UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

THE EFFECT OF AN EQUINE-ASSISTED POSITIVE PSYCHOLOGY INTERVENTION ON FLOURISHING, MEANING AND HOPE IN AN UNDER-RESOURCED SOUTH AFRICAN CONTEXT: A MIXED-METHODS STUDY

by

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A thesis submitted in fulfilment of the requirement for the degree

PhD (PSYCHOLOGY)

In the

Faculty of Humanities

at the

University of Pretoria

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Date of submission: 04 November 2024

DECLARATION

I, Sharon Doris Boyce, declare that this thesis represents my original work, with due acknowledgement given to any sources referenced or quoted. Furthermore, I declare that this submission has not been previously presented for examination towards any other academic degree at any university or tertiary institution for examination.

Sharon Boyce

Signature

04 November 2024
Date

ETHICS STATEMENT

The author, identified on the title page of this dissertation, confirms that all research described herein has received the necessary research ethics approval. Furthermore, the author affirms adherence to the ethical standards mandated by the University of Pretoria's Code of Ethics for Researchers and the Policy Guidelines for Responsible Research.

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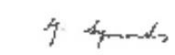
To whom it may concern

This serves to confirm that I edited the thesis titled *The Effect of an Equine-Assisted Positive Psychology Intervention on Flourishing, Meaning and Hope in an Under-Resourced South African Context: A Mixed Methods Study* by Sharon Boyce. I trust that the author attended to all the required revisions prior to submission.

Kind regards



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ACKNOWLEDGEMENTS

I want to express my deepest gratitude to the following people who made it possible for me to complete this research project:

- Prof. Nicoleen Coetzee and Prof. Tharina Guse, my supervisors, for their patience as I strove to achieve the standard of excellence they set for this research project. *Thank you for believing in me.*
- Andries Masenge, for conducting the statistical analysis and helping me understand the data.
- Dudley Baylis, without whom I would not have completed this dream. *I am better because of you.*
- My daughters, Heather, Jennifer and Hannah, who supplied endless cups of tea, engaged in numerous discussions about the research and, most importantly, reminded me to take a walk. They always encouraged me to continue because *We can do hard things.*
- Ruric Vogel, a colleague and friend whose encouragement, facilitation, support and preparedness to read everything I wrote is much appreciated and immensely valued.
- Caroline Erdmann and Karen Bands, whose facilitation support and contributions exceeded all my expectations.
- Jonathan Nel and Shelly Roe-Berning, my writing buddies from the PhD Network, thank you for travelling with me and chanting when times were tough.
- My higher power, God, calls me to keep becoming and places me exactly where I need to be to grow and be useful to others, especially when it is difficult.
- The participants who willingly and generously gave their time to participate in the research.
- The horses and donkeys who always know exactly how to respond.

ABSTRACT

This study aimed to develop, implement and evaluate the effect of an equine-assisted positive psychological intervention (EAPPI) on the flourishing, meaning, and hope of adults in the under-resourced community of Diepsloot, South Africa. Grounded in the intersection of eco-psychology and existential positive psychology, the research employed a concurrent mixed-methods design, with qualitative data collection embedded in the quantitative phase post-intervention. Participants recruited via purposive sampling were assigned to either an experimental or control group. Quantitative data on flourishing, meaning, and hope levels were collected using standardised self-reported questionnaires at pre-intervention, post-intervention, and three-month follow-up and analysed using non-parametric statistics. Qualitative data, capturing participants' subjective experiences, were gathered through semi-structured interviews and analysed thematically. The quantitative and qualitative findings were integrated via joint display analysis, which confirmed the EAPPI's effectiveness in enhancing flourishing, deepening a sense of meaning, and fostering hope despite ongoing exposure to adverse conditions. However, the study noted limitations in the ability of quantitative measures to detect subtle changes in psychological distress, which were more effectively captured through qualitative reporting. This research offers robust evidence that the EAPPI is a feasible and culturally adaptable intervention that supports optimal well-being and promotes mental health in marginalised communities. The findings contribute to expanding the scope of positive psychological interventions and highlight the importance of further research on equine-assisted approaches in similar contexts.

Key Words: Eco-existential positive psychology, Equine-assisted positive psychological interventions, Mixed methods research, Joint display analysis, Diepsloot, South Africa, Under-resourced communities, Flourishing, Meaning, Hope, Arenas for Change

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Chapter 1. An Introduction to the Study

1.1. Introduction

Historically, South Africa has been characterised by a severe deficiency in mental health care services, particularly at a community level in primary health care (PHC) systems (Docrat et al., 2019; Morar et al., 2024; Spedding et al., 2014). This critical gap has persisted amid an escalating and widespread burden of mental disorders, which have often been attributed to the collective trauma of apartheid and exacerbated by persistent racial tensions and widening socio-economic disparities in the post-apartheid era (Jack et al., 2014; Shisana et al., 2024). These challenges are acutely experienced in under-resourced communities such as Diepsloot, a densely populated community on the northern boundary of Johannesburg in Gauteng Province, South Africa (SA).

Initially established as an informal settlement in the mid-1990s, Diepsloot became a destination for displaced communities from surrounding areas (Bénit, 2002; Cross, 2014). Although Diepsloot, which is 12 square kilometres, officially housed 138,329 residents in 2012 (Statistics South Africa, 2012), the population has recently been estimated to be closer to 600,000 due to rapid urbanisation and the influx of both internal and international migrants (Malan, 2015; Zhujiworld, 2023). The community is severely under-resourced, with high unemployment rates, overcrowded housing, inadequate infrastructure and limited access to basic service delivery (Hasel, 2014; Mahajan, 2014; Mushongera et al., 2017; Siphumeze, 2014). These conditions are closely associated with various psychosocial problems, including high rates of violent crime, substance abuse and gender-based violence, which perpetuate cycles of

disadvantage (Gibbs et al., 2018; Malan, 2015; South African National Council on Alcoholism and Drug Dependence, 2023; University of the Witwatersrand, 2016).

An under-resourced community may be defined as a geographic area affected significantly by multidimensional poverty, resulting in limited access to essential services, including healthcare, education, housing, and employment (Jürgens et al., 2013; Mugisha et al., 2017; Mushongera et al., 2017). In SA, many under-resourced communities like Diepsloot are the legacy of apartheid-era spatial planning policies that segregated economically disadvantaged, predominantly Black people to poorly serviced peripheries of urban centres, which may be viewed as a continuation of systemic oppression (Averweg & Leaning, 2018; Carolissen, 2006; Sigogo & Modipa, 2013). This historical context of systemic oppression continues to affect the ability of residents in these communities to realise a decent standard of living, thus contributing to persistent poverty and inequality (Bhomoyi, 2020; Mushongera et al., 2017).

Poverty is a pervasive issue in SA, with 63% of the population living in poverty and unemployment rates exceeding 30% (Statistics South Africa, 2021; The World Bank, 2024). Diepsloot reflects these national trends, with its residents facing extreme poverty and economic instability. The community's economy is mainly informal and fragile, with many individuals depending on unregulated small businesses and irregular employment for survival (Cross, 2014; Mahajan, 2014). Such conditions foster social discontent, contributing to a lack of public safety, frequent service delivery protests and outbreaks of xenophobic violence (Brown University, n/d; Hasel, 2014; Mahajan, 2014). Diepsloot has been characterised as an environment that "ferments a brew of anger, suspicion, fear, and longing for opportunity" (Mahajan, 2014, p. 10) and described as a poverty and unemployment trap that fosters widespread disillusionment and discontent (Cross, 2014).

Lack of service delivery, particularly in healthcare, is a critical challenge for Diepsloot. The community is serviced by only two government-run PHC clinics, which are insufficient to meet the large and growing population's needs (Brown University, n/d; Dworzanowski-Venter, 2017). Although community members have come to rely on non-governmental organisations (NGOs), including the South African National Council on Alcoholism and Drug Dependence (SANCA), Shumbashaba Community Trust (SCT) and the South African Depression and Anxiety Group (SADAG) to provide some mental health support, their capacity is limited (Brown University, n/d; Dworzanowski-Venter, 2017; Shamos, 2011; South African National Council on Alcoholism and Drug Dependence, 2023). The lack of integrated community mental health services contributes to poor outcomes as residents experience multiple stressors, including violence, poverty and substance abuse. In turn, these issues exacerbate psychological distress and poor mental health (Craig et al., 2022; Mokwena & Mokwena, 2022; Mugisha et al., 2017; Myer et al., 2008; World Health Organization, 2007).

Globally, mental health concerns have escalated. Following the COVID-19 pandemic, depression and anxiety increased by 25%, contributing to 35% of the global burden of non-communicable diseases and leading to significant economic costs through disability and premature death, including suicide (Bloom et al., 2011; GBD Mental Disorders Collaborators, 2022; World Health Organization, 2022a, 2022b). Global mental health is a major concern, and accordingly, the United Nations (UN) has included the reduction of deaths by suicide and the prevalence of depression, anxiety and other less common mental disorders in its Sustainable Development Goals as Goal 3: Ensuring better health and well-being for all (Tsutsumi et al., 2015; United Nations, 2015, 2022, 2023b). This involves not only implementing actions aimed

at preventing and treating mental disorders but also at promoting and maintaining mental health and well-being.

This burden is particularly acute in low-middle-income countries (LMICs), like SA, where socio-economic stressors and limited mental health infrastructure exacerbate the prevalence of common disorders such as depression, anxiety and substance abuse (Gibbs et al., 2018; Kim et al., 2020; Petersen et al., 2016; Sorsdahl et al., 2023; World Health Organization, 2018). While approximately 26% of adults suffer moderate to severe depression in SA, 18% experience moderate to severe anxiety. Gauteng has reported exceptionally high levels of these disorders (Craig et al., 2022). Diepsloot residents are disproportionately affected by a high burden of untreated mental illnesses, including depression, anxiety, post-traumatic stress disorder and substance-related disorders (Dworzanowski-Venter, 2017; Gibbs et al., 2018; Govender, 2021; Kim et al., 2020; Malan, 2015; University of the Witwatersrand, 2016).

In order to promote mental health and wellbeing globally, the World Health Organization (WHO) argued that mental health is a fundamental human right, essential for overall well-being and optimal functioning (World Health Organization, 2022b). Therefore, mental health should be perceived as more than just the absence of mental illness since it involves flourishing, in which individuals realise their potential, cope with everyday stresses and contribute productively to their communities (Keyes, 2002; World Health Organization, 2021).

Flourishing is a multidimensional construct involving emotional, psychological and social well-being that includes low levels of psychological distress, high levels of satisfaction with life and more positive than negative emotions (Keyes, 2007; Peterson & Seligman, 2004). Existential positive psychology (EPP) expands traditional views of flourishing to encompass the dialectical balance of positives and negatives in life (Ivtzan, Lomas, et al., 2016; Lomas, 2016a).

It incorporates the capacity to transcend adversity through meaning-seeking, meaning-making and hope (Wong, 2011b, 2021a). Meaning is central to flourishing as it not only indicates and predicts optimal functioning but also ensures the psychological fortitude needed to face adversity (Baumeister et al., 2013; Peterson & Seligman, 2004; Slezáčková & Krafft, 2016; Wong, 2021a). Hope, in turn, mediates the bidirectional relationship between meaning in life and flourishing, enabling individuals to navigate life's challenges with fortitude (Guse & Shaw, 2018). In this study, mental health is understood as a state of flourishing. However, in accordance with the literature, the terms mental health, mental well-being, optimal well-being and flourishing are employed interchangeably (Hone et al., 2014; Keyes, 2007, 2016).

In communities such as Diepsloot, where adversity is pervasive, realising mental health in the form of flourishing is incredibly challenging. Promoting flourishing, meaning, and hope are crucial for empowering individuals to navigate and overcome their daily struggles and enhance mental health outcomes (Slezáčková & Krafft, 2016; Wong, 2010b). In addition, positive mental health outcomes increase individuals' economic productivity, lifespan and quality of life (Tsutsumi et al., 2015; United Nations, 2023a). Ensuring access to mental health services that foster flourishing is both a public health priority and a human right, particularly imperative in under-resourced settings.

1.2. Problem Statement

As noted, Diepsloot is an under-resourced community that experiences severe psychosocial challenges, including extreme poverty, high unemployment, overcrowded housing and limited access to essential services. Compounded by an inadequate mental health infrastructure, residents rely on under-resourced NGOs for support. Consequently, there is a significant limitation in treating and preventing common mental health conditions, including

depression, anxiety and substance abuse, never mind promoting mental well-being. This lack of services contributes to widespread psychological distress and low levels of flourishing among residents.

Despite recognising mental health as a fundamental human right and efforts to reform SA's public health legislation (Department of Health Republic of South Africa, 2023; Docrat et al., 2019; Patel et al., 2018), the residents of Diepsloot continue to experience significant barriers to achieving optimal mental health. There is an urgent need for effective mental health services in Diepsloot, particularly culturally relevant, community-based interventions that promote flourishing, meaning and hope (Lund et al., 2010; Petersen & Lund, 2011; Sorsdahl et al., 2023). Without such interventions, the mental health crisis in Diepsloot will continue to deepen, ensuring residents are unable to realise optimal functioning.

1.3. Rationale of the Study

Given the significant limitations in mental health services in Diepsloot, particularly the lack of culturally relevant interventions that promote mental health as flourishing, this study proposed developing and implementing a novel equine-assisted positive psychology intervention (EAPPI). Grounded in EPP and ecopsychology, this intervention leveraged the therapeutic benefits of human-animal interactions, specifically with equines, to foster flourishing, meaning and hope. It was underpinned by the biophilia hypothesis, which propounds that humans have an innate affinity for nature and living systems because these assist them to be well (Gullone, 2000; Howell & Passmore, 2013; Wilson & Kellert, 2013).

Research has revealed that equine-assisted psychological interventions (EAPI) can reduce symptoms of depression, anxiety and post-traumatic stress disorder (Carlsson, 2016; Kendall et al., 2015). However, there is a paucity of evidence on the efficacy of such interventions in

promoting adult mental health, particularly in non-Western and under-resourced contexts such as Diepsloot (Anestis et al., 2014; Carlsson, 2016; Coetzee et al., 2022; Frewin & Gardiner, 2005; Kendall et al., 2015; Maujean et al., 2015; Selby & Smith-Osborne, 2013; Stern & Chur, 2019).

1.4. Primary Aims and Objectives

In light of the identified problem, this research aimed to develop, implement and evaluate the effect of an EAPPI on flourishing, meaning and hope among adults living in Diepsloot. To achieve this aim, the following objectives were set:

- Develop and implement a culturally and contextually relevant EAPPI.
- Assess and compare participants' levels of flourishing, meaning and hope at three time intervals: pre-intervention, post-intervention and three months post-intervention.
- Explore participants' subjective experience of the EAPPI, specifically how the intervention influences their sense of flourishing, meaning and hope.
- Provide a comprehensive analysis of the EAPPI's effect by integrating quantitative outcomes, measured through psychometric assessments, with qualitative insights acquired through semi-structured interviews using joint display analysis.

1.5. Thesis Chapter Outline

This chapter has served as a preamble to the study, providing a comprehensive overview that clarifies its background, problem statement and rationale. In addition, the aim and objectives formulated to execute the study have been outlined.

In Chapter 2, the theoretical framework of eco-existential positive psychology (eco-EPP), employed to develop the study intervention and understand the integrated results regarding the intervention's effect on participant flourishing, meaning and hope, is introduced.

The focus in Chapter 3 is on conceptualising and operationalising the key constructs central to this study: flourishing, meaning and hope. Furthermore, a critical review of the literature on these constructs, with particular attention to their applicability to adults living in under-resourced contexts like Diepsloot, is included in the chapter.

In Chapter 4, the existing literature on positive psychological interventions (PPIs) and their extension to existential positive psychological interventions (EPPIs), including EAPPI is reviewed. Limitations and challenges that justify the need for this study are identified. The development and pilot testing of the EAPPI to assess its feasibility and relevance in the Diepsloot community context prior to implementation in the study are also detailed.

An in-depth description of the research methodology, in which a comprehensive description of the embedded mixed-methods design and process employed in the study are presented, constitutes Chapter 5. In addition, the ethical and logistical aspects of conducting the research in an under-resourced community are discussed.

While the quantitative results obtained from the statistical analysis of the collected data are presented in Chapter 6, the qualitative findings through a thematic analysis of the interview data collected are detailed in Chapter 7. In Chapter 8, the quantitative and qualitative findings are integrated through a joint display analysis in which the resultant meta-inferences are discussed. Furthermore, the implications of these findings, in light of the study's aims and the broader literature, offer comprehensive insights into the effect of EAPPI. In addition, an overview of the study's contribution is provided and its limitations and recommendations for future research are outlined.

1.6. Conclusion

In this chapter, the global and local mental health crisis, particularly in LMICs like SA, where under-resourced communities such as Diepsloot face significant psychosocial challenges was introduced. Despite efforts to address mental health policy gaps, access to mental health care integrated into PHC services remains insufficient, contributing to high levels of psychological distress. The critical need for culturally relevant, community-based interventions, leading to the proposal of an EAPPI, were highlighted in this chapter. Furthermore, the study's aims and objectives of implementing and evaluating the EAPPI through a mixed-methods research design were outlined. Finally, an overview of the thesis structure was outlined. In the following chapter, the study's theoretical framework, eco-EPP, is discussed.

Chapter 2. Eco-Existential Positive Psychology as Explanatory Framework

2.1. Introduction

The nascent positive psychology (PP) theoretical perspective of eco-existential positive psychology (Eco-EPP), which integrates eco-psychology and existential positive psychological (EPP) theory, is the explanatory framework that informed this study (Passmore & Howell, 2014). In this chapter, the dynamic nature of PP is first examined and EPP as a sequela of PP discussed. Subsequently, integrating nature into psychology through the less commonly practised eco-psychology is presented as an overlaid element of the theoretical framework. Ultimately, these perspectives converge to present Eco-EPP as a theoretical explanatory framework that is relevant to maintaining and promoting a life worth living despite the confines of life's challenges for regular people in all communities, including those living in resource-constraint contexts.

2.2. Positive Psychology

Seligman introduced PP as the scientific study of positive human functioning at his inaugural address to the American Psychology Association (APA) in 1998 (Seligman & Csikszentmihalyi, 2000). During the past two decades since its establishment, PP has continuously evolved with new theoretical perspectives, empirical emphasis and methods (Lomas et al., 2021; Wissing, 2022). A byproduct of the field's rapid expansion related to the nature and dynamics of positive constructs was the absence of a single definition of PP, thus prompting Linley et al. (2006) to expound a widely accepted comprehensive definition encompassing the dynamic nature of PP:

Positive psychology is the scientific study of optimal human functioning. At the meta-psychological level, it aims to redress the imbalance in psychological research and practice by calling attention to the positive aspects of human functioning and experience and integrating

them with our understanding of the negative aspects of human functioning and experience. At the pragmatic level, it is about understanding the wellsprings, processes and mechanisms that lead to desirable outcomes (p. 8).

Recently, the evolution of PP was retrospectively captured metaphorically in three waves. Each wave represents the focus of theoretical assumptions, research topics and practices in each decade of PP's existence (Ivtzan, Lyle, et al., 2016; Lomas, 2016b; Lomas et al., 2021; Wissing, 2022). The first wave focused on flourishing and positive phenomena, including traits, behaviours, emotions, cognitions, and organisations and well-being (Seligman, 2011; Seligman & Csikszentmihalyi, 2000). Wong (2011b), followed by Lomas and Ivtzan (2016), who popularised the term second wave, which had initially been coined by Held (2004), noted the importance of considering the positive and negatives of the good life. Currently, a third wave is advancing towards greater complexity by expanding PP's scope of enquiry. This wave includes multi and transdisciplinary perspectives, broader multicultural and systemic worldviews and increased diversity of empirical topics and methodological approaches (Lomas et al., 2021; Wissing, 2022). Lomas et al. (2021) emphasised that the three-wave assumptions, research foci, and methods are not siloed but contiguous and overlapping. Subsequently, the critical elements of each wave of PP are highlighted as progenitors of this study's theoretical framework of EPP.

2.2.1. First Wave of Positive Psychology

The first wave of PP (FWPP) is characterised by the first decade's (± 1998 – 2010) focus on building positive qualities and what is right with life as a counterbalance to traditional psychology's focus on human dysfunction and pathology (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000). Unfortunately, focusing on disease and disorder created a skewed perception of what it meant to be human because research and practice emphasised the negative

and omitted the significant positives of human experience (Baumeister et al., 2001; Linley et al., 2006). Pioneers of PP argued that normal human functioning could not be explained by negative (problem-focused) frames of reference (Sheldon & King, 2001; Simonton & Baumeister, 2005). Rather, it required an understanding of what is good and functional in people and the positive qualities of individuals, groups and organisations (Seligman & Csikszentmihalyi, 2000). Therefore, PP aimed to shift the focus of psychology from repairing the worst aspects of life to building positive qualities and nurturing positive emotions, character traits and phenomena that contribute to a worthwhile life (Baumgardner & Crothers, 2014; Gable & Haidt, 2005; Linley et al., 2006; Seligman & Csikszentmihalyi, 2000). In essence, PP focused on those aspects of the human condition that were predominantly neglected in empirical research.

Moreover, PP emphasised the importance of examining and enriching all aspects of the human experience, ranging from suffering, loss and illness to connection, fulfilment, psychological health and well-being (Linley et al., 2006; Seligman & Csikszentmihalyi, 2000). However, as might be anticipated of a corrective response (Linley et al., 2006), the focus in research and practice became skewed towards attending solely to positive phenomena (Held, 2004, 2018). The ensuing result was the rapid expansion of psychological theory, research and interventions to explore and enrich the positive and lighter aspects of human life that would enhance everyone's quality of life; topics previously ignored in psychology (Linley et al., 2006; Simonton & Baumeister, 2005).

The field initially concentrated on examining well-being from a hedonic perspective (*feeling good*), including the constructs of happiness, satisfaction with life and subjective well-being (Diener & Ryan, 2009; Diener et al., 1998; Seligman, 2002), with an associated focus on positive emotions (Fredrickson, 2003; Lyubomirsky et al., 2005). Affiliated theoretical

developments included theories of happiness (Authentic Happiness Theory; Seligman, 2002) and positive emotions (Broaden-and-Build Theory; Fredrickson, 2003). Consequently, the design and implementation of measures and interventions to promote feeling good ensued (Huppert, 2014; Lyubomirsky & Layous, 2013; Parks & Schueller, 2014; Seligman et al., 2005).

However, as the field of PP developed, perspectives expanded to view happiness as a multi-dimensional construct encompassing eudaimonic perspectives (*functioning well*) of well-being. Thus, happiness became defined as a combination of: (i) a pleasant life seeking positive emotions and pleasure in the present, past and future; (ii) an engaged life of utilising personal strengths and virtues to experience flow with the world; and (iii) a meaningful life filled with meaning and purpose, achieved by belonging to a group and serving something greater than oneself (Hefferon & Boniwell, 2011; Peterson & Park, 2011; Steger et al., 2011). However, the sole focus on happiness had shortcomings.

Although happiness was strongly linked to mood and pleasure, it became evident that people did not necessarily choose positive emotions, engagement and meaning when their moods did not collaborate or when pleasure was not a priority (Seligman, 2011). Accordingly, Seligman proposed expanding the scope of PP from happiness to include optimal functioning or flourishing . Theoretical development included the five pillar PERMA theory of flourishing, conceptualised as positive emotions, engagement, positive relationships, meaning and accomplishment (Seligman, 2018). In addition, existing theories of well-being conducted outside the remit of PP, including Ryff's (1989, 2014a, 2022) eudaimonic theory of psychological well-being and Keyes (2005, 2016) dual continua model of mental health were integrated into PP. Consequently, the focus of PP became flourishing and was subsequently recognised as the outcome of high levels of well-being (Huppert & So, 2013; Keyes, 2007; Seligman, 2011;

Seligman, 2018). Accordingly, PP conceptualised flourishing as a multidimensional construct of hedonic and eudaimonic well-being, the experience of more positive than negative emotions and the absence of psychological distress, which is further discussed in Chapter 3.2.1.

Research and practice became concerned with the conditions and processes that lead to optimal functioning and flourishing (Donaldson et al., 2015), including the study of human strengths and virtues (Park & Peterson, 2009; Peterson & Park, 2011), other positive elements of the human condition, such as flow, optimism and hope (Csikszentmihalyi, 1990; Ivtzan, Young, et al., 2016; Seligman, 2002; Snyder, 2002) and the conditions and processes contributing to happiness, fulfilment and flourishing or optimal functioning of people, groups and institutions (Gable & Haidt, 2005; Seligman, 2011). Accordingly, the first wave PP is characterised by three fundamental assumptions:

(i) Positive human feelings and functioning are as essential to study as dysfunction and distress, deserving of equal attention within the mental health field (Seligman & Csikszentmihalyi, 2000).

(ii) It is imperative to make conscious efforts to improve positive functioning, regardless of whether individuals are experiencing any dysfunction. In addition, ineffective patterns of emotions, cognitions and behaviours are considered common and normal challenges of everyday life, rather than signs of dysfunction or pathology (Gable & Haidt, 2005; Sheldon & King, 2001). In essence, problems of living do not reside within people but rather in the interactions between an individual and other people, including society and culture (Maddux, 2002).

(iii) People have the potential for goodness and are motivated to lead worthwhile lives (Biswas-Diener, 2008). Good character includes aspects of personality that are

> morally valued and inspire people to do the right thing. When people act on the universal values of wisdom, courage, humanity, justice, temperance and transcendence (Peterson & Seligman, 2004), they are deemed to have good character. The latter is essential for promoting psychological and social well-being because it enhances people's ability to achieve a fulfilling life for themselves and those around them. Furthermore, these qualities are crucial for coping with challenging situations and overcoming adversity (Peterson & Park, 2011; Peterson & Seligman, 2004).

In essence, the first wave grew to affirm PP as the scientific study of what makes life worth living (Peterson, 2008). While PP was emerging in the Western world, a concomitant genre of it was established in South Africa.

Concurrently, South African researchers contested traditional health perspectives as physical health and the absence of pathology and produced extensive research in early PP constructs (Coetzee & Viviers, 2007; Wissing, Potgieter, et al., 2014). Strümpfer (2005) proffered PP-based contributions of eminent 20th-century humanistic and existential psychologists such as Maslow and Frankl and further argued that the recognition of PP as a new paradigm occurred only due to the increased visibility of positive psychological contributions to Western literature and practice at the turn of the century. During the 1990s, Strümpfer and colleagues expanded conceptualisations and investigations of health and well-being from *salutogenic* (origin of health) to *fortigenic* (origin of strengths) perspectives, thus providing the term fortology as an antonym for pathology (Coetzee & Viviers, 2007; Strümpfer, 2005). Accordingly, an African-specific sub-discipline and science of positive psychological equivalent called Psychofortology that focuses on "the nature, manifestation, patterns, origins, dynamics,

and enhancement of strengths on individual, group and community level" (Wissing, 2020, p. 9) was created. Coetzee and Viviers (2007) highlighted extensive South African research on the PP topic of coping, including resilience, emotional intelligence and spirituality.

Spearheaded by Wissing, South African research extended the focus on well-being to a multi-dimensional understanding grounded in African cultural perspectives of meaning and relatedness, including spirituality and harmonious connection with others and one's surroundings (Wilson Fadiji & Wissing, 2022; Wissing, 2014a, 2022; Wissing, Schutte, et al., 2022). Thus, South African research has contributed to more complex perspectives of optimal functioning by including differing cultural contextual understandings aligned to the current third-wave considerations (Wissing et al., 2020).

The notable progress of first wave PP led to critical thinking regarding its foundational notions. Growing recognition of the ambiguity of what is considered positive and essential for a good life led to efforts to create consensus on what is meant if something is positive. Initially, Diener and Suh (1997) proposed three ways to identify something as positive. First, people judge the positive in accordance with their cultural values, which are based on what is considered right or wrong, irrespective of other definitions of what is good. Second, people choose what they consider desirable based on the availability of resources. That which is chosen consistently is deemed to be positive and valuable. Finally, life is considered satisfying and positive if objects, events, processes and outcomes are experienced as pleasant. Pawelski (2016a, 2016b) delineated inclusion and continuum criteria for identifying the positive. The inclusion criteria regard phenomena as positive if their presence is preferable to their absence. The continuum criteria indicate a spectrum of positivity in which positivity is a function of phenomena being more desirable than something else, with long-lasting beneficial consequences and diverse

applicability across individuals, groups and cultures. In addition, “positive” represented a commitment to the scientific investigation of positive phenomena in a positivistic paradigm (Seligman & Csikszentmihalyi, 2000).

Nonetheless, the apparent hyper-interest in the positive side of human living, in increasing and maintaining the presence of what is pleasant and the absence of the unpleasant was a persistent concern (Gable & Haidt, 2005; Linley et al., 2006). Despite the original intention of PP not replacing the knowledge acquired on pathology, distress and dysfunction but rather expanding and complementing the existing knowledge base by developing qualities within individuals and their communities that assist them not only to endure and survive but also to flourish, this view prevailed (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000). Consequently, the skewed focus ignoring the negative (Gable & Haidt, 2005; Linley et al., 2006) was viewed to generate dualistic rhetoric in which positive qualities were promoted as beneficial and desirable while negative phenomena became regarded as undesirable, unwanted and accordingly rejected (Lomas, 2016b; Wong & Roy, 2018).

While some have argued that emphasising the positive was necessary to create the impetus to expand psychology’s view of the human (Lomas & Ivtzan, 2016; Rhein & McDonald, 2022), the perspective that the polarising narrative led to a tendency to overlook positives to negatives and negatives to positives in our encounters with life grew (Lazarus, 2003). Critics from inside (e.g., Wong, 2011b) and outside the field (e.g., Held, 2004, 2018) revealed that the relationship between positive and negative phenomena and their effects on well-being was more complex than previously described. It is important to distinguish between positive and negative valence and positive and negative outcomes.

Emergent research has shown that certain positive qualities and experiences can range from flourishing to harmful. The sole pursuit of happiness may lead to unhappy people and undue optimism may lead to an under-appreciation of risk-increasing and risk-taking behaviour or poor decisions regarding health (Dolinski et al., 2022; Gruber et al., 2011; Mauss et al., 2011; Shepperd et al., 2013; Zerwas & Ford, 2021). In addition, subjective views of what is appropriate or good may be problematic as they could provide people with an excuse to conduct evil or unethical acts based on character strengths. While character strengths of manipulation and opportunism could lead to taking unfair advantage of others, extreme optimism may result in engaging in risky behaviours like gambling. Although society may regard such actions as wrong, people with subjective views of what is good may justify these actions (Wong, 2011b). Moreover, hyper-focussing on the positives and individualistic values challenges and potentially undermines PP's initial premise of promoting positive outcomes (Lomas & Ivtzan, 2016).

On the contrary, negative phenomena can paradoxically lead to flourishing (Wong, 2011b). Anger, which is usually considered negative due to destructive consequences to relationships and health, can motivate someone to act and change a terrible situation that curtails their well-being, sadness reflecting prosocial attributes such as compassion, caring and sensitivity, or boredom facilitating introspective insight and creative imagination (Lazarus, 2003; Lomas, 2016b). Furthermore, post-traumatic growth demonstrates that some people flourish and grow after experiencing an adverse event (Middleton, 2016). Wong (2011b) suggested that personal growth and flourishing may benefit from prior experiences of overcoming hardships. Consequently, Wong (2011b) proposed expanding the definition of what is good or positive to consider both individual and collective good by including morality, ethics and cultural norms related to characteristics of the good life.

2.2.1.1. Criticisms of First Wave Positive Psychology. Critics argued that PP neglected its existential-humanistic psychological roots (Robbins, 2008; Wong, 2006). Despite many touting PP as a new discipline of psychology (Seligman & Csikszentmihalyi, 2000), others viewed it as an extension of existential-humanistic psychology (Bohart & Greening, 2001; Bretherton & Ørner, 2004). Humanistic psychology is based on various philosophical perspectives, including existentialism, feminism, postmodernism and constructivism, that guide the exploration of the mind and behaviour in the context of understanding human nature. Existential-humanistic psychology values the subjective human experience, including the choices, decisions, emotions and responsibilities with which humans experience and grapple and the sense of awe that life inspires.

While the founders of PP, Seligman and Csikszentmihalyi (2000), acknowledged the contribution of humanistic psychologists such as May, Maslow and Rogers, they distanced PP from humanist psychologies by promoting the idea that the latter lacked an empirical foundation due to the predominance of qualitative research and was overly concerned with generating self-help content. This argument led to underplaying the impact and contribution of humanistic psychology to PP and devaluing the humanistic influence as unscientific (Bohart & Greening, 2001; Churchill & Mruk, 2014; Friedman, 2014; Schneider, 2014; Waterman, 2014). Consequently, PP became primarily motivated to empirically understand the sources, processes and practices that lead to positive human outcomes, thereby de-emphasising the subjective experiences of the whole human (Linley et al., 2006; Waterman, 2013).

In response to the positivist empirical emphasis, Schneider (2014) argued that one should not rely exclusively on quantitative-experimental findings of PP to understand the qualitative-experiential realities of flourishing and thereby, risk losing potential knowledge acquisition

related to this complex topic. Instead, lines of convergence between both sets of data should be explored. Moreover, Churchill and Mruk (2014) postulated that the differences between quantitative and qualitative approaches are more theoretical than practical. Mixed-methods research designs can assist one to investigate the vastly complex construct of flourishing. Although the debate regarding the contribution of humanistic psychology to PP is ongoing (Bohart & Greening, 2001; Robbins, 2008), Wong (2011b) stated that PP is inherently humanistic, noting the unnecessity of questioning the influence of humanistic psychology on PP as Froh (2004) advocated embracing its humanistic roots for a maturing PP. Therefore, acknowledging the humanistic aspect can enhance PP's effectiveness and broaden its scope.

PP has also been criticised for focussing on Western values of individualism and instrumentalism, which makes the individual solely responsible for their well-being without considering external factors such as systemic and structural limitations that impact vulnerable and disadvantaged populations (Wong, 2019a). This is perpetuated by a lack of diversity in multicultural perspectives because published research tends to be skewed towards WEIRD (Western, high Education levels, highly Industrialised, high-income levels, namely, Rich and Democratic) countries, particularly the USA (Arnett, 2008; Hendriks et al., 2019; Kim et al., 2018). This lack of diversity has resulted in a paucity of research from less industrialised and developed economies such as South Africa. It is noteworthy that although South Africa is the hub for PP research in Africa, the research tends to adopt a negative perspective, focusing on violence, trauma, coping and recovery. In a review, Kim et al. (2018) revealed the need for more research on flourishing as a balance between negative and positive aspects of life in marginalised groups such as impoverished community members. While some studies have indicated that there has been an improvement in the diversity of PP research beyond the USA (Kim et al., 2018),

Hendriks et al. (2019) noted that not much has changed since Arnett's (2008) bibliometric analyses of American Psychology Association (APA) publications. Only 1.4% of authors in PP publications have emanated from Africa, most of whom have been associated with institutions in South Africa. Despite an increase in international publications from non-WEIRD countries, a gap in published works from African countries, including South Africa, remains (Hendriks et al., 2019).

PP responded to these criticisms by adapting and maturing its approach to include an appreciation of the interplay between life's positive and negative aspects. This newer phase of scholarship is referred to as second wave positive psychology (SWPP) or PP 2.0 (Ivtzan, Lomas, et al., 2016; Lomas, 2016b; Wong, 2011b).

2.2.2. Second Wave of Positive Psychology

Second wave PP (SWPP; ±2010 – 2015) builds on the ideas of the first wave, which emphasises conceptions of flourishing and the range of positive qualities (Delle Fave et al., 2011). However, SWPP adopts a more nuanced approach to positive and negative phenomena, recognising the dialectical nature of flourishing and ambivalent duplexity of the good life (Ivtzan, Lomas, et al., 2016; Lomas & Ivtzan, 2016; Wong, 2011b).

The little-heeded emphasis of Ryff and Singer (2003) during FWPP that understanding human flourishing requires appreciation of the dialectics between the positive and negative aspects of life becomes central to SWPP. This approach helps to develop a broader understanding of complex constructs such as flourishing, which advance beyond a singular focus on happiness and include negative emotions that can contribute to optimal functioning (Lomas, 2016a, 2016b; Wong, 2011b).

SWPP recognises two emotional systems, positive affect and negative affect, and acknowledges that emotional experiences are a complex intertwining of both positive and negative phenomena. Being dependent on the context, emotions cannot be labelled as either positive or negative (McNulty & Fincham, 2012). Positive and negative life experiences interact with each other to accomplish the good life (Wong, 2011b). Moreover, being contextually dependent, it is difficult to determine if certain experiences are positive or negative. Thus, flourishing is considered a dialectical balance of the positive and negative aspects of life (Lomas, 2016a; Lomas & Ivtzan, 2016; Wong, 2011b).

Lomas (2016a) proposed that an appreciation of the dialectical nature of flourishing is revealed through four principles: appraisal, covalence, complementarity and evolution. Appraisal suggests that it is challenging to compartmentalise phenomena as either positive or negative since such appraisals depend on context. Accordingly, dichotomous emotions such as optimism and pessimism, self-esteem and humility, freedom and restriction, anger and forgiveness, and happiness and sadness can be detrimental or advantageous to flourishing (Ivtzan, Young, et al., 2016). Co-valence holds that many phenomena, such as many states and qualities central to flourishing, comprise a complex blend of light and dark elements. Hope, for example, involves a longing for a desired outcome, confidence in its achievement and anxiety that it will not (Lazarus, 2003).

Complementarity acknowledges that within the co-valence of phenomena, the opposing elements are inseparable, co-creating aspects of life that are different sides of the same coin, thus suggesting that flourishing is a complex whole of dichotomous states. This principle builds on the Keyes (2007) dual continua model in that mental illness and well-being are not two poles of the same continuum. Rather, they are separate co-existing dimensions of functioning in which

flourishing is not simply the absence of mental illness and distress is not incompatible with happiness. (See Section 3.2.1.3 for the Keyes (2007) dual continua model). Finally, evolution contextualises EPP because just as an appreciation of dialectics defines it, it is itself an example of the dialectical process; it is the resultant synthesis of a thesis (traditional problem focussed psychology) and the anti-thesis thereof (PP focussed on happiness) (Wong, 2015).

Thus, SWPP moved away from a dualistic classification of phenomena as either positive or negative, with the former valued and the latter rejected, towards a subtle appreciation of the dialectics of flourishing within the complex socio-cultural context it occurs (Lomas & Ivtzan, 2016; Wong, 2015). In a further effort to understand the way in which the positive and negative aspects of life interact to achieve the good life, Wong (2010a, 2011b, 2012d) proposed the dual-system process model, which is primarily concerned with how to flourish amidst the hardships of life. Although nobody enjoys suffering, the model acknowledges that finding meaning in suffering is crucial for finding meaning in life. Furthermore, effective coping with life stressors, misfortunes and negative emotions is necessary to lead a good life in which flourishing occurs. This dual-system model is a complex multisystem model that takes into consideration individual, group and socio-cultural contextual factors as well as several psychological theories. Although, it is beyond the scope of this thesis to describe this complexity, the model's conceptualisation of how people adapt to the negative (life's hardships) by employing human approach and avoidance motivation systems so as to achieve the good life is relevant to the discussion (Wong, 2010a).

According to the human approach system, when things are going well, our natural inclination is to seek out positive experiences and growth opportunities (Wong, 2010a, 2012d). This system motivates us to engage in activities that are meaningful and enjoyable and helps us feel like our lives have purpose. Both intrinsic and extrinsic motivations contribute to positive

emotions and experiences. While intrinsic motivations come from the pursuit of competence, creativity, justice and doing good, extrinsic motivations arise from achieving goals and receiving rewards for success. Striving for a higher purpose is crucial as focussing solely on fulfilling physical desires or selfish ambitions can lead to temporary happiness and even regression and unhappiness.

On the contrary, the avoidance regulation system is our natural tendency to avoid pain and overcome adversities (Wong, 2010a). It involves primitive defence mechanisms such as fight, flight and freeze responses as well as intentional coping strategies. This system also includes warning signals that protect individuals from potential threats and harmful situations. Some people may choose to ignore, avoid or deny their problems or resort to substance misuse and other distractions to avoid facing the painful realities of life. However, these efforts are ultimately futile because existential and situational problems will inevitably trap them. Ironically, existential anxieties can be beneficial in encouraging us to live with vitality and authenticity. Accepting negative conditions as opportunities for growth can strengthen our approach to life and may lead to inspiring stories of tenacity and heroism. Therefore, negative experiences and emotions can be invigorating and enriching.

The dual-system model postulates that approach and avoidance systems work together in that certain levels of avoidance can actually improve approach behaviours (Wong, 2011b, 2012d). When a person is motivated by the fear of failing and the desire for success, they tend to work harder than when only motivated by the latter. The main goal of this model is to realise a fulfilling life by connecting positive emotions and experiences with the existential pursuit of coping with human suffering, transcending it and discovering meaning by attending to contextual factors and adaptive processes in both positive and negative conditions (Wong, 2011b, 2012d).

Wong (2011b) and Lomas (2016b) concurred that SWPP offers a balance to the positive valence of PP as its dialectical approach acknowledges the complex relationship between positive and negative phenomena in that positive outcomes and increased flourishing can be consequential to positive emotions and traits as well as the negative. PP as a field is dynamic and continues to evolve into greater complexities, described in the following section.

2.2.3. Third Wave of Positive Psychology

According to Lomas et al. (2021) and Wissing (2022), PP is currently developing into a third wave with its scope orientated towards greater complexity. The emphasis is on incorporating knowledge and methodologies from diverse fields by focusing on the groups, organisations, cultures and systems in which people and their well-being are embedded (Lomas et al., 2021; Wong et al., 2022). Accordingly, this translates to an understanding and embracement of human well-being, happiness and overall optimal functioning. Third wave PP provides a transformational aspect of how happiness, strength of character and well-meaning emotions can evolve into a more comprehensive form of positive psychology (Lomas et al., 2021).

This recent evolution of PP also considers subjective elements of diversity, confusion and complexity, which it views as inclusive in the range of experiences located within a sense of well-being. For PP to be fully operational and functional, negative factors and experiences are included as components of PP. True happiness cannot be experienced until one has experienced sadness; similarly, light can only be appreciated after an encounter with darkness. Therefore, the negative aspects associated with PP build rigour and resilience; such adversity is an essential element to understand this important aspect of psychology. The third wave also includes acceptance-based practices and awareness so that the positive and negative aspects of the present

are accepted. The focus of the third wave is beyond satisfying current happiness needs but rather a feeling of fulfilment and sense of direction and accomplishment. Such a perspective is developed and achievable when directed towards valid objectives, enabling self-actualisation and the exploration of personal capabilities and strengths (Lomas, 2016b; Wong, 2015). Optimal functioning involves complex and interactive processes that include predispositions and experiences. This occurs in a nested ecological system that comprises the individual and many other layers of influence that support and guide development. Although PP has been criticised for ignoring the influence of the larger context in favour of focussing on the individual (Wissing, 2022), advances within the PP third wave towards interdisciplinary perspectives that better address the complexity of human behaviour have started to address this limitation in different contexts (Lomas et al., 2021).

The African notion of Ubuntu corresponds with the PP third wave consideration of broader cross-cultural non-Western perspectives of well-being. According to this perspective, understanding people cannot occur outside of their community context as "a person is a person through other persons" or expressed differently, "I am because we are" (Desmond Tutu Peace Foundation, 2013; Tutu, 1992, p. 35). Hence, our humanity is intricately connected to others and by displaying Ubuntu, we become better humans and realise a good and worthwhile life (Metz, 2014). Moreover, when positive emotions such as empathy and positive actions are positively oriented towards others, everybody is enriched (Desmond Tutu Peace Foundation, 2013). The current study concurs with the PP third wave through Ubuntu as it enhances and brings an African perspective to PP that acknowledges and incorporates the cultural and contextual influences of participants living in a resource-constrained South African community. In adverse circumstances such as those experienced in South Africa, the concept of Ubuntu involves the

identity of an individual and comprises a sense of belonging to a group and a feeling of solidarity because of unselfish actions of mutual aid in which actions are orientated towards the collective so that such actions are anticipated to benefit every person in a group or community. This concept of benefit to all can be extended to include nature and is presented in Section 2.4.2.

2.2.4. Summation

Positive psychology is a rapidly expanding field of psychology whose evolution has been described in three interrelated yet individual waves (Ivtzan, Lyle, et al., 2016; Lomas & Ivtzan, 2016; Lomas et al., 2021). While the PP field is still in nascence, global scholarship is expanding, indicating PP's applicability to non-WEIRD contexts, including South Africa. As a field of psychology, PP adopts scientific methods to research and understand what is right with people and implements effective interventions that enable regular people, groups and communities to realise their potential, feel good and function optimally (Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000; Seligman et al., 2005; Seligman, 2019; Sheldon & King, 2001). However, PP has been criticised with regard to an overly positive valence that disregards the negatives associated with living. The PP field has responded receptively with a flexible growth response and emerged into a new development phase (Ivtzan, Lyle, et al., 2016; Lomas, 2016b; Lomas & Ivtzan, 2016). Subsequently, an evolution encompassing second and third waves of PP, which led to the emergence of a more holistic integration of theories and practices that deepen the insights and impact of FWPP occurred (Lomas et al., 2021).

In addition to his major contribution to SWPP scholarship, Wong (2011b, 2015, 2019a) also emphasised the intrinsically existential-humanistic nature of PP. He has not ascribed to the wave metaphor like Lomas and Ivtzan (Ivtzan, Lomas, et al., 2016; Ivtzan, Lyle, et al., 2016; Lomas, 2016a, 2016b; Lomas & Ivtzan, 2016), but has viewed PP 2.0 as a paradigm shift

complexity within PP known as existential positive psychology (Wong, 2016c, 2021b), thus evidencing PP's maturation (Flora, 2019; Ivtzan, Lomas, et al., 2016). Existential psychology (EP) as a theoretical framework informing EPP is discussed in the following section.

2.3. Existential Psychology

Existential psychology (EP) is a humanistic psychology that applies existential philosophy to humanistic psychology, incorporating existential concerns about human life into the humanistic study of what it means to be human. This approach prioritises human choices, decisions and appreciation for life's awe-inspiring qualities (Schneider, 2014). EP views anxiety as inherent in human existence and advocates that people need meaning in a meaningless world and make choices aligned with individual authentic desires (Koole, 2010). Authenticity requires the integration of positive and negative emotions, experiences and events as well as implementing actions to meet life's challenges directly to grow (Price, 2011; Schneider, 2014; Winston, 2015).

Humanistic psychology emerged in response to the psychoanalytic and behaviourist schools, with a non-reductionistic view of humans as an integrated whole, recognising that a person is a process, a combination of factors superseding the sum of their individual aspects (Bugental, 1963; Clay, 2002). In addition, priority is given to understanding the person's subjective experience of themselves and their reality and viewing the therapeutic process as a collaborative, authentic relationship where individuals are responsible for their change process (Bugental, 1963). In essence, humanistic psychology is primarily concerned with the quality of human experience and adopts an optimistic, constructive view of humans (Froh, 2004; Waterman, 2013). Furthermore, it is traditionally associated with hermeneutics, phenomenology and qualitative research (Clay, 2002).

Existential psychology is humanistic in that it is concerned with the quality of human experiences. However, its roots are in existential philosophy and primarily based on the work of pioneering existential philosophers such as Kierkegaard, Nietzsche and Heidegger who, together with more contemporary writers like May, Frankl and Yalom, contributed significantly to writings about the anxiety inherent in human existence, humans' need for meaning in a meaningless world and the importance of authentic autonomous decision-making (Koole, 2010; Wong, 2017). Heidegger noted that humanism's response to the question of what it means to be human is the essence or nature, and not the existence, of the human being (Wong, 2017). On the contrary, existential thinking is concerned with the human lived experience and potential related to being in the world, thereby emphasising existence before essence (Bretherton & Ørner, 2004).

Yalom (1980), often referred to as the father of existential psychology, stated that existential psychology encourages people to look within and attend to their existential situation. It is concerned with inescapable aspects of human existence and encompasses the entire human condition, capabilities and aspirations, including limitations and struggles. Emergent are five major existential concerns or anxieties (Bretherton & Ørner, 2004). First, death refers to the psychological conflict between an awareness of the inevitability of death and desire to continue living. Second, isolation emanates from the tension between the need for connection to others and experiences of rejection, with the realisation that the experience of reality is subjective and never fully shared by others. The third concern is related to identity and the conflict between the desire for a clear sense of self and how one fits into the world versus uncertainties due to tensions between aspects of self, unclear boundaries between self and non-self or limited insight into self. Fourth, freedom originates from experiences of tension between free will and external forces on behaviour coupled with the burden of responsibility for choices. Finally, meaning

stems from a conflict between the desire to believe that life is meaningful and the events and experiences that appear to be random and inconsistent with personal sources of meaning.

Frankl (1969, 1988a) contended that as meaning seekers, humans find meaning through creative experiential and attitudinal values. Furthermore, by acting in accordance with these values, finding meaning in the face of adversity and suffering is possible. Wong (2017) concurred by identifying the role of meaning within existential perspectives as a pathway to survival and flourishing in a chaotic, meaningless world. Accordingly, existential psychology complements PP through its concern with living meaningfully by engaging with life and acting consistently with our values as well as in the ability to seek happiness and significance amidst suffering and death by exploring the essentials of human existence (Frankl, 1969; Wong, 2010; Yalom, 1980).

A further existential perspective is related to the dual concern of the limitation of necessities and possibilities (Bretherton & Ørner, 2004). Necessity refers to the unavoidable and non-negotiable givens of life. Many of life's givens such as death, our family and the way the world is are not chosen by us but thrust upon us by life. On the contrary, possibility refers to the openness of existence to enable us to determine our experience within what is available to us. Frankl (1967) noted we have freedom to choose; we can choose how to relate to life, how we define ourselves and how we view the world. Moreover, in times of adversity, outside of our control, we have the freedom to find meaning by acting in accordance with our attitudinal values to choose the stance we take towards such circumstances. This perspective does not ascribe to a pessimistic, optimistic dualism; rather, it is neither one nor the other. Instead, it offers hope that meaning can be found even in the face of unchangeable givens, for example, amidst the tragic triad of pain, guilt and death (Bretherton & Ørner, 2004; Frankl, 1988a).

As an integration of PP and EP, EPP is greater than the sum of its constituent parts and thus is identifiable by unique characteristics. The characteristics of EPP are presented in the following section.

2.4. Existential Positive Psychology

Early in the PP's history, Wong proposed existential positive psychology as "the mature, positive psychology of how to live and die well in spite of the conflicts and tensions that pervade human existence (Wong, 2004)" (Wong, 2021b, p. 3). The vision of EPP is to assist people to address suffering and help them find hope for a better future as transforming suffering provides a starting point for sustainable flourishing (Wong et al., 2022). Wong et al. (2022) motivated EPP as a second paradigm of PP (PP2.0), that is embedded in the waves of PP, and EP. It encompasses SWPP's extension beyond a sole focus on the positive (FWPP) with its complex nuanced perspective of positive and negative, emphasising dialectical nature and seeking to harmoniously assimilate such dichotomous elements into an integrated whole in the service of optimal human functioning. While incorporating the third wave commitment, this approach also emphasises the inclusion of diverse fields of knowledge claims and methodologies that focus on the groups, organisations and socio-cultural systems in which individuals and their well-being are embedded (Wong, 2016a; Wong et al., 2022). Wong and colleagues conceptualised these changes as reflective of fundamental shifts in principles, theory, research and practices associated with a paradigm shift, rather than gradual change reflected by the wave metaphor (Wong, 2011b; Wong et al., 2022).

Furthermore, Wong (2016c, 2021b) motivated two reasons for the amalgamation of EP and PP. First, EP is more orientated towards negative feelings, anxiety, death and even alienation and, accordingly, does not fully represent what life is about. Second, it could be argued that PP is

naïve as it does not acknowledge the challenges and problems that occur during life's journey. Furthermore, EP is equally naïve as it focuses only on darkness and negativity and does not pay enough attention to the joy of living. The resultant argument is that life or optimal living encompasses both PP and EP, as life can only be viewed as contained within these two variable domains of psychology, thereby resulting in EPP (Wong, 2010b). Accordingly, EPP aims to broaden the perspective on the positive aspects of life to include inevitable times of adversity and suffering that we all experience. It teaches us how to maintain a positive outlook and lead a fulfilling life, even during the most trying and difficult moments of life (Jans-Beken, 2021; Wong, 2021b; Wong et al., 2022).

Moreover, EPP as a scientific paradigm of PP highlights the importance of meaning in life. EPP seeks to discover truths about human existence, survival and the meaning in life. As individuals, we strive to understand our purpose and become authentic while dealing with our existential anxieties (Flora, 2019; Nel & Govender, 2022; Wong, 2010b, 2016c). Hence, EPP is "the study of ultimate concerns through integrating both positive and negative aspects of the human condition in order to create a better future for self and others" (Wong, 2009, p. 361). The nascent assumptions of EPP extend beyond those of PP and are subsequently presented.

2.4.1. Tenets of Existential Positive Psychology

The tenets of EPP fall into three broad categories. First, human suffering is an existential given, allowing people, organisations and communities to flourish and prosper by reflecting on and acknowledging adversity and suffering. Second, by recognising that all things in life present dichotomously and by dialectically balancing the dark (negative) and light (positive) sides, the good life can be realised. Finally, flourishing is context dependent, meaning that cultural and contextual complexities embed people's ability to flourish and maximal levels of flourishing

require both individual and world flourishing (Bretherton & Ørner, 2004; Nel & Govender, 2022; Wong, 2010b, 2011b, 2016c, 2021b; Wong et al., 2022).

2.4.1.1. The Universality of Suffering

The unpredictability, uncertainty and suffering of life is a fundamental assumption that no amount of positive thinking can change (Emmons, 2013; Frankl, 1967, 1969, 1988a; Yalom, 1980). This existential given that all people suffer arises for a variety of reasons, varying from internal phenomena such as painful memories, inner demons, character defects, self-destructive habits and desires to hurt others for personal gain or sacrifice self for justice to external phenomena, including natural disasters, accidents, discrimination due to unequal social, political and economic policies impacting poverty, unemployment and lack of access to mental health services (Wong et al., 2022). The notion of suffering is central to EPP, as it is impossible to live without experiencing some form of adversity that brings pain (Frankl, 1969; Wong, 2016c).

However, EPP does not regard the dark side of human existence, suffering and adversity as "problems" to be solved but they are accepted as integral to human existence; the non-negotiable givens of life (Rajkumar, 2021). A caveat is that if suffering is avoidable, it should be circumvented because to suffer for its own sake is unnecessarily masochistic and not heroic (Frankl, 1988a). Although we have freedom of will, we are not free from the consequences of our choices. Choice brings responsibility for our actions and their effects on the people and events we encounter. Therefore, we have a responsibility to ourselves and others to make decisions leading out of suffering. Nevertheless, in moments out of our control, those moments for which we are not responsible, we are challenged to transform into meaning through our attitude towards the situation (Frankl, 1969; Wong, 2020a). Hence, we are required to adapt by viewing favourable and adverse contexts and scenarios as potentially beneficial over the longer

term. This translates to a scenario in which the best in people is brought out during good and bad times regardless of personal and circumstantial limitations. Consequently, EPP considers people's "distress, deficits, dysfunctions, and disorders along with their assets, abilities, strengths, and skill" (Rashid & Al-Haj Baddar, 2019, p. 334). Accordingly, we cannot achieve a life worth living through momentary pleasure and denial but rather by meeting suffering head-on and transforming it into opportunities for meaning, wisdom and growth, with the final objective being the emergence of an authentic, mature, fully functioning human being (Whillans et al., 2020; Wong, 2012a). It is through dynamically balancing positive and negative life forces that flourishing and joy can be attained amidst suffering (Wong et al., 2022).

2.4.1.2. The Dichotomy and Dialectical Balance of Dark and Light Life Experiences

This is a multidimensional tenet that encompasses polarity, balance and harmony, and true positivity (Wong et al., 2022). Polarity suggests that all things in nature exist as two opposite yet complementary dimensions. Balance and harmony refer to the notion that inner peace and flourishing result from balancing an individual's different and often competing dimensions. True positivity involves seeing or being the light in times of darkness and suffering. Accordingly, positivity is not defined in terms of a positive-to-negative ratio but is based on a person's ability to turn negatives into positives, thus being able to accept and transcend negative emotions and situations in order to grow and flourish.

Sustainable wellbeing requires actions to enhance flourishing in addition to actions oriented towards the transformation of suffering. In such actions there is an inevitable tension between dual polarities of existential anxieties and positive life experiences (Wong, 2016c). According to Wong (2006, 2010b, 2015, 2016c, 2017, 2021b), EP's rationale that people become free to appreciate the significance of life by facing their deepest existential fears of freedom,

isolation, death and meaning (Yalom, 1980) is negative because it does not pay sufficient attention to the pleasures experienced in life. Consequently, people fail to recognise the inherent positivity in human courage and responsibility when confronting existential anxieties to live authentically. Thus, Wong (2010b, 2016c) proffered two additional positive existential themes: personal identity and happiness. Human flourishing requires balance and harmony of all six types of existential anxieties despite previously noted dualistic tensions. Therefore, the following six recurrent EPP themes of human existence, which may remain latent in some people, emerged (Wong, 2010b, 2016c; Wong et al., 2022):

1. **Identity crises and the quest for authenticity.** Identity crises can occur at any time in our life. They involve an ongoing struggle to define ourselves when we experience major life transitions or turmoil. According to Wong (2016c) self-knowledge is essential to understanding who we are and what we want from life. When we lack self-knowledge, we may experience discomfort, which can lead to an identity crisis. However, this discomfort is necessary to begin a personal quest for authenticity and self-knowledge. Authentic individuals take responsibility for their own lives and do not conform to the group if it opposes their true nature and values. The journey towards authenticity often begins with a moment of awakening, a deep conviction about core values and a felt sense of one's authentic identity. This journey can be risky and challenging and may involve suffering, particularly when it counters social norms. Therefore, the quest for authenticity and meaning may not always concur with pursuing happiness and the good life.
2. **Crises of discontentment and the quest for happiness.** Sustainable flourishing involves balancing contentment and healthy discontentment. Even though

contentment may be equated to happiness as optimal satisfaction with life, chaos and death may prevail as we will have nothing for which to strive. On the contrary, discontentment increases dissatisfaction with life , which can motivate personal growth and social reform (Frankl, 1988a). Discontentment is a part of human nature and EPP distinguishes between healthy and unhealthy discontent. While destructive discontent is represented by blind ambition and greed, healthy discontent involves striving for higher values and greater virtues (Wong, 2016c).

EPP views the ideal of maximising happiness or optimising life satisfaction as unrealistic and counterproductive to flourishing. It embraces Frankl's (1988a) view that happiness cannot be pursued, but ensues when we pursue meaning and authenticity. Accordingly, EPP emphasises an enduring form of happiness characterised by sustained contentment and inner peace. This mature form of happiness is founded on the human ability to achieve balance and self-transcendence. Self-transcendence involves selflessly orientating oneself towards something outside or greater than oneself, which can be achieved through serving others or through acts of love (Frankl, 1988a; Wong, 2021a). This type of happiness is more resilient to the negative impacts of adversity. EPP advocates three types of mature happiness: (i) authentic happiness arising from being an authentic person; (ii) eudaimonic happiness arising from conducting virtuous deeds; and (iii) chaironic happiness arising from our spiritual nature (Wong, 2009; Wong & Bowers, 2019).

3. **Meaninglessness anxiety and the quest for meaning and purpose.** Existential anxiety caused by meaninglessness might be the most pervasive issue that has a negative effect on all aspects of our lives. As we approach death, our greatest fear is

often not the act of dying, but rather the realisation that we have not lived a fulfilling life. Moreover, the lack of meaning and purpose, also known as an existential vacuum, has been noted as the root cause of many personal and societal problems (Frankl, 1969, 1988a). On the contrary, having a clear sense of meaning and purpose is essential to maintaining positive mental health; thus, the quest for meaning and purpose lies at the core of EPP (Wong, 2020a).

Frankl (1969, 1988a) outlined three values that are necessary for a meaningful life and encompass the entirety of our experiences of meaning: (i) creative values, which involve giving of ourselves to the world through our creative endeavours; (ii) experiential values, which refer to receiving something from the world such as love, beauty and other positive experiences; and (iii) attitudinal values, which comprise adopting a positive attitude or stance towards negative situations that are beyond our control.

Building on Frankl, Reker and Wong (1988) proposed four levels of meaning sources, each reflecting an increasing depth of meaning in life. The first level focuses on self-centred pursuits of pleasure and comfort (self-preoccupation), while the second centres on realising personal potential (individualism). The third level involves serving others and committing to causes larger than oneself (collectivism). Finally, the fourth and deepest level emphasises transcendent values, cosmic meaning, and ultimate purpose (self-transcendence). Individuals who find meaning at higher levels (3 or 4) experience a deeper, more profound sense of purpose than those focused on lower levels (1 or 2), where meaning is derived from self-interest (Reker & Woo, 2011). This hierarchical structure implies that as individuals strive for greater

meaning, they can better integrate life's contradictions and find purpose even amidst existential challenges.

4. **Isolation anxiety and the quest for community.** Isolation anxiety can arise from the realisation that our attachment to others is often impermanent since people change and leave us through separation and death (Yalom, 1980). Displacement and alienation in a competitive and impersonal world can further increase our sense of isolation and loneliness. Notably, the breakdown of social institutions and communities, such as family and community, is contrary to human nature because we are wired for relationships and meant to be social beings (Siegel, 2020). According to Wong (2016c) EPP emphasises building authentic relationships and belonging to a supportive community. Living a good life is inherently relational. Furthermore, community is a powerful antidote to isolation anxiety because we have a deep-seated longing to belong to a safe and supportive place where we are accepted as a significant member. Nevertheless, the community is fragile and can easily be disrupted by selfish and inconsiderate acts. Positive communities are built with empathy, kindness, tolerance and self-sacrifice. A collectivist orientation is required to balance our individualistic tendencies because our lives are enhanced by the vitality and harmony of the group to which we belong (Wong, 2010b). Nonetheless, even when we experience satisfaction from our intimate social network, we remain solitary beings. EPP accepts isolation as an existential given and recognises that it is through loneliness that we seek relationships and intimacy as major sources of personal meaning (Wong, 2016c).

5. **Freedom anxiety and the quest for responsibility.** Freedom can present challenges for us. While too much freedom can be overwhelming and lead to anxiety, too little can cause despair and fatalistic thinking. Freedom comes with responsibility: response-ability is the ability to respond to the meaning offerings in each situation (Fabry, 1988). Although we are free to choose our response in each situation, we are not free from the consequences of those choices. Therefore, we are responsible for the outcomes of our decisions based on our own volition. Choices made irresponsibly will not be fulfilling. Frankl (1969, 1988a) further cautioned that freedom without responsibility can negatively impact our flourishing and lead to feelings of emptiness, frustration, despair, addiction, violence, neurosis and even suicide. EPP aims to discover the right balance between freedom and responsibility for a healthy and fulfilling life.
6. **Death anxiety and the quest for death acceptance and self-transcendence.** Death anxiety is a challenge for PP because it is not a positive trait, experience or organisation. However, for EPP, death anxiety serves as a catalyst for personal and spiritual growth (Wong, 2010b). Death is an inevitable part of our existence. Furthermore, life and death are interconnected (Yalom, 1980). We are aware of our mortality and often fear what is beyond death. Our ability to reflect on the meaning of life and death can create further existential anxiety. Although we cannot escape death, our capacity for spirituality and meaning-making can help us create personal narratives that transform death anxiety (Frankl, 1969, 1988a). If we consider death as a reminder of our mortality and the importance of living authentically, then death anxiety can facilitate death acceptance and encourage self-actualisation and self-

transcendence (Wong, 2014b; Wong & Tomer, 2011). Paradoxically, confronting death is imperative for us to live a meaningful and fulfilling life (Frankl, 1967; Wong & Tomer, 2011).

2.4.1.3. Flourishing Occurs Within Context

According to the SWPP dialectic principle of appraisal, it is impossible to understand the good life separate from the contexts in which it occurs, regardless of whether the conditions are negative or positive (Lomas & Ivtzan, 2016; Lomas et al., 2021). Contexts can be intrapsychic or environmental. Just as dispositional factors such as strengths and weaknesses are relevant, so too are cultural, societal and environmental factors in determining optimal experiences (Wong, 2011b). Hence, optimal functioning depends on a complex intertwinement of personal growth, social impact and meaning-making for individuals and the community (Delle Fave & Bassi, 2009). Therefore, while circumstances characterised by crime, corruption, injustice, oppression, violence and poverty can be incredibly challenging, it is possible to transcend such difficulties and flourish.

Applying dialectical principles brings hope to flourishing by balancing positive and negative emotions, experiences, events and meanings within life's challenges. By identifying such experiences as meaningful, the ability to transcend life's challenges is promoted, thereby allowing people and communities to flourish in an imperfect world. EPP provides a framework of possibility and hope for individuals, communities and the world to flourish despite life's challenges. This framework is especially relevant to this study, as it directly addresses the profound challenges to flourishing and living a meaningful life in the face of crime, corruption, injustice, oppression, violence and poverty, which are daily realities for the participants, as noted in Section 1.2. Through EPP, these adversities are not only acknowledged but also positioned as

catalysts for fortitude and growth, offering participants a pathway to find hope and meaning even in the most difficult circumstances.

2.4.2. Differentiating between Positive Psychology and Existential Positive Psychology

Despite Seligman purporting that PP included understanding happiness, suffering and their interaction, enhancing happiness and reducing suffering were considered separate endeavours (Linley et al., 2006; Seligman & Csikszentmihalyi, 2000). In contrast, EPP regards happiness and suffering as interdependent pursuits. Regardless of peoples' intrapersonal and contextual limitations, the aim is to bring out the best in people in good and bad times. If the question, "How can I be happy and satisfied with my life?" is addressed by PP, then EPP seeks answers to questions about how we make sense and find a reason for our existence (Wong, 2016c). Hence, EPP addresses fundamental questions relating to human existence: "(i) Who am I? (ii) How can I be happy? (iii) What should I do with my life? (iv) How do I make the right choices? Where do I belong? (vi) What is the point of striving when life is so short" (Wong, 2010b, p. 2). Grappling with and resolving these six existential questions is essential to flourishing because it allows us to confront the negative existential givens and to grow, individually and collectively, through opportunities presented by challenging encounters with life (Wong, 2010b, 2016c). Consequently, the complexity of our arriving at flourishing requires us to journey through the dark and challenging aspects of the human experience; suffering and its transcendence to live a worthwhile life and flourish is central to EPP (Wong et al., 2022).

While Lomas (2016b) and Ivtzan, Lomas, et al. (2016) extended the concept and interpretation of PP, in the current study, it is argued that second wave PP concurs with EPP as it recognises and leverages a subtle contextual understanding of positives and negatives, acknowledging that they can be integrated into one experience. Furthermore, flourishing is a

dialectical balance of life's positive and negative aspects. EPP values the subjective human experience of existence and adopts a positive theoretical approach to dealing with existential anxieties, acknowledging that authentic living requires courage and responsibility to confront existential anxieties. Accordingly, EPP moves beyond the dark existential focus on human anxieties of death, isolation, meaninglessness, choice and absurdity (Yalom, 1980) to include the pleasure humans experience in living – happiness and authenticity (George & Park, 2014a; Schneider, 2014; Wong, 2010b, 2016c). Existential yearnings for love, meaning and faith are balanced with the dark emotions of guilt, shame and fear or Frankl's (1969) tragic triad of guilt, suffering and death, as well as with themes of personal identity and the pursuit of happiness (Wong, 2021b; Wong et al., 2021). The mission of EPP is to reduce human suffering and transform it into flourishing by accepting and transcending life's positive and negative experiences (Wong, 2021a; Wong et al., 2022).

Hence, flourishing is an important meta-concept in PP and EPP. However, their emphasis differs. PP is concerned with virtues and individual signature strengths (Lopez & Snyder, 2009; Peterson & Park, 2011; Peterson & Seligman, 2004; Snyder et al., 2011) taking a value-neutral empirical stance (Wong, 2015). On the contrary, EPP underlines that survival and flourishing require actions consistent with universal core values (Wong, 2010b, 2011b), thereby advocating for the cultivation of values such as human dignity, kindness and integrity as precursors to producing more moral and good human beings and kinder, gentler societies. EPP argues that the enhancement of individual signature strengths will not achieve such humanistic ideals (Wong, 2015). High levels of flourishing are thought to originate from living virtuously to the best of our potential, pursuing meaning and being resilient by overcoming difficulties (Wong, 2011b). Wong et al. (2021) purported that flourishing is contingent upon the ability to accept and transform

suffering into positive outcomes such as redemption, resilience, hope and happiness. Therefore, EPP's emphasis on human capacities to flourish in the face of adversity and for positive development qualifies it as positive.

An additional consideration is methodological in nature. PP researchers prioritised positivistic quantitative research methods and minimised the value of qualitative research methods and people's subjective experiences (Waterman, 2013). However, EPP addresses the critiques of PP's purely positivistic inclinations by combining existential humanistic qualitative research approaches, thereby allowing for both a qualitative and quantitative study of what enables individuals and groups to survive and flourish in a wide range of life circumstances. This holistic approach considers the totality of a person's experiences, thus providing a more comprehensive understanding of the complexity of facets of overall well-being as per second and third wave PP (Wong, 2010b).

In conclusion, EPP provides a broader perspective of PP as the study of the totality of life through integrating positive and negative aspects of the human condition and seeking evidenced-based positive solutions to life's existential crises to create a better future for self and others (Wong, 2021b; Wong et al., 2022).

2.4.3. Summation

In summary, EPP is a theoretical perspective committed to answering the fundamental question of what makes life worth living and how to enhance everyone's quality of life under all circumstances. It is the dialectical synthesis of the thesis (existential psychology) and the anti-thesis (PP) (Wong, 2021b). The resulting synthesis expands the focus from life's exclusively positive side to include life's inevitable times of adversity and suffering. By overcoming adversity, we grow psychologically and spiritually and live authentic lives (Wong, 2010b,

2016c). EPP's mission is to reduce human suffering and transform it into flourishing (Whillans et al., 2020). Flourishing emerges from suffering by integrating the dark and light sides of life and existential wisdom through the dialectical process of navigating between opposites (Wong, 2023). Therefore, this theoretical perspective is particularly applicable to those living in societies where there is a continual struggle for survival. The participants of the current study were regular people who lived in a resource-constrained community in South Africa, thus making EPP particularly relevant to them (Nel & Govender, 2022; Wong, 2012a, 2012c). EPP aligned with third wave PP creates the possibility of amalgamating diverse knowledge claims (Wong, 2016a), paving the way for accepting the pertinent incorporation of environmentally-orientated psychologies.

2.5. Eco-psychology

Doherty (2011) proposed a provisional framework for environmentally focused psychologies, recognising the synergy between human mental health and well-being and the health and ecological integrity of the natural environment. Consequently, studies employing this theoretical perspective to examine connections between human beings and nature utilise ecological and psychological philosophies, values and ideologies.

Eco-psychology focuses on how we are connected to and interdependent with the natural world (Doherty, 2011). It explores the psychological impact of our relationship with nature and considers how this relationship affects our identity, health and well-being. In essence, eco-psychology adopts a holistic and existential approach to understanding our relationship with the natural environment. The eco-psychological perspective acknowledges that humans are integral to the larger natural world, and connections to nature and other living beings satisfy an innate human need to flourish (Doherty, 2011; Hibbard, 2003).

While the integration of nature with psychology is not widely adopted in contemporary practices, it is not a novel concept. Historically, ancient healing traditions "took it for granted that human nature is densely embedded in the world we share with animal, vegetable, mineral, and all the unseen powers of the cosmos" (Roszak, 1992, p. 14). The American Psychological Association (2011) acknowledges that eco-psychology facilitates the inclusion of nature-based activities in mental health practices, highlighting the therapeutic potential of nature. Similarly, Le-Grange (2015) employed the ancient African wisdom of Ubuntu to advocate for its application as an eco-philosophy, emphasising ecological values and exploring the complex interrelationships between humans and nature.

The discourse on eco-psychology embraces a variety of perspectives, ranging from Ubuntu philosophy to the biophilia hypothesis. The subsequent sections examine these perspectives, including a discussion on Ubuntu and the biophilia hypothesis, before linking eco-psychology with PP. This approach illustrates a comprehensive view of the intrinsic connection between humans and the natural world and highlights the psychological benefits derived from this interdependence.

2.5.1. Ubuntu as an African Perspective to Eco-psychology.

Traditionally, the Ubuntu view of the human being is that we become more fully human through relationships with other human beings. Furthermore, we can only realise our true selves and live a good life through collaboration and valuing the other (Metz, 2014). Therefore, we cannot become fully human if we exploit, deceive and act unjustly towards others; instead, we realise our true selves and live a good life through collaboration and valuing the other (Desmond Tutu Peace Foundation, 2013; Tutu, 1992) . Community comprises independent and interdependent individuals and is found through connection and unity of purpose with others.

Accordingly, our humanity can only be defined through interactions with others. Furthermore, flourishing emanates from being in the community, having positive relationships with others and being self-differentiated (Boon, 1998; Desmond Tutu Peace Foundation, 2013).

In conceptualisations of Ubuntu, rarely has it been considered that the other could extend beyond the human to include the non-human (Le-Grange, 2015). However, the Ubuntu perspective of others acknowledges humans' deep connection to nature, believing that the earth is sacred, to be venerated and protected. Nature is viewed as the creator (UMvelinganqi) from which all life descended (Edwards & Hermann, 2022). Le-Grange (2015) expanded the understanding of Ubuntu from the anthropocentric to the eco-centric by proposing that caring for self and others does not have to be antagonistic towards caring for non-human environments and nature because of the mutual benefit of caring for self and nature. Therefore, the concept of Ubuntu as an unselfish and pro-collective attitudinal stance conveys an African cultural perspective to the notion of motivating the integration of the natural environment into contexts, thus promoting optimal functioning and the good life in alignment with third-wave PP.

2.5.2. Eco-psychology as Bridge between Psychology and Ecology

Unfortunately, in the quest to differentiate human inner experiences from the outer world, modern psychologies disconnected mental ill-health and flourishing from nature, resulting in attempts to understand the human condition in isolation from nature. The latter situation is reflected in the Oxford English Dictionary's early definition of nature as "The phenomena of the physical world collectively; especially, plants, animals, and other features and products of the earth itself, as opposed to humans and human creations" (Oxford English Dictionary, n.d.-a, Sense IV.11.a section). Interestingly, in this definition, humans are viewed as separate from nature. Only more recent definitions reflect a wider view of the external world that includes

human and nonhuman animals (Merriam-Webster, n.d.; Oxford English Dictionary, n.d.-b). These disparities in the definition of nature represent the historical sociocultural tendency of viewing humans in a vacuum, separate from nature, resulting in humans as entities of nature becoming increasingly disconnected. Hence, eco-psychology provides a bridge to overcome the divide between psychology and ecology perspectives to view the planet's needs and human needs as a continuum (Roszak, 1992).

Searles (1960) underlined that animals and nature "constitute one of the most important ingredients of human psychological existence, the ignoring of which is at peril to psychological well-being" (p. 6). In support of Searles' perspective, Louv (2011) coined the metaphor nature-deficit disorder to emphasise the significant negative impact of disconnections from nature on mental health across the human lifespan. While nature deficit disorder is not a conventionally recognised disorder, Louv alerted us to the harmful impact disconnection from nature has on our ability to live a life worth living.

Eco-psychology views an inextricable intimate interconnectedness between human health and the planet's health, thus, extending psychology beyond the belief that psychological health exists only through individual wholeness and human relationships (Hibbard, 2003). Hence, the primary notion of eco-psychology is that "nature is everywhere and humans are nature, not part of or in nature" (Dickinson, 2013, p. 330).

2.5.3. Biophilia Hypothesis

A central theoretical foundation of eco-psychology is the biophilia hypothesis of humans' innate need to affiliate with nature and other living beings (Wilson, 1984; Wilson & Kellert, 2013). This hypothesis postulates that humans evolved in natural environments and only relatively recently in our evolutionary history moved to live separately from nature, in cities.

Therefore, it is unlikely we have erased our learning about nature's value embedded in our biology, resulting in an inherent motivation to focus on nature and animals to satisfy innate needs to connect to other living beings (Johnson, 1994). Evidence of our biophilic tendencies may be found in our powerful responsiveness to nature's presentations, processes and patterns, as evidenced by the popularity of outdoor activities, visiting wildlife parks, enjoying natural scenery and our relationships with animals (Nisbet et al., 2011).

2.5.4. Eco-psychology and Positive Psychological Functioning

Multiple authors have identified the knowledge of biophilia as a valuable contributor to the design and implementation of mental health promotion interventions (Fretwell & Greig, 2019; Frumkin et al., 2017; Heerwagen, 2009). A robust body of literature has revealed that exposure to and experiences with nature offer a broad range of benefits to human physical and mental well-being (Ballew & Omoto, 2018; Capaldi et al., 2015; Frumkin et al., 2017; McMahan, 2018; McMahan & Estes, 2015). Franco et al. (2017) highlighted that many of the benefits people receive from nature accrue through the five senses of sight, sound, smell, taste and touch as well as non-sensory experiences, including exposure to phytoncides, negative air ions and microbes. The latter effects have been referred to as the hidden benefits of nature on human flourishing.

Other studies have shown that the subjective experience of feeling connected to nature is sufficient to facilitate psychological benefits such as mood improvements and increased happiness (Capaldi et al., 2015; Nisbet et al., 2011). In addition, a meta-analysis of 32 randomised controlled studies conducted by McMahan and Estes (2015) provided strong evidence that nature enhances emotional well-being by increasing positive and decreasing negative affect. Furthermore, Ballew and Omoto (2018) found that engrossed and captivating

experiences in nature fostered positive emotions. The benefit of nature-based interventions on positive psychological constructs is a common thread in research. Heilmayr and Miller (2021) found that a two-week nature-exposure intervention was as effective in improving participants' mental well-being as an intervention incorporating evidenced-based positive psychological activities. Two questions may be asked. First, can nature experiences and PP activities be combined in an intervention? Second, what is the resultant effect on mental well-being? This study integrated these questions in exploring a nature-based equine-human intervention's role in flourishing, meaning and hope.

An emerging body of research in the eco-psychology field has explored nature experiences as interactions with animals. Several recent reviews indicate that human relationships with animals have broad psychological benefits, including the amelioration of existential anxieties and positive effects on human flourishing (Amiot & Bastian, 2015; Capaldi et al., 2015; Heilmayr & Miller, 2021; Howell & Passmore, 2013; Howell et al., 2013; Joye, 2007; McMahan, 2018). Heilmayr and Miller (2021) cited studies that reported that experiences of touching animals have positive psychological benefits such as increased relaxation, decreased loneliness and enhanced frustration tolerance and stress recovery. In addition, they revealed that human-animal touch interactions activate the oxytocinergic system, resulting in increased social, emotional and psychological well-being.

However, there is a paucity of research on the relationship of nature to well-being in a South African context. Cocks et al. (2016) found that Xhosa-speaking rural and urban adults shared themes of the vital contribution of natural places to aspects of flourishing such as quality of life, family and community support networks, connection to ancestors and a sense of belonging. Based on the significant meaning of nature ascribed by the participants, these authors

recommended the inclusion of spaces and opportunities for interactions with nature in town planning.

Despite the growing body of research supporting therapeutic benefits derived through involvement with nature, there is a need for studies with follow-up assessments to ascertain the maintenance of benefits after exposure to nature-based interventions (Passmore & Holder, 2017). Fascinating and of specific relevance to this study are the recommendations in McMahan and Estes (2015) review supporting research that (i) expands the definition of well-being beyond initial PP constructs of positive and negative affect to include more complex hedonic and eudaimonic facets in addition to mediators of flourishing, (ii) measures the constructs at different points in time, and (iii) conducts studies in more traditional cultures and those living in low, middle-income countries (LMICs) such as South Africa. This study heeded these recommendations through its situational context, design and operationalisation of the central construct of flourishing and its mediating factors of meaning and hope.

2.5.5. Summation

Eco-psychology complements creating sustainable human-earth relationships rather than being a new therapeutic approach or subfield of psychology (Hibbard, 2003). An enhanced understanding of human connections with nature is promoted through interlacing ecology and psychology as it recognises the beneficial effects of nature beyond nutrition and homoeopathy to relationships and psychological well-being (Roszak, 1992). This perspective positions interactions with nature beyond cultural and individual preferences. Instead, contact with nature is imperative in satisfying universal human needs for connection. Humans not only need exercise and healthy nutrition to flourish but also connections to nature and animals (Heerwagen, 2009). Research has supported the positive, beneficial effects of psychological interventions that

incorporate nature to promote people's ability to feel good and function well (Logan & Selhub, 2012).

In conclusion, eco-psychology is part of a larger community of environmentally-focused psychologies concerned with humans and the natural or non-human environment, recognising the beneficial synergistic relationship between humans and nature for the survival and optimal functioning of both. However, the differentiator of eco-psychology is its focus on therapeutic, holistic and existential aspects of human experiences of connectedness and inter-being with animals and natural environments (Doherty, 2011). Consequently, eco-psychology is an appropriate component of the theoretical perspective of the current study.

2.6. Explanatory Framework: Eco-Existential Positive Psychology

Eco-Existential Positive Psychology (Eco-EPP) overlays ecopsychology on the existential positive psychology perspective. From this perspective, the human relationship to the larger natural world is a symbiotic, mutually beneficial cyclical relationship between individual human flourishing and the larger natural world's well-being (Passmore & Howell, 2014).

2.6.1. Defining Eco-Existential Positive Psychology

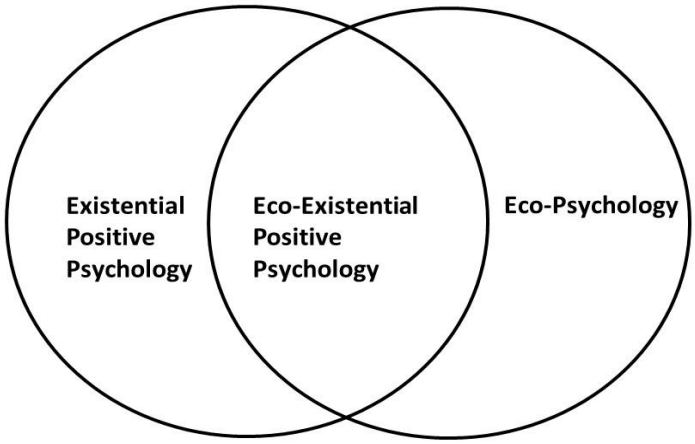
Eco-EPP is an umbrella term for existing and future research efforts dedicated to fostering an understanding of cultivating innate biophilic tendencies, relieving existential anxieties and promoting flourishing through experiences with the natural world (Passmore & Howell, 2014). The overarching ethos is that humans seek to establish relationships and associations with animals and the natural world to feel good, function well and live meaningfully (Gullone, 2000; Wood, 2016). Accordingly, this perspective views experiences with the natural environment as fundamentally significant in addressing the positive existential anxieties of

identity, happiness and the existential anxieties of isolation, meaning in life, freedom and death (Passmore & Howell, 2014).

Figure 2.1 depicts a pictorial representation of Eco-EPP as a theoretical perspective. It is defined by encompassing principles of EPP and eco-psychology paradigms, as presented earlier in this chapter.

Figure 2.1

Eco-Existential Positive Psychology Explanatory Framework



2.6.2. Tenets of Eco-Existential Positive Psychology

The central assumption of Eco-EPP is that affiliations with nature allow people to be optimally functioning human beings (Passmore & Howell, 2014; Passmore, Lutz, et al., 2022). May (1983) proposed that the healing or restorative power of connections to nature strengthens people's sense of self and combats feelings of anxiety relating to meaningless and isolation. One may argue that May provided the starting point of eco-EPP with his perspective that we can flourish and live a worthy life by connecting to nature. Moreover, May recommended incorporating nature into research, theory and psychological interventions (Softas-Nall &

Woody, 2017). Eco-EPP acknowledges that relationships between the natural environment and humanity are multifaceted and understood according to two central tenets regarding this relationship: (i) it is bidirectional, and (ii) it assuages existential needs. The two central tenets are subsequently presented.

2.6.2.1. The Relationship between Nature and Humans is Bidirectional

Human relationships with the larger natural world are not regarded as unidirectional but rather bidirectional in this perspective. On the contrary, humans' flourishing depends on the world's flourishing and vice versa (Softas-Nall & Woody, 2017). Furthermore, Passmore and Howell (2014) emphasised the symbiotic, mutually beneficial cyclical relationship between individual human flourishing and the larger natural world's well-being. Hence, from an eco-existential perspective, experiences of human-nature connections influence people's ability to flourish and find meaning and hope in life.

2.6.2.2. The Relationship between Nature and Humans Assuages Existential Needs

A further premise of the eco-EPP perspective is that cultivating our biophilic tendencies through experiences in nature assists us in addressing existential needs: death, isolation, happiness, identity, freedom and meaning in life. Specifically, people can appease these anxieties by embedding themselves into the larger cycle of life and existence. Nature assists by becoming a transcendent symbol of the life cycle and immortality (Passmore & Howell, 2014). According to Searles (1960), the transcendent features of nature also contribute to a reduction of existential isolation. Nature exposure assists in diminishing isolation through its positive effects on prosocial behaviour, which, in turn, improves our social well-being (Passmore & Holder, 2017).

Human identity formation occurs within a mixed species community as the formation of self is not only dependent on linguistic exchanges. Hence, animal interactions can contribute to

our subjective sense of who we are (Myers, 2003). Our relationships with wild and domesticated species and elements of the natural world, such as the landscape, can shape and enhance our sense of identity, creating a broader sense of self and a more collective identity (Leary et al., 2008; Myers, 2003; Sommer Harrits, 2011). The latter statement supports May's (1983) hypothesis that relations to nature significantly facilitate and maintain our sense of identity. Furthermore, the degree to which an individual incorporates nature into their identity is positively associated with flourishing (Capaldi et al., 2015; Howell et al., 2011; Nisbet et al., 2011). Contact and connection with nature positively influence the emotional and psychological facets of flourishing (Passmore & Howell, 2014).

At the core of the definition of meaning is that it connects things. Such connections operate on three levels: first, on a concrete level where things make sense within a changing world; second, through the belief that humans are part of a grander scheme; and third, on a transcendent level where we feel called by life to a higher purpose connected to our significance and worth (Baumeister, 1991; Baumeister & Vohs, 2002; Frankl, 1988a; Mascaro et al., 2004; Wong, 1998b, 2010a). These core elements of meaning can be found in nature (Passmore & Howell, 2014). Heintzelman et al. (2013) revealed that participants who felt that life is meaningful were sensitive to the coherence of nature pictures regardless of whether they included familiar or unfamiliar patterns and whether the patterns were relatively transparent or significantly less so.

Moreover, experiencing the natural world through cultivating our connections and relationships with nature can contribute to meaning in life (Davis & Gatersleben, 2013; Frankl, 1969, 1988a; Ward-Smith et al., 2020). Nature provides opportunities for realising our creative and experiential values as the provider of sources of meaning and orientations in our search for

meaning by, for example, painting and photographing animals or landscapes, viewing and appreciating awe-inspiring scenery, engaging in nature-based activities such as hiking and establishing relationships with animals (Frankl, 1988a; Johnson, 1994). Empirical findings have highlighted that meaning in life for adults is commonly associated with nature affiliation and experiences in natural contexts are commonly identified as sources of meaning (Nisbet et al., 2011; O'Connor & Chamberlain, 1996; Reker & Woo, 2011).

Wong (2010b) posited that both self-transcendence and religion are meaning sources that nature may influence. Empirical research has revealed that exposure to nature elicits a sense of awe, transcendence and a connection to something greater than self, for example, God and the universe, thereby contributing to meaning in life (Keltner & Haidt, 2003; Piff et al., 2015; Shiota et al., 2007).

Passmore and Howell's (2014) interdisciplinary literature review demonstrated the long-acknowledged link of nature to feelings of spontaneity and freedom. They proposed that natural environments create settings for us to strike a healthy balance between our existential needs for freedom and responsibility. This may be due to the immediacy of experiencing the consequences of actions such as dressing warmly when feeling cold. In addition, freedom-seeking acknowledges the need to overcome adversity, which is paralleled in positive and negative experiences induced by experiences with nature. When expending effort and possibly feeling frightened while ascending a mountain peak, one may experience awe and a sense of connection to the immensity of the universe, but simultaneously feel insignificant and small in relation to the vastness of the universe. Passmore and Howell (2014) proposed "that the raw, elemental, and dynamic push-pull of joy-fear, tranquillity-aliveness, isolation connectedness, danger-freedom

that nature experiences afford us is perhaps one reason that we are innately drawn to nature" (p. 380).

2.7. Conclusion

In this chapter, the contributing perspectives to the study's explanatory theoretical framework Eco-EPP, namely, eco-psychology and existential positive psychology (EPP), a merging of existentialism and PP, are explained. Eco-EPP views eco-psychology overlaid onto EPP in which both the positive and negative aspects of life are a reality. The overarching tenet is that humans seek to establish relationships and associations with animals and the natural world. Yet, while seeking to satisfy universal needs related to feeling good, functioning well and living meaningfully, they also accept the trials and tribulations that are part of life (Gullone, 2000; Wood, 2016). The human relationship to the larger natural world is a symbiotic, mutually beneficial cyclical relationship between individual human flourishing and the larger natural world's well-being (Passmore & Howell, 2014). Accordingly, this perspective holds that experiences with the natural world, including animals, cultivate our innate biophilic tendencies, thereby promoting benefits to flourishing by helping people address existential anxieties of meaning in life, isolation, freedom, death, identity and happiness ((Passmore & Holder, 2017; Passmore & Howell, 2014). Humans, animals and other living things existent within the natural environment are also subjected to EPP as all living things collectively experience both positive and negative aspects of natural existence and are subjected to the natural laws of nature.

In contexts with multiple life stressors challenging flourishing coupled with a lack of community-based psychological services, the Eco-EPP perspective creates hope that meaningful affiliations with nature and animals can address existential needs related to flourishing, meaning and hope in life. Based on drawing attention and focus via research within the context of an

under-researched and vulnerable population and a spotlight on those living in a resource-constrained urban South African community, the aim of this study was to contribute to the broad field of PP on a meta-psychological level. Furthermore, on a pragmatic level, the study aimed to contribute knowledge related to the influence of a nature-based PP intervention incorporating horses on qualities that enhance participants' lives from enduring and surviving to flourishing. In the following two chapters, the pragmatic contribution of the study is presented. In Chapter 3, the relevant literature and operationalisation of the study's central construct of flourishing and its significant facets of meaning and hope are discussed. The case for PP interventions incorporating horses as appropriate in mental health restoration and promotion in South Africa is the focus of Chapter 4.

Chapter 3. Flourishing, Meaning and Hope

3.1. Introduction

Chapter 3 presents an overview of the relevant literature on the study's dependent variables, namely, flourishing, meaning and hope. Flourishing is a meta-construct central to positive psychology (PP) and existential positive psychology (EPP) and is intricately associated with meaning and hope. The conceptualisation of these constructs and the research related to the study are described in this chapter.

3.2. Flourishing

Flourishing, which is often employed synonymously with mental health and well-being, is central to PP and EPP's concern with positive human functioning and well-being. This complex multi-dimensional state involves feeling good and functioning optimally. Combined with low levels of mental ill-being, it is regarded as indicative of high levels of mental health (see Section 1.1) (Hone et al., 2014; Patel et al., 2018; World Health Organization, 2001). The Oxford English Dictionary defines flourishing as "individuals' ability to thrive, prosper, or do well" (Oxford English Dictionary, 2024a, pp. flourish, v) . In psychological terms, flourishing represents a person's experience and evaluation that their life is good and has quality (Hone et al., 2014; Huppert & So, 2013; Lomas et al., 2023). While the term has been employed widely, its precise definition varies across different theoretical frameworks, leading to some ambiguity in the literature (Dodge et al., 2012).

3.2.1. Conceptualising Flourishing

The historical, theoretical development of flourishing in PP can be understood from two main perspectives, namely, hedonic and eudaimonic well-being (Biswas-Diener et al., 2009;

Disabato et al., 2016; Dodge et al., 2012; Huta & Waterman, 2014; Joshanloo, 2016; Keyes et al., 2002).

3.2.1.1. Hedonic Well-being

Hedonic well-being, which is rooted in hedonism, emphasises the pursuit of pleasure and avoidance of pain as the key to happiness and overall well-being. It encompasses both cognitive and affective dimensions, and focuses on positive emotions, including happiness, joy and satisfaction, while minimising negative emotions (Diener, 1984). Early PP conceptualised hedonic well-being as subjective well-being (SWB), which may be defined as the combined subjective state of feeling good, experiencing more positive than negative emotions towards life and being satisfied with life (Diener, 1984; Diener et al., 1985; Ryan & Deci, 2001). Authentic happiness theory links happiness to hedonic well-being, leading to its widespread use as a synonym for happiness (Delle Fave & Bassi, 2009; Seligman, 2002).

Research has identified life satisfaction as a distinct component of SWB, focusing on one's cognitive evaluation of life in accordance with personal criteria (Diener et al., 1985; Pavot & Diener, 1993). Cross-cultural studies have consistently associated hedonic well-being with high levels of positive emotions, low psychological distress (stress, anxiety and depression) and life satisfaction (Diener & Ryan, 2009; Keyes & Annas, 2009). Accordingly, it has been recommended that assessments of hedonic well-being include separate instruments for life satisfaction, psychological distress, positive and negative emotions, including affect balance (Diener et al., 1985; Diener & Ryan, 2009). While hedonic pursuits are common, an alternative view has suggested that true happiness may emanate from eudaimonic pursuits focused on living with purpose and realising one's full potential (Joshanloo, 2016; Lee & Carey, 2013; Steger, Todd, et al., 2008).

3.2.1.2. Eudaimonic Well-being

Eudaimonic well-being, which is rooted in Aristotelian philosophy, involves living in accordance with one's *daimon* or true self and finding meaning and purpose through the pursuit of virtue and moral excellence (Waterman, 1993). This approach emphasises fulfilling one's true potential, prioritising personal growth over pursuing pleasure (Henderson & Knight, 2012; Keyes & Annas, 2009; Ryff, 1995). Eudaimonic well-being does not focus on the subjective experience of pleasure and avoidance of discomfort but rather, emphasises goal attainment, realising personal potential and living a meaningful life, thus creating a more enduring sense of fulfilment (Ryan & Deci, 2001).

Within PP, theories such as psychological well-being (PWB) and self-determination theory (SDT) expand on eudaimonia by emphasising well-being as the result of fulfilling psychological needs such as autonomy, competence and relatedness (Deci & Ryan, 1985; Ryff, 1989). These theories assert that well-being stems not from mere pleasure but from living in accordance with one's values, engaging in meaningful activities and achieving personal growth (Ryan & Deci, 2001; Ryff, 2014a; Ryff & Singer, 2008). Wong (2011b) concurred that eudaimonia is grounded in a blend of meaning and virtues and can be understood from a meaning-centred perspective using the PURE model (see Section 3.3.2) in which well-being is realised through actions that reflect personal integrity and the greater good.

3.2.1.3. Flourishing as Complete Well-being

Integrating hedonic and eudaimonic perspectives has increasingly been recognised as essential for acquiring a comprehensive state of well-being. Henderson and Knight (2012) and Huta and Waterman (2014) contended that the most desirable form of well-being emanates from

a balanced synthesis of hedonic and eudaimonic elements, indicating that flourishing involves both the pursuit of pleasure and the cultivation of meaning for a fulfilling life.

Although there has been an ongoing debate about the empirical distinction between hedonia and eudaimonia, studies have revealed that these dimensions are highly correlated. Confirmatory factor analysis (CFA) has consistently demonstrated strong correlations between hedonic and eudaimonic well-being, particularly in diverse populations (Gallagher et al., 2009; Keyes et al., 2002). However, exploratory structural equation modelling (ESEM) has revealed that while hedonia and eudaimonia are related, they may also function as distinct dimensions (Joshanloo, 2016). Other studies have found that hedonia and eudaimonia are often sub-factors of a single overarching well-being construct across different cultures (Disabato et al., 2016; Kashdan et al., 2008). In South Africa, de Bruin and du Plessis (2015) supported the existence of a well-being factor, which comprised hedonic and eudaimonic elements. These studies have shown that a consideration of both perspectives is important for a comprehensive, culturally sensitive understanding of flourishing.

Contemporary PP literature has identified several conceptual models that integrate eudaimonic and hedonic components to capture well-being and human flourishing (Hone et al., 2014). Influential models widely accepted within the first wave of PP (FWPP) are subsequently outlined. First, Diener et al.'s (2010) Model of Flourishing integrates eudaimonic and hedonic elements of well-being, extending SWB to include psychological and social well-being. This model emphasises constructs such as competence, relatedness and social relationships and employs the Flourishing Scale (FS) to measure these dimensions. Second, Huppert and So's (2013) Model of Flourishing links flourishing to mental health diagnostic frameworks, using symptoms of positive emotions and characteristics, including resilience and self-esteem, and

positive functioning such as engagement and meaning to assess flourishing. Finally, Seligman's (2011) PERMA Model regards positive emotion, engagement, relationships, meaning and accomplishments as the building blocks of flourishing, each contributing independently to overall well-being.

However, from an EPP perspective, these models have several limitations. First, they focus primarily on positive states and functioning, lack engagement with life's challenges and overlook the role of existential concerns and suffering, which are essential for true flourishing (Lomas et al., 2021; Wong, 2020b). As stated in Chapter 1, flourishing is not merely the absence of mental illness. Second, to consider flourishing simply as the absence of mental illness may pathologise normal negative emotions and suffering (Hone et al., 2014) and underestimate the existential need for meaning in the face of life's inevitable struggles (Wong et al., 2022). Finally, as Lomas et al. (2021) suggested that these models misconstrue the intricate relational, communal and ecological dimensions of flourishing. Their emphasis on Western values of individualism and instrumentalism can distort life's purpose, potentially hindering authentic relationships and neglecting crucial aspects such as community, social justice and ecological sustainability. These models have limited applicability in broader, more diverse contexts by prioritising self-interest and personal achievement over collective well-being and ethical considerations (Cheng et al., 2021; Przybylko et al., 2021).

These limitations suggest the need for a more comprehensive framework that integrates both life's positive and negative dimensions (Ivtzan, Lomas, et al., 2016; Lomas & Ivtzan, 2016; Wong & Bowers, 2019). In response, EPP recognises that flourishing involves life's positive experiences as well as inevitable challenges, including suffering, existential anxieties, negative emotions and setbacks; hence, flourishing constitutes both the positives and negatives of life

(Mayer & Vanderheiden, 2020; Wong, 2011b). EPP emphasises that sustainable flourishing is the result of embracing these difficulties as essential components of life rather than avoiding and/or denying them (Wong et al., 2022).

In contrast to conventional views of happiness as a transient state of pleasantness without unpleasant feelings, there is advocacy for "mature happiness" within EPP (see Section 2.4.1), which is a deeper and more sustainable happiness characterised by contentment and serenity that transcends the hedonic pursuit of maximum happiness and life satisfaction (Wong, 2009; Wong & Bowers, 2019). This state of contentment involves accepting and integrating suffering into one's life through personal development (Lomas et al., 2023). From an EPP perspective, flourishing is a dynamic process in which individuals grow by transcending negative experiences and emotions. Self-transcendence is central to this growth. Personal potential is realised not by avoiding suffering but by engaging with it, overcoming its inherent challenges and striving for higher ideals in service of the greater good (Wong, 2021a). Balancing life's paradoxes affords individuals the opportunity to learn from positive and negative experiences, fostering flourishing (Wong, 2010b; Wong & Bowers, 2019; Wong et al., 2021). Of importance, flourishing is not a fixed state but can be cultivated and enhanced through intentional activities (see Section 4.2 and 4.3).

Some authors, including Keyes and Martin (2017), have advocated for eradicating suffering and viewed flourishing as the absence of suffering. However, the EPP perspective postulates that flourishing can coexist with suffering. Moreover, happiness arises from meaningful pursuits rather than being an end in itself. (Frankl, 1988a; Wong, 2014a). Keyes' (2002, 2005, 2007) Mental Health Continuum (MHC) model is particularly relevant within this perspective as the dual continua approach concurs with the World Health Organization's (2022b)

view that mental health is more than the absence of mental illness but also the presence of positive psychological functioning. The MHC model's framework conceptualises flourishing as a state of optimal functioning in which individuals manage stressors effectively and maintain integrity while interacting with their social environment positively (Hone et al., 2014; Keyes, 2002, 2005, 2007).

As detailed in Table 3.1, in Keyes' model (2005), flourishing individuals have reported high emotional, psychological and social well-being levels, thus meeting specific indicators of well-being near-daily. This model also recognises that even though individuals may experience psychological distress (such as depression, anxiety and stress), they can still flourish or achieve moderate mental health. On the contrary, those without mental illness may still experience languishing or diminished well-being (Keyes, 2002,2005). The MHC model's nuanced approach, acknowledging flourishing and distress, complements EPP's recognition of suffering as integral to the human experience.

Table 3.1

*Defining the 13 Dimensions of Mental Health as Flourishing (*Keyes, 2005, p. 541*)*

DIMENSION	DEFINITION
HEDONIA	
FEELING GOOD (EMOTIONAL WELL-BEING)	
POSITIVE AFFECT	Regularly cheerful, interested in life, in good spirits, calm and peaceful, full of life.
AVOWED HAPPINESS OR QUALITY OF LIFE	Feels happy or highly satisfied with life overall or in domains of life.
EUDAIMONIA	
FUNCTIONING WELL (PSYCHOLOGICAL WELL-BEING)	
SELF-ACCEPTANCE	Holds positive attitudes toward self and past life, acknowledges, likes and accepts the different parts of self.
PERSONAL GROWTH	Seeks new and challenging experiences, has insight into potential, and feels a sense of continued development.
PURPOSE IN LIFE	Holds beliefs and goals affirming life has direction and feels life has meaning and purpose.
ENVIRONMENTAL MASTERY	Shows competence to handle complex contexts by selecting, managing and moulding personal environments to suit needs.
AUTONOMY	Guided by own, socially accepted internal standards and renounces unprincipled social pressure.
POSITIVE RELATIONS WITH OTHERS	Experiences warm, trusting and satisfying personal relationships, exhibits empathy and intimacy
FUNCTIONING WELL (SOCIAL WELL-BEING)	
SOCIAL ACCEPTANCE	Holds positive attitudes while acknowledging and accepting human differences and complexities.
SOCIAL ACTUALISATION	Believes people, groups and society have potential and can evolve or grow positively.
SOCIAL CONTRIBUTION	Views life and actions as useful to and valued by society and others.
SOCIAL COHERENCE	Interested in society, social life and culture, finding them meaningful, reasonable and understandable.
SOCIAL INTEGRATION	A sense of belonging to and receiving comfort and support from a community.

Numerous factor analytic studies have validated the MHC model as a comprehensive construct of flourishing, encompassing emotional well-being (EWB), psychological well-being

(PWB) and social well-being (SoWB) in diverse contexts, including South Africa (SA) (Gallagher & Lopez, 2009; Karaś et al., 2014; Keyes et al., 2008; Khumalo et al., 2011; Lamers et al., 2011; Lupano Perugini et al., 2017; Robitschek & Keyes, 2009).

Feeling good and functioning well can exist independently and may not necessarily contribute to flourishing. Negative emotions do not inherently detract from flourishing and one does not need to be constantly euphoric to function well. The MHC model integrates the EPP principles of appraisal and co-valence (see Section 2.2.2), acknowledging that optimal functioning can coexist with negative emotions, which are essential components of a balanced life (Huppert, 2014). High levels of happiness, for example, may be inappropriate in contexts such as risky behaviours, including drug use and compulsive gambling (Diener & Ryan, 2009). On the contrary, sadness and distress, as during bereavement, can coexist with a sense of meaning, allowing individuals to flourish (Delle Fave & Bassi, 2009; Diener & Ryan, 2009; Wissing, 2014b).

The alignment between the MHC model and EPP's evolution principle is evident in the synthesises of the pathogenic focus on preventing and treating mental illness in accordance with the salutogenic perspective on promoting and maintaining mental health. The EPP perspective posits that true flourishing requires a dialectical approach, accepting and transforming suffering and negative emotions into opportunities for growth and meaning-making (Wong, 2010a, 2020a).

The MHC model offers a balanced perspective that flourishing and psychological distress can coexist, making it an ideal fit within the EPP framework. This theoretical congruence, in conjunction with robust international support and relevance in the South African context (Bonthuys et al., 2011; Hone et al., 2014; Joshanloo et al., 2013; Khumalo et al., 2012;

Schotanus-Dijkstra et al., 2016), informed the decision to include Keyes' conceptualisation of flourishing in the study. Accordingly, in this study, flourishing was viewed as a complex multi-dimensional integration of hedonic and eudaimonic well-being, represented by sub-facets of EWB, PWB and SoWB, positioned on a continuum ranging from languishing (low levels) to flourishing (high levels) (Keyes, 2002). Flourishers experience more positive than negative affect as well as high levels of life satisfaction and low levels of distress and mental illness. Consequently, flourishing was operationalised in the study by employing the MHC-SF (Keyes, 2002), the Life Satisfaction Scale (Diener et al., 1985), the Scale of Positive and Negative Experience (SPANE) (Diener et al., 2010) and the Depression Anxiety Stress Scales (DASS-21) (Lovibond & Lovibond, 1995), thus ensuring a thorough assessment of flourishing in accordance with the EPP perspective (see Section 5.5.2.1).

3.2.2. The Influence of Nature on Flourishing

Nature's role is critical to flourishing, particularly within the context of this study. While biological factors such as genetics (Bartels, 2015) and physical and mental health (Chen et al., 2022; Keyes & Simoes, 2012) play a significant role in sustaining flourishing; nature's influence is foundational in establishing and enhancing flourishing. The study's equine-assisted positive psychological intervention (EAPPI) is grounded in the biophilia hypothesis (see Section 2.5.3), which posits that humans have an innate affinity to nature and that this association is essential for flourishing.

Passmore and Howell (2014) noted that affiliation and connections to nature positively influence hedonic and eudaimonic well-being. Individuals who are highly engaged with nature have reported greater life satisfaction, increased happiness and positive affect in comparison to

their less-engaged peers (Mayer et al., 2009; Zhang et al., 2014). These positive effects are not limited to short-term experiences but contribute to sustained well-being over time.

Studies have shown reliable positive correlations between nature connectedness and eudaimonic facets of PWB and SoWB, including personal growth engagement, and a sense of meaning or purpose in life (Howell et al., 2011; Howell et al., 2013; Passmore, 2019). In addition, nature relatedness has been linked to lower levels of negative affect and a greater sense of vitality, highlighting its role in promoting overall mental health (Nisbet et al., 2011).

Moreover, a person's sense of self is often deeply intertwined with interactions within diverse multi-species communities, making relationships with nature essential for maintaining personal identity (May, 1983; Myers, 2003). Interactions with wild and domesticated animals and natural landscapes can shape and enhance one's sense of identity, fostering a broader, more collective identity that transcends individualism (Leary et al., 2008; Myers, 2003; Sommer, 2003). These interactions also promote a sense of connectedness to the larger ecological community, a critical component of eudaimonic well-being and EPP.

In essence, nature's influence on flourishing is multifaceted, supporting well-being's hedonic and eudaimonic components. Nature's foundational role in flourishing concurs with the EPP framework, which emphasises the integration of positive and negative life experiences, including those derived from interactions with the natural world, as essential to flourishing.

3.2.3. Empirical Research on Flourishing

Research has revealed that flourishers have consistently outperformed those who are moderately mentally healthy or languishing. They have enhanced psychosocial functioning, lower absenteeism, fewer chronic conditions and greater resilience in the face of challenges (Keyes, 2005, 2007; Keyes et al., 2010; Keyes & Simoes, 2012; Keyes & Westerhof, 2012).

However, the variations in the conceptualisation of flourishing have posed challenges in interpreting the results of flourishing studies (Dodge et al., 2012; Hone et al., 2014). Depending on the operationalisation employed, these variations have resulted in diverse findings across different populations. The large-scale Midlife in the United States (MIDUS) study implemented the long form of the MHC questionnaire. The findings revealed that most of the representative sample of United States adults (aged 25-74) did not experience flourishing (82%), with only 18% meeting the criteria for flourishing (Keyes, 2005). The study highlighted the importance of using a multidimensional approach to assess well-being as the majority of adults exhibited moderate mental health rather than flourishing.

Similarly, the European Social Survey (ESS), which employed Huppert and So's (2009) operationalisation of flourishing, examined flourishing in 22 countries. The results revealed significant cross-cultural differences in flourishing, with Nordic countries such as Denmark showing the highest levels of flourishing. In contrast, Eastern European countries, including Slovakia and the Russian Federation, exhibited the lowest levels. These findings highlighted the role of cultural and environmental factors in influencing flourishing rates and need for context-sensitive approaches.

In New Zealand, Hone et al. (2014) found significant differences in the prevalence of flourishing, depending on the operationalisation, employed amongst 10,009 adults. The results revealed the prevalence of flourishing ranged from 24% to 47%, contingent on whether the Seligman, Diener, Keyes, or Huppert and So models were employed. These variations highlight the complexity of measuring flourishing and importance of a consistent, multidimensional approach such as the Keyes MHC model.

Similar to international flourishing research, which has been conducted in predominantly Western, educated, industrialised and democratic (WEIRD) contexts, South African flourishing research has largely been quantitative, concentrating on specific settings such as universities (Basson & Rothmann, 2019; Graham & Eloff, 2022; Guse & Shaw, 2018; Janse van Rensburg & Marais, 2022; Van Zyl & Rothmann, 2012) and workplaces (Janse van Rensburg & Marais, 2022; Janse Van Rensburg et al., 2018; Redelinghuys et al., 2019; Rothmann, 2013). Studies involving multi-racial university students revealed that most were moderately mentally healthy and only a few flourishing or languishing. The flourishing students reported higher life satisfaction, more positive emotions and less negative affect (Basson & Rothmann, 2019; Van Zyl & Rothmann, 2012).

The MHC has also been employed in cross-cultural research. Keyes et al. (2008) revealed that 20% of Setswana-speaking adults in the North-West were flourishing, 67.8% were moderately mentally healthy and 12.3% were languishing. These results highlighted the relevance of the Keyes MHC model in diverse cultural contexts, further justifying its use in this study.

Despite the valuable insights provided by existing studies, several methodological limitations, including small sample sizes, non-representative samples and the cross-sectional nature of many studies, have reduced the generalisability of the findings. These limitations reflect broader challenges identified in flourishing research across Africa, emphasising the need for more rigorous, representative and longitudinal studies (Guse & Vermaak, 2011; Van Schalkwyk & Wissing, 2010). In addition, a scoping review focusing on well-being among South African youth highlighted the over-reliance on quantitative research and lack of mixed-methods research to capture the full spectrum of flourishing's emotional, psychological and social

dimensions (Guse, 2022). Notably, there is also a significant gap in research, particularly qualitative studies on non-clinical populations, on flourishing in under-resourced urban communities (Cele et al., 2021; Keyes et al., 2008; Koen et al., 2022).

In conclusion, the study's conceptualisation of flourishing within the EPP framework, supported by the influence of nature and empirical research, provides a holistic understanding of flourishing aligned with EPP. This perspective affords the exploration of other critical dimensions of flourishing, including the significance of meaning in life and hope, which are vital for sustained flourishing. In the following section, meaning, an important construct related to flourishing within EPP, is explored.

3.3. Meaning

Meaning is considered a critical indicator of flourishing, both as a contributor to and a result thereof (Heintzelman & King, 2014; Martela & Steger, 2016; Steger et al., 2006; Van der Weele, 2017; Wong, 2014a). However, it is a complex, multifaceted construct that includes objective, subjective and relational dimensions of reality, thus creating challenges in defining it clearly. Researchers have acknowledged that examining meaning is difficult in psychology because it is a hypothetical construct, something imagined rather than directly observable that has been employed to explain visible phenomena but not fully explained by them (Baumeister & Vohs, 2002; Leontiev, 2013). Meaning can be viewed as an illusion (Yalom, 1980), a purely abstract intangible entity (Baumeister, 1991), a quality realised through virtuous and intentional living (Ryan & Deci, 2001; Ryff & Singer, 2008; Seligman, 2002) and yet also a fundamental necessity for life and a core of human motivation (Frankl, 1969, 1988a).

Given the term's inherent ambiguity, Park (2017b) recommended that researchers clearly define the specific types and processes of meaning being investigated. On a meta-level, meaning

is often classified as *meaning of life* and *meaning in life*. The former refers to the overarching purpose and significance of existence, a profound secret through which human life matters or makes sense (King & Hicks, 2021). It is often understood as an ultimate meaning beyond human comprehension and linked to spirituality or belief in a higher power (Fabry, 1988; Frankl, 2000).

On the contrary, *meaning in life* refers to an individual's subjective sense of significance, worth and purpose derived from their overall evaluation of life and specific moments of meaning. One aspect, existential meaning, involves a broad assessment of life's meaningfulness across dimensions, including life goals, purpose fulfilment, and feelings of significance, mattering and satisfaction, particularly in significant areas such as relationships (George & Park, 2014b; Wong, 2010b). Another aspect, situational meaning, emanates from specific encounters and is shaped by reflection, action and meaning-making processes that integrate these experiences into a broader worldview (Frankl, 1988a; Park, 2010). Both existential and situational meaning contribute to global meaning, namely, the individual's broad beliefs about God, the world, self and human nature as well as subjective feelings about life, which evolve over time and are shaped through early experiences (Park, 2010, 2017a; Reker & Wong, 1988). This study focused on meaning in life and the processes that motivate individuals to pursue personally meaningful actions and foster flourishing in the face of adversity (Frankl, 1969; Wong, 2014b).

3.3.1. Conceptualising Meaning in Life

As noted, the concept of meaning in life is complex. While various models have been proposed, theory and consensus on the construct's definition and operationalisation are lacking (King & Hicks, 2021; Martela & Steger, 2016). Different authors have conceptualised it in various ways. While Steger (2009, 2012) emphasised both cognitive understanding of self and

the world as well motivational striving towards goals and purpose, Reker and Wong (1988) highlighted coherence, purpose and the fulfilment of worthwhile goals. Fry and Debats (2010) viewed personal meaning as a mental map for life. On the contrary, Schnell et al. (2013) highlighted personal meaning as coherence, significance, direction and belonging. An emergent agreement has suggested that meaning in life involves a combination of purpose, significance and understanding (Martela & Steger, 2016; Medlock, 2017; Steger, 2021; Wong, 1998b).

Seminal author Viktor Frankl's conceptions of meaning in life appear to underpin almost all contemporary literature on meaning. Frankl (1969, 1988a, 1988b) proposed that meaning in life is a universal human need, prompting humans to be concerned with fulfilling meaning. Accordingly, the world is perceived as unconditionally meaningful. Furthermore, individuals are viewed as inherently meaning-seeking, have a will to meaning and are motivated by the longing and striving to find meaning in their existence, resulting in actions that concur with values (Frankl, 1988a). Meaning fulfilment requires intrapersonal motivation, the appraisal of external meaning in all of life and identification of the moment's meanings (Lukas, 2000). Accordingly, meaning is unique and specific to each individual. Furthermore, meaning only achieves significance when the individual fulfils it to satisfy the will to meaning (Frankl, 1988b).

The belief that life is unconditionally meaningful is linked to the notion that meaning exists in all circumstances and cannot be extinguished. This perspective is particularly relevant when dealing with life's negative elements, which Frankl conceptualised as the tragic triad: suffering, guilt and death. Frankl noted that these difficult situations can be transcended and transformed through a deliberate attitude to transform adversity into something positive such as an achievement (Frankl, 1969, 1988a). However, this applies only to unavoidable suffering because choosing to suffer borders on masochism. Frankl (1969) also posited that a lack of

meaning in life is associated with languishing or even psychopathology, a notion which has continued to receive empirical support (Chen et al., 2021; Harlow et al., 1986; Park & Baumeister, 2017; Steger & Kashdan, 2013; Wang et al., 2007). Building on these principles, Wong's PURE model (2012a, 2012b, 2016d) offers a framework for understanding personal meaning, which is grounded in Frankl's logotherapy, and concurs with the tenets of EPP (see Section 2.4).

3.3.1.1. PURE Model of Meaning (Wong, 2012a)

In the PURE model, meaning in life is conceived as a personally and socially constructed cognitive-affective-behavioural system that endows life with significance (Wong, 2016b). Meaning is conceptualised as a multidimensional construct that comprises four interrelated elements: *purpose* (motivation), *understanding* (cognition), *responsible action* (behaviour) and *enjoyment or evaluation* (affect) (Wong, 2012a, 2012d).

Purpose includes goals, directions, values, incentivising objects and objectives, motivating one to engage in a purposeful life towards an ideal future. *Understanding* encompasses cognitive actions, a sense of coherence, making sense of situations, knowing self and others, effective communication and establishing relationships. This component seeks clarity and coherence regarding life by answering questions such as *What has happened?*, *What does this mean?*, *Who am I?*, and *What am I doing here?*

Responsible action includes appropriate behaviours related to what is socially and morally correct, problem-solving concerned with what is right and making amends. The individual determines what is right and is influenced by the socio-cultural context in which they are embedded. The *evaluative* component includes satisfaction and dissatisfaction with a particular situation or life. Accordingly, a meaningful life involves reflecting and evaluating

oneself in relation to various questions, including *Have I achieved what I set out to do?, Am I happy with how I have lived my life?* and *If this is love, why am I still unhappy?* These components represent four significant psychological processes for optimal functioning. Moreover, when absent, life is not fulfilling (Wong, 2012a, 2012d).

This model provides a framework for explaining how individuals discover and create meaning in their lives. Given life's unconditionally meaningful nature, humans inherently seek and discover meaning to realise purpose and direction (Frankl, 1988a). This process involves recognising the presence of meaning and proactively searching for it throughout life.

3.3.1.2. Presence of Meaning

Determining the presence of meaning in life is multi-faceted, comprising the comprehension that one's experiences make sense, the perception that life has a purpose with important goals or some overarching aim and accompanied by the sense that one's life has significance in that it is valuable and worthwhile (Steger, 2009, 2021). Meaning can be sourced everywhere, including interconnectedness with nature. It is important for individuals to become aware of this so they can heighten their awareness and detect it (Frankl, 1988a).

From the EPP perspective, the pathway to discovering the presence of meaning in life is through enduring values, namely, creative, experiential and attitudinal (see Section 2.4) (Frankl, 1969, 1988a, 1988b). These values help one discover potential sources of meaning in life, which, according to Fabry (1988), are revealed by the following guideposts. First, *self-discovery* allows one to realise meaning by getting to know one's authentic self, strengths and weaknesses. Second, the freedom to make *choices* and the range thereof enhances the possibilities for finding meaning. Third, *uniqueness* affords one the opportunity to discover meaning in situations where others do not easily replace an individual. Fourth, taking *responsibility* for one's choices in the

areas in which one has the freedom to choose and recognising what is outside of one's control and for which one is not responsible increases meaning in life. Finally, *self-transcendence* is related to finding meaning by surpassing personal interest to serve others and the greater good.

Frankl (1988a) advocated that the human spirit is also an instrument of meaning detection guided by conscience. Conscience is highly personal and influenced significantly by socio-cultural factors and assists a person in discerning meaning in each moment. Humans can choose conscience, the inner responsible voice, which may, if necessary, reject societal values in the search for meaning (Frankl, 1969, 1988a).

Moreover, research has revealed that individuals from different cultures and life stages typically identify different categories of meaning sources (Nell, 2014) and individuals are in a more desirable position when they have a greater number and variety of meaning sources. Wong (1998b) identified seven measurable vital sources of meaning that are relevant in multicultural contexts: achievement, acceptance, relationship, intimacy, religion, self-transcendence and fairness. These meaning sources indicate that meaning is not solely an individual action but requires social support and a just society.

3.3.1.3. Search for Meaning

The search for meaning involves the orientation and motivation to search for meaning in life (Frankl, 1988a, 1988b; Steger et al., 2006). This search may arise when life feels meaningless and through the continuous desire to understand what life means (Baumeister, 1991; Steger & Kashdan, 2013). Steger, Kashdan, et al. (2008) noted that searching for meaning involves individuals' determination, passion and effort to actively deepen their understanding of the importance, purpose and significance of their existence.

Wong (2018) distinguished between negative and positive orientations in meaning-seeking. The negative search for meaning arises in response to adversity, prompting individuals to confront discomfort and reassess beliefs and values to cope with suffering (Baumeister, 1991). This, in turn, results in self-evaluation and introspection, leading to deeper self-discovery and purpose, despite the discomfort and pain it may cause (Steger, 2021; Steger & Kashdan, 2013).

On the contrary, the positive search for meaning is goal-oriented, driving individuals to discover their purpose and pursue meaningful aspirations that foster growth and vitality. This orientation is often linked to goal setting so as to fulfil basic needs and ensure survival (Wong, 2018). Baumeister (1991) noted that individuals become more open to sources of meaning when their existing sources are inadequate. Furthermore, this search tends to lessen once these needs are met.

Wong (1998a) added that a positive search for meaning can also emerge in stable times by reflecting on life's transience and striving to use one's time to create a better life. Frankl (1988a) noted that during extreme adversity, one's attitude is critical in transcending suffering. Reframing challenges can transform suffering into hope for the future (Wong, 2021b). Essentially, the positive-oriented search for meaning is directed towards happiness and growth (Wong, 2019b). This interplay between happiness and suffering highlights how both initiate types of meaning-seeking, which ultimately enrich life.

Recognising the significance of discovering and pursuing meaning allows individuals to lead fulfilling and meaningful lives (Frankl, 1969, 1988a). In this study, meaning in life was conceptualised within the PURE model and was operationalised by identifying the presence of meaning and search for meaning processes. While the Personal Meaning Profile measures the presence of meaning and evaluation of sources (MacDonald et al., 2012; Wong, 1998b), the New

Search for Meaning Scale (NSM) measures an individual's orientation towards the search for meaning (Wong, 2018). These measures are described in Section 5.5.2.1.

3.3.2. The Contribution of Meaning to Flourishing

From the EPP perspective, meaning in life is fundamental to flourishing (Heintzelman & King, 2014; Martela & Steger, 2016; Wong, 2014a). Meaning acts as a preventive and protective buffer, particularly in adversity, offering hope even in seemingly hopeless situations. Meaning is not only found in positive experiences but can be forged through transcending adversity, which as previously stated, is critical for flourishing in a challenging world (Frankl, 1969, 1988a; Wong, 2014a). The appraisal and presence of meaning, often involving self-transcendence and engagement with values, plays a pivotal role in this flourishing (Wong, 2011a, 2012d).

Frankl (1969) emphasised that the meaning of life should not be viewed abstractly but lived through responsible actions aligned with one's values, with self-transcendence at the core. However, while PP often overlooks this dimension by focusing on hedonic well-being, true flourishing requires the courage to endure suffering and derive meaning from it (Baumeister et al., 2013; Wong, 2014b). At times, the pursuit of happiness and meaning can conflict as finding meaning may demand discomfort, sacrifice and the willingness to transcend personal challenges (Wong, 2014b).

Both PP and EPP recognise that a meaningful life involves using one's strengths and virtues to serve something greater than oneself (Seligman, 2011; Wong, 2012c). Frankl (1969) argued that self-actualisation is achieved only through self-transcendence, fulfilling the spiritual need to serve a higher purpose. Wong (2014b) critiqued PP's emphasis on happiness, arguing that true meaning requires embracing suffering and transcending personal goals for higher, self-transcendent purposes. Similarly, Baumeister et al. (2013) asserted that meaningful living often

involves distress and unhappiness, requiring bravery, a willingness to forgo personal happiness and flourishing in pursuit of higher self-transcendent goals. Accordingly, happiness is not the goal but a byproduct of meaningful pursuits (Frankl, 1969). A broader discussion on the EPP perspective of happiness can be found in Section 2.4.1.

Wong's (2012d) dual-systems model explains how meaning regulates flourishing by managing individuals' approach and avoidance behaviours. In favourable conditions, meaning drives approach behaviours towards fulfilling goals and expanding life's possibilities. During adversity, meaning activates coping strategies, including acceptance, affirmation and personal growth, thus allowing individuals to transform suffering into opportunities for growth. This dual-process model emphasises meaning's dual role as both a protective and enhancing factor of flourishing, fostering fortitude and growth, even in the face of challenges.

3.3.3. Empirical Research on Meaning

Psychological research has consistently highlighted the critical role of meaning in promoting overall physical health, reducing psychological distress and enhancing flourishing and its hedonic and eudaimonic facets in predominantly WEIRD contexts (Czekierda et al., 2017; Dursun et al., 2016; Hooker et al., 2018; Park et al., 2010; Reker & Woo, 2011; Ryff, 2014b; Wong, 2012d). Meaning in life is strongly correlated with happiness, life satisfaction and personal growth, even when individuals experience adversity. Baumeister et al. (2013) found that meaning and happiness are related life attitudes and while life struggles affect happiness negatively, they can promote meaning in life, enabling individuals to live meaningful lives even when they encounter unpleasant circumstances.

Park's (2010)systematic review demonstrated that meaning-making efforts following stressful events are universal and often result in positive outcomes such as post-traumatic growth

and identity reformation. However, there are limitations in understanding how global and situational meaning processes interact and the extent to which meaning-making efforts lead to long-term resolution and flourishing. Park (2010) suggested that promoting meaning-oriented interventions facilitates greater adaptability and flourishing.

In a large cross-nation study of 75 countries, including one African country, Joshanloo and Weijers (2014b) found that thinking about the meaning and purpose of life was not a significant predictor of life satisfaction. On the contrary, as religiosity increased, the connection between pondering the meaning and purpose of life and life satisfaction became more positive.

A nuanced distinction between the presence of meaning and the search for meaning is evident in the literature. The presence of meaning has consistently been linked to flourishing, including happiness, life satisfaction and lower levels of depression and distress (Park et al., 2010; Wong, 1998b). In contrast, searching for meaning, especially when it indicates a lack of perceived meaning, is associated with languishing and distress (Park et al., 2010). Contemporary meaning research has frequently demonstrated a negative correlation between the presence of meaning in life and the search for meaning (Chu & Fung, 2021; Newman et al., 2018; Steger et al., 2006). The satisfaction of the need to belong, namely, the sense of mattering experienced by fitting into a group motivates meaning seeking (Lambert et al., 2013). In addition, continuing the search can further enhance flourishing in those with a strong sense of meaning (Park, 2010).

Grouden and Jose (2015) revealed that while positive family and friendship relations predicted the presence of meaning, leisure activities had a negative impact on it. Meaning derived from family and health facilitated the search for meaning, ultimately leading to the presence of meaning. Personal growth and religiosity were significant drivers of the search for meaning. Interpersonal relationships, religiosity/spirituality and life helped buffer against the

negative effects of meaning-seeking, thus highlighting the complexity of meaning-seeking, with its effects on flourishing heavily dependent on the individual's existing sense of meaning and life context. While meaning-seeking can indicate an existential void, it can also be a pathway to higher flourishing when meaning is substantial (Frankl, 1988a; Wong, 2012a). The presence of meaning in life correlates with greater mental well-being across all life stages (Steger et al., 2009).

Empirical research has supported the relationship between meaning and nature, revealing that exposure to natural environments and experiences in nature are commonly identified as significant sources of meaning, with nature fostering self-transcendence and a sense of connection to something greater such as God and the universe (Nisbet et al., 2011; O'Connor & Chamberlain, 1996; Wong, 2010a). Exposure to nature has elicited feelings of awe and transcendence, contributing to constructing meaning in life (Keltner & Haidt, 2003; Piff et al., 2015; Shiota et al., 2007).

Animal interactions foster emotional safety, allowing individuals to form positive and meaningful relationships (Chandler, 2017; VanFleet & Faa-Thompson, 2010). Animal-assisted relational interactions provide a platform for experiential meaning-making interventions (see Section 4.4), assisting individuals to derive meaning, purpose and hope (Fine, 2015; Schroeder & Prasath, 2022) However, there is a paucity of research and accordingly, further exploration is needed to afford an enhanced understanding on the relationship between animals and the development of meaning, particularly in therapeutic contexts. This limitation offers opportunities for expanding knowledge in this field.

On the contrary, meaninglessness is strongly linked to psychological distress. Studies have demonstrated that the absence of meaning correlates with higher levels of anxiety,

depression, stress and substance abuse (Yalom, 1980). In SA, Makola (2016) revealed that meaninglessness mediated the relationship between uncontrollable stress and substance abuse in young adults, highlighting the importance of meaning as a protective factor. Makola (2015) also found that frontline healthcare workers who experienced increased meaning reported reduced depression levels. This concurs with Frankl's (1988a) view that a lack of meaning can lead to existential crises marked by hopelessness, depression and loss of purpose.

In SA, meaning is deeply rooted in relational and cultural factors. Nell (2014) and Wissing, Khumalo, et al. (2014) revealed that relationships, particularly with family, were central to meaning for students from diverse cultural backgrounds. Furthermore, interpersonal and spiritual relatedness are intricately intertwined, unlike in Western contexts.

Wissing et al. (2014) found that family, education, and spirituality are pivotal sources of meaning drawn on to improve flourishing among Setswana-speaking students. Despite these findings, there is limited understanding on how personal meaning operates in the lives of adults in SA, especially those in under-resourced communities where systemic challenges such as poverty and inequality may influence how individuals derive meaning in their lives (Wissing, Khumalo, et al., 2014).

3.4. Hope

Hope is widely regarded as an intrinsic force that drives individuals towards a better life and world. Across disciplines, including philosophy, theology and psychology, hope has consistently been linked to the motivation to pursue goals and aspirations (Hefferon & Boniwell, 2011; Krafft & Walker, 2018b)However, lay people perceive hope, as defined in the Oxford English Dictionary, as the "expectation of something desired, a feeling of expectation and desire combined." (Oxford English Dictionary, 2024b, pp. hope, n.[1]). In PP, hope is viewed as a

positive subjective state, shaped by constructive thoughts about the self and future, with expectations of achieving desired outcomes through effort (Seligman & Csikszentmihalyi, 2000). Hope motivates individuals to strive towards their goals and to help others, making it crucial for both individual and collective well-being (Snyder & McCullough, 2000). Yet, even in situations where individuals are unable to influence or attain the desired outcomes, hope can still emerge, serving as a powerful coping mechanism in the face of uncertainty and adversity (Lazarus, 1999; Tong et al., 2010).

EPP extends beyond the cognitive-motivational framework by emphasising the existential nature of hope. In EPP, hope arises in response to negative and/or stressful conditions, helping individuals cope by fostering transformative growth (Lazarus, 1999; Pruyser, 1986). According to Frankl (1969, 1988a), hope is closely linked to self-transcendence, relationships with loved ones and faith in a benevolent higher power. Frankl's (1988a, p. 139) concept of tragic optimism highlights the ability to say, "yes to life in spite of everything" thus transforming suffering into meaning and growth. This existential framing of hope is particularly relevant in flourishing, in which adversity becomes an opportunity for meaningful development.

Universally, hope helps individuals cope with hardship and aspire towards a better future. In times of adversity, meaning provides the foundation for hope, enabling individuals to endure suffering while maintaining life satisfaction and flourishing (Wong, 2011b). Meaning and hope are often drawn from the same sources, such as relationships, family, world spirituality, and education (Bernardo, 2010; Delle Fave et al., 2013; MacDonald et al., 2012; Nell, 2014). From an Afrocentric view, valued goals are central to meaning and hope, and meaningful things provide pathways for hopeful thinking (Wilson et al., 2018).

Frankl's (1969, 1988a) tragic optimism highlights how uncontrollable suffering can sustain hope by finding meaning and transforming hardship into a purposeful experience. While suffering is not necessary for meaning, it often inspires the search for it. Meaning becomes an adaptive mechanism, helping individuals navigate challenges by sustaining hope (Wong, 2012c). Accordingly, hope enables individuals by affording both coherence and a transcendent connection to a higher purpose, linking present struggles to a broader sense of significance and worth (Baumeister, 1991; Frankl, 1969, 1988a).

Moreover, eco-EPP suggests that nature is central to fostering hope through meaning. The stability and predictability of the natural world offer a sense of coherence and connection, contributing to meaning even in difficult circumstances (Howell et al., 2013; Passmore & Howell, 2014). Nature evokes awe and transcendence, providing emotional solace and reinforcing the belief that life is meaningful, which, in turn, nurtures hope (Frankl, 1988a; Keltner & Haidt, 2003; Wong, 2010b). Thus, both personal meaning and nature sustain hope in the face of adversity.

In the following section, this study's conceptualisation of hope is outlined.

3.4.1. Conceptualising Hope

Hope has been conceptualised in various ways in psychological theories, reflecting its complex, multi-dimensional nature. It involves the interplay of cognitive, emotional, rational, relational and spiritual elements (Krafft & Walker, 2018b). As a universal human need, hope is shaped by cultural contexts and directed towards diverse goals, including material goods, personal achievements, pleasurable experiences, relationships and acts of service (Averill et al., 1990). General social beliefs influence it and its sources and expressions may differ across contexts (Bernardo & Nalipay, 2016; Bernardo et al., 2018). Furthermore, the nature of what is

hoped for influences the motivation and actions individuals employ to achieve them, ranging from actions characterised by increased effort and risk to prayer and meditation.

Early hope theory identifies hope as a discrete emotion and way of thinking. Over time, psychological perspectives on hope have shifted from focusing on emotions to prioritising thoughts and actions as emotions have been considered outcomes of either the success or failure in goal attainment (Chadwick, 2015; Krafft & Walker, 2018b; Lazarus, 1999; Snyder, 2002; Snyder, Harris, et al., 1991). However, hope is understood primarily as a cognitive-motivational construct and a dispositional trait (Peterson & Seligman, 2004; Snyder, 2002). In addition, FWPP has recognised hope as a strength within the virtue of self-transcendence, enabling individuals to connect with something greater than themselves, thus providing meaning and purpose (Peterson & Seligman, 2004).

3.4.1.1. Hope Theory (Snyder, 2002; Snyder, Harris, et al., 1991)

Snyder et al. have characterised hope as individual willpower in the pursuit of fulfilling and manifesting personally valuable goals. Snyder et al.'s widely accepted hope theory defines hope as two dimensional, comprising two core processes: first, *agency*, the motivation to pursue goals and second, *pathways*, the ability to generate plans to realise those goals (Snyder, 2002; Snyder, Harris, et al., 1991). This contemporary understanding highlights hope as a dispositional trait that is central to human flourishing and adaptive goal pursuit, playing a key role in the development and influence of FWPP (Peterson & Seligman, 2004; Snyder, 2002).

Snyder et al.'s hope theory focuses on individuals' perceptions of goal attainment (e.g., *I can think of many ways to get out of a jam*) (Snyder, Harris, et al., 1991), emphasising the individual as the sole agent. This disjoint agency model assumes that actions are independent of others and driven solely by personal goals and intentions, neglecting the role of external agents

such as other people, events and spiritual dimensions. This perspective has been criticised for not reflecting the collectivist values of societies like SA and overlooking relational, spiritual and contextual dimensions of hope (Bruininks & Malle, 2005; Colla et al., 2022; Krafft et al., 2019; Markus & Kitayama, 2003; Tong et al., 2010). Recently, the theory was extended to address these criticisms by including locus-of-hope dimensions to account for relational, interpersonal and spiritual processes (Bernardo, 2010).

3.4.1.2. Locus of Hope Theory (Bernardo, 2010)

Research in collectivist societies has revealed that hope often involves family, community members and spiritual or religious elements, suggesting that goal attainment extends beyond personal capacities and actions (Bernardo, 2010; Briones & Bernardo, 2016). In these contexts, agency includes external support and pathways may involve actions by others, reflecting a conjoint agency model in which significant others' expectations and obligations also shape personal actions (Markus & Kitayama, 2003). This perspective acknowledges that actions may be defined interpersonally and affirms the interdependence of individuals within social situations aligning with EPP.

Bernardo's (2010) locus of hope theory offers a more comprehensive and culturally relevant extension of Snyder's hope theory by incorporating internally and externally derived agency and pathways of hope. This framework acknowledges the collectivist perspective in which individuals' goals and pathways to achieve them are deeply interconnected with family, peers and spiritual beliefs. It moves beyond the self-centred focus of traditional hope theories and emphasises how hope is fostered through relational and external supports. To operationalise this, Bernardo (2010) developed the Locus-of-Hope Scale (LoHS), which measures four dimensions of hope: internal, family, peers and

spiritual. This scale (see Section 5.5.2.1) extends Snyder's Dispositional Hope Scale (Snyder, Harris, et al., 1991) by including internal and external agents and pathways, making it applicable in collectivistic contexts in which individuals' goals are intertwined with their social networks and spiritual beliefs.

3.4.1.3. Perceived Hope Theory (Krafft & Walker, 2018b)

Krafft and Walker's (2018b) perceived hope theory shifts the focus from purely cognitive goal-directed processes to a broader understanding of hope as an emotional, spiritual and existential experience. This perspective highlights how individuals define hope for themselves through feelings of trust in positive outcomes, especially in difficult situations outside their control. It further emphasises the transcendent nature of hope, where trust in something greater than oneself, whether community, faith or spiritual beliefs, plays a central role in sustaining hope, especially in situations beyond personal control (Krafft et al., 2019; Slezáčková, 2017). Accordingly, hope is understood as a positive expectation and desire for something to happen that will lead to a better future (Krafft & Walker, 2018b). Krafft et al. (2019) operationalised this concept by developing the Perceived Hope Scale (PHS), which measures hope as experienced rather than merely a motivation for goal attainment. The PHS (see Section 5.5.2.1) captures hope's emotional and spiritual dimensions, ensuring it is a valuable tool for understanding hope in cultures where communal and spiritual factors are central to well-being.

Krafft et al. (2023) proposed that a culturally sensitive understanding of hope comprises three key elements: first, a desire for something of value; second, the belief that while achieving this desire is possible, it remains improbable or unguaranteed and finally, trust in the availability of both current and future internal and external resources to overcome challenges and facilitate the fulfilment of the desired outcome. Within this conceptualisation, hope is a powerful coping

mechanism in the face of uncertainty and adversity, highlighting the significance of external sources, including family, community and spirituality (Lazarus, 1999; Tong et al., 2010). This culturally and contextually sensitive perspective is particularly relevant in the collectivist South African context in which communal support and spirituality are integral to the lived experience of hope.

This study's multidimensional conceptualisation of hope was operationalised by employing Bernardo's (2010) Locus of Hope Scale and Krafft and Walker's (2018a) Perceived Hope Scale. These measures are detailed in Section 5.5.2.1.

3.4.2. The Role of Hope in Flourishing.

Hope plays a central role in fostering flourishing by inspiring and motivating individuals to set meaningful goals and pursue pathways to achieve them. Hope strongly correlates with flourishing (Daugherty et al., 2018; Khodarahimi, 2013) and has predicted flourishing across different ethnic groups (Murphy, 2023; Park et al., 2004; Snyder, 2004). According to Fredrickson (2001) and Keyes (2007), hope inspires positive emotions and enhances both hedonic and eudaimonic facets of flourishing. Research employing Snyder's hope theory has consistently demonstrated that both agency and pathways thinking contribute to flourishing while reducing psychological distress (Belen et al., 2020; Cheavens & Gum, 2010; Hernandez & Overholser, 2021; Lee & Gallagher, 2018; Murphy, 2023; Pleeging et al., 2021; Snyder, 2000; Snyder, Irving, et al., 1991).

Hope is a critical protective factor for mental health as it buffers against negative emotions and contributes to overall positive mental health (Lee & Gallagher, 2018). Studies have consistently found a positive correlation between high levels of hope and improved mental health, including reduced levels of anxiety and depression (Carretta et al., 2014; Cheavens &

Gum, 2010; Gallagher et al., 2020; Leite et al., 2019). Hope's protective effects are particularly evident in its ability to moderate the effect of negative life events, revealing an inverse relationship with depression and anxiety across diverse populations (Leite et al., 2019; Snyder, Irving, et al., 1991; Visser et al., 2013). Cognitive appraisals of agency and pathways have enhanced therapeutic outcomes (Leite et al., 2019). In addition, Munoz et al. (2016) found that hopeful pathways and agency thinking has a positive influence on EWB and perceptions of health-related quality of life among marginalised individuals.

In addition to its mental health benefits, hope is closely associated with life purpose and meaning. Cotton Bronk et al. (2009) and Mascaro and Rosen (2005) found that individuals with a strong sense of purpose and meaning experienced higher levels of hope, which, in turn, enhanced their life satisfaction and decreased symptoms of depression. This relationship between life purpose and hope has been observed across different age groups, suggesting that hope mediates the relationship between life purpose and satisfaction in various developmental stages (Daugherty et al., 2018). Furthermore, eudaimonic and hedonic well-being strongly predicted dispositional and perceived hope, especially in early and middle adulthood (Torr, 2022).

Moreover, in SA, hope has inspired the pursuit of meaningful goals and spiritually significant experiences, enhancing a sense of life meaning and ultimately promoting flourishing (Guse & Shaw, 2018). Guse and Shaw (2018) found that perceived hope is associated with multidimensional flourishing and furthermore, this relationship is mediated by meaning in life. The authors suggested that since meaning in life and perceived hope are known to have strong links to self-transcendence and spirituality, these factors may increase flourishing. Hence, by offering individuals a sense of purpose and alignment with something greater than themselves, hope enhances life's meaning. Individuals with higher hope levels are often more likely to view

their lives as meaningful, which may affect their flourishing positively (Slezáčková & Krafft, 2016).

On a different note, Belen et al. (2020) highlighted that hope plays a subtle role in mediating fear of happiness, indicating that alleviating fears related to experiencing happiness can further motivate and encourage goal-directed thinking, ultimately promoting flourishing. The relational aspect of hope is also crucial for flourishing. Jeffrey and Mehari (2023) emphasised that fostering hope through trusting relationships provides the emotional and psychological support necessary to sustain hope. From an eco-psychological perspective, connections with nature and animals also nurture hope by providing a sense of continuity, renewal and faith in the future, inspiring fortitude and optimism, which is vital for sustaining hope in difficult circumstances (Passmore & Howell, 2014). Interventions that aim to increase hope are discussed in Section 4.3.2.5.

3.4.3. Empirical Research on Hope

While Snyder's hope theory has been foundational in most of the research, many empirical studies have focused on WEIRD societies, where hope tends to be linked to personal achievement and individual self-reliance (Snyder, 2002). In contrast, hope manifests differently across cultural contexts as it is shaped by socioeconomic conditions, cultural norms and collective values.

As noted previously, in collectivist cultures, hope tends to be more relational and community-oriented, emphasising external sources of support such as family and spiritual beliefs (Bernardo, 2010). In parts of Asia and Africa, hope is deeply intertwined with communal relationships and spiritual practices, reflecting a holistic approach to well-being (Bernardo et al., 2018). Furthermore, hope often functions as a communal attribute rather than an individual one

(Wilson et al., 2018). Dargan et al. (2021) found that while individualism was positively correlated with internal and external-family locus of hope, collectivism was positively correlated with internal locus of hope and the three external locus of hope dimensions. These results indicate that in collectivist communities, goal achievement depends less on personal willpower and more on the collective support systems that surround individuals.

Relationships among family, peers and community members play a central role in shaping the experience of hope. In addition, goals are frequently viewed through a relational lens, where maintaining positive relationships is valued for emotional well-being and their intrinsic importance. Economic independence is also tied to relational goals as it empowers individuals to support others in the community (Wilson et al., 2018). Thus, hope in collectivist societies is deeply intertwined with communal ties and collective efforts, highlighting the significance of interconnectedness in sustaining hope.

While limited in SA, research on hope has revealed important insights into how social relationships and religious experiences shape both dispositional and perceived hope (Torr, 2022). Boyce and Harris (2013) conducted a foundational study to provide initial indications of hope levels in SA. The 2018 Hope Barometer Survey revealed a higher mean score for dispositional hope among South African adults in comparison to similar studies in European contexts (Guse & Shaw, 2018; Torr, 2022). Furthermore, perceived hope was linked to positive interpersonal relationships and religious experiences, demonstrating that social and spiritual factors significantly shape hope in South African adults.

International studies have consistently found no significant age and gender differences in hope, which has been determined to be relatively stable across time and lifespan.(Marques & Gallagher, 2017). However, inconsistencies related to the impact of socio-economic status (SES)

on levels of hope in diverse adult samples have been found (Scioli et al., 2011; van der Westhuizen et al., 2013). Studies that have explored how race and socioeconomic status intersect in urban South African settings have revealed unique challenges and strengths in fostering hope among marginalised groups (Barrar, 2010; Boyce & Harris, 2013; Møller et al., 2024). Boyce and Harris (2013) identified lower dispositional hope among individuals in under-resourced communities in which social and economic challenges influenced hope. In contrast, Guse and Vermaak (2011) found no significant differences in the hope levels of South African youth living in different socio-economic contexts. SES did not influence the relationship between hope and psychological well-being.

In SA's under-resourced communities, hope, as anticipated for a collectivist society, is deeply rooted in communal and relational dynamics, where interconnectedness among family, community and spirituality serve as a central source of support. In these communities, hope has been shown to extend beyond individual aspirations, focusing instead on collective well-being and mutual support (Ahmed et al., 2004; Wilson et al., 2018). Support systems, including family, peers and community stakeholders, play a vital role in nurturing hope (Dee et al., 2020; Guse & Vermaak, 2011).

In such communities, where access to material resources is limited, spirituality and religion serve as important sources of hope, especially when experiencing violence and hardship, offering individuals a sense of purpose and emotional fortitude in existentially difficult circumstances (Bernardo, 2010; Dee et al., 2020; Isaacs & Savahl, 2014; Savahl et al., 2013; Wilson et al., 2018). The belief in a higher power, coupled with support from religious or spiritual communities, affords individuals a sense of hope and purpose during difficult times (Bernardo, 2010; Bernardo et al., 2018).

Furthermore, as described in Section 3.4.2, hope is essential for promoting flourishing. It encompasses both negative affect and cognition. Moreover, one can hope for something that may be unattainable (Counted & Newheiser, 2023; Krafft et al., 2023). Therefore, in the face of adversity, hope is essential for fostering fortitude and personal development. In essence, hope protects one against the negative impacts of living in under-resourced environments.

There is a paucity of research on hope in the South African context, with most studies focusing on children and young adults (Guse & Vermaak, 2011). While these studies have provided valuable insights, they are primarily cross-sectional, limiting understanding of how hope evolves over time. Consequently, longitudinal studies to help reveal the stability and variability of hope, as well as its adaptive functions within specific cultural and community contexts, are needed (Jones et al., 2021).

Moreover, it is recommended that predominantly quantitative research be expanded to include qualitative methods such as personal narratives and in-depth interviews. It is believed qualitative data will enrich an understanding by uncovering the lived experiences and subjective meanings of hope within various communities (Colla et al., 2022; Creswell, 2013; Denzin & Lincoln, 2018). This integration of methods will afford a more comprehensive view of how hope is perceived, practised and valued across diverse populations, including those living in under-resourced communities. This is particularly pertinent to this study as research on hope in both ordinary and adverse South African contexts is limited. Furthermore, prominent researchers in the field have identified the need for additional research on the locus of hope and perceived hope in populations living in under-resourced communities(Guse & Vermaak, 2011; Wilson et al., 2018).

3.5. Conclusion

In this chapter, the study's conceptualisation of flourishing, meaning and hope aligned to EPP's recognition of the complexities of such constructs was discussed. The interrelatedness of flourishing, meaning and hope was acknowledged, demonstrating their significance for mental health and well-being, particularly in under-resourced communities.

Flourishing was conceptualised as a multidimensional state that comprises hedonic and eudaimonic well-being as defined by Keyes' (2002) mental health continuum, coupled with life satisfaction, a balance of more positive than negative emotions and low levels of psychological distress, which can be achieved despite life's hardships. Appropriate methods for the measurement of flourishing that were noted include the MHC-SF (Keyes, 2002), the Life Satisfaction Scale (Diener et al., 1985), the Scale of Positive and Negative Experience (SPANE) (Diener et al., 2010) and the Depression Anxiety Stress Scales (DASS-21) (Lovibond & Lovibond, 1995).

Meaning in life is an essential contributor to and outcome of flourishing, especially in the face of adversity. The study conceptualised meaning as a combination of personal meaning through meaning-making by identifying personal meaning sources (Wong, 1998b) and the positively or negatively oriented search for meaning processes (Wong, 2018). The Personal Meaning Profile (MacDonald et al., 2012; Wong, 1998b) and the New Search for Meaning Scale (NSM) (Wong, 2018) were employed to measure these aspects of meaning in life.

While meaning is a foundation for hope, hope is vital to flourishing, particularly in times of adversity. Hope was conceptualised as a multidimensional construct comprising internal and external agency and pathways to achieve goals appropriately. The Locus-of-Hope Scale

(Bernardo, 2010) was used to measure the latter, and hope as perceived by people was measured by the Perceived Hope Scale (Krafft et al., 2019).

While research on the three constructs has focused on quantitative studies from the predominantly WEIRD socio-cultural perspective, there has been a lack of qualitative research in non-Western, non-clinical populations. Addressing these limitations is imperative to afford a nuanced understanding of flourishing, meaning, and hope in diverse, under-researched populations. Prioritising mixed-methods approaches that capture the complexity of human experience will better align with the EPP framework, offering a more context-sensitive perspective and enhancing the validity of findings across cultural and socioeconomic contexts.

As dynamic constructs, flourishing can be enhanced, meaning restored and hope nurtured through intentionally designed activities known as positive psychological interventions (PPIs). In Chapter 4, PPIs are introduced, with the specific focus on an equine-assisted PPI as a deliberate approach to enhancing these constructs.

Chapter 4. Equine-Assisted Positive Psychological Interventions

4.1. Introduction

As the development of positive psychological interventions (PPIs) has evolved, the need to address the full spectrum of positive and negative human experiences has increasingly been recognised. This has led to the development of existential positive psychological interventions (EPPIs), which integrate existential themes, including the search for meaning, acceptance of suffering and pursuit of authenticity (Wong, 2016d). Accordingly, the theoretical foundations and practical applications of PPIs and EPPIs are explored in this chapter. The origins and unique benefits of equine-assisted interventions, which represent an innovative approach to enhancing optimal functioning, particularly within culturally diverse and under-resourced communities such as Diepsloot, South Africa are examined. A detailed description of the equine-assisted intervention developed for this study and an evaluation of its preliminary outcomes from the pilot study conducted in Diepsloot concludes the chapter. The aim of this comprehensive exploration is to establish a solid foundation for implementing equine-assisted EPPIs in under-resourced settings and their potential impact on flourishing, meaning and hope.

4.2. Positive Psychological Interventions (PPIs).

4.2.1. Defining PPI

PPIs are intentional activities designed to cultivate long-term well-being by fostering positive emotions, behaviours and cognitions (Sin & Lyubomirsky, 2009). The core premise of PPIs is to focus on building strengths and enhancing life satisfaction rather than merely alleviating psychological distress. Grounded in the principles of positive psychology (see Chapter 2 for more detail), which emphasises human flourishing and the cultivation of positive qualities, PPIs aim to enhance aspects of life that contribute to flourishing, including happiness,

meaning and engagement (Seligman et al., 2005). Such interventions supplement traditional treatments of mental health disorders to build positive psychological resources that alleviate suffering and foster well-being.

Initially, PPIs aimed to enhance individuals' well-being by promoting positive qualities and strengths rather than focusing on treating and/or reducing mental illness (Bolier et al., 2013; Joseph & Linley, 2006). Research has revealed that positive traits not only contribute to well-being but also predict the absence of negative traits and distress, mitigate the impact of life's challenges and potentially reduce the risk of developing dysfunction (Chakhssi et al., 2018; Wood & Tarrier, 2010). The theoretical requirement for PPIs has increased to include interventions aligned with the broader goals of positive psychology, as indicated in the term positive psychological interventions (Schueller et al., 2014) rather than being based solely on the narrow application of positive psychology theory (Bolier et al., 2013).

In addition, the current literature has established the following inclusion criteria for an intervention to be considered a PPI:

- Goal-oriented: PPIs target specific positive outcomes, including increased positive emotions, eudaimonia and meaning. Techniques such as gratitude practices, mindfulness and strengths-based activities are commonly employed (Parks & Biswas-Diener, 2013).
- Evidenced-based: PPIs are supported by empirical research, thus demonstrating their effectiveness in improving well-being across diverse populations and settings. Meta-analyses have revealed that PPIs can significantly enhance both hedonic and eudaimonic aspects of flourishing (Bolier et al., 2013; Carr et al., 2020; Sin & Lyubomirsky, 2009).

- Flexible application: PPIs can be adapted to various contexts, making them suitable for individual, group and community settings. They can be tailored to meet the participants' cultural and demographic needs, enhancing their relevance and effectiveness (Schueller et al., 2014).

In essence, PPIs are created to enhance positive experiences, promoting optimal functioning in daily life and thereby assisting individuals in managing any negative occurrences and emotions they may experience (Seligman et al., 2006). PPIs differ from traditional psychological interventions in that they focus on building positive aspects of life rather than merely addressing psychological deficits. Several authors have cautioned that if PPIs concentrate solely on increasing positive variables, they may inadvertently neglect the average person struggling with life's challenges (Joseph & Linley, 2006; Wong & Roy, 2018).

PPIs have garnered substantial attention for their capacity to enhance positive emotions, thoughts and behaviours, reduce psychological distress, and foster positive social relationships (Layous et al., 2014; Seligman et al., 2005; Sin & Lyubomirsky, 2009). Extensive research has emphasised their efficacy in promoting hedonic and eudaimonic well-being, thus contributing to flourishing and reducing psychological distress in both clinical and non-clinical populations (Bolier et al., 2013; Ghielen et al., 2017; Lyubomirsky & Layous, 2013; Moskowitz et al., 2021; Quinlan et al., 2012; Schueller & Parks, 2014)). However, a nuanced examination has revealed both strengths and limitations, highlighting the need for broader, more inclusive approaches; this is apparent in the following section.

4.2.2. Critique.

4.2.2.1. Effectiveness and Limitations of PPIs

PPIs have demonstrated significant benefits across numerous studies. In a review of 51 interventions involving 4,266 individuals, Sin and Lyubomirsky (2009) found that PPIs effectively enhance well-being and reduce depressive symptoms. Similarly, in an analysis of 39 studies with 6,139 participants, Bolier et al. (2013) revealed that PPIs produce sustained, albeit modest, effects on hedonic well-being over three to six months. These findings suggest that longer and more traditional PPIs tend to be more effective and have longer-lasting effects compared to shorter, technologically implemented ones (Bolier et al., 2013; Chakhssi et al., 2018; Sin & Lyubomirsky, 2009; Weiss et al., 2016).

However, concerns related to the overstatement of these benefits persist. Studies have frequently reported small to medium effect sizes, giving rise to questions about the practical significance of these interventions (Moskowitz et al., 2021; White et al., 2019). While Koydemir et al. (2021) noted minor improvements in both hedonic and eudaimonic well-being in non-clinical populations, Jankowski et al. (2020) highlighted inconclusive results for anxiety and depression. These mixed outcomes emphasise the necessity for a more nuanced understanding of the contexts and mechanisms through which PPIs exert their effects.

4.2.2.2. Cultural Sensitivity and Adaptation

A critical examination of the literature reveals a significant over-representation of WEIRD (Western, educated, industrialised, rich and democratic) populations in PPI research, accounting for approximately 78% of studies (Hendriks et al., 2019). This bias stresses the need to adapt and replicate PPIs in diverse cultural contexts to ensure their relevance and effectiveness globally (Becker & Marecek, 2008a, 2008b; Bolier et al., 2013; Ng & Lim, 2019; Ng & Ong, 2022). Positive psychology concepts and interventions often require cultural sensitivity to

resonate with non-Western populations (Guse, 2022; Joshanloo & Weijers, 2014a; Kim et al., 2018; van Zyl & Donaldson, 2023).

Most PPI research in Africa has been conducted in South Africa, typically involving non-clinical adult groups in structured programmes aimed at promoting flourishing and optimal functioning (Guse, 2022; Hendriks et al., 2019; Kim et al., 2018). These studies have highlighted the need for culturally adapted interventions that reflect diverse populations' values, beliefs and social dynamics. Integrating indigenous wisdom and practices into PPIs could offer richer, more contextually relevant approaches to well-being (Wissing, Nel, et al., 2022).

4.2.2.3. Long-Term Effects and Real-World Applications

While PPIs demonstrate immediate benefits, the evidence for their long-term effectiveness is limited. Most studies have focused on short-term outcomes, leaving gaps in our understanding of how these interventions sustain well-being over extended periods (Gander et al., 2013). Research that explores the durability of PPI effects and their applicability in real-world settings is imperative. One may ask how these interventions influence day-to-day well-being outside of clinical or structured environments.

Furthermore, translating PPIs into everyday life requires practical insights into how individuals can integrate positive practices into their routines. This involves examining the impact of PPIs on various domains of life, including work, relationships and personal development to understand their broader implications for holistic well-being (Parks & Biswas-Diener, 2013; Parks & Schueller, 2014).

4.2.3. Summation

Although positive experiences can help alleviate the negative impact of difficult experiences, it is also imperative to take cognisance that depending on the situation, experiencing

both positive and negative emotions is healthy (Wong & Roy, 2018). To address the complexities of human suffering and adversity, PPIs have evolved into EPPIs, which adopt a more balanced and holistic approach to well-being and flourishing (Wong & Roy, 2018), thus increasing PPIs' focus to assist individuals find meaning and hope amidst suffering, rather than merely focusing on increasing positive aspects. Wong (2016d) contended that strategies and activities that promote the flourishing or optimal functioning of individuals, groups and communities (Gable & Haidt, 2005) are intrinsically existential in nature and are classified as EPPIs. Subsequently, EPPIs and their commonly used strategies and activities are detailed.

4.3. Existential Positive Psychological Interventions (EPPIs)

EPPIs combine principles from existential psychology (EP) and positive psychology (PP) to enhance overall well-being. By broadening the scope of PPIs to include existential-humanistic psychology, EPPIs apply an existential psychological perspective to address both the positive and negative aspects of life (Parks & Biswas-Diener, 2013; Wong, 2020b; Worth & Lyle, 2022). This approach fosters a meaningful and authentic life by assisting individuals in finding purpose, embracing their true selves and navigating life's complexities and dualities.

Integrating EPPIs with PPIs offers a more comprehensive framework to address the limitations of traditional PPIs. EPPIs focus on deeper existential themes, including meaning, suffering and authenticity, thus providing a richer context for understanding human flourishing (Wong, 2021b). While PPIs form the foundation for EPPIs, the latter incorporate existential themes into PP frameworks, aiming to cultivate meaning, embrace life's dualities and promote authentic living (Wong, 2021b; Worth & Lyle, 2022). EPPIs aim to address the full spectrum of human experiences, acknowledging both the positive aspects of life and inevitable challenges and adversities. They balance positive and negative emotions to foster fortitude and flourishing,

recognising that well-being encompasses both joy and suffering. Hence, the goal is to foster a meaningful and authentic life by assisting individuals to find meaning and purpose, embrace their true selves and navigate life's inherent complexities (Wong, 2016d, 2021b).

Vos et al. (2015) emphasised that EPPIs combine existential therapy's focus on meaning and purpose with PP's emphasis on strengths and well-being. This synergy helps individuals navigate life's challenges and enhances their overall quality of life by promoting a profound sense of personal meaning and fulfilment. Lomas and Ivtzan (2016) further elaborated that EPPIs explore the existential dimensions of human experience, including the quest for meaning, confrontation with mortality and pursuit of authenticity, while simultaneously fostering positive emotions, engagement and satisfaction with life.

Wong (2016d) defined EPPIs as interventions aimed at enhancing optimal functioning by changing perspectives, attitudes and behaviours to recognise the inevitability of suffering and anxiety. They encourage individuals to achieve authentic happiness by accepting and transforming challenges and negative emotions. EPPI strategies emphasise dialectical principles, highlighting positive aspects of negative situations and limiting negative aspects of positive situations. Moreover, they promote the adoption of a mindset oriented towards finding meaning to foster flourishing. Furthermore, Wong (2016d) posited that EPPIs should be based on a broad and positive explanatory system regarding the human condition that does not require it to be oriented in a specific theory.

Building on the previous PPI criteria described in Section 4.2, Worth and Lyle (2022) proposed expanded criteria for EPPIs. These include Wong's (2016d) aforementioned definition related to intervention aims as well as additional criteria: (i) constructs are theoretically oriented and studied in positive, existential or humanistic psychology; and (ii) interventions are designed

to be based on empirical research within the field. Schueller et al. (2014) noted that EPPI strategies should be conceptually grounded in an existential positive psychological theory. Accordingly, the key elements of EPPIs include:

- **Acknowledgement of suffering and anxiety:** Individuals are guided through self-discovery, self-reflection, and self-acceptance, equipped with skills to overcome suffering and enhance flourishing by living according to their values, increasing their character strengths, and addressing their weaknesses (Wong, 2016d). A fulfilling life involves enduring difficult challenges and struggling to achieve one's dreams and full potential despite adversity (Wong & Roy, 2018).
- **Recognition of the dialectical balance of life's positives and negatives:** Interventions encourage extending boundaries of positive experiences by considering negatives (Parks & Biswas-Diener, 2013; Wong, 2020a). Practices are designed to enhance flourishing by encouraging the dialectical balance of positive and negative emotions, pursuing meaning and overcoming challenges (Wong, 2016d).
- **Nurturing meaning and purpose:** Interventions encourage self-reflection and align with personal values and goals. There is a strong emphasis on the meanings attributed to or derived from the intervention activities' experiences (Wong, 2014b, 2016d).
- **Expansion of growth and identity**: Interventions focus on *being* (identity/who we are) and evolving and *becoming* (potential) because a strong sense of self facilitates authentic living (Worth & Lyle, 2022). Wong (2014b) noted that

activities emphasise *being* rather than *doing*, thereby encouraging individuals to attain a way of *being* in a world that includes both pleasures and adversities.

The integration of ecopsychology nature-based interventions expands the scope of EPPI to further enhance flourishing by incorporating nature and environmental factors to foster a deeper connection to the broader ecosystem (Chalquist, 2009; McGeeney, 2016; Passmore & Howell, 2014). These interventions recognise the therapeutic potential of natural environments and importance of ecological connectedness in promoting holistic well-being. Rooted in the foundational principles of ecopsychology and EPP, the aim of this study was to extend the benefits of nature-based EPPIs by exploring the unique potential of animal-assisted existential positive psychological interventions (AEPPIs). Specifically, equines in AEPPIs were proposed as a novel and promising direction. Equine-assisted psychological interventions (EAPIs) leverage the unique bond between humans and animals to enhance flourishing (Schroeder & Prasath, 2022). This approach is in accordance with the call for increased innovation and creativity in developing EPPIs, as advocated by Wong and Roy (2018) and Worth and Lyle (2022). Before examining AEPPIs, a form of nature-based EPPIs, a brief overview of the characteristics and common types of activities used within EPPIs is presented.

4.3.1. Characteristics of Existential Positive Psychological Interventions (EPPIs)

EPPIs are comprehensive and adaptable, addressing the full range of human experiences to promote optimal functioning. It is noteworthy that the field of evidenced-based EPPIs is still developing in PP. Furthermore, there is no clear guidance on the essential characteristics of activities in PPIs. Specific patterns have emerged in relation to the differing content and structure of existing evidence-based PPIs and emerging EPPIs (Parks & Biswas-Diener, 2013; Worth & Lyle, 2022). Several meta-analyses have identified characteristics of PPIs, including

components, strategies, techniques, delivery methods, duration and dosage (Bolier et al., 2013; Carr et al., 2020; Chakhssi et al., 2018; Hendriks et al., 2020; Sin & Lyubomirsky, 2009)).

In this section, the defining characteristics of EPPIs are combined with an exploration of their various types, emphasising how they promote flourishing, meaning and hope through diverse strategies and techniques. As research has continued to evolve, an increasing interest in expanding these interventions to include broader and more innovative approaches such as integrating nature and animal interactions to enhance flourishing and foster holistic well-being has occurred.

EPPIs are versatile interventions that can be tailored in their components, strategies, dosage and formats to address a diverse range of well-being needs. The emphasis is on their flexibility and applicability in different cultural and socio-economic contexts, ensuring they are particularly valuable in communities with limited resources (Guse, 2022; Ng & Ong, 2022; Pawelski, 2020). A brief overview of their key characteristics is thus provided. **Integrative Components**

PPIs can be structured as single-component or multi-component interventions, each targeting different outcomes related to well-being (Carr et al., 2020; Hendriks et al., 2020; Parks & Biswas-Diener, 2013; Sin & Lyubomirsky, 2009). ***Single-component interventions*** focus on specific positive activities or themes, such as mindfulness and gratitude, to address a particular aspect of well-being, usually hedonic well-being. They are often straightforward and easy to implement, ensuring they are accessible and practical for various settings (Carr et al., 2020; Hendriks et al., 2020).

Multi-component interventions incorporate several activities to address multiple facets of flourishing simultaneously. A multi-component EPPI may integrate mindfulness, narrative

exercises and values clarification to promote comprehensive well-being. As noted previously, these interventions typically blend several activities and are designed to promote both hedonic and eudaimonic well-being outcomes (Hendriks et al., 2020; Schotanus-Dijkstra et al., 2019).

The majority of empirical research on PPIs has concentrated on single-component interventions, with a lack of theory-based, manualised, multi-component interventions (Gorbeña et al., 2021). However, evidence has indicated that multi-component interventions are more effective. Schotanus-Dijkstra et al. (2019) found that participants who engaged in a multi-component PPI delivered via email demonstrated significant improvements in positive emotion, strengths usage, optimism, self-compassion, fortitude and positive relations in comparison to a control group. Parks and Titova (2016) found that when individuals were given a standard set of positive psychological interventions, they tended to select and use only a subset of the techniques. This finding supports Schueller's (2014) recommendation that PPIs offer various activity options rather than prescribing a single activity for all participants. This flexibility allows individuals to choose activities that best meet their needs, enhancing engagement and effectiveness.

4.3.1.2. Strategies

EPPIs employ cognitive, emotion-regulation, behavioural and attitudinal strategies to realise positive outcomes (Schueller & Parks, 2014; Van der Weele, 2020; Wong, 2016d).

Cognitive strategies comprise mental exercises that promote positive thinking and reflection. Activities such as gratitude identification (Rash et al., 2011) and best possible selves (Loveday et al., 2016; Sheldon & Lyubomirsky, 2006) encourage individuals to reframe their thoughts and develop a more hopeful and meaningful outlook (Ng & Lim, 2019).

Emotion-regulation strategies aim to enhance the regulation and experience of emotions. Techniques like savouring and positive reappraisal help individuals manage their emotional responses to both positive and negative experiences. These strategies are essential for maintaining emotional balance and fortitude (McCullough, 2002; Smith, 2017).

Behavioural strategies include activities that enhance well-being through engagement and interaction, including performing acts of kindness and engaging in novel activities (Buchanan & Bardi, 2010). These strategies comprise engaging in activities in accordance with one's values and strengths as well as promoting actions that foster authentic living and personal growth. For example, mindfulness practices and narrative exercises help individuals align their behaviours with their core values (Wong, 2016d).

Attitudinal strategies encompassing persistent beliefs, emotions and behavioural inclinations of socially significant entities can have a significant impact on an individual's overall perspective and well-being (Wong & Roy, 2018).Wong (2016d) argued that focusing solely on behaviour and/or cognition could ignore the importance of attitudinal change. Negative attitudes and meaning orientations can be modified by techniques such as logotherapy's Socratic dialogue, attitude modulation and dereflection, which help reframe pessimistic views and perspectives on suffering and promote positive transformation (Frankl, 1969; Lukas, 2000; Sun et al., 2022).

A core feature of EPPIs is their focus on changing attitudes and behaviours towards life's adversities, fostering a balanced acceptance of positive and negative experiences. They aim to stimulate a deep and enduring change in how individuals perceive and interact with their surrounding world rather than merely focusing on momentary shifts in thinking, behaviour and mood (Wong, 2016d).

4.3.1.3. Delivery Methods and Settings

EPPIs can be delivered in diverse formats and settings, tailored to meet the needs of different populations and contexts. They have been effectively implemented through a variety of modalities, including individual and group sessions, in-person, online platforms, self-help materials and community-based programmes, allowing for wide adaptability and accessibility (Schueller & Parks, 2014).

In-person interventions allow for direct interaction and personalised guidance. These are often more effective due to the immediate feedback and support provided (Koydemir et al., 2021).

Online and technological platforms can provide flexibility and accessibility, especially for those who cannot attend in-person sessions. These include online therapy, virtual mindfulness sessions and self-help modules (Howells et al., 2016).

Self-help approaches engage participants in activities independently, guided by materials such as books, apps and online resources. This method is particularly beneficial for individual empowerment and ongoing personal development (Lyubomirsky, 2008; Moskowitz et al., 2021; Seligman, 2011).

Community-based programmes are implemented in specific communities, including urban and rural contexts, fostering social support and collective engagement. They effectively promote well-being in culturally diverse and under-resourced settings (Appiah et al., 2020). Community settings can also include natural environments where activities are performed in nature. Walking, being outdoors and interacting with nature or animals can enhance both hedonic and eudaimonic well-being (Capaldi et al., 2015; Howell et al., 2011; McMahan, 2018; McMahan & Estes, 2015; Passmore & Holder, 2017; Pluta, 2012; Zhang et al., 2014).

Individual and group settings are two different ways of implementing EPPIs. While individual settings offer a personalised focus, group settings provide social support and shared learning experiences (Bolier et al., 2013; Seligman et al., 2006).

Recent evidence from a meta-analysis on randomised controlled PPIs revealed that face-to-face personal interaction may be more effective than technology-assisted alternatives in enhancing users' well-being (Koydemir et al., 2021). Despite the reported benefits to well-being associated with natural settings, they remain underutilised in PPIs (Hamann & Ivtzan, 2016; Passmore & Holder, 2017).

4.3.1.4. Dosage

The duration and frequency of EPPIs, referred to as dosage, can vary significantly across different interventions:

Single-session interventions often focus on brief, impactful once-off activities such as a one-time gratitude exercise or mindfulness session. These are beneficial for immediate relief and short-term engagement (Sin & Lyubomirsky, 2009).

Brief and short-term interventions typically last from a few weeks to two months, allowing for sustained engagement with practices such as gratitude journaling and goal-setting exercises (Gorbeña et al., 2021). The latter authors posit that interventions may include daily practices lasting between five and 15 minutes each, suitable for single-component activities such as gratitude journaling.

Long-term interventions involve ongoing engagement over several months, often incorporating multiple components for more sustained engagement and impact (Bolier et al., 2013). Long-term programmes such as positive psychotherapy integrate various activities to build comprehensive well-being (Rashid & Al-Haj Baddar, 2019).

Research has indicated that longer and more frequent interventions tend to yield more substantial benefits. However, the optimal dosage for EPPIs remains a subject of ongoing study, with recommendations to consider both the duration of prescribed activities and overall timeline of the intervention (Bolier et al., 2013; Sin & Lyubomirsky, 2009; Yu & Chang, 2022).

4.3.2. Types of Existential Positive Psychological Interventions (EPPIs) and Their Activities

EPPIs encompass a variety of intervention types that are broad enough to include various ways of achieving optimal functioning, including activities that may not be inherently positive but contribute to optimal functioning (Ng & Lim, 2019). Emergent EPPI interventions with positive outcomes that encourage the development of abilities to buffer and cope effectively with the multiple difficulties of life include gratitude, mindfulness, self-compassion, meaning and hope interventions (Ciarrochi et al., 2022). Various intervention types and their respective activities that each play a unique role in promoting flourishing, meaning and hope are subsequently briefly explored as an in-depth discussion of these interventions is outside the scope of this chapter.

4.3.2.1. Gratitude Interventions

Gratitude, as a multifaceted concept central to human psychology and well-being, can be experienced and expressed as an emotion, attitude, moral virtue, habit, personality trait and coping response (Emmons & McCullough, 2003). As an emotion, gratitude reflects a sense of thankfulness for positive events and acts of kindness. When perceived as an attitude, it embodies a generally positive outlook on life. As a moral virtue, it involves ethical behaviour and an appreciation of others' contributions. As a personality trait, gratitude shapes one's overall disposition, while as a coping response, it helps manage stress and adversity by focusing on positive aspects (Emmons, 2013; Wood et al., 2007).

In the context of EPPIs, gratitude practices do not merely concern recognising and valuing positive outcomes, but involve a deep appreciation for life's complexities and challenges, contributing to personal growth and meaning (Wood et al., 2010). Gratitude practices deepen connections with others and the world, understanding how these connections contribute to a fulfilling and meaningful life. Furthermore, in many traditional cultures, gratitude includes a profound respect and appreciation for various elements, including ancestors, the earth and those who contribute to one's sustenance such as those responsible for growing and preparing food (Wong, 2016d). Consequently, a positive attitude of gratitude concurs more closely with ethical values and principles rather than mere personal happiness (Wong & Roy, 2018).

Wong (2016d) emphasised cultivating gratitude as an intrinsic virtue and enduring life value rather than as a tool for merely boosting transient positive emotional states. Gratitude practices assist individuals in embracing adversity by discovering its value and learning to appreciate the lessons and strengths acquired from experiencing life's challenges (Wong, 2016d; Wong & Roy, 2018). This holistic perspective encourages individuals to view gratitude as a way to deepen connections with others and the world, fostering a fulfilling and meaningful life even amidst adversity.

Examples of gratitude practices and activities in EPPIs include gratitude visits (Seligman et al., 2005; Shin et al., 2020; Wong, 2016d), gratitude journaling (Wong, 2016d) and counting one's blessings even in adverse events (Jans-Beken et al., 2020; Wong & Roy, 2018). A brief description of these practices follows:

1. **Gratitude Visits:** These involve expressing gratitude directly to someone who has significantly impacted one's life. Traditionally used to generate positive emotions in PPI (Seligman et al., 2005), and in EPPIs, gratitude visits are reframed to emphasize deep

connections and meaningful interactions. This approach accounts for cultural and personal contexts and acknowledges the complex dynamics within relationships. (Shin et al., 2020; Wong, 2016d).

2. **Gratitude Journaling:** This practice involves reflecting on and recording positive and challenging experiences, focusing on their contributions to personal growth. It helps develop virtuous qualities and fosters a profound appreciation for all life's experiences, including adversities (Wong, 2016d).
3. **Counting Your Blessings:** Adapted from the PPI "Three Good Things" exercise (Jans-Beken et al., 2020), this activity encourages daily or weekly reflections and writing on things or people and situations one is grateful for, even within adverse events. It helps in reframing losses into potential gains and channelling negativity into positive expressions of gratitude (Emmons, 2013); and has a place within EPPI (Jans-Beken & Wong, 2019; Wong & Roy, 2018).

Gratitude is often hailed as the "quintessential positive psychology trait" (Wood et al., 2009, p. 43) and research consistently demonstrates the positive impact of gratitude on well-being across various cultural contexts (Kim et al., 2018). Gratitude enhances both hedonic and eudaimonic well-being, reduces psychological distress, and fosters flourishing (Davis et al., 2016; Emmons & McCullough, 2003; Froh, 2011). Interventions focused on gratitude have shown substantial benefits for mental health, including increased life satisfaction and positive affect while reducing negative emotions (Fagley, 2012; Ouweneel et al., 2014). Moreover, gratitude promotes prosocial behaviours and strengthens social connections, underscoring its collective benefits (Algoe et al., 2008; Grant & Gino, 2010).

Gratitude has often been hailed as a “quintessential positive psychology trait” (Wood et al., 2009, p. 43). Furthermore, research has consistently demonstrated the positive impact of gratitude on well-being across various cultural contexts (Kim et al., 2018). Gratitude enhances both hedonic and eudaimonic well-being, reduces psychological distress and fosters flourishing (Davis et al., 2016; Emmons, 2013; Emmons et al., 2019; Froh et al., 2011). Interventions focused on gratitude have demonstrated substantial benefits for mental health, including increased life satisfaction and positive affect while reducing negative emotions (Ouweneel et al., 2014) (Fredrickson, 2004; Harbaugh & Vasey, 2014; Iodice et al., 2021). Moreover, gratitude promotes prosocial behaviours and strengthens social connections, emphasising its collective benefits (Bono & Sender, 2018; Grant & Gino, 2010; Ma et al., 2017).

Despite these benefits, meta-analyses have revealed that gratitude interventions typically result in small to medium improvements in well-being (Dickens, 2017). Furthermore, while most research has focused on short-term outcomes, longitudinal studies are needed to understand the long-term effects of gratitude practices.

Current literature on gratitude interventions has often overlooked their integration in existential frameworks. EPPIs offer a unique pathway to fostering fortitude and deep spiritual maturity, particularly by addressing existential themes such as meaning, suffering and transcendence (Wong, 2016d). By embracing an attitude of gratitude in this broader context, individuals can cultivate a resilient mindset that appreciates life’s joys and adversities, promoting holistic flourishing (Wong, 2016d; Wong & Roy, 2018). Further research is imperative to explore how gratitude interventions can be tailored to different cultural contexts and individual experiences as well as how they contribute to long-term well-being and existential growth (Dickens, 2017, 2019).

In conclusion, gratitude practices in EPPIs offer a powerful means to enrich life experiences and cultivate a deep-seated sense of well-being. In the following section, mindfulness, another critical component of EPPIs, is explored.

4.3.2.2. Mindfulness Interventions

Mindfulness, once considered outside the realm of traditional PPIs due to its roots in Eastern spiritual practices rather than PP theory, has now become integral to EPPIs (Allen et al., 2021; Harris, 2013). Mindfulness is associated with EPPIs because it addresses both positive and negative aspects of self-awareness, emotions, thoughts and attention (Ciarrochi et al., 2022). Defined as the awareness that emerges from paying attention to the present moment intentionally and non-judgementally, mindfulness fosters a deep acceptance of the unfolding experience (Kabat-Zinn, 2015; Linehan, 2014).

As mindfulness transcends cultural boundaries, it is recognised and valued across many traditions and contemporary practices, even if the same term is not employed (Kabat-Zinn, 2015). The essence of mindfulness involves a dual awareness: the individual is conscious of their experiences and simultaneously practises non-attachment and non-judgement towards these experiences. This reflective stance allows one to observe mental states ebb and flow without becoming entangled in them (Davis & Hayes, 2011).

In the context of EPPIs, mindfulness practices cultivate present-moment awareness and acceptance, fostering a compassionate and balanced understanding of oneself and one's experiences. They may include focusing on the senses, breathing and opportunities for being in the moment with oneself through contemplation, exploration and self-awareness of inner thoughts, beliefs and feelings combined with opportunities to express and develop these characteristics. These practices help individuals build fortitude and a deeper self-awareness,

promoting holistic flourishing. Typical mindfulness activities in EPPIs include mindful breathing (Davis & Hayes, 2011), body scan (Kabat-Zinn, 2015) and reflective contemplation (Worth & Lyle, 2022) .

Research has supported the positive effects of mindfulness across various settings extensively. It enhances both hedonic and eudaimonic well-being, increases positive affect, decreases negative emotions and improves overall psychological health (Khoury et al., 2013; Lomas et al., 2019; Sakuraya et al., 2020). Mindfulness also predicts relationship satisfaction, reduces psychological distress and enhances a sense of meaning in life (Allan et al., 2015; Davis & Hayes, 2011; Schreiner & Malcolm, 2008; Zheng et al., 2022).

However, most research has focused on mindfulness as a tool for reducing ill-being rather than explicitly within the framework of PP (Allen et al., 2021; Ivtzan, Young, et al., 2016). Recent systematic reviews have indicated that while mindfulness enhances both hedonic and eudaimonic well-being in different populations, the quality of research has been inconsistent, highlighting the need for more rigorous and long-term studies (Allen et al., 2021; Chi et al., 2018; Chu & Mak, 2020; Lomas et al., 2017).

Incorporating mindfulness into EPPIs provides a pathway to understanding the nature of one's mind and the essence of being fully human. By fostering mindful awareness, individuals are able to alleviate psychological and situational suffering, thereby unlocking their potential for flourishing. Mindfulness practices in EPPIs contribute to a deep sense of flourishing and the ability to find meaning and hope in everyday experiences. This balance of acceptance and reflection supports the development of fortitude and self-understanding, which is essential for holistic well-being (Kabat-Zinn, 2015).

The role of self-compassion within EPPIs, another crucial aspect of fostering well-being, is subsequently explored.

4.3.2.3. Self-Compassion Interventions

Self-compassion is a fundamental element in EPPIs as they focus on treating oneself with kindness and understanding during times of suffering and failure. This practice enables individuals to navigate adversities with greater emotional fortitude and strength (Neff, 2003, 2023). Defined as a healthy attitude towards oneself, self-compassion involves recognising one's own suffering and responding with care and empathy, which significantly enhances personal well-being and relationships (Bluth & Neff, 2018; Ciarrochi et al., 2022; Kirschner et al., 2019), thus promoting a non-judgemental stance towards one's own shortcomings, failures and struggles (Neff, 2003, 2011; Neff & Dahm, 2015; Neff & Davidson, 2016). Examples of self-compassion activities include self-compassionate letter writing (Neff & Dahm, 2015), compassionate imagery (Lambert D'Raven & Pasha-Zaidi, 2014) and mindful self-reflection (Neff, 2011). A brief description of these activities follows:

1. **Self-Compassionate Letter Writing**: This practice involves writing letters to oneself from the perspective of a compassionate friend, addressing personal struggles with empathy and support. It helps foster a kinder internal dialogue and reduces self-criticism (Neff & Dahm, 2015).
2. **Compassionate Imagery:** This activity uses visualisation techniques to evoke feelings of warmth and kindness toward oneself. It helps develop a nurturing inner dialogue and reinforces self-compassionate thoughts and actions (Lambert D'Raven & Pasha-Zaidi, 2014).

3. **Mindful Self-Reflection:** This practice encourages participants to reflect mindfully on their experiences and helps integrate a compassionate approach to understanding and accepting one's emotional and cognitive responses without judgment (Neff, 2011).

Research has consistently supported the significant role of self-compassion in promoting both hedonic and eudaimonic well-being. Systematic reviews and meta-analyses have revealed that self-compassion interventions are associated with enhanced levels of flourishing and moderate improvements in symptoms of depression, anxiety and stress (Neff, 2023; Wilson et al., 2019; Zessin et al., 2015). Self-compassion acts as a protective factor, fostering a kind and accepting relationship with oneself, enhancing emotional strength, which is essential for developing hope, fortitude and flourishing in times of pain and hardship (Neff & Davidson, 2016).

However, most research on self-compassion has focused on its impact on reducing psychological distress, with less emphasis on its broader implications within positive psychology and existential frameworks (Neff & Dahm, 2015). It is recommended that future studies explore the long-term benefits of self-compassion interventions and their role in fostering existential growth and resilience in diverse cultural contexts.

Despite the growing body of evidence on the benefits of self-compassion, more rigorous research is needed to explore its application within EPPIs. Integrating self-compassion into existential frameworks may provide deeper insights into how individuals cope with life's fundamental challenges and cultivate a resilient, compassionate mindset. Furthermore, research should examine how self-compassion interventions can be tailored to various cultural and individual contexts, enhancing their effectiveness and applicability in promoting long-term well-being.

In conclusion, self-compassion interventions in EPPIs help individuals develop a supportive and nurturing relationship with themselves, which is essential for overcoming adversities and fostering holistic flourishing. Meaning-centred interventions within EPPIs are subsequently explored, further deepening our understanding of how these practices contribute to well-being and resilience.

4.3.2.4. Meaning-Oriented Interventions

Although meaning is a cornerstone of flourishing and an essential component of PP, meaning-oriented interventions remain underdeveloped and underutilised (Parks & Biswas-Diener, 2013; Wong, 2016d; Wong & Roy, 2018). Wong's extensive work highlights the importance of meaning in life and introduces new areas within the increased understanding of PP, focusing on existence, being, self-transcendence, responsibility and personal growth (Wong, 2011a, 2016d, 2019a, 2020a; Wong & Roy, 2018). Meaning-oriented interventions in EPPI emphasise discovering and cultivating a life purpose, understanding life's questions and responsibilities, and fostering actions that concur with these purposes (Frankl, 1988a). Types of meaning-oriented activities in EPPIS include personal narrative exercises (McAdams, 2018; Wong, 2014b), values clarification activities (Steger et al., 2013; Worth & Lyle, 2022) and self-transcendent actions (Lyubomirsky et al., 2005; Nelson et al., 2016; Piff et al., 2010; Wong, 2016d, 2016e).

Research has revealed that meaning-oriented interventions are crucial for fostering eudaimonic well-being and holistic flourishing. These practices help individuals develop fortitude, enhance their sense of purpose and cope more effectively with life's adversities (Frankl, 1988a). By focusing on what gives life meaning, individuals can discover motivation

and strength even during challenging times, promoting long-term well-being (Wong & Roy, 2018).

However, there is a notable gap in the development and application of these interventions within mainstream PP, possibly due to an assumption that when people are content and prosperous, there appears to be no need for meaning. This premise is supported by accounts indicating that activation of meaning-seeking occurs only when life is hard and meaning makes suffering more bearable as it enables fortitude (Frankl, 1988a). Most of the existing research has highlighted the pursuit of happiness and satisfaction, often neglecting the deeper, existential aspects of meaning (Wong, 2016d). In addition, most meaning-oriented interventions have focused on writing about traumatic or stressful events, with mixed results on the benefits of writing about positive experiences (Lyubomirsky et al., 2006; Parks & Biswas-Diener, 2013).

Despite the recognised importance of meaning in life, meaning-oriented interventions are relatively underexplored (Wong, 2016d; Wong & Roy, 2018). Future research is imperative to investigate how these interventions can be effectively integrated into EPPIs and tailored to diverse cultural and individual contexts (Parks & Titova, 2016; Steger & Kashdan, 2013). Exploring the long-term impact of meaning-focused activities and their role in fostering existential growth and resilience will provide valuable insights into their potential for enhancing well-being (Wong, 2020a).

Incorporating meaning-oriented activities into EPPIs helps individuals cultivate a profound connection to their life purpose, guiding them towards a more purposeful and fulfilling existence (Parks & Biswas-Diener, 2013; Wong, 2014a, 2014b). These interventions support flourishing by encouraging reflection on one’s values, life goals and contributions to others,

thereby fostering a holistic sense of well-being and fortitude (Steger & Kashdan, 2013; Worth & Lyle, 2022).

Hope interventions and their role in EPPIs are subsequently explored.

4.3.2.5. Hope Interventions

Hope is a vital component of human well-being, recognised as an emotion and character strength that mediates positive outcomes such as increased positive affect, goal attainment and personal growth (Feldman, 2013; Ghielen et al., 2017). In the framework of EPP, hope is considered a crucial value, working alongside faith and love to support the fundamental components of the triangle of meaning, spirituality and relationships, which are key pillars of optimal functioning (Wong, 2016d). While engaging in meaningful activities can awaken a sense of agency and opportunity, overcoming adversity engenders a powerful message of hope (Frankl, 1988a).

Hopeful individuals derive pleasure from pursuing their goals, understanding that the journey itself imbues life with meaning and purpose. This mindset reflects a form of mindfulness, where each step towards achieving one's goals is valued, regardless of the outcome (McCullough, 2002). In an EPPI framework, hope is cultivated through activities that encourage personal experiences, develop connections with others, expand spiritual and transcendent boundaries, and foster a rational approach to maintaining a hopeful outlook (Herth, 2000). Such interventions emphasise the importance of meaning, address existential anxieties, particularly isolation, and highlight the role of freedom in generating hope (Terao & Satoh, 2022).

Hope intervention strategies typically involve activities designed to evoke hopeful thoughts and foster positive emotions, consistent with the goals of broader PPIs aimed at enhancing well-being (Cheavens et al., 2006; Snyder et al., 2011). Types of hope-centred

activities in EPPIs include psychoeducation on hope (Feldman & Dreher, 2012), proactive goal mapping (Buragohain, 2014; Feldman & Dreher, 2012), visualisation techniques (Buragohain, 2014; King, 2001), gratitude and hope reflection (Witvliet et al., 2019)and cultural adaptations of hope (Bernardo & Sit, 2020).

Hope-based interventions have demonstrated positive effects on well-being and flourishing, reducing psychological distress and enhancing life satisfaction. Meta-analytic and systematic reviews have supported the effectiveness of hope interventions in promoting both hedonic and eudaimonic aspects of flourishing (Bolier et al., 2013; Kim et al., 2018; Sin & Lyubomirsky, 2009). Hope interventions have been linked to improvements in hopefulness and reductions in depressive symptoms (Cheavens & Gum, 2010; Sin & Lyubomirsky, 2009).

Furthermore, hope plays a critical role in enhancing resilience. Frankl (1988a) noted that finding meaning through creative values (something unique and beneficial for others), experiential values (engaging fully with daily experiences) and attitudinal values (maintaining a resilient attitude towards adversity) help individuals develop a hopeful and purpose-driven approach to life. This triad of values emphasises the potential for hope-centred activities to promote long-term well-being and resilience, even when encountering significant challenges.

However, depending on context and application, the impact of hope interventions varies. While some studies have revealed moderate effects on flourishing and depressive symptoms (Sin & Lyubomirsky, 2009), others have demonstrated smaller effect sizes, indicating a need for more nuanced and context-specific approaches (Bolier et al., 2013). Weis and Speridakos (2011) found that although hope enhancement strategies yielded modest increases in hopefulness and life satisfaction, they did not alleviate depression, anxiety and distress. Furthermore, many hope

interventions are created within a deficit perspective by often focusing on clinical populations, limiting their generalisability to non-clinical and culturally diverse settings (Kim et al., 2018).

Despite encouraging findings, more high-quality, methodologically rigorous studies are imperative to better understand the long-term effects and cultural relevance of hope interventions (Weis & Speridakos, 2011). Future research should explore how hope interventions can be adapted to diverse cultural settings and examine their long-term impact on well-being and existential growth. Nevertheless, incorporating hope-centred activities into EPPIs provides individuals with the tools to cultivate a resilient and hopeful outlook, guiding them towards a purposeful and fulfilling life. These interventions support flourishing by encouraging reflection on one's goals and the proactive pursuit of meaningful outcomes.

The focus has shifted from the normal employment of EPPIs to exploring nature-based interventions as a strategy that extends EPPIs to include eco-psychology. Such EPPI practices seek to assist individuals to lead worthwhile lives by strengthening their fortitude and flourishing by connecting with something greater than themselves. Nature offers continuous and consistent opportunities for such interventions (Passmore & Howell, 2014).

4.3.2.6. Nature-based Interventions

Nature-based interventions (NBIs) harness the therapeutic potential of natural environments to enhance psychological well-being. These interventions concur with existential themes by fostering deep connections with nature and offering a setting for reflection, emotional balance and the exploration of meaning (Howell et al., 2011; Passmore & Holder, 2017). Within the eco-EPP framework described in Section 2.5, these interventions accord with existential themes by fostering deep connections with nature and providing a setting for reflection and

emotional balance (Howell et al., 2011; Passmore & Holder, 2017). Such nature-based practices promote holistic well-being through active and passive engagement with the natural world.

Active engagement comprises activities in which individuals interact directly with nature, including hiking, gardening and coming into contact with animals. Passive engagement, which involves simply being present in a natural setting or practising mindfulness while observing nature, also contributes to flourishing (Capaldi et al., 2015; Ciarrochi et al., 2022; Lewis et al., 2022). Nature-based activities that may comprise EPPIs include forest bathing (shinrin-yoku) (Capaldi et al., 2015), gardening therapy (Bloomfield, 2017), nature walks (Passmore & Holder, 2017) and animal-assisted interventions (Fine, 2015; Schroeder & Prasath, 2022). The latter, the focus of the present study, involves interacting with animals such as dogs, cats, and equines in psychological interventions to enhance emotional and psychological well-being. These activities build connections between humans and animals, fostering empathy, responsibility and social skills (Fine, 2015; Schroeder & Prasath, 2022). Animal-assisted psychological interventions (AAPIs), particularly those incorporating equines, are emerging as effective strategies within the eco-EPP framework. Interactions with animals can provide unique emotional support and facilitate therapeutic outcomes, including increased empathy, reduced anxiety and enhanced social skills (Schroeder & Prasath, 2022). Despite promising findings, empirical research of nature-based interventions with existential positive outcomes is still in its early stages (Howell et al., 2013; Passmore & Howell, 2014).

Ongoing research in these areas is crucial for understanding how NBIs can be adapted and implemented to promote mental health across various populations and settings (McMahan & Estes, 2015). South African studies on NBI are underrepresented in global reviews, which often focus on research in WEIRD countries (Lewis et al., 2022; Silva et al., 2023; Taylor et al., 2022).

Consequently, there is a limited understanding of the effectiveness of NBIs in different cultural and environmental contexts. Addressing these gaps through methodologically rigorous studies on diverse South African populations, long-term effects and practical implementation strategies will enhance the development of effective, sustainable and culturally relevant NBIs that can significantly enhance mental health and well-being (Potgieter, 2019; Tomita et al., 2017).

NBIs hold significant promise for enhancing mental health and fostering meaningful connections in settings where quality mental health care is often inaccessible. These interventions require minimal resources, are culturally adaptable and can be implemented in various settings, from urban parks to rural landscapes, including farms (Bloomfield, 2017; Shanahan et al., 2019). Nature, accessible to all communities, affords an ideal environment for implementing eco-EPP strategies as it offers a multifaceted approach to enhance mental health, generate connections and provide refuge from modern life's stresses.

4.3.2.7. Summation

Accordingly, a multi-dimensional conceptualisation of EPPIs as evidenced-based practices designed to enhance optimal functioning was adopted in this study. These interventions encourage a dialectical balance of positive and negative emotions, promote living in accordance with one's values and strengths, foster the search for meaning and support overcoming life's adversities (Schueller et al., 2014; Wong, 2016d; Worth & Lyle, 2022) .

It is recommended that the scope of PPIs and EPPIs should explore innovative approaches, embrace cultural diversity and adapt to various contexts to enhance their global relevance and effectiveness (Guse, 2022). The integration of nature and animals into interventions, which introduces a new dimension to how individuals can connect with and discover meaning through interactions with the natural world, is one such innovative approach.

Bloomfield (2017) noted that integrating animals into therapeutic practices enhances well-being and promotes a deeper sense of connection and purpose. By embracing the unique therapeutic benefits provided by animals, especially equines, this study contributes to the ongoing evolution and enrichment of EPPIs (Passmore & Howell, 2014; Wong & Roy, 2018).

Animal-assisted interventions (AAIs) as the foundation for describing equine-assisted psychological interventions (EAPIs) are presented in the following section. The specific equine-assisted positive psychological intervention (EAPPI) developed to enhance flourishing, meaning, and hope in adults residing in under-resourced communities is detailed.

4.4. Animal-Assisted Interventions (AAIs)

AAIs encompass a broad range of practices that harness the beneficial effects of human-animal interactions to enhance psychological well-being and overall health. This concept originates from the well-established recognition of the unique and profound relationship humans share with animals, a bond deeply embedded in the history of human civilisation (Serpell, 2010).

4.4.1. Understanding the Human-Animal Bond

The human-animal bond is more than mere companionship but represents a dynamic and mutually beneficial relationship between people and animals that influences emotional, psychological and physical health (AVMA, 2023). This enduring bond, rooted in the concept of biophilia, reflects our innate affinity for connecting with nature through animals (Beck, 2014). These relationships provide various benefits, from emotional support and alleviation of loneliness to social interaction and physical activity opportunities (Chandler, 2017; Fine, 2015). In communities where resources are limited, this bond can play a critical role in offering emotional support and alleviating feelings of isolation and stress.

Animal companionship can provide stability, reduce loneliness and create opportunities for social interaction in adults in impoverished settings (Chandler, 2005). These benefits are particularly valuable in environments where social and mental health services are scarce.

4.4.2. Scope and Definition of Animal-Assisted Interventions

AAIs are broadly categorised into animal-assisted activities and therapies. Kruger and Serpell (2010) defined AAIs as any structured interaction involving animals as part of the therapeutic or ameliorative process. This includes activities aimed at enhancing participants' emotional, cognitive and physical functions. Animal-assisted therapy (AAT), a subset of AAIs, comprises specific therapeutic interventions conducted by trained health professionals within their scope of practice (Hoagwood et al., 2016).

Despite various empirical challenges, the therapeutic benefits of AAIs are increasingly becoming recognised. Early influences in this field, including Sigmund Freud, documented the calming presence of animals during therapy sessions, which fostered a sense of security and confidence in clients (Fine, 2015). Modern AAIs leverage these interactions to realise targeted therapeutic outcomes that are guided by professionals knowledgeable in human and animal behaviour (Jegatheesan et al., 2018). In under-resourced community contexts, AAIs may provide an accessible and cost-effective alternative form of therapy, leveraging local animals and community involvement. This approach addresses immediate emotional and psychological needs and stimulates a sense of community and collective well-being (Beck, 2000; Fine, 2015).

When integrating animals into psychological interventions, professionals' careful selection is based on factors such as the practice setting, treatment goals, client needs and preferred level of interaction. Therapists' theoretical and methodological approaches also inform these decisions. MacNamara et al. (2015) stated that depending on their unique qualities and

skills, animals can play a crucial role in various implicit, explicit and instrumental categories of interventions. In the implicit category, animals who are part of the therapeutic environment can enhance rapport and trust through their natural behaviour and appearance. The interventions are usually indirect such as observing and being in the presence of the animals. In the explicit category, animals are integrated as passive change agents to enhance rapport, assessment and sensory/cognitive processing. The interventions focus on directed observation and activities that involve simple contact with the animal. Finally, the instrumental category emphasises interventions that develop skills and practise new behaviours. The animals become active therapeutic agents and the interventions involve directed activities and interactions between animals and people. The extent and nature of contact with the animal steadily increases through the categories. Animals in the instrumental intervention category play a crucial role in creating therapeutic experiences by offering unique interaction opportunities and providing high levels of tactile stimulation. This requires greater specificity of the working animal's abilities, skills and stress tolerance.

4.4.3. Therapeutic Benefits and Empirical Evidence

Although numerous anecdotal reports and lay community testimonials have supported AAIs, the scientific validation of these benefits is still emerging. Initial studies have demonstrated promising outcomes, including reduced symptoms of depression and anxiety, improved social integration and enhanced quality of life (Kamioka et al., 2014; Kapustka & Budzyńska, 2020). Physiologically, interactions with animals have been shown to modulate stress-related hormones, lower blood pressure and increase oxytocin levels, which are associated with enhanced psychological well-being (Beetz et al., 2012).

However, the field has encountered challenges in producing high-quality empirical evidence due to methodological limitations, including small sample sizes, lack of randomised controls and observer bias (Kazdin, 2015; Morrison, 2007). Despite these challenges, AAIs' positive effect on human health is evident, prompting calls for more rigorous and systematic research to validate and refine these interventions (Gee, 2021).

4.4.4. Mechanisms of Therapeutic Action

The therapeutic benefits of AAI are understood within the reciprocal and interactive nature of the human-animal relationship that facilitates the fulfilment of basic human needs for connection to nature and living beings, love and friendship, all essential components of flourishing (Amiot & Bastian, 2015; Fine et al., 2015). The therapeutic efficacy of AAIs is often attributed to the unique qualities of animals and the dynamics of the human-animal relationship. Animals can serve as metaphors in therapy, symbolising various aspects of the human experience, including power, freedom and nurturance (Latella & Abrams, 2015). This metaphorical use can facilitate profound insights and emotional healing as participants relate their interactions with animals to their personal life experiences and challenges (VanFleet & Faa-Thompson, 2010).

Moreover, animals in therapeutic settings can help individuals develop psychosocial skills and experience less psychological distress (Kapustka & Budzyńska, 2020; Maujean et al., 2015). They also act as non-judgemental listeners, offering unconditional acceptance and facilitating emotional expression and cognitive processing (Kruger & Serpell, 2010). This is especially relevant in communities where traditional mental health services may be inaccessible or stigmatised (Chandler, 2005).

4.4.5. Application in Under-Resourced Communities

In impoverished and under-resourced communities, the presence of therapy animals can enhance the therapeutic environment and provide unique opportunities for engagement and healing. AAIs can be adapted to the specific needs and cultural contexts of these communities, offering a flexible and culturally sensitive approach to mental health care (Morrison, 2007).

The integration of animals into therapeutic practices can foster resilience and provide a sense of purpose and connection for adults dealing with chronic stress and economic hardship. This approach is not only beneficial for individual participants but also strengthens community ties and promotes collective well-being (Beck, 2000).

4.4.6. Ethical Considerations and Contraindications

Even though AAIs offer numerous benefits, there are ethical considerations, particularly concerning the welfare of both the participants and animals involved. It is imperative that issues related to participants' fear of animals, possible allergies, physical fitness and mobility, as well as the potential for inhumane treatment of animals, are carefully managed (Fine, 2015). Pre-intervention assessments and ongoing monitoring are essential to ensure the safety and appropriateness of these interventions for all involved.

These ethical considerations are especially critical in under-resourced settings, as the availability of resources to support and care for the animals must be guaranteed to maintain integrity and effectiveness.

4.4.7. Future Directions and Research Needs

The field of AAIs is ready for further exploration, particularly in its application to under-resourced communities. In order to establish strong evidence for the effectiveness of these interventions and develop best practices for their implementation in diverse settings, further

research is crucial (Kazdin, 2015). A notable lack of studies includes animal-assisted interventions, particularly in diverse cultural contexts, including under-resourced communities in South Africa (Luhmann & Kalitzki, 2018; Schroeder & Prasath, 2022) .

Equine-assisted interventions (EAIs) represent a specialised subset of AAIs that involve equines, horses and donkeys in psychological interventions. The sensitivity and complex social nature of equines provide unique therapeutic opportunities that can be especially beneficial for adults in under-resourced communities. How these interventions can promote profound psychological and emotional healing in such contexts is subsequently explored. EAIs as a type of EPPI are subsequently examined to shed light on how they can benefit adults in impoverished communities, offering distinct therapeutic experiences that address psychological and existential needs.

4.5. Equine-Assisted Psychological Interventions (EAPIs)

Throughout human civilisation, horses have served diverse roles, ranging from transportation and labour to companionship and therapy (Frewin & Gardiner, 2005; Kelenka, 2009). The ancient Greeks recognised the therapeutic benefits of horseback riding for physical and psychological well-being (Latella & Abrams, 2015). In contemporary times, incorporating horses into mental health services has gained popularity as a complementary approach to traditional methods (Dewkett et al., 2015). However, the equine-assisted psychological intervention (EAPI) field is marred by ambiguous terminology such as equine therapy, equine-assisted activities and therapy, and equine-facilitated therapy, with no standardised health practice guidelines (Wood et al., 2021). This ambiguity has hindered empirical research and the development of best practices.

Accordingly, Wood et al. (2021) recommended using specific terminology that accurately reflects the therapeutic modality and role of equines. Following this recommendation, the term equine-assisted positive psychological interventions (EAPPIs) was adopted to describe the intervention developed for this study. The term EAPPI reflects the intentional integration of equine qualities within existential positive psychological interventions aimed at fostering flourishing and personal growth.

4.5.1. Experiential Nature of Equine-Assisted Psychological Interventions

Equine-assisted psychological interventions are inherently experiential. They integrate equines such as horses and donkeys into behavioural and mental health treatments through various mounted and unmounted activities (Esposito & Fournier, 2023; Notgrass & Pettinelli, 2015). Often, the literature has not distinguished between horses and donkeys but employed the terms equine and horse interchangeably. This practice was also adopted in this study. Therapeutic interactions with equines include riding, driving, grooming, leading and other relational activities (Kendall et al., 2015; Latella & Abrams, 2015; Maujean et al., 2013). By allowing clients to explore their experiences and struggles, these interactions stimulate personal insight, growth and well-being (Brandt, 2013; Klontz et al., 2007). Moreover, for these interactions to be therapeutic, it is not sufficient for equines to be present, but rather they must be active agents of change. Their unique traits facilitate personal growth and enhanced flourishing (Latella & Abrams, 2015; Wood et al., 2021).

The focus in the present study was on ground-based, non-riding activities involving equines in their natural environment. During the intervention, the equines roamed freely in a herd and chose their level of interaction with humans.

4.5.2. Mechanisms of Action: Why Horses?

Horses symbolise the human spirit's desire for freedom and strength, embodying deep mythological archetypes and non-verbal communication that resonates with human emotions (Latella & Abrams, 2015; VanFleet et al., 2015). Jung viewed horses as representing vital aspects of the human psyche, including strength, sensitivity and the capacity for both creation and destruction (Jones, 1983; McCormick & McCormick, 1997). These qualities ensure horses are powerful partners in therapeutic settings, fostering feelings of freedom, trust and pleasure (Latella & Abrams, 2015; Lentini & Knox, 2009).

The rationale for incorporating horses into psychological interventions has been supported by several hypothetical mechanisms, including attachment theory, humanistic and narrative approaches and the unique biofeedback provided by horses (Bachi, 2013; Chandler, 2017; Equine Assisted Growth and Learning Association, 2019). Understanding these mechanisms enhances the credibility of equine-assisted interventions (Esposito & Fournier, 2023; Marchand et al., 2021). While this study focused on the effect of an EAPPI, it is beneficial to gain insight into the current thinking on possible mechanisms of action. Understanding the effect of human-horse interventions is evolving. A brief overview of the current empirical understanding related to possible mechanisms underlying the effects equines might have on humans follows.

4.5.2.1. The Human-Horse Bond

The bond between humans and horses is fundamental to the benefits of equine-assisted interventions (Hallberg, 2018). Horses, as prey animals, rely on communication and strong social bonds in their herd for survival, reflecting human social dynamics, including forming friendships, experiencing courtship and dealing with rejection, (Skipper, 2005). In addition,

horses and humans share similarities in their life-cycle processes, reproduction and ultimate death (Bachi et al., 2012). This bond is characterised by mutual trust and non-verbal communication, with horses responding to humans on the ground the same way as they react to conspecifics in the herd, exhibiting behavioural and body language changes in response to human emotions and behaviour similar to their reactions in the herd (McGreevy & McLean, 2010).

This relationship promotes social well-being, providing experiences of social integration and acceptance (Passmore & Howell, 2014). Buber's concept of the *I-Thou* relationship highlights how interactions with horses can enhance an individual's sense of self and their role in the world, leading to greater authenticity and alignment with their purpose (Buber, 1958; Passmore & Howell, 2014).

Horses, being highly sensitive prey animals, are acutely responsive to environmental stimuli, thus providing a unique opportunity for therapeutic growth (McGreevy & McLean, 2010; Skipper, 2005). Their reactions to human emotions and subtle non-verbal cues necessitate that clients remain present and mindful, fostering sensorimotor learning and emotional regulation (Hausberger et al., 2008; Latella & Abrams, 2015). Working with large animals like horses that display similar hyperarousal and hypoarousal states to humans provides unique opportunities for growth and healing through embodied sensorimotor experiences, metaphor and narrative (DePrekel, 2012; Trotter, 2012). Understanding these dynamics includes biophilia, the innate human connection to nature and neurobiological mechanisms such as the influence of oxytocin and cortisol.

4.5.2.2. Neurobiological Mechanisms

Mindful interactions with horses within a choice-oriented environment can facilitate new neural pathways, supporting experiential learning and personal growth (DePrekel, 2012; Schenck & Cruickshank, 2015; Siegel, 2010). Studies have revealed that equine-assisted interventions can reduce stress and promote emotional regulation through physiological changes such as decreased cortisol levels and increased oxytocin (Hoagwood et al., 2022; Yorke et al., 2013). These interactions encourage mindfulness and the development of coping skills, contributing to overall flourishing (Burton et al., 2019).

Recent research has also indicated that horses can distinguish human emotions through body odours and visual cues, fostering mutual physical and emotional exchange that supports the therapeutic process (Jardat et al., 2023; Sabiniewicz et al., 2020; Trösch et al., 2019).

4.5.2.3. Horse Metaphors in Personal Narratives

Horses serve as powerful metaphors in therapeutic narratives, aiding in the development of self-confidence, trust and essential life skills (Fournier et al., 2018; Masini, 2010). The metaphorical significance of horses emerges through their actions, interactions with their environment and the therapeutic activities in which they participate (Kakacek & Ottens, 2008). While empirical evidence on horses' ability to mirror human emotions is still developing, the narrative and symbolic role of horses in therapy is well recognised (Fournier et al., 2018). These metaphors enrich participant stories and facilitate deeper engagement with their personal narratives, providing insights and transformative learning opportunities (Arenas for Change, 2023; Esposito & Fournier, 2023).

4.5.2.4. Psychologically Safe Environment

A psychologically safe environment is crucial for effective therapy. It allows individuals to express themselves without fear of negative consequences, fostering trust and respect

(Edmondson, 2019). Interactions with horses are often described positively as unconditional and non-judgemental, creating a safe space for clients to explore and express their personal narratives (Cagle-Holtcamp et al., 2019). This sense of psychological safety parallels the therapist-client relationship, which reflects a collaborative relationship of trust, acceptance and respect (Masini, 2010). This experience of a psychologically safe environment facilitates the expression of personal narratives that might otherwise be difficult to share with other human beings (Marchand et al., 2021).

4.5.3. Emergent Theoretical Framework: Equine-Assisted Story Transformation

Esposito and Fournier (2023) have proposed a comprehensive theory, Equine-Assisted Story Transformation (EAST), to explain the mechanisms of change in equine-assisted psychological interventions. EAST integrates the client's narratives, the intervention experience and the resultant personal change, offering a framework to understand how interactions with equines facilitate transformation.

EAST comprises three theoretical elements. First, the theory of the problem refers to the theoretical comprehension of the problem(s) in a person's life that led them to seek psychological help. The focus is on how individuals become entrenched in limiting narratives shaped by their experiences.

It appears that the theory of the problem is situated in the disease model or traditional psychology perspective of negative human experiences, human dysfunction and disorder, and subsequent need for treatment. However, people also seek change for positive human experiences, including personal growth and the desire to flourish. From an EPP perspective, this element should also encompass the quest for a meaningful and flourishing life, addressing both healing and growth (Wong, 2010b, 2011b). Therefore, based on the present intervention's EPP

nature and purpose, the researcher proposes renaming this element *the theory of the problem and quest for a worthwhile life*.

Second, the theory of the intervention highlights how equine-assisted activities and the environment shape therapeutic experiences. It draws on polyvagal theory, sensory processing and narrative and metaphor theory, with the equine's role being central to creating a safe and dynamic context for change (Esposito & Fournier, 2023).

The theory of change explores how experiential learning with horses stimulates cognitive and emotional transformation, guided by theories such as Kolb's experiential learning and Mezirow's transformational learning (Esposito & Fournier, 2023). This theory emphasises the unique role of horses in the therapeutic process, often acting as co-therapists and altering the dynamics of traditional therapy.

Finally, the theory of the problem is informed by narrative theory, conceptual metaphor theory and polyvagal theory (Esposito & Fournier, 2023). The theory of the intervention is supported by polyvagal, sensory, metaphor and narrative theory in addition to what Esposito referred to as the theory of the horse (Esposito & Fournier, 2023).

EAST provides a flexible, transdiagnostic framework that can be adapted to various models of equine-assisted interventions. In the present study, EAST was extended by integrating eco-existential positive psychology in accordance with the study's focus on holistic flourishing and personal growth.

4.5.4. Critique of the Efficacy of Equine-Assisted Psychological Interventions

Although the evidence supporting the psychological benefits of equine-assisted interventions is growing, it remains primarily anecdotal and descriptive (Kendall et al., 2015). Systemic reviews have highlighted that the majority of equine-assisted intervention studies have

reported beneficial psychological and social outcomes (Kendall et al., 2015; Smith-Osborne & Selby, 2010). Furthermore, research has shown positive effects on post-traumatic stress disorder (PTSD) (Burton et al., 2019; Fisher et al., 2021; Willmund et al., 2021; Zhu et al., 2021), abuse (Kemp et al., 2014; Meinersmann et al., 2008), stress, depression and anxiety (Chakales et al., 2020; Earles et al., 2015; Schmidt et al., 2020), psychological distress and psychological well-being (Coetzee et al., 2022; Klontz et al., 2007), eating disorders (Cody et al., 2011; Cumella et al., 2014; DeZutti, 2013), and substance abuse (Brandt, 2013). Selby and Smith-Osborne (2013) noted that studies have failed to discuss outcome measures in a comprehensive theoretical framework in which the effects of interventions employing equines could be understood. They further stated that most studies involved children and adolescents, highlighting the need to validate interventions for a range of mental health outcomes across different populations.

The field of EAPI encounters challenges similar to those in AAI, primarily due to a lack of empirical rigour, as discussed in Section 4.4.3, thus making it difficult to draw definitive conclusions about their effectiveness. The need for well-designed randomised controlled trials and consistent methodological improvements is critical to establish best practices and validate EAPI as standard treatments (Anestis et al., 2014; Kendall et al., 2015).

In South Africa, there is limited research on EAPI, particularly in nonclinical adult populations. Although Boshoff et al. (2015) and Coetzee et al. (2022) revealed potential benefits for hedonic and eudaimonic well-being and coping skills in vulnerable adolescents, further research is needed to confirm these findings and explore their applicability to diverse populations. A global gap in rigorous research into the efficacy of EAPI for promoting well-being and flourishing in non-clinical adult populations exists. This study aimed to address this gap by evaluating the efficacy of EAPPI in promoting flourishing, meaning, and hope in adults

from a South African resource-constrained community. In addition, the researcher sought to contribute to the international field by developing and implementing an EAPI rooted in Eco-EPP theory, as described in Chapter 2. Accordingly, the EAPPI developed and implemented in this study constitutes the rest of the chapter.

4.6. The Current Study: An Equine-Assisted Positive Psychology Intervention (EAPPI)

This section describes the design and implementation process of the study's EAPPI, Surviving 2 Thriving. This intervention was developed within the theoretical framework of Eco-EPP and emphasises personal growth and flourishing by integrating experiences with horses and donkeys in their natural environment.

4.6.1. Guiding Elements in the Development of the Intervention

The *Surviving 2 Thriving* EAPPI development was guided by Eco-EPP principles, which integrate ecological and existential positive psychology perspectives to promote holistic well-being. The multi-component intervention balances individual and pro-social activities to meet diverse participant needs and goals (Sin & Lyubomirsky, 2009). Key elements of the development process included:

- **Theoretical Framework:** Grounded in Eco-EPP, the intervention focuses on enhancing flourishing through personal growth and fostering a meaningful and hopeful life. It addresses existential questions and the dialectical balance of positive and negative emotions and experiences (Wong, 2010b, 2016c).
- **Integration of EPPIs:** Evidence-based EPPIs were selected to complement the experiential learning with horses. Activities included emotional regulation such as mindfulness and savouring, cognitive exercises, including expressive writing and counting blessings, and behavioural tasks such as self-transcendent acts of kindness

and responsible actions (Lambert D'Raven & Pasha-Zaidi, 2014; Van der Weele, 2020). These EPPIs were intervention activities, which participants were encouraged to practise at home, ensuring continuity of learning and reinforcement of the intervention's goals.

- **Flexibility and Choice:** Participants had the flexibility to choose activities and determine the level of interaction with the horses, fostering a personalised and empowering experience. A pilot study, presented in Section 4.7, was conducted to ensure cultural and personal relevance. This helped tailor the facilitation approach and activities to the participants' cultural contexts and personal needs (Lyubomirsky & Layous, 2013; Schueller, 2014).

4.6.2. Arenas for Change (ARCH) Facilitation Approach

The Arenas for Change (ARCH; Arenas for Change, 2023) facilitation approach to assisting mental health interventions incorporating equines was adopted during the intervention. This facilitation approach is an innovative story-based framework that provides a process with associated actions for facilitating transformative change experiences.

The ARCH framework is grounded in the social constructivist belief that while individuals construct their reality through narratives, changing these narratives can lead to transformative change in their lives (Anderson, 2003). Within this framework, the equine environment is viewed as a storyboard, with equines, people and various environmental elements serving as potential characters in participants' evolving narratives. Participants are invited to engage with equines and intervention themes through experiential activities, which facilitate the development and authoring of their unique stories. This approach encourages participants to

construct new narratives and link them to their past and future, fostering a sense of continuity and transformation.

The facilitation in the ARCH framework addresses three key aspects: the facilitator's thought processes, stance or way of being and actions as they interact with both humans and equines. Facilitators help participants identify and shape their life stories through these interactions by determining the characters and storylines involved. This ongoing authoring of stories helps participants to integrate their current experiences with their past and future, thus facilitating profound personal transformation (Arenas for Change, 2023).

4.6.3. Intervention Objectives

The primary goals of *Surviving 2 Thriving* were to facilitate personal growth, enhance flourishing and activate awareness of meaning in life and hope for the future. Specific sub-goals included:

- Emotional awareness and regulation through enhancing participants' knowledge about emotions and their ability to recognise and manage them effectively.
- Values awareness by increasing awareness of personal values and their role in responsible decision-making.
- Encouraging self-knowledge and acceptance by developing a deeper understanding and acceptance of oneself, including recognising one's unique qualities and balancing positive and negative life experiences.
- Social connectedness through promoting a sense of belonging and connection with others, namely, people, animals and the environment.

- Meaning and purpose by helping participants identify sources of meaning and purpose in their lives, learning that suffering can be transformed into opportunities for meaning.

These objectives concur with the broader aims of EAPPIs to foster optimal functioning and worthwhile life by balancing both positive and negative experiences (Wong, 2010b)

4.6.4. Intervention Content and Structure

The intervention objectives determined the *Surviving 2 Thriving* content, which was developed per the EPP perspective of flourishing, requiring the balance of positive and negative emotions and addressing positive existential questions to guide personal growth (Wong, 2010b, 2016c). Accordingly, the session topics were related to existential themes such as happiness, identity, meaning and purpose, belonging, value-centric living and death anxiety. The psychoeducational content and EPPI were selected to support each session's topic and learning objectives, as displayed in Table 4.1.

Table 4.1

Overview of the Surviving 2 Thriving Intervention Implemented in the Study

WEEK	SESSION THEME OR PREMISE	ANTICIPATED OUTCOMES	PSYCHO-EDUCATION TOPICS	EXISTENTIAL POSITIVE PSYCHOLOGY ACTIVITIES	ARENA / FIELD EXPERIENCE WITH THE HORSES	HOME PRACTICE ACTIVITIES
1.	Getting to Know the Story (Intervention) Context and Characters	Knowledge about the intervention's aims Orientation to the context and interaction with equines Skills of mindfulness, and story mindset	Safety in the environment with equines Mindfulness Story mindset	Noticing 5-4-3-2-1 Technique	Explore the context and the characters (equines) in the environment. Introduce yourself to the equines	Practice mindfulness Personal review/journal Reflect on experience in the session Responsible Action Share learning with somebody else
2.	Getting in Touch with Emotions	Knowledge about emotions and their importance in life Skills of emotional regulation	Defining emotions Dialectical balance of positive and negative emotions Regulating emotions	Accepting Emotions Mindfulness Activity	Observe equines and identify emotions in equines and self. Explore scenarios with the equines and group to create a happy life despite negative events and difficult emotions.	Practice mindfulness Personal review/journal Note emotions experienced in the coming week Responsible Action Evaluate actions taken during the week – act on emotional urge or did they fit the facts Share learning with somebody else
3.	Making Values-Led Choices	Knowledge of values and values-centric living Skills of responsible decision-making	Values Responsibility Choice	Wise Mind Spiral Staircase Imagery Activity	Explore values and value-led actions through interactions with the equines.	Practice mindfulness Personal review/journal Reflect on the top two values and how values are integrated into actions Responsible Action Strengthen / increase values influence

WEEK	SESSION THEME OR PREMISE	ANTICIPATED OUTCOMES	PSYCHO-EDUCATION TOPICS	EXISTENTIAL POSITIVE PSYCHOLOGY ACTIVITIES	ARENA / FIELD EXPERIENCE WITH THE HORSES	HOME PRACTICE ACTIVITIES
						Share learning with somebody else
4.	Identity Who am I?	New knowledge about self, Identification of personal uniqueness Increased awareness that personal identity is linked to others Skills of self-acceptance	Self-discovery Unique worth	Mindful Breathing (Hanh, 2010)	Exploring personal uniqueness through interactions with equines.	Practice mindfulness Personal review/journal Reflect on self – strengths & weaknesses, role model & personal motto Responsible Action Share learning with somebody
5.	The Good Life Despite Life's Difficulties	Knowledge that the "good life" as the dialectical balance of +ve & -ve events & experiences in life Skills of self-compassion and self-care	Qualities of the good life Self-compassion Self-care	Self-Compassion Activity (Neff, 2011) Self-care activity ideas	Create an experience with the equines such that all experience quality of life, feel satisfied with life or that life is meaningful. If life is difficult, help the characters (people and equines) implement self-compassion and self-care strategies.	Practice mindfulness Personal review/journal gratitude reflection Responsible Action Engage in self-care Share learning with somebody else
6.	Belonging Where Do I Belong?	Knowledge about social well-being And Ubuntu	Social well-being Ubuntu	Loving Kindness Mindfulness	Engage in accepting and meaningful relationships with the equines and group. Create a space of belonging with the equines where all contributions are valued.	Practice mindfulness Personal review/journal Reflect on where you belong and your contribution to the world; Responsible action Perform a random act of kindness Share learning with somebody else

WEEK	SESSION THEME OR PREMISE	ANTICIPATED OUTCOMES	PSYCHO-EDUCATION TOPICS	EXISTENTIAL POSITIVE PSYCHOLOGY ACTIVITIES	ARENA / FIELD EXPERIENCE WITH THE HORSES	HOME PRACTICE ACTIVITIES
7.	Finding Meaning and Purpose in Life	Knowledge about personal meaning-seeking actions and sources of meaning and purpose Skills implement personal Ikigai	Guideposts to meaning and purpose in life Ikigai	Awe, Walk in Nature	Create an experience of awe and wonder in the space with the equines. Explore Ikigai through interactions with the equines and group.	Practice mindfulness Personal review/journal Complete Ikigai questionnaire. Responsible action Notice personal reasons for living Share learning with somebody else
8.	The Point of Striving Even Though Life is So Short	Knowledge that a worthwhile life includes the good and the bad. Transforming suffering into meaning and gratitude Celebrating the end of the intervention and that life is worth living	Building a life worth living Transforming suffering into meaning Gratitude as a perspective to life in its entirety	Counting Blessings in Good and Bad Times (adapted from Jans-Beken and Wong (2019); Wong et al. (2018))	Engage the equine to create the final chapter using the premise – "What makes life worth living?" Reflect on personal growth, wisdom, and meaning gained during the programme. Celebration of learning and growth and expression of gratitude to equines and group.	Encourage continue to be mindful in daily living

Using the narrative approach of ARCH (2023) described in Section 4.6.2, the facilitators crafted narrative questions related to the session topic. These questions encouraged participants to explore unique ways to achieve the session's objectives, prompting action with the equines rather than mere reflection (Thornton, 2017). The fourth session, for instance, titled *Who am I?* addressed identity. The experiential activity for this session involved creating scenarios with the equines that explored identity and potential for growth.

Narrative questions prompting participant actions included, "How will the characters (equines) get in touch with their essence, who they are at their core? How can they identify what is unique and special about them?" Guided by these questions, the participants created interactions with the equines based on their perceptions of the best responses. This involved exploring the different equines' unique characteristics, behaviours and attitudes. This externalising method created self-distancing for participants, fostering opportunities for self-reflection, gaining new perspectives and increasing self-knowledge (Frankl, 1969; Kross & Ayduk, 2017).

The intervention was structured into eight 120-minute weekly group sessions that took place in an outdoor farm setting. The researcher developed a comprehensive intervention protocol that included session agendas, psychoeducational content, experiential activities and debriefing guidelines. This protocol ensured a structured yet flexible approach, allowing facilitators to adapt to the participants' needs and cultural contexts.

The individual sessions were structured to follow the same sequence of events aligned to co-constructed developmental teaching theory (CDTT), an expansion of Kolb's experiential learning theory (Kolb, 2014; Schenck & Cruickshank, 2015). Each session was structured as follows:

1. **Initial Framing:** Begin with mindfulness activities and psychoeducation to inform and prepare participants for the session's objectives and encourage them to adopt a story mindset.
2. **Activity:** Participants engage in experiential activities with equines in their natural environment, facilitating direct learning and interaction.
3. **Debriefing:** Post-activity discussion focuses on insights gained and the session's psychological goals.
4. **Pausing:** This requires a significant break after debriefing, which can include sleep. It allows time for internal reflection to consider and personalise learnings from the experience. The week-long break between sessions facilitated pausing.
5. **Bridge-Building:** Connecting previous learnings with the current session's objectives, including peer learning in which participants volunteer to share their expressive writing and learnings with the group.
6. **Assimilation:** Facilitating the integration of new knowledge into the participants' personal narratives and life practices.

Furthermore, the structuring of the activities was informed by MacNamara et al.'s (2015) classification of implicit, explicit and instrumental categories of interaction. The intervention activities predominantly fell into the non-directive, explicit category. Intervention participant-equine interactional activity examples included:

- **Implicit activities** comprised observing and reflecting on the equines and their environment without specific directives, allowing participants to interact and reflect freely. The participants were not directed to do anything specific with the equines but rather to be in the space with the equines and reflect on the experience.

- **Explicit activities** consisted of assigned tasks, including identifying emotions in equines and creating scenarios to explore these emotions, promoting active engagement and learning. For example, participants were given cards with the names of different emotions printed on them. They were asked to identify the equines, horses and donkeys demonstrating those emotions. Subsequently, they were asked to create a scenario in which the equines learned about their emotions. The participants were requested to observe any physical changes in the equines' bodies and reflect on the emotion message and the appropriateness of their actions for the situation. During this activity, the participants spent time observing, reflecting and interacting in the space with the equines.
- **Instrumental activities** involved guided processes, including identifying values with the help of an equine and reflecting on these values in different life domains. For instance, participants identified a horse or donkey that reminded them of themselves and approached it. They then answered a series of questions to determine their current values. They noted their responses on 20 cards in five colours, each representing a life domain: significant places, influential people, personal and professional goals and cherished memories. They subsequently identified and moved to a designated *less-in-life* space and progressively removed cards, placing them in this space until only five remained. The remaining cards represented their core values. On returning to the space of the chosen horse, they reflected on their answers. Then, they chose the two most relevant cards and refined each to one representative word. These words highlighted their prioritised values at that moment. Finally, participants decided on actions that would either increase or decrease the

influence of these values in their lives. After that, they interacted with their chosen equine to enact the activity that would bring them closer to their values. This process involved meaningful interaction and reflection with the equine to concur with their identified values.

The pilot study the researcher conducted to confirm the appropriateness of the intervention and assessment measures is subsequently discussed.

4.7. Pilot Study

To test the feasibility and cultural appropriateness of the EAPPI, a pilot study was conducted. This pilot study served as a critical step in refining the intervention and ensuring it was well-suited to the target population.

4.7.1. Pilot Study Participants

The participants in the pilot study were engaged in a community mental health programme that SCT was running with members of community organisations in Diepsloot. These organisations agreed to pilot the "Surviving 2 Thriving" for this intervention. Due to COVID-19, fewer people attended in-person community programmes. The convenience sampling method resulted in four African women aged 18 to 26 volunteering to participate in the intervention and the adjunctive pilot research. The participants' demographic characteristics closely matched the study's target group, ensuring the relevance of feedback and insights acquired from the pilot study. The participants provided informed consent to participate in the pilot study, which was similar to the main study. While one participant dropped out due to employment, those remaining attended between two and six sessions.

4.7.2. Assessment and Intervention Phases

The pilot study was structured into three phases:

1. **Assessment Phase:** Pre- and post-intervention assessments were conducted using the study's questionnaire booklet that comprised a biographical

questionnaire and assessment measures for flourishing, meaning and hope as described in Section 5.5.2

2. **Intervention Phase:** The *Surviving 2 Thriving* EAPPI was implemented over several weeks, following the detailed structure and facilitation methods previously outlined. The intervention took place at the outdoor facility at SCT.
3. **Focus Group Phase:** After completing the intervention, the participants participated in a focus group discussion to provide feedback on their experiences. The discussion aimed to assess the intervention's cultural relevance and personal fit and acquire suggestions for improvement.

4.7.3. Focus Group Feedback

The focus group provided valuable insights into the intervention's cultural appropriateness and effectiveness. Key feedback included:

- **Session Duration:** The participants suggested extending the session time from 90 to 120 minutes to allow for deeper engagement and reflection.
- **Measures:** The participants reported that the questionnaires were clear, user-friendly, and easy to understand. Only one item out of the 131 required clarification. They were unsure of the meaning of the word blue, as it was not an expression they were familiar with in item 13 on the DASS-21. They recommended that if anyone questioned this term, it should be described as feeling down or depressed rather than changed. Alternatively, they suggested removing the item.
- **Creative Expression:** They recommended expanding personal story writing to include other forms of creative expression, such as poetry, songwriting, and art, to accommodate diverse preferences and enhance engagement.

- **Cultural Relevance:** The participants affirmed the intervention's cultural appropriateness, noting that the activities and content resonated well with their experiences and values.
- **Integration of Mindfulness and EPP:** The feedback strongly supported the integration of mindfulness and EPPI activities with the experiential learning provided by interactions with equines.

4.7.4. Personal Reflections and Lessons Learned

The pilot study highlighted several key lessons that informed the final design of the EAPPI:

- **Flexibility and Adaptation:** It was crucial for personal relevance and engagement that participants could choose the home practice activity, level of engagement and level of interaction with the equines. This flexibility was maintained in the final intervention design.
- **Cultural Sensitivity:** The positive feedback on the cultural appropriateness of the intervention content and experiences reinforced the importance of tailoring interventions to participants' cultural contexts. The final design incorporated these considerations to ensure broader applicability and effectiveness.
- **Extended Session Time:** Increasing the session duration provided more time for activities and reflection, enhancing the depth and impact of the intervention.
- **Broader Creative Expression:** Offering multiple forms of creative expression allowed participants to engage with the material in ways that resonated with them personally, enriching their learning and growth, and enhancing the person and cultural fit of the intervention.

- **Facilitation Fidelity:** The pilot study served two functions in establishing facilitation fidelity. First, the facilitators were trained on the intervention before the study and were familiar with it. Second, they gave valuable feedback on the content and session activities, which remained materially unchanged. Their experiences in facilitating the entire intervention contributed to the development of the final intervention protocol.

Overall, the pilot study validated the intervention's approach and provided critical insights that refined its final implementation. These adjustments ensured that the *Surviving 2 Thriving* EAPPI was culturally relevant and practically implementable.

4.8. Conclusion

PPIs and EPPIs were comprehensively explored in Chapter 4. Definitions, methodologies and the emerging field's integration of existential perspectives were outlined. Furthermore, intervention activities and strategies, particularly those adapted to include existential dimensions that address life's complexities, were examined in detail. The innovative integration of equine-assisted activities within the Eco-EPP framework was highlighted, addressing both positive and negative life aspects to foster flourishing, meaning and hope.

The need for more rigorous research into multi-component PPIs was identified, particularly in non-clinical adult populations and diverse, real-world settings. Meta-analytic and systematic reviews have highlighted a significant gap in the literature related to the efficacy of these interventions in both WEIRD and non-WEIRD contexts (Bolier et al., 2013; Carr et al., 2020; Chakhssi et al., 2018; Hendriks et al., 2018; Hendriks et al., 2019). While South Africa has recently emerged as a leader in PPI research on the African continent, there remains substantial scope for developing and implementing culturally appropriate interventions in community-based settings (Guse, 2022; Hendriks et al., 2019).

In the nascent field of EPPIs, there is a pressing need for diverse, multi-component and culturally sensitive interventions that address both the positive and negative aspects of life to foster a life worth living (Ng & Lim, 2019; Wong, 2021b; Worth & Lyle, 2022). Innovative approaches, including integrating equines into psychological interventions, offer promising avenues for promoting adult flourishing and optimal functioning. In addition, a critical gap in existing research was identified in this chapter: while equine-assisted interventions have primarily focused on treating mental illnesses, there is limited exploration of their effectiveness in promoting optimal functioning and flourishing in non-clinical populations. The aim of this study was to address this gap by examining the effectiveness of an EAPPI, *Surviving 2 Thriving,* with a non-clinical population in a community-based setting, specifically in the resource-constrained community of Diepsloot, South Africa.

Furthermore, in this chapter, the development of the EAPPI, an intervention designed within the Eco-EPP framework, was presented. The development and pilot testing of the EAPPI, which played a vital role in refining the intervention, was detailed. The insights acquired from the pilot study were crucial in refining the intervention and finalising the intervention protocol, ensuring that it was effective and aligned with the participants' cultural and personal contexts. By leveraging the Eco-EPP perspective, this study sought to expand the scope of EPPIs and provide a deeper understanding of their potential benefits for enhancing personal growth and well-being (Passmore & Howell, 2014).

A further aim of this study was to contribute significantly to the field by addressing the gap in current research and tailoring the intervention to meet the needs of a community-based, non-clinical adult population. The detailed description of the *Surviving 2 Thriving* EAPPI, enriched by pilot study insights, set the stage for a robust exploration of its efficacy in promoting flourishing, meaning and hope.

In the following chapter, the study's methodology, detailing the research design, participant selection, data collection methods and analytical strategies to evaluate the intervention's impact is detailed. This approach provided a comprehensive framework for understanding the potential of EAPPI to enhance optimal functioning.

Chapter 5. Research Methodology

5.1. Introduction

In this chapter, the mixed-methods research design employed to examine the effect of an equine-assisted positive psychological intervention (EAPPI) on flourishing, meaning and hope among adults living in the South African resource-constrained community of Diepsloot is discussed. First, the purpose and research questions of the study are presented. Subsequently, the research paradigm, research design and research methods utilised in the quantitative and qualitative components of the mixed-methods design are outlined. Thereafter, the sampling process, data collection and analysis are explained. The mixed-methods analysis process employed to integrate the quantitative and qualitative results is highlighted. Finally, the quality of the research and ethical considerations of the study are presented.

5.2. Purpose Statement

Aligned with the study's research aims and objectives, as outlined in section 1.5, this embedded mixed-methods study aimed to explore the effect of an EAPPI on a group of South African adults' levels of flourishing, meaning and hope. The research questions formulated to achieve this purpose were:

- What is the effect of the EAPPI on participant levels of flourishing, meaning and hope?
- How is the EAPPI subjectively experienced by the participants?
- How do the participants' subjective experiences of the EAPPI augment the understanding of the intervention's impact on their levels of flourishing, meaning and hope?

5.3. Research Paradigm

A research paradigm is a worldview that encompasses a researcher's general philosophical orientation about the world and nature of knowledge. This belief system fundamentally influences decisions regarding research questions and methodologies (Barnes, 2012; Creswell, 2013). Research paradigms range from positivism to constructivism, each offering distinct perspectives on reality and knowledge acquisition.

The positivist paradigm, which views reality as singular, objective and predictable, can be found at one end of the continuum. From a positivist standpoint, knowledge is acquired by collecting empirically verifiable data, often using quantitative methods that emphasise measurement and analysis (Creswell, 2013). This approach seeks to uncover universal truths through systematic observation and statistical analysis.

On the contrary, the constructivist paradigm posits that reality is subjectively experienced and constructed through social interactions and personal perspectives. Knowledge, according to constructivists, is formed by understanding multiple, context-dependent viewpoints, typically explored through qualitative methods (Creswell, 2013; Creswell & Plano Clark, 2011; Dawadi et al., 2021). This approach values in-depth insights into individual experiences and the meaning people ascribe to their lived realities.

The pragmatic philosophical stance, which embraces a pluralistic approach and focuses on the practical application of methods based on their effectiveness in addressing research questions, bridges these paradigms (Creswell & Plano Clark, 2011; Heyvaert et al., 2013). Pragmatism emphasises *what works* in a given context, allowing for the integration of both quantitative and qualitative methods according to the best-suited methods and analytical strategies to understand the research problem and address the specific research objectives (Bonthuys et al., 2011; Creswell, 2013). The flexibility of pragmatism is particularly valuable

in mixed-methods research where the selection of methods is driven by the research problems rather than adherence to a single philosophical viewpoint (Dawadi et al., 2021).

Section 2.3.2 acknowledged the potential benefits of adopting a pragmatic stance and conducting mixed-methods research in non-Western cultures for knowledge creation within third-wave positive psychology (Plano Clark, 2017; Rich, 2018). Barnes (2012) noted that this approach is especially suitable because of the lack of mixed-methods research in South Africa and the specific need for research exploration of locally relevant interventions. Consequently, it was deemed appropriate to adopt a pragmatic view in employing a mixed-method research design to expand insight and understanding of an intervention effect on adult flourishing, meaning and hope in an under-resourced community in South Africa (Barnes, 2012; Creswell, 2013; Creswell & Plano Clark, 2011).

5.4. Mixed-methods Research Design

A research design provides the blueprint for how a study is conducted, encompassing the processes and frameworks used to collect, analyse, interpret and inform the research. It guides the researcher's choices in selecting appropriate methods and shapes the interpretations applied to the study's conclusions (Creswell, 2013). Research is characterised by primary methodological approaches: qualitative, quantitative and mixed-methods (Johnson & Onwuegbuzie, 2004; Johnson et al., 2007).

While quantitative and qualitative research methodologies have long been recognised, mixed-methods has gained prominence more recently as a distinct approach. This methodology combines philosophical assumptions, often rooted in pragmatism, with methods of inquiry that integrate data from multiple sources within a single study (Creswell & Plano Clark, 2011; Dawadi et al., 2021). The core of mixed-methods research lies in its ability to integrate qualitative and quantitative approaches, thus providing a comprehensive understanding of the phenomena under study (Creswell, 2013).

Mixed-methods research is valued for its ability to deliver a richer, more nuanced explanation of research findings. By combining qualitative and quantitative data, a fuller account of the phenomena under investigation results, thereby enhancing the credibility and depth of the study (Creswell & Plano Clark, 2011). This comprehensive approach was crucial for the current study, which required a rigorous process of collecting, analysing and integrating data from both quantitative and qualitative phases, to afford an in-depth understanding of the research problem (Creswell & Plano Clark, 2011; Johnson & Onwuegbuzie, 2004; Johnson et al., 2007).

Despite its strengths, mixed-methods research presents challenges, including increased time and resource demands as well as the complexities involved in analysing and integrating different types of data. However, the researcher and supervisor's extensive experience with mixed-methods research ensured that these challenges were effectively managed. The numerous advantages of this approach, including providing stronger evidence for the research problem and allowing one method's strengths to offset the other's weaknesses, far exceeded its potential difficulties (Castro et al., 2010; Creswell & Plano Clark, 2011; Fetters et al., 2013).

By blending descriptive and exploratory information, mixed-methods research bridges the gap between quantitative and qualitative methodologies. It offers methodological flexibility, affording an-depth understanding of specific cases while generalising findings to broader populations. This dual capability makes mixed-methods research both practical and intuitive, enabling researchers to view a problem from multiple perspectives (Castro et al., 2010; Dawadi et al., 2021; Johnson et al., 2007). This approach is particularly valuable in social sciences and mental healthcare, where it facilitates the investigation of complex processes and systems (Fetters et al., 2013). In the realm of positive psychology (PP), mixed-methods research enhances our understanding by combining the breadth of quantitative data

with the depth of qualitative insights. This methodological integration leads to more nuanced, contextualised and corroborated conclusions about human flourishing and well-being (Plano Clark, 2017).

Various mixed-method designs differ in their approaches to integrating qualitative and quantitative research procedures and data (Creswell & Plano Clark, 2011; Fetters et al., 2013). In accordance with the study's time orientation, theoretical perspective, research aims and questions, an embedded mixed-methods design was chosen (Creswell & Plano Clark, 2011).

5.4.1. Embedded Mixed-Methods Design

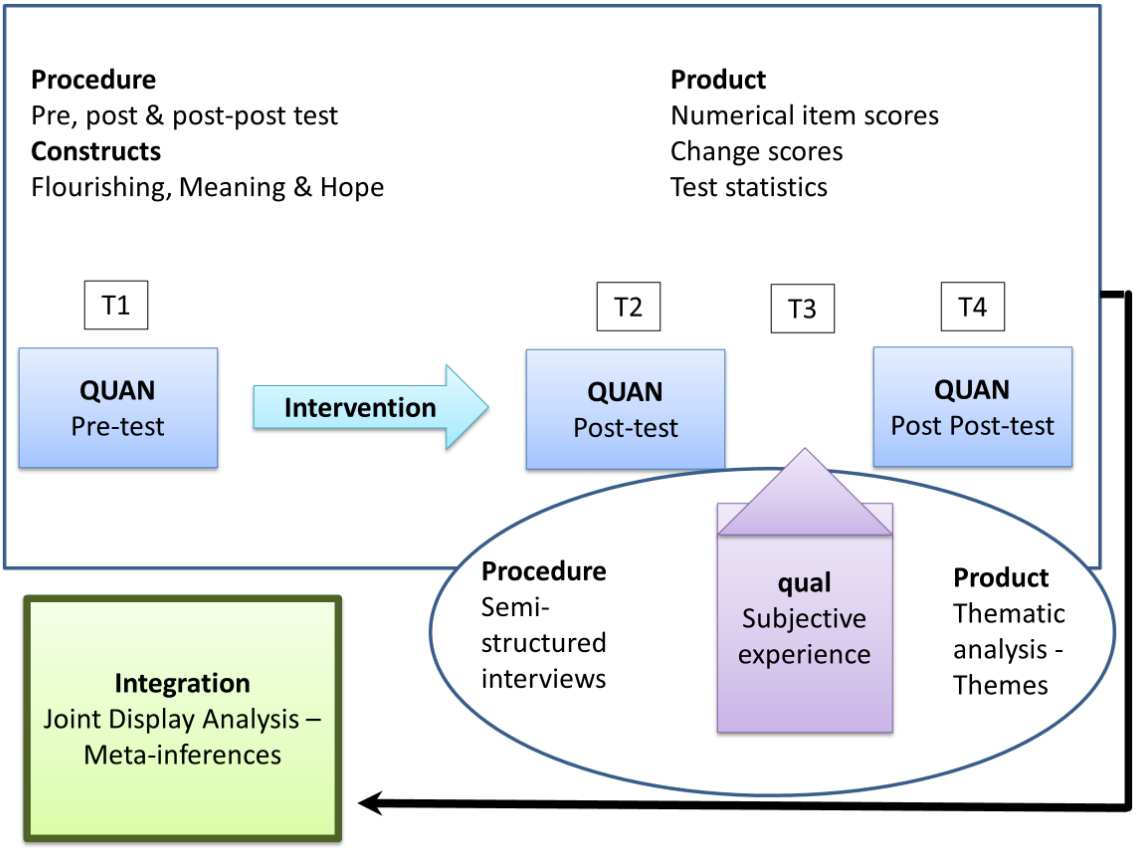
The embedded mixed-method design may be classified as a concurrent design because the qualitative and quantitative phases of the study occur simultaneously and independently (Creswell & Plano Clark, 2017). Concurrence can be realised by embedding a phase within the other. In this design, one phase is typically given priority, indicated by capitalising its abbreviation (e.g., QUAN for quantitative) (Creswell & Plano Clark, 2011; Onwuegbuzie & Collins, 2007).

The QUAN phase was prioritised in this study and a quasi-experimental between-groups pre-test, post-test and post-post-test design employed. Following the post-test and the post-post-test, a qual phase was embedded to provide detailed insights into the participants' subjective experiences of the intervention, thus enriching the quantitative data (Creswell & Poth, 2017; Fetters et al., 2013). Although the quantitative and qualitative data were collected and analysed separately, their findings were integrated into the final interpretation phase to enhance the overall understanding of the research problem (Fetters et al., 2013; Johnson & Onwuegbuzie, 2004).

Figure 5.1 depicts the mixed-method research design employed in this study, illustrating the concurrent yet independent nature of the QUAN and qual phases and their integration.

Figure 5.1

Diagrammatic Representation of the Embedded Mixed-Methods Research Design



Note : QUAN = quantitative phase, qual = qualitative phase

5.5. Data Collection Procedure and Method

This section outlines the procedures and methods employed to collect the data for this study. The mixed-methods approach integrated the qualitative and quantitative data to provide a comprehensive understanding of the research problem.

5.5.1. Sampling.

5.5.1.1. Sampling Frame

The sample included adults aged 18 and older who were proficient in English and resided in Diepsloot, a resource-constrained community in Johannesburg, Gauteng province. Shumbashaba Community Trust (SCT) is a public benefit organisation that provides pro bono counselling and psychosocial support to Diepsloot's community members and organisations. The researcher served as a SCT board member and provider of psychological services. SCT programme coordinators sourced participants either directly from SCT community development programmes or through community organisations in Diepsloot, which provided SCT psychosocial programmes to their members. The SCT programme coordinators provided preliminary information to the Diepsloot-based community organisations they worked with regarding the intention to host a "Surviving 2 Thriving" programme and associated research study. Volunteers, staff, and members interested in participating were informed of information-giving sessions the researcher presented at the organisations and at SCT. The parents of the children who participated in the SCT youth development programme and clients attending the SCT community mental health programme were also invited to attend information sessions at SCT. The SCT programme coordinators were not incentivised to recruit participants. It is standard practice with the SCT community programme coordinators to respect a person's freedom to choose. Therefore, no one is ever coerced into participating; all participation is voluntary.

Some organisations hosted an information session, after which interested individuals could sign up. Others referred interested parties to attend information-giving sessions at SCT.

5.5.1.2. Mixed-Method Sampling Procedure

The two-dimensional mixed-methods sampling model proposed by Onwuegbuzie and Collins (2007) was utilised. This model aligns sampling strategies with the mixed-methods research design by considering two critical dimensions: time orientation and the relationship between the quantitative and qualitative phases. Accordingly, a concurrent time orientation

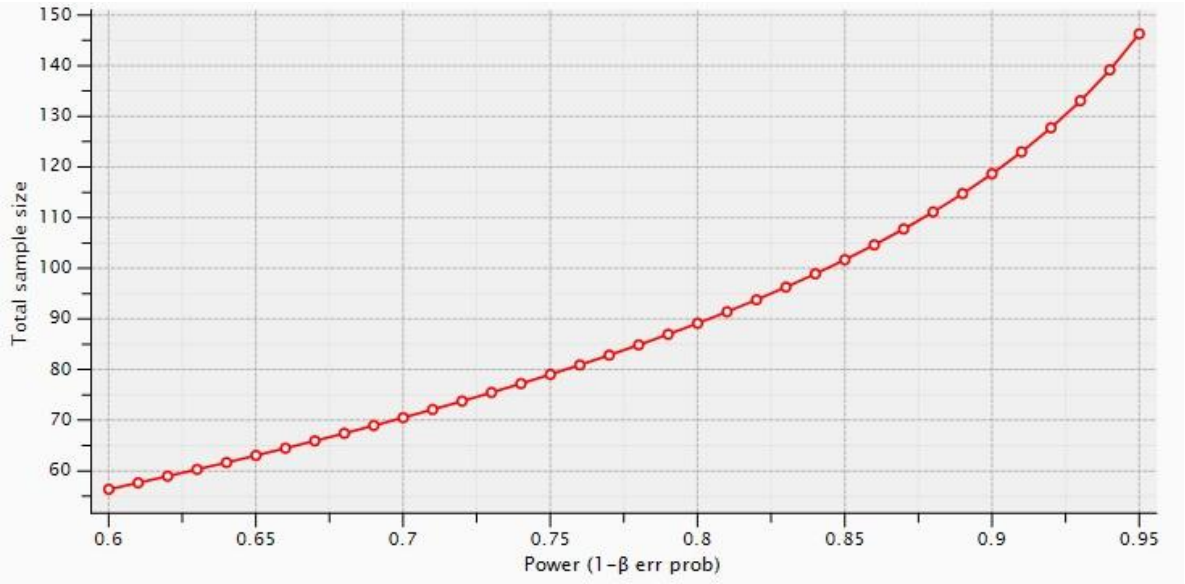
for the two phases was adopted. Furthermore, the sampling was nested, meaning the qualitative sample was a subset of the quantitative sample. Mixed-methods research often requires balancing large sample sizes favoured in quantitative research for statistical reliability with smaller, more manageable samples typical in qualitative research for in-depth analysis (Castro et al., 2010). To ensure that each component's sample size was compatible with its traditional research design, while a large sample was utilised for the quantitative phase to guarantee statistical power, the qualitative phase focused on a smaller, more detailed subset of participants (Onwuegbuzie & Collins, 2007).

5.5.1.3. Quantitative Phase Sampling

A table was conducted using G*Power software (version 3.1.9.4), depicted in Figure 5.2, for the quantitative phase to determine the appropriate sample size needed to achieve sufficient statistical power to detect significant differences between the pre-test and post-test results (Bartlett et al., 2022; Faul et al., 2007; Field, 2013). The power analysis was based on the anticipated effect size (Cohen's d) between 0.3 and 0.5, aiming for a statistical power of 0.80 at a 5% significance level. (Anderson et al., 2017; Lakens, 2022). According to Cohen (1992), an effect size (*d*) of 0.2 is considered small, 0.5 medium, and 0.8 large.

Figure 5.2

*Plot Generated Using G*Power to Illustrate the Relationship Between the Sample Size and Statistical Power.*



Note: t-tests – Means: Difference between two dependent means (matched pairs), Tail(s) = Two, α err probability = .05, Effect size d= 0.3

Given the alpha = .05 and the selected power = .80 with Cohen's *d* set at .30 (between small and medium effect), the required sample size was calculated to be 90. Similar calculations for effect size d = .50 (medium effect) determined the minimum sample size as 34.

Due to time and financial constraints, the study employed the non-probability sampling technique (non-random sampling) of convenience sampling. Although convenience sampling relies on selecting a sample based on location and accessibility, the results are not generalisable to the larger population (Babbie, 2021; Gravetter & Forzano, 2012). The convenience sampling occurred at SCT and its partner community-based organisation sites, where willing adult residents of Diepsloot could voluntarily participate in the study.

Quantitative Phase Participants. Participants were identified at different times during a 10-month period, from January to October 2022 by the SCT programme

coordinators (noted in Section 5.5.1.1). All potential participants were grouped into cohorts. Each cohort attended an information-giving and informed consent session during which the researcher, supported by a SCT programme coordinator, presented information about the research process, including ethical considerations. In addition, attendees had an opportunity to ask questions. Subsequently, informed consent forms (Appendix G) were distributed to interested parties. Those people who wanted to participate returned the signed consent forms. The inclusion criteria were that the individuals had to be proficient in English and not have previously participated in an intervention incorporating horses. If the cohort had over 15 participants, they were randomly assigned to the experimental group (received the intervention) or wait-list control group.

There were seven cohorts. First, the pre-test was conducted prior to the group assignment. Second, randomisation was conducted by utilising a computer randomisation process in Excel. Thereafter, participants were informed of their group allocation via WhatsApp or telephonic text. If the cohort was small, participants were assigned on a first-come basis. Accordingly, the first participants were allocated to the experimental group and the remainder of the participants were allocated to the wait-list control group. Only cohort two was part of a group that was randomly assigned to experimental and control conditions as they all belonged to the same organisation. The members of the other six cohorts were assigned to experimental and control conditions based on the availability of the intervention run by SCT. All members of the wait-listed control group had the opportunity to attend the intervention at the end of the research process.

Within different cultures there is a variation in the age of onset of adulthood, resulting in the lack of a universal definition of adulthood (Caneo & Neirotti, 2017). The WHO considers adulthood as a life stage starting at 20 (World Health Organization, 2013); however, in South Africa, 18 is regarded as the onset of adulthood (South African

Government, 1992). The APA identifies three broad subgroups of adulthood: early adulthood from +/-20 to 35 years; middle adulthood from +/- 36 to 64 years; and late adulthood is age 65 and beyond (American Psychological Association, 2025). Furthermore, there are differences in the definition of young people or youth as evidenced by the UN description of youth as those between the ages of 15 and 24 (United Nations Department of Economic and Social Affairs, 2013), and the African Charter that defines young people as those between 15 and 35 (African Union Commission, 2006).

The final sample included 149 participants, ranging in age from 18 to 56. Based on the previously described fluidity within the definition of adulthood, the researcher created three age categories for statistical purposes: emerging adulthood (18 – 20 years), early adulthood (21 – 35 years), and middle adulthood (36 – 64 years).

As noted previously, according to the a priori power analysis results, 149 was an adequate sample size for the study. The demographic characteristics of the sample are presented in Table 5.1.

Table 5.1

Demographic Characteristics of Experimental and Control Groups

Characteristic	**Category**	**Experimental Group (n = 78)**	**Control Group (n = 71)**
Age Range		18 – 56 years	19 – 55 years
	Mean (SD)	M = 35.73 (SD = 9.93)	M = 36.64 (SD = 2.23)
	Age Categories		
	18-20 years	3 (4%)	2 (3%)
	21-35 years	38 (49%)	33 (46%)
	36-64 years	37 (47%)	35 (49%)
	Missing	0	1 (1%)
Gender	Female	60 (77%)	54 (76%)

Characteristic	Category	Experimental Group (n = 78)	Control Group (n = 71)
	Male	18 (23%)	17 (24%)
Ethnicity	Sepedi/North Sotho	28 (36%)	20 (28%)
	Sesotho	4 (5%)	0
	Setswana	16 (21%)	11 (15%)
	Tsonga	2 (3%)	7 (10%)
	Venda	3 (4%)	4 (6%)
	Xhosa	10 (13%)	4 (6%)
	Zulu	10 (13%)	20 (28%)
	Other	4 (5%)	0
Education Level	Tertiary	15 (19%)	5 (7%)
	Matric (Matric Equivalent)	31 (40%)	26 (37%)
	Grade 8 - Grade 11	29 (37%)	32 (45%)
	None	1 (1%)	0
	Missing	2 (3%)	8 (11%)
Employment Status	Employed	34 (44%)	29 (41%)
	Student	2 (3%)	0
	Unemployed	41 (53%)	34 (48%)
	Missing	1 (1%)	8 (11%)

Note: M = mean, SD = standard deviation, n = number in sub-group sample, % = percentage of the total sub-group sample

The qualitative sampling process and technique are subsequently presented.

5.5.1.4. Qualitative Phase Sampling

The qualitative sample was determined as a subset of the experimental group by employing convenience and criterion sampling. Convenience sampling occurred through members of the experimental group volunteering to participate (Babbie, 2021). The inclusion

criterion for this phase was that participants had to have attended at least 75% of the intervention sessions (Fàbregues et al., 2021; Moser & Korstjens, 2018). After the intervention and post-test, facilitators asked eligible participants to volunteer to participate in semi-structured interviews and, once again, provide informed consent (see Appendix H).

Qualitative Phase Participants. Achieving an adequate sample size in qualitative studies occurs when there are sufficient meaningful data, which can occur with 6 - 12 participants (Boddy, 2016; Moser & Korstjens, 2018; Onwuegbuzie & Collins, 2007). Therefore, the qualitative sample size was determined to be sufficient after 12 people had volunteered and participated in the interviews. All the participating adults, namely, five black males and seven black females, ranging from 20 to 50 years of age, lived in Diepsloot. While six of the participants had undergone tertiary education, the highest level of education the others had obtained was Grade 12 or the equivalent. In addition, two participants were students, seven were unemployed and three were employed.

5.5.2. Data Collection and Procedure

The quantitative and qualitative data collection procedures occurred independently in line with the concurrent mixed-methods research design. The qualitative data collection process was embedded within the quantitative data collection procedure.

5.5.2.1. Quantitative Data Collection and Procedure

The instruments used and the procedure followed to collect quantitative data is presented next.

Instruments. During the quantitative phase, data were collected using a biographical questionnaire and multiple assessment instruments, which were presented to the participants in a booklet format to be completed in pen. The booklet was written in clear, comprehensible English and administered individually or in a group format by the researcher or the research assistant. When necessary, a field worker trained by the researcher, fluent in the vernacular of

the participants, assisted the researcher with administration and/or translation. The booklet contained instructions for completing the questionnaires and was accompanied by an information letter explaining the purpose of the study (Appendix A). To ensure adequate ethical conduct, the anonymity of participants was ensured by the researcher removing the participant names after writing the assigned alphanumeric identification code on the questionnaire. The alphanumeric code was used for data capture.

1. ***Biographical Questionnaire.*** A biographical questionnaire was utilised to collect socio-demographic information from the participants such as gender and age, as per Appendix B. Both closed and open-ended questions were employed to obtain this information (Creswell & Plano Clark, 2011).

Several measures related to the constructs flourishing, meaning and hope and their respective facets, as discussed in Chapter 4, were employed. The measures, which are self-report measures, were deemed appropriate for use because of the subjective nature of the psychological constructs under investigation (Encyclopedia.com, 2019; Sandvik et al., 1993). Reliability coefficients for each measure were determined from the pre-test data. The quantitative data collected included the following eight questionnaires (Appendix B):

2. ***Mental Health Continuum-Short Form (MHC-SF).*** The MHC-SF was administered to determine participants' overall flourishing as well as its hedonic and eudaimonic subcomponents (Keyes, 2002, 2005). The MHC-SF consists of 14 items and determines an overall well-being score in addition to measuring three subscales of emotional well-being (EWB; three items, e.g., *How often did you feel happy?*), psychological well-being (PWB; five items, e.g. *How often did you feel good at managing the responsibilities of your daily life?*), and social well-being (SWB; six items, e.g. *How often did you feel that you belonged to a community?*) (Keyes, 2009). Each item represents a feeling of well-being of which the frequency during the past month is rated on a 6-point Likert scale,

ranging from 0 (*never*) to 5 (*every day*). Item scores are summed to compute a total flourishing score, ranging from 0 to 70. Subscale scores for emotional well-being (hedonic) are calculated on a scale from 0 to 15. The two eudaimonic subscales, psychological well-being and social well-being are scored on a scale of 0 to 30 and 0 to 25, respectively.

While low scores on the three subscales indicate languishing, higher total scores reflect greater levels of flourishing (Keyes, 2009). Furthermore, flourishing is diagnosed if a participant reports one of the three hedonic well-being symptoms (items 1-3) *every day* or *almost every day* and six of the 11 positive functioning symptoms (items 4-8 are indicators of SWB and 9-14 are indicators of PWB) *every day* or *almost every day* in the past month. Languishing is diagnosed when a participant reports one of the three hedonic well-being symptoms (items 1-3) *never* or *once or twice* and six of the 11 positive functioning symptoms (items 4-14) *never* or *once or twice* in the previous month. Individuals who report neither languishing nor flourishing are identified as moderately mentally healthy (Keyes, 2009).

Numerous international, African and South African studies have confirmed the three-factor structure of emotional, psychological and social well-being with flourishing as a higher-order factor (de Bruin & du Plessis, 2015; Kabir et al., 2021; Karaś et al., 2014; Keyes et al., 2008; Khumalo et al., 2011; Lamers et al., 2011; Luijten et al., 2019; Lupano Perugini et al., 2017; Petrillo et al., 2015). Furthermore, the MHC-SF has demonstrated test-retest reliability, indicating sensitivity to change and stability over time (Lamers et al., 2012; Petrillo et al., 2015). Aligned to global and South African studies, this study showed good internal consistency of the scale and subscales, with Cronbach's α ranging between .69 and .84.

3. ***Satisfaction with Life Scale (SWLS). The SWLS*** is a five-item self-report scale that measures the global cognitive judgements of participants' satisfaction with life as a whole, demonstrated by the sample item, *The conditions of my life are excellent* (Diener et al., 1985; Pavot & Diener, 2008). Participants respond to items based on their perception of life in accordance with a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Item raw scores are summed to create a total score between five and 35, with higher scores representing higher life satisfaction. Total scores are interpreted according to the following life satisfaction categories: extremely satisfied (30-35), satisfied (25-29), slightly satisfied (20-24), slightly dissatisfied (15-19), dissatisfied (10-14), and extremely dissatisfied (5-9) (Pavot et al., 1991) .

   This scale has demonstrated excellent psychometric properties and has therefore been interpreted as valid and reliable (Cronbach's α ranging from .87 to .91) in diverse global contexts, including South Africa (Cotton Bronk et al., 2009; Diener et al., 1985; Disabato et al., 2016; Keyes et al., 2008). Furthermore, the scale reveals a two-month test-retest reliability index of .82 (Diener et al., 1985). In the current study, the SWLS was found to have acceptable reliability, Cronbach $\alpha = .75$.

4. ***Scale of Positive and Negative Experience (SPANE).*** Diener, Wirtz, Tov, et al. (2009) described the SPANE as a 12-item self-report scale that assesses participants' subjective experiences of positive and negative feelings as well as their overall affect balance. The total affect balance scale (SPANE-B) comprises two subscales: (1) Positive feelings (SPANE-P) subscale, signified by the sample item *positive* and (2) Negative feelings (SPANE-N) subscale, indicated by the sample item *angry*. Each of these subscales comprises six items, to which participants respond based on experiences over the four weeks on a 5-point Likert scale, ranging from 1 (*very rarely/never*) to 5 (*very often/always*). The total score for each subscale is derived by summing the raw scores for

the scale items, ranging from the lowest possible (6) to the highest possible (30) positive/negative feelings. The SPANE-B score is calculated by subtracting the SPANE-N score from the SPANE-P; the resultant difference ranges from the unhappiest possible (-24) to the highest affect balance possible (24). Hence, a participant who scores very high (24) reports never or rarely experiencing negative feelings and very often or always experiences all of the positive feelings (Diener, Wirtz, Tov, et al., 2009). Previous studies involving multicultural adult populations, including South Africa, have found that the scale and subscale Cronbach's α values ranged from .70 to .89 (du Plessis & Guse, 2017; Jovanović, 2015; Li et al., 2013). Similarly, this study demonstrated good internal consistency and validity with Cronbach's α values between .70 and .81 for the SPANE scale and its subscales.

5. ***Depression Anxiety and Stress Scale - 21 items (DASS-21).*** The DASS-21 was administered to determine participants' emotional states of anxiety, stress and depression (Lovibond & Lovibond, 1995). The DASS-21 comprises three self-report scales, each containing seven items that measure the intensity of negative emotional states experienced in the previous week.

   The depression scale assesses dysphoric mood states as denoted by self-depreciation, lack of interest/involvement, hopelessness and anhedonia, represented by the sample item, *I felt downhearted and blue*. The anxiety scale measures arousal states, including autonomic arousal, muscular tension and anxious affect, reflected by the example, *I felt scared without any good reason.* The stress scale evaluates negative emotional liability to stressors and general tension, evidenced by the example, *I found it difficult to relax*. Participants evaluate the severity of these states in accordance with a four-point Likert scale, ranging from 0 (*didn't apply to me*) to 3 (*applied to me very much or most of the time*). Scoring for the depression, anxiety and stress scales involves adding the raw

scores of the corresponding items. The total score for the DASS-21 is determined by summing the separate scale raw scores and doubling the total. The total scale scores for each of the negative emotional states are interpreted according to categories of severity, as depicted in Table 5.2 (Lovibond & Lovibond, 1995)

Table 5.2

DASS-21 Categories of Severity

Categories	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Dreyer et al. (2019) confirmed support for the three-factor model of the DASS-21 (depression, anxiety and stress) in a non-clinical South African context. Numerous international studies, including those conducted in South Africa, of the DASS-21's psychometric properties have demonstrated that the scale has good validity and adequate internal consistency (Cronbach's $\alpha \geq .70$) for the total scale and subscales (Coker et al., 2018; Dreyer et al., 2019; Lovibond & Lovibond, 1995; Moya et al., 2022; Norton, 2007; Oei et al., 2013).

Furthermore, the DASS-21 demonstrates acceptable test-retest reliability and intraclass correlation (ICC) values above 0.74 for periods ranging from three weeks to three months in both Western and non-Western (including African) adult communities (Asghari et al., 2008; Gomez et al., 2014; Kakemam et al., 2022; Moya et al., 2022). The reliability of the DASS-21 for the current study yielded a Cronbach value of .92 for the

whole scale. The subscales produced reliability coefficients ranging from .75 to .81. The instrument was therefore deemed reliable for use in the current study.

6. ***Personal Meaning Profile–Brief (PMP-B).*** The PMP-B evaluates participants' current perceptions of personal meaning and what matters in their lives (MacDonald et al., 2012; Wong, 1998b). There are seven subscales, each comprising three items measuring (i) achievement (*I like a challenge*), (ii) religion (*I seek to do God's will)*, (iii) self-transcendence (*I strive to make this world a better place*), (iv) relationship (*I am liked by others*), (v) intimacy (*I have found someone I love deeply*), (vi) fair treatment (*Life has treated me fairly*) and (vii) self-acceptance (*I accept my limitations)*. Participants indicate to what extent the statements characterise their own life in accordance with a 7-point Likert scale, ranging from 1 (*not at all*) to 7 (*a great deal*).

   The subscale scores are calculated by summing the raw scores for the relevant items, thereby providing a hierarchical indication of the most important sources of meaning seeking for the participants. To determine an overall measure of success in approximating an ideally meaningful life, the total scale score is calculated by adding up the subscales' scores. A higher score indicates greater success (MacDonald et al., 2012).

   The total scale and subscales have demonstrated validity and internal consistency with Cronbach's α ranging between .64 and .95 in diverse global contexts and when translated into different languages (Demirbaş-Çelik, 2018; MacDonald et al., 2012). Furthermore, MacDonald et al. (2012) established test-retest reliability in adults after five weeks ($r = .73$), with stability indicated for each subscale ($r \geq .63$). This study yielded adequate to good internal consistency on the scale and six of the subscales, with Cronbach's α ranging between .61 and .87. The self-acceptance subscale yielded Cronbach's $\alpha = .25$. The subscale's low reliability may be attributed to two possible reasons. First, the PMP-B scale was developed and standardised on a white English-speaking Canadian and USA

population (MacDonald et al., 2012), and within this South African sample, self-acceptance is a more heterogenous construct that is not strongly related to accepting personal limitations, accepting what cannot be changed, and the ability to live with suffering and make the best of it. Second, there are too few questions to measure the construct reliably (Tavakol & Dennick, 2011). Future validation of this instrument is necessary in the South African context.

7. ***New Search for Meaning Scale (NSMS).*** The NSMS is a self-report instrument that assesses participants search for meaning in life (Wong, 2019b). The NSMS comprises two subscales of six items each: (1) positively oriented search for meaning (PSM) (e.g., I am searching for ways to make a valuable contribution to the world) and (2) negatively oriented search for meaning (NSM) (e.g., *I want to find out why I am not satisfied with my life*). Participants reflect on each item in accordance with a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

   The subscale scores are calculated by summing the relevant item raw scores. The sum of the subscale totals yields a total search for meaning scores. Higher scores indicate greater success in the search for meaning orientation or overall search for meaning (Wong, 2019b). As this is a new measure, no reliability information was available at the time of the study. The present study, however, revealed good to excellent internal consistency on the overall scale with Cronbach's $\alpha = .89$, and on the NSM and PSM subscales with Cronbach's $\alpha = .82$ and $\alpha = .77$, respectively.

8. ***Locus-of-Hope Scale (LoHS).*** The LoHS measures trait hope in relation to the range of participants' goal related thoughts concerning personal (internal) and shared (external) agency and pathways connected to goal attainment (Bernardo, 2010). As required by the LoHS author, an application for permission to use the scale letter was submitted to him (Appendix C). This 40-item scale comprises eight randomly ordered items for each of the

four specific LoHS subscales: internal, external-family, external-peer and external-spiritual. Within each subscale, there is a combination of four items referring to agency and four to pathways. Sample items for the subscales are presented in Table 5.3.

Table 5.3

Locus-of-Hope Scale Sample Items

Locus-of-Hope Subscale	Component	Sample item
Internal	Agency	I can think of many ways for me to get out of a problem.
	Pathway	I energetically pursue my goals.
External-family	Agency	I am confident that my family will support me in the goals that are important to me.
	Pathway	My family has lots of ways of helping me attain my goals.
External-peers	Agency	I count on my friends to think of different ways of reaching the goals that are important to me.
	Pathway	I have been able to meet my goals because of my friends help.
External-spiritual	Agency	I will attain my life goals by trusting God.
	Pathway	God has many different ways of letting me attain my goals.

In addition, the scale includes eight filler items (e.g., I am easily downed in an argument), which are disregarded in the scoring. Participants are required to evaluate how true each statement is using a 4-point Likert scale, ranging from 1 (definitely false) to 4 (definitely true) (Bernardo, 2010). The subscale scores are computed by calculating the average across the eight items of each subscale, with higher scores indicating higher levels of locus-of-hope.

A variety of different factor analysis studies in western and non-western samples has supported the four-factor structure of the LoHS (Bernardo, 2010; Bernardo et al., 2018; Gadiana & David, 2015; MacDonald et al., 2022). The scale possesses good psychometric properties, with each subscale showing good to excellent internal consistency (Cronbach's α ranging from .69 to .91) in adult cross-cultural populations, including South Africa (Abdel-Khalek & Snyder, 2007; Babyak et al., 1993; Bernardo,

2010; Bernardo & Nalipay, 2016; Bernardo et al., 2018; Munoz et al., 2019). In the current study, the LoHS internal consistency was good, with Cronbach's α ranging from .61 to .93 across the subscales and .91 for the total scale.

9. ***Perceived Hope Scale (PHS).*** The PHS is a one-dimensional scale comprising six items that measure hope as it is experienced and perceived by people, leveraging the religious, spiritual and self-transcendent elements of hope (Krafft et al., 2019). The PHS differs from the LoHS in that it does not measure future expectations of goal achievement and does not assess sources and mechanisms of hope. Rather, the PHS evaluates general levels of hope (items 3 & 5), general beliefs in hope fulfilment (item 2), how much hope outweighs anxiety (item 1),whether hope improves quality of life (item 4) and the ability to remain hopeful in difficult times (item 6) (Krafft et al., 2020; Krafft et al., 2019; Krafft & Walker, 2018b). Sample items include *I am hopeful with regard to my life* and *Even in difficult times, I am able to remain hopeful*. Participants are required to respond in accordance with levels of agreement to a 6-point Likert scale, ranging from 0 (*strongly disagree*) to 5 (*strongly agree*). Higher scores on the PHS signify greater levels of hopefulness in life (Krafft et al., 2019).

   Validation studies using German and Portuguese translated versions of the scale and the English version in a South African context have confirmed the one-factor structure, reliability of the scale and its discriminant and predictive value in relation to dispositional hope (Krafft et al., 2020; Krafft et al., 2019; Marujo et al., 2021). The PHS correlates positively with flourishing and negatively with depression and anxiety, thereby increasing its predictive power beyond dispositional hope (Marujo et al., 2021).

   This concise scale has shown good psychometric properties, exhibiting excellent internal consistency (Cronbach's $\alpha \geq .87$) in cross-cultural contexts such as South Africa (Guse &

Shaw, 2018; Krafft et al., 2019; Slezáčková & Krafft, 2016). The PHS demonstrated adequate reliability in this study, with Cronbach's $\alpha = .76$.

The process by which these measures were implemented to collect the quantitative data is subsequently detailed.

Procedure. The quantitative data collection occurred at various community sites such as the SCT facility and community organisation offices and classrooms, which were accessible to the participants at three different times: the pre-test and post-test before the start of and after the intervention, respectively and the post-post-test at least three months after the post-test. While the experimental group participants completed the questionnaires at the SCT facility, the control group participants completed them either at SCT or at a community organisation site in Diepsloot. Participants, who were provided with a pen, took between 20 and 40 minutes to complete the questionnaire. After completion, each answer sheet was marked with the alphanumeric identification code previously assigned to each participant to guarantee their anonymity. Names of participants were only visible to the researcher and were collected to assist her with assessment follow-up and were redacted after data collection. Data capture only used the alphanumeric identification code.

The participants were notified of the assessment dates via text or WhatsApp text message sent from the researcher's phone. The number of completed questionnaires decreased from pre-assessment to post- and post-post-assessment in both the experimental and control groups. This attrition was due to various factors, including participants' gaining employment and being unable to get time off, unexpected interruptions in their schedules, moving away from the community, and insufficient time to attend the session to complete the questionnaires. No incentives to complete the questionnaire were provided.

5.5.2.2. Qualitative Data Collection and Procedure

The semi-structured interview for qualitative data collection and the procedure followed are presented next.

Semi-structured Interview. Interviews are a qualitative data collection method in which a researcher employs interview techniques to obtain an interviewee's perspective of the phenomena under discussion (Alamri, 2019). Qualitative data are generated by transcribing interviews that were conducted employing face-to-face semi-structured interviews (Moser & Korstjens, 2018). Semi-structured interviews provide valuable qualitative data as they provide access to a person's thoughts, knowledge base, preferences, attitudes and beliefs (Brinkmann, 2018). They are suitable for inductive qualitative research as they allow for the exploration of both explicit and implicit knowledge as well as subjective personal experiences and intuitions, which constitute an individual's intellectual property and, accordingly, are an appropriate method. Semi-structured interviews were employed in this study, questions were predetermined according to a pre-prepared interview guide (Appendix D), with additional questions informed by emerging information from conversations between the interviewer and interviewees. Therefore, all the interview questions resulted from both secondary and primary research guided by literature to create an ongoing journey of qualitatively constructed discovery (DiCicco-Bloom & Crabtree, 2006; Jamshed, 2014).

Procedure. The interviews were conducted within a month of the termination of the intervention, at a point in time between the post-test and the post post-test as indicated in Figure 5.1, at community venue offices that were convenient and accessible to both the participant and researcher. The interviews which the researcher conducted were audio recorded. Moreover, to ensure trustworthiness, the researcher adopted the stance of curiosity and not knowing, prompting the participants to provide illustrations or examples of their experiences and perceptions (Creswell & Poth, 2017). The recordings allowed the researcher

to focus on the interview content and verbal prompts, thus facilitating more effective data-capturing (Jamshed, 2014). A trained research assistant transcribed the audio recordings using the Conversation Analysis (CA) transcription system (Wilkinson & Kitzinger, 2011), to generate a verbatim interview transcript, providing the text data for data analysis.

Each script was identified by the pseudonym assigned to the participant. The researcher checked the interview transcripts against the corresponding audio recordings. Each participant received their transcript for accuracy checking and amended the contents if so desired. The semi-structured interviews provided a point of interaction between the intervention, quantitative data and qualitative data (Fetters et al., 2013; Tashakkori & Teddlie, 2010).

5.6. Intervention

The EAPPI described in Section 4.6 was employed as the intervention in the study. It was implemented from 1 March to 15 December 2022 at SCT. Two HPCSA licensed counselling psychologists, one of whom was the researcher, and two equine behavioural specialists facilitated the intervention. All the facilitators were certified in Eagala and ARCH facilitation approaches and, as such, trained to include equines in psychological interventions. To maintain facilitation fidelity, the facilitation group agreed that the same mental health and equine specialist would facilitate all eight intervention sessions for a particular group.

The intervention occurred in the SCT outdoor equestrian farm setting comprising an enclosure and an outdoor classroom. The enclosure was a large grassy area of approximately one hectare with accessible clean water and grazing. The study included ten horses and three donkeys who regularly engaged in equine-assisted services offered by SCT. Each intervention group had the same herd of equines for the eight sessions. The number of equines allocated to each intervention group depended on the space available and the number

of participants, so there was no overcrowding, and the equines and people could be apart if they so chose. There were a maximum of seven equines in each herd during the intervention.

At the beginning of the first sessions there was a safety briefing for participants. Participants were encouraged to approach the equines from the front and side, as this is where they would be seen, and to move slowly rather than fast when engaging with them. At times when the equines were moving fast, the participants were called to stand with the facilitators in the centre of the enclosure. At times when participant actions were having an impact on equine behaviour the facilitators would create an opportunity for the participants to reflect on and learn from the situation.

As noted previously in Section 5.5.1.2, seven intervention cohorts were facilitated during the research period. SCT determined that the cohort groups be closed. Furthermore, to facilitate diversity and maximise participation and learning, 15 was the maximum number of participants per group (American Psychological Association, 2019; Ezhumalai et al., 2018).

5.7. Data Analysis

Three sections constitute the data analysis section: quantitative, qualitative, and mixed-methods data analysis.

5.7.1. Quantitative Data Analysis.

The quantitative data analysis was conducted by utilising IBM SPSS Statistics Version 28®. Descriptive and inferential statistical analyses were conducted. The Kolmogorov-Smirnov statistic was determined to indicate the normality of the distribution of scores in the sample. Due to the lack of normality in the data, non-parametric statistics were conducted (Section 6.3). The prevalence of participant levels of flourishing, meaning and hope was determined at three different time points (pre-, post- and post-post-intervention) by analysing the percentage of participants who reported their levels as described in Section 5.5.2.1.

Thereafter, a Wilcoxon Sign Rank test was performed to assess the null hypothesis that there was no difference in flourishing, meaning and hope pre-, post- and post-post intervention median scores in the experimental and control group. The Mann-Whitney U test was employed to test the null hypothesis that there was no difference in flourishing, meaning and hope pre-, post- and post-post intervention scores between the two experimental conditions (Field, 2013; Pallant, 2020).

Finally, the influence of the demographic factors was investigated on the experimental group's significant results, which were determined by the Wilcoxon Sign Rank tests conducted on the study measures of flourishing, meaning and hope. The demographic factors were categorised as follows: two groups for gender (male and female) and employment (employed and unemployed); three groups for age (18-20, 21-35, 36-64 years) and for number of sessions attended (1-3, 4-5, 6-8 sessions) and four categories for level of education (none, grade 8-11, Matric, tertiary).

The Kruskal-Wallis test was performed on factors with more than two groups/categories to assess the null hypothesis that the distribution of significant scores determined on the measures of flourishing, meaning and hope was the same across the categories of age, levels of education and number of sessions attended. Where the null hypothesis was rejected a subsequent Pairwise comparison was conducted.

The independent samples Mann-Whitney U test was performed on factors with two groups to test the null hypothesis that the distribution of significant scores on the respective flourishing, meaning and hope measures was the same across the categories of gender and employment status. Where the null hypothesis was rejected, an additional Mann-Whitney U test was performed to investigate the distribution of significant meaning orientation scores across the two categories.

5.7.2. Qualitative Data Analysis

The qualitative data were analysed using reflexive thematic analysis (Braun & Clarke, 2019). Braun and Clarke (2006, 2019, 2023) noted that thematic analysis provides a robust, systematic framework for coding qualitative data and subsequently using that coding to identify patterns across the dataset in relation to the research questions. Thematic analysis is regarded as a family of methods with broad paradigmatic and conceptual foundations, rendering it flexible and practical (Braun & Clarke, 2006, 2014, 2023). Therefore, it is specifically suited to mixed-methods research designs (Braun & Clarke, 2022).

In the context of thematic analysis, a theme refers to patterns of meaning constructed from the data reflecting something that the researcher considers important, interesting or meaningful (Braun & Clarke, 2022, 2023). The thematic analysis involved an inductive and deductive process of identifying themes across the data set by the researcher searching for repeated patterns of meaning, which were extracted and grouped into higher-order categories (Braun & Clarke, 2006; Braun et al., 2015). This was facilitated by the researcher's adoption of an open-minded reflexive stance to derive themes for analysis from code categories linked directly to the data within the dataset in conjunction to those representing existing theoretical constructs (Joffe, 2012). Hence, explicit themes were identified using the semantic content and thereafter, theoretically interpreted to determine the significance of the emerging patterns as well as their implications and broader meanings to tell the story of the data (Braun & Clarke, 2006).

In this study, themes were generated by the well-established six-stage approach outlined by Braun and Clarke (2006, 2023) and Braun et al. (2015). First, the interview transcriptions were checked for accuracy by comparing them to the audio recordings and sharing them with the participant, followed by gaining familiarity with the wording and meanings. Subsequently, the focus was directed at understanding emerging themes, patterns

and explicit and implicit meanings. Thereafter, initial codes were generated by identifying small units of interesting text. Common primary themes and sub-themes were then constructed and collated into a table, which remained changeable subject to reflection. Subsequently, themes were extensively reflected upon to establish whether they were relevant to the coded extracts, the entire data set and the study's theoretical framework. Finally, the researcher created meaningful interpretive themes to tell the story of the data (Braun & Clarke, 2023).

5.7.3. Mixed-Methods Data Analysis: Joint Display Analysis

In mixed-methods research, integrating qualitative and quantitative data is essential for developing a comprehensive understanding of complex phenomena (Creswell, 2013). Integration involves systematically combining the insights from qualitative and quantitative analyses to form a cohesive narrative that effectively addresses the research questions. Both data strands were investigating the same constructs, so the integration was conducted with a triangulation purpose. This approach aimed to assess the extent to which the finding converged or diverged, providing a more comprehensive understanding of the constructs under investigation (McCrudden et al., 2021).

For this embedded mixed-methods design, core integration techniques were applied, requiring the researcher to iteratively engage with both datasets. This approach allows for examining intersections, linkages, contrasts and interpretations between the statistical results and qualitative themes (Bazeley, 2019; Fetters & Molina-Azorin, 2017). Joint display analysis is one such technique that plays a pivotal role in merging quantitative and qualitative data. This method structures and restructures data to facilitate a deeper understanding, allowing for the visualisation of integrated findings in a manner that highlights relationships and insights from both strands (Fetters et al., 2013; Guetterman et al., 2021; Guetterman et al., 2015). Through joint displays, the researcher can visually and analytically integrate the

findings from both strands, thus providing a platform for comparing and synthesising the data.

In accordance with recommendations by Guetterman et al. (2021), the level of aggregation between the two data sets in this study was considered carefully. The level of aggregation refers to the degree to which the raw data have been transformed into a new entity through analysis or interpretation. This could range from raw data such as participant quotes or numerical data to more aggregated forms, including themes, narrative summaries and statistical results (Voils et al., 2011). In this study, the joint display analysis involved triangulating qualitative themes and sub-themes supported by participant quotes with inferential statistical results. This combination allowed for the production of meta-inferences that integrate both quantitative and qualitative insights (Guetterman et al., 2021).

The integration process in this study involved multiple stages:

1. **Separate Analysis**: Initial analyses of quantitative and qualitative data were conducted independently to identify key results within each data set.
2. **Comparison and Synthesis:** Findings were compared to identify patterns of confirmation, complementarity, expansion and discordance (Bazeley, 2019; Creswell, 2013; Fetters et al., 2013; Onwuegbuzie & Collins, 2007).
    - Confirmation: Instances where qualitative narratives supported the quantitative results, enhancing credibility.
    - Complementarity: Nonconflicting yet distinct insights by each data type.
    - Expansion: Additional non-overlapping information was offered by the analyses, enriching the overall understanding.

- Discordance: Conflicts, contradictions or divergence between the datasets that require deeper exploration and interpretation (Skamagki et al., 2024).

3. **Joint Display Construction:** A joint display visually presented the quantitative and qualitative data side-by-side, making it easier to interpret relationships and insights across both datasets (Fetters & Tajima, 2022; Guetterman et al., 2021). These displays included themes and participant quotes to enrich the qualitative representation and afford a fuller context for the quantitative statistical data (Clark & Ivankova, 2015; Plano Clark, 2019). The level of aggregation used in the displays ensured that both raw and synthesised forms of data were effectively utilised to produce comprehensive meta-inferences (Guetterman et al., 2021; Voils et al., 2011). This final stage of integration occurred iteratively during the interpretation and writing-up phases, allowing for the drawing of meta-inferences that combined insights from both data strands (Barnes, 2012; Kern, 2018)

Integrating diverse data types often presents challenges such as reconciling conflicting findings and merging different analytical frameworks. Such challenges were addressed by maintaining a flexible approach to data interpretation and actively seeking convergence or plausible explanations for discordance. Furthermore, the integration process was linked to the study's theoretical framework, which combines ecopsychology and existential positive psychology. This framework guided the analysis and interpretation, ensuring the findings related to the effect of the EAPPI on flourishing, meaning and hope were aligned with the overarching themes of environmental connection and personal growth.

The systematic integration of quantitative and qualitative data through joint display analysis added a layer of embedding that facilitated a deeper understanding of the research questions and objectives (Almalki, 2016; Onwuegbuzie & Collins, 2007; Plano Clark, 2017).

5.8. Research Quality

A component of good research is the utilisation of procedures that ensure the validity of data, results and the interpretation thereof. While validity differs in quantitative and qualitative research, it serves the purpose of checking the quality of the research products in both (Creswell, 2013; Creswell & Plano Clark, 2011). Due to the context-dependency of mixed-methods research, checking the quality of the research is more complex as no quality criteria have yet been established (Fàbregues et al., 2021). However, Fetters and Molina-Azorin (2017) proposed that the quality of mixed-methods research can be ensured by attending to validity and reliability in the quantitative methods, trustworthiness during the qualitative methods and legitimation throughout the mixed methods. Accordingly, the quality of this research is subsequently discussed under validity and reliability, trustworthiness and legitimation.

5.8.1. Validity and Reliability

In the quantitative research phase, the researcher is specifically concerned with issues of validity and reliability. While validity confirms that scores obtained in a study are meaningful indicators of the construct being measured, reliability verifies that the scores obtained are consistent and stable over time (Creswell, 2013; Creswell & Plano Clark, 2011). Consequently, the quantitative phase of this study ensured validity by using previously validated measuring instruments. In addition, reliability checks were conducted to determine the internal consistency of the scales in the study and reliability coefficients reported for all scales and subscales (see Section 5.5.2.1).

5.8.2. Trustworthiness

Validity in qualitative research is determined by verifying whether the collected data in a study are accurate from the researcher, participants and readers' perspective. This concept, commonly known as trustworthiness, refers to the quality of the research and answers the question of whether the findings can be trusted (Creswell & Plano Clark, 2011; Creswell & Poth, 2017). To ensure trustworthiness, Korstjens and Moser (2018) identified the principles of credibility, transferability, dependability and confirmability. Each of these principles includes various strategies that researchers can employ to guarantee trustworthiness. Furthermore, the researchers use their discretion to choose which strategies are appropriate for their research design. In addition, researcher reflexivity is a crucial process that ensures transparency and research quality (Korstjens & Moser, 2018). In this study, the following trustworthiness principles were adhered to:

1. **Credibility** is equivalent to internal validity in quantitative research and is concerned with confidence in the truth of the research findings. Strategies include prolonged engagement, persistent observation, integration and member checking, all of which were employed in this study (Korstjens & Moser, 2018).
    a. *Prolonged engagement* occurred during the interviews by asking several specific questions related to the experience of flourishing, meaning, hope and the intervention. Participants were encouraged to support their answers with examples and the researcher asked follow-up questions. In addition, the raw interview material was repeatedly examined to discover themes, thereby providing new insights to the phenomenon under study. Moreover, during the coding and theme development process, the researcher engaged in a dual process of immersion in the data and creating distance from the data to extensively reflect to acquire inspiration and

insight (Braun & Clarke, 2022). Hence, in accordance with Braun and Clarke (2022), the quality of coding and theme development was not dependent on multiple coders, but rather on the researcher's reflexivity and commitment to interpretive depth by consistently engaging with the data and theoretical framework.

b. *Persistent observation* through the process of creating subcodes, codes and themes facilitated an examination of the data's characteristics. This required constantly reading and rereading, analysing the data to revise the codes and theme categories. Furthermore, extensive researcher reflection afforded a depth of understanding and insight into the themes.

c. *Member checking* was ensured by the interviewer who remained curious in the space of not knowing during and prior to the end of each individual interview. The interviewer also summarised the major themes identified to allow the participants to check whether they had been correctly understood. This afforded them the opportunity to discuss and clarify this information as well as contribute any new or additional perspectives regarding their experiences. Furthermore, all interview transcripts were sent to the participants to enable them to amend and add to the transcribed narrative.

d. *Integration* between the themes and theoretical framework was achieved in the researcher's extensive reflexivity during theme development. Integration also occurred in the systematic combining of the quantitative and qualitative data in the embedded mixed-methods data analysis.

2. **Transferability** refers to the degree to which the results can be transferred to other contexts or settings with different participants (Korstjens & Moser, 2018).

Transferability was achieved through the provision of a rich account of descriptive data relating to the research context, setting, sample, sample size, sample strategy, and demographic inclusion criteria. Excerpts from the interviews were attended to when writing up the study.

3. **Dependability and confirmability** relate to the stability of the findings over time and the degree to which the findings can be confirmed by other researchers (Korstjens & Moser, 2018). The study attended to this through coding and reviewing of themes, adhering to the procedures of the thematic analysis as well as through coder reflexivity (Braun & Clarke, 2023). Researcher reflexivity assisted in maintaining awareness of the potential influence that the multiple relationships of researcher, intervention developer and facilitator might have on the results, as described in Section 5.9. Consequently, the researcher kept research notes and engaged in critical discussions with peer facilitators and supervisors in addition to maintaining ethical mindfulness to ensure beneficence.

5.8.3. Legitimation

Legitimation is a term employed by mixed-methods research for validity and is recommended in the context of discussing the overall criteria for assessment of mixed-method research studies (Onwuegbuzie & Johnson, 2006). Different types of legitimation include sample integration legitimation, inside-outside legitimation, weakness minimisation legitimation, sequential legitimation, conversion legitimation, paradigmatic mixing legitimation, commensurability legitimation, multiple validities legitimation and political legitimation (Dellinger & Leech, 2007; Onwuegbuzie & Johnson, 2006). In this study, the following types of legitimation were applied:

1. **Sample integration legitimation** is the extent to which the relationship between the quantitative and qualitative sampling designs yields quality meta-inferences.

In this study, the qualitative sample was a subset of the quantitative sample and an adequate size. This facilitated the drawing of quality meta-inferences from the comparable inferences evident within the dominant-less dominant (QUAN-qual), thereby increasing the transferability of results within reason (Barnes, 2012; Fetters et al., 2013; Onwuegbuzie & Johnson, 2006).

2. **Weakness minimisation legitimation** is the extent to which the weakness of one approach is compensated by the strengths of the other approach. Hence, the detailed description of the embedded dominant-less dominant (QUAN-qual) nature of the mixed-methods design facilitated the strengths from the empirical investigation and subjective experiences shared in the qualitative phase to develop the breadth and depth of the inferences and meta-inferences drawn (Fetters & Molina-Azorin, 2017; Onwuegbuzie & Johnson, 2006). Furthermore, the strength of the qualitative data, the participants' voices, offset the weakness of the quantitative measures to highlight the participant lived experience of the phenomenon.
3. **Paradigmatic mixing legitimation** is the extent to which the researcher's epistemological, ontological, axiological, methodological and rhetorical beliefs underlying the quantitative and qualitative phases are successfully combined or blended into a usable package. This was addressed by the researcher's pragmatic stance, which allowed for a pluralistic and flexible approach towards the data.
4. **Multiple validities legitimation** is the use of quantitative, qualitative and mixed validity types to yield high quality meta-inferences. This occurred through the embedded nature of the design and methodology. Furthermore, it was facilitated during interpretation and reporting through triangulation, which assisted in drawing inferences and meta-inferences between different data sets to afford an

enhanced understanding of the researched phenomena (Fetters & Molina-Azorin, 2017; Kern, 2018). This legitimation was further addressed through the attention given to validity in the quantitative and qualitative phases (Barnes, 2012; Fetters & Molina-Azorin, 2017).

5.9. Researcher Positionality

The researcher has a diplomate in Logotherapy, which informs her anthropological and existential philosophical position of viewing humans as meaning seekers, life as unconditionally meaningful and human suffering as an opportunity for growth and source of personal meaning (Frankl, 1969). She is also an experienced facilitator of psychological interventions that incorporate horses. She holds international advanced certification in the Eagala model and was an educator of the model for many years. Moreover, she is a member of the Arenas for Change (ARCH) core team of professional developers of a novel framework for facilitating mental health interventions incorporating nature, horses and other animals (Arenas for Change, 2023). This framework adopts the social constructivist worldview that people understand reality through stories. Accordingly, reality is created in language so when stories change people change (Boyce & Esposito, 2022).

During the study, the researcher adopted multiple roles, namely, researcher, intervention developer and facilitator, and interviewer for the qualitative data collection phase. While developing the intervention, she drew on knowledge and experience from national and international peers within the mental health and horse specialist professions for guidance and peer reviewing the completed product. While it is acknowledged that the researcher's multiple roles had the potential to affect the results negatively, this may have also been beneficial to the research in terms of fidelity to the intervention and creating a point of contact of the quantitative data to the qualitative data, as her subjectivity may have provided a resource to the research process (Braun & Clarke, 2023).

Regardless, the researcher attempted to remain reflexive throughout the research process, striving to remain aware of biases, preferences and preconceptions by making notes in a research journal and engaging in discussions with colleagues. In many ways her reflexivity was aided by the ARCH process Sense of Self (SOS), which was applied through continual questioning of her role in the research story development. This was further facilitated by an attitude of collaboration and her openness to feedback from supervisors as well as co-facilitators and participants during intervention sessions in addition to the broader facilitation team during post-session debriefings.

5.10. Ethical Considerations

Ethical permission to conduct the study was obtained from the faculty of the Humanities Ethics Committee; human protocol number HUM007/1220 (Appendix E). In addition, a SCT trustee gave the researcher permission to conduct research into the effects of the EAPPI on participants in their community development programme (Appendix F).

Furthermore, the study adhered to the overarching ethical core principles of beneficence and non-maleficence, respect and justice (Health Professionals Council of South Africa, 2008) by taking the following ethical considerations into account:

(i) ***Voluntary participation*** was realised as the participants could choose to participate in the study. They were informed verbally (at the information and informed consent session) and in writing (information letter) that they could withdraw from the research at any time, but could continue attending the intervention without negative consequences (Appendix A).

(ii) ***Informed consent*** was obtained from participants for both the quantitative and qualitative phases of the research. They were fully informed about the research process and purposes through the information and informed consent session and an information letter (Appendix A). In addition, they were informed that there was

no compensation for participating in the study. Participants provided separate informed consent to participate in the quantitative (Appendix G) and qualitative phases of the research (Appendix H).

(iii) ***Beneficence to humans*** involved the determination that the risk of harm to the participants was minimal. Furthermore, participants were informed of the potential risks of participating in the research process prior to enrolling. Participants who experienced psychological distress had access to the mental health professional on the facilitation team or were referred to a relevant mental health service in their community. This information was provided in the information letter as well as verbally during the informed consent process (Appendix A,G,H).

Safety in participation was delivered through the facilitation team that comprised a licensed mental health professional and a horse specialist who were certified in facilitating horse-human interventions. All facilitators were Eagala and ARCH certified and had valid first-aid certification (Arenas for Change, 2023; Equine Assisted Growth and Learning Association, 2019). Both professionals brought their expertise to the session and shared the responsibility for ensuring the psychological and physical safety of all involved.

In addition, an initial safety briefing during the first session reviewed the participants' knowledge and experience of horses as well as provided appropriate information regarding safety around horses, including the risks of interacting on the ground with horses and large flight animals that move quickly. The participants were also informed that they were not required to touch the equines. All activities would occur on the ground, and no horse riding was involved.

(iv) ***Beneficence to equines*** was guided by national and international animal welfare codes which informed the SCT equine welfare policy. The host organisation's stable manager monitored horse and donkey welfare and appropriateness for inclusion in the intervention. All horses/donkeys were selected because of their suitable temperaments and were habituated to this work. Throughout sessions, the horse specialist remained alert to the horses' nonverbal behaviour, including pinning ears, moving away, turning hindquarters and swishing tails. They interrupted an interaction if it appeared that the horse/donkey was uncomfortable or the welfare of the animals or humans was threatened. The session activities occurred in a large space where the equines were free to remove themselves from human interaction and were, therefore, not obliged to interact.

(v) ***Privacy and confidentiality*** of the participants were ensured by storing their names on a password-protected Google Drive database. In the quantitative phase, each participant was assigned a unique alphanumeric identification number so that their identity was always protected and in the qualitative phase, a pseudonym. There were no participant identifiers. The facilitators signed confidentiality statements and participants were informed that anonymity would be maintained in any forums where the results of the research might be shared. Furthermore, the participants signed confidentiality statements relating to the sharing of information by members of the group (Appendix G).

During the research process, all data were entered into either a password-protected computer or Google Drive folder. At the conclusion of the research, all the raw data and documents relating to the research were transferred for safekeeping to a password-protected folder on a computer in the Department of Psychology, University of Pretoria Hatfield campus, for a minimum period of 15 years.

(vi) ***Trustworthiness*** was assured through participants not being subjected to any acts of deception or betrayal in the research process or its published outcomes.

(vii) ***Mitigation of the risk of the spread of COVID-19*** during the research process occurred through the requirement that all participating parties adhered to the relevant COVID-19 prevention protocols as determined and adjusted by the South African Government from time to time (South African Government, 2020). Such recommendations remained until early 2022 when the intervention was initiated. In addition, all sessions took place outdoors, reducing the risk of spreading COVID-19.

5.11. Conclusion

This chapter meticulously details the methodology employed to investigate the impact of an EAPPI on the constructs of flourishing, meaning, and hope among adults residing in Diepsloot, Johannesburg, South Africa. Anchored in a pragmatic research paradigm, the study adopted an embedded mixed-methods design, integrating qualitative methods within a quasi-experimental framework to comprehensively explore these psychological constructs.

The mixed-methods approach combined both quantitative and qualitative data collection to offer a multifaceted understanding of the intervention's effects. Purposive sampling was employed to select participants for the quantitative phase, ensuring a representative sample of the target population. For the qualitative phase, a subset from the quantitative sample was derived from convenience sampling, focusing on those who were available and willing to provide in-depth insights through semi-structured interviews.

Quantitative data were collected through a booklet of validated questionnaires measuring flourishing, meaning and hope, accompanied by a biographical questionnaire. Data collection occurred at three critical points: pre-intervention, post-intervention and three months post-intervention. Descriptive and inferential statistical analyses were conducted,

including the Kolmogorov-Smirnov test for normality, non-parametric Wilcoxon Signed Rank tests and Mann-Whitney U tests. These analyses examined changes within and between groups over time and assessed the impact of demographic factors on the intervention outcomes.

The qualitative phase involved semi-structured interviews with a subset of participants who had significantly engaged with the intervention. These interviews were embedded within the quantitative timeline, specifically between the post-test and post-post-test assessments. Thematic analysis was applied to the qualitative data, uncovering detailed insights into participants' experiences and perceptions of the EAPPI, thereby enriching an understanding of the quantitative findings.

Throughout the study, strict adherence to ethical principles was maintained. Participants' rights and well-being were prioritised through processes, including informed consent, confidentiality measures and the provision of mental health support. Safety protocols were enforced to protect both the participants and the horses involved in the intervention. In response to the COVID-19 pandemic, preventive measures were implemented to minimise health risks during the study.

The study ensured the robustness and credibility of its findings by using well-validated instruments with established reliability for the quantitative phase. The application of non-parametric tests appropriately addressed the non-normal distribution of data. In the qualitative phase, credibility was ensured through meticulous transcription, participant validation of transcripts and systematic thematic analysis.

Integrating quantitative and qualitative data through joint display analysis facilitated a comprehensive synthesis of diverse data types. This methodological approach provided a holistic perspective on the EAPPI's effect, capturing both statistical trends and personal experiences. The integration illuminated how the intervention influenced participants'

flourishing, meaning and hope, thereby offering valuable insights into their lived experiences. Through this rigorous and ethically sound methodology, the study significantly contributes to the field of positive psychology and underscores the potential benefits of equine-assisted interventions within under-resourced communities.

In Chapter 6, the findings from the quantitative data analysis are presented. Chapter 7 presents the qualitative findings. Finally, Chapter 8 provides the integrated results of the mixed-methods analysis and a discussion of the combined results, affording an in-depth understanding of the EAPPI's effectiveness and implications in fostering flourishing, meaning and hope among the Diepsloot participants.

Chapter 6. Quantitative Results

6.1. Introduction

The primary aim of the study was to evaluate and explore the effect of an equine assisted-existential positive psychological intervention (EAPPI) on adult flourishing, meaning and hope by employing quantitative measures (surveys) and qualitative data (semi-structured interviews) in the South African resource-constrained community of Diepsloot. In this chapter, the quantitative research questions outlined in Section 5.2 are addressed:

- What is the effect of the EAPPI on participant levels of flourishing, meaning and hope?

The results are presented in order of the three objectives that were formulated to answer the quantitative research question:

1. To determine the effect of an EAEPP on adult flourishing;
2. To investigate the impact of an EAPPI on adult meaning; and
3. To ascertain the influence of an EAPPI on adult hope.

The descriptive statistics, prevalence and inferential statistical results for flourishing, meaning and hope are presented for each stated objective. Following the protocol for the embedded mixed methods design described in Section 5.4, the qualitative data collection was embedded in the quantitative data collection procedure and the data analysis sequence was completed after data collection (Creswell & Plano Clark, 2011). The quantitative and qualitative data strands were analysed separately. The results of the quantitative data analysis are presented in subsequent sections.

6.2. Description of the Sample

The final sample comprised 149 adult residents of Diepsloot. They were assigned to either an experimental (n = 78) or control (n = 71) group in accordance with the process

outlined in Section 5.5.1.3. The demographic characteristics of the groups can be found in Table 6.1.

6.3. Normality of the Data and Statistical Analysis

In accordance with the power analysis described in Section 5.5.1.3, the sample (N= 149) was deemed to be large enough to yield sufficient power to statistically analyse the effect of the EAPPI on participant flourishing, meaning and hope meaningfully (Anderson et al., 2017; Lakens, 2022). In this quasi-experimental study, while the experimental group underwent the intervention, the wait-listed control group continued life as usual.

Continuous data were collected using the Likert scales of flourishing, meaning and hope measures: Mental-Health Continuum Short Form (MHC-SF) (Keyes, 2002, 2005), Satisfaction with Life Scale (SWLS) (Diener, Wirtz, Biswas-Diener, et al., 2009), Scale of Positive and Negative Emotions (SPANE) (Diener, Wirtz, Biswas-Diener, et al., 2009), Depression Anxiety and Stress Scale (DASS-21) (Lovibond & Lovibond, 1995), New Search for Meaning Scale (NSMS) (Wong, 2019b), Personal Meaning Profile – Brief (PMP-B) (MacDonald et al., 2012; Wong, 1998b), Locus of Hope Scale (LoHS) (Bernardo, 2010) and Perceived Hope Scale (PHS) (Krafft et al., 2019). A Kolmogorov-Smirnoff test conducted on the pre-test data set confirmed that the data violated the normality assumption. Accordingly, non-parametric statistical analysis was performed (Field, 2013; Pallant, 2020). A Wilcoxon signed-rank test was conducted in the experimental and control conditions to analyse differences in the repeated measures. The Mann-Whitney U test was conducted to interrogate the differences between the independent experimental and control groups on the continuous measures. A Kruskal-Wallis test or Mann-Whitney U test was also employed to for any effects of the categorical demographic variables on the significant changes in measure scores.

The statistical analyses used a confidence level of 95% and a significance level of 5%; $p < .05$. Effect sizes were determined using Cohen's d, which describes the constitution of

effect size as follows: d = 0.2 (small effect), 0.5 (medium effect), 0.8 (large effect) (Field, 2013; Pallant, 2020).

Not all the items on the measures were answered by participants, resulting in missing data. Potential reasons for non-completion include respondents skipping questions (Mirzaei et al., 2022), the length of the survey and its pencil-and-paper nature (De Leeuw, 2001). While the participants indicated proficiency in English, they were all non-native English speakers, which could have led to non-response due to possible difficulty understanding certain items (Wenz et al., 2020). Furthermore, the participants dropped out before the completion of the study, which may also have resulted in missing data. In Section 5.5.2.1, which deals with sample attrition, the potential causes for participant dropout are discussed. Consequently, the listwise deletion method was used to manage the missing data (Peeters et al., 2015).

In the following sections, the statistical data analysis for flourishing, meaning and hope per the study objectives are presented separately.

6.4. Determining the Effect of the EAPPI on Adult Flourishing

In this section, the statistical analysis results that determined the effects of the EAPPI on flourishing are presented. The respective dimensions of flourishing were measured by employing the MHC-SF, SWLS, SPANE and the DASS-21 psychological distress measures. The validity and reliability of these measures were reported in Section 5.5.2.1.

6.4.1. Descriptive Statistics for Flourishing

In Table 6.1, the descriptive statistics for the experimental group at pre-, post- and post-post-intervention are provided. The participants completed the self-report questionnaires, MHC-SF, SWLS, SPANE and DASS-21 to measure changes in flourishing facets before, after and three months after the intervention.

Table 6.1

Descriptive Statistics for Sample Flourishing at Pre-, Post- and Post-Post-Intervention

			Pre-Intervention								Post-Intervention								Post-Post-Intervention							
Group	**Variable**	**N Obs**	**N Miss**	**N**	**Mean**	**Median**	**Min**	**Max**	**Skew**	**Kurt**	**N Miss**	**N**	**Mean**	**Median**	**Min**	**Max**	**Skew**	**Kurt**	**N Miss**	**N**	**Mean**	**Median**	**Min**	**Max**	**Skew**	**Kurt**
MHC-SF																										
Experimental group	EWB	78	3	75	10.05	11.00	2.00	15.00	-0.69	-0.40	18	60	12.03	13.00	2.00	15.00	-1.74	4.10	37	41	10.90	12.00	2.00	15.00	-1.20	1.43
	SWB		5	73	14.64	14.00	1.00	25.00	-0.00	-0.42	20	58	17.88	19.00	3.00	25.00	-0.96	1.26	40	38	16.95	16.00	6.00	24.00	-0.36	-0.67
	PWB		7	71	22.65	24.00	5.00	30.00	-1.19	1.28	23	55	24.15	25.00	7.00	30.00	-1.26	1.98	38	40	23.73	25.00	11.00	30.00	-1.01	0.18
	MHC		12	66	47.14	48.00	13.00	70.00	-0.54	0.09	26	52	54.10	55.00	17.00	70.00	-1.43	2.79	42	36	52.36	54.00	19.00	64.00	-1.22	1.76
Control group	EWB	71	7	64	10.88	12.00	2.00	15.00	-1.01	0.15	39	32	10.94	12.00	3.00	15.00	-0.98	-0.40	58	13	10.31	11.00	1.00	15.00	-0.96	0.92
	SWB		11	60	15.60	16.50	2.00	25.00	-0.47	-0.76	41	30	14.87	14.50	2.00	24.00	-0.29	-0.61	60	11	16.55	17.00	10.00	24.00	0.02	-0.55
	PWB		7	64	24.36	26.00	9.00	30.00	-1.06	0.55	42	29	22.86	27.00	4.00	30.00	-1.15	0.26	60	11	21.82	25.00	4.00	29.00	-1.57	2.34
	MHC-SF		17	54	51.85	53.00	20.00	70.00	-0.55	-0.17	45	26	49.54	54.50	16.00	68.00	-0.96	-0.14	61	10	51.40	54.50	33.00	61.00	-0.87	-0.66
SWLS																										
Experimental group	SWLS	78	1	77	20.78	21.00	8.00	35.00	-0.07	-0.84	18	60	25.32	28.00	5.00	35.00	-0.87	0.11	36	42	24.24	24.50	6.00	34.00	-0.70	0.25
Control group	SWLS	71	3	68	22.51	23.50	7.00	34.00	-0.30	-0.84	38	33	24.03	25.00	5.00	35.00	-0.83	-0.12	58	13	24.15	26.00	8.00	33.00	-0.60	-0.78
SPANE																										
Experimental group	SPANE-P	78	5	73	20.64	20.00	10.00	29.00	-0.36	-0.29	20	58	23.17	23.00	13.00	30.00	-0.23	-0.34	36	42	22.07	23.00	8.00	30.00	-0.68	0.36
	SPANE-N		6	72	17.21	17.00	10.00	27.00	0.46	0.07	18	60	16.55	16.00	8.00	30.00	0.61	0.24	37	41	18.15	17.00	9.00	30.00	0.75	-0.30
	SPANE-B		8	70	3.26	3.00	-17.00	17.00	-0.65	0.91	21	57	6.70	8.00	-12.00	21.00	-0.44	-0.03	37	41	3.90	3.00	-12.00	18.00	0.06	0.29
Control group	SPANE-P	71	9	62	20.77	21.00	6.00	30.00	-1.01	2.17	39	32	20.47	20.00	12.00	30.00	0.08	-0.51	58	13	21.69	22.00	11.00	28.00	-0.78	-0.31
	SPANE-N		6	65	16.11	16.00	8.00	22.00	-0.40	0.06	39	32	16.91	16.00	10.00	30.00	0.96	1.62	58	13	16.85	17.00	12.00	22.00	-0.15	-1.05
	SPANE-B		11	60	4.53	5.00	-8.00	20.00	0.29	0.66	40	31	3.26	3.00	-10.00	15.00	-0.25	0.12	58	13	4.85	2.00	-1.00	15.00	0.69	-0.95
DASS21																										
Experimental group	Anxiety	78	9	69	14.46	12.00	2.00	40.00	0.71	-0.39	26	52	18.46	18.00	4.00	38.00	0.19	-1.09	38	40	19.50	18.00	2.00	40.00	0.29	-1.10
	Stress		6	72	16.61	16.00	2.00	40.00	0.59	-0.12	21	57	18.70	18.00	2.00	34.00	-0.01	-1.12	39	39	19.28	16.00	4.00	38.00	0.28	-0.77
	Dession		2	76	16.37	14.00	2.00	38.00	0.45	-0.85	24	54	17.11	16.00	2.00	40.00	0.53	-0.61	38	40	18.30	16.00	2.00	40.00	0.38	-1.11
	DASS21		13	65	48.71	42.00	10.00	114.00	0.66	-0.22	29	49	56.61	56.00	18.00	108.00	0.20	-0.98	40	38	58.58	55.00	10.00	112.00	0.34	-1.03
Control group	Anxiety	71	11	60	13.20	10.00	2.00	34.00	0.70	-0.22	38	33	16.48	16.00	2.00	38.00	0.38	-1.03	60	11	13.09	12.00	6.00	26.00	0.53	-0.90
	Stress		10	61	15.44	14.00	2.00	32.00	0.41	-0.55	41	30	16.13	13.00	2.00	40.00	0.83	-0.24	61	10	15.00	16.00	6.00	22.00	-0.56	-1.23
	Dession		10	61	14.26	14.00	2.00	36.00	0.50	-0.56	41	30	14.93	12.00	2.00	36.00	0.38	-1.00	58	13	11.85	8.00	2.00	32.00	0.98	0.65
	DASS21		23	48	45.50	42.00	10.00	94.00	0.47	-0.68	45	26	45.77	36.00	6.00	114.00	0.63	-0.37	63	8	40.25	34.00	24.00	60.00	0.45	-1.92

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

6.4.2. Prevalence of Sample Flourishing Throughout the Study

A preliminary investigation into changes in participant flourishing was conducted by examining the prevalence of well-being, life satisfaction, affect balance and psychological distress.

6.4.2.1. Prevalence of Well-being

The participant's overall well-being diagnostic categories were determined based on the MHC-SF scores using the guidelines outlined in Section 5.5.2.1. Table 6.2 displays the prevalence of flourishing, moderate well-being, and languishing categories in the sample over the course of the study.

Table 6.2

The Prevalence of Categories of Overall Well-being in the Sample at Pre-, Post- and Post-post-Test

Group	N	N Missing	Classification	Pre-Intervention	Post-Intervention	Post-Post-Intervention
Experimental Group	78	Pre = 5 Post = 17 Post-Post = 38	Languishing Moderate Flourishing	03 (4%) 31 (42%) 39 (53%)	0 18 (30%) 43 (70%)	0 16 (40%) 24 (60%)
Control Group	69	Pre = 0 Post = 37 Post-Post = 58	Languishing Moderate Flourishing	02 (3%) 29 (42%) 38 (55%)	02 (6%) 10 (31%) 20 (63%)	01 (9%) 03 (27%) 07 (64%)

Note: Valid percentages are reported

Prior to the intervention, at least 50% of participants in both the experimental and control groups met the criteria for flourishing. The prevalence of flourishing increased for both groups after the intervention and three months later. Notably, the prevalence of languishing (low levels of well-being) in the experimental group decreased to 0% after the

intervention and three months later. In contrast, a small percentage of languishers remained in the control group during the same period. Due to the high number of missing scores at the follow-up assessment points, the trend of a greater prevalence of flourishing in the experimental group than in the control group must be interpreted cautiously.

6.4.2.2. Prevalence of Satisfaction with Life

Various levels of satisfaction with life were classified according to the guidelines outlined in Section 5.5.2.1. Table 6.3 presents the prevalence of participant satisfaction with life throughout the study.

Table 6.3

Prevalence of Satisfaction with Life in Experimental and Control Groups at Pre-, Post- and Post-Post-Test

Group	N	N Missing	Classification	Pre-Test	Post-Test	Post-Post-Test
Experimental Group	78	pre = 1 post= 18 post-post= 36	Extremely Dissatisfied	4 (5%)	2 (3%)	1 (2%)
			Dissatisfied	13 (17%)	3 (5%)	2 (5%)
			Below Average	16(21%)	9 (15%)	5 (12%)
			Average	17 (22%)	6 (10%)	13 (31%)
			Satisfied	19 (25%)	18 (30%)	11 (26%)
			Extremely Satisfied	8 (10%)	22 (37%)	10 (24%)
Control Group	71	pre = 3 post= 38 post-post= 58	Extremely Dissatisfied	2 (3%)	3 (9%)	1 (8%)
			Dissatisfied	9 (13%)	3 (9%)	1 (8%)
			Below Average	17 (25%)	8 (24%)	3 (23%)
			Average	12 (18%)	1 (3%)	
			Satisfied	15 (22%)	6 (18%)	3 (23%)
			Extremely Satisfied	13 (19%)	12 (36%)	5 (38%)

At the beginning of the study, nearly half of the experimental group reported average or below-average life satisfaction (43%). However, after the intervention, that percentage increased to 67%. Three months after the intervention, 50% of participants still reported being satisfied or extremely satisfied with life. In addition, over the study, the prevalence of the experimental group's life dissatisfaction and extreme life dissatisfaction decreased from

23% to 7%. Although the control group reported an increase in the prevalence of life satisfaction, the percentage of participants who reported dissatisfaction and extreme dissatisfaction with life remained consistent between 16% and 18% throughout the study.

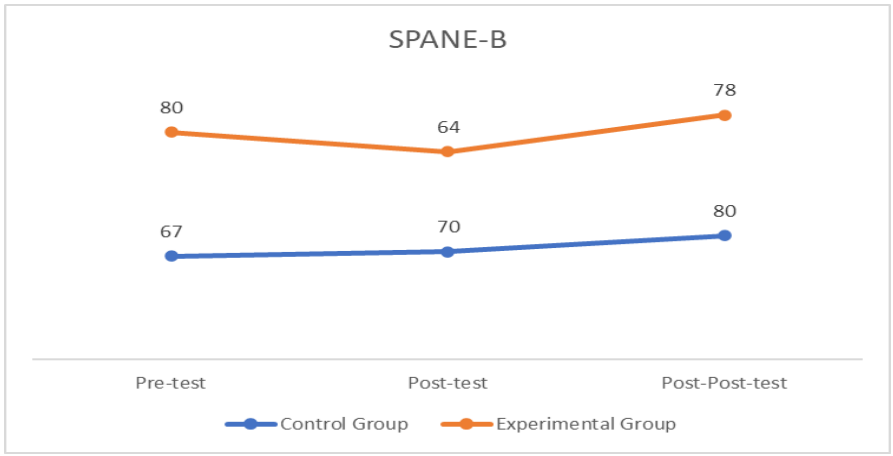
6.4.2.3. Prevalence of Affect Balance

The prevalence of affect balance and the amount of positive and negative emotions experienced was calculated by determining the percentage of participants who reported scores equal to or greater than the median at pre-, post- and post-post-test. The median values are reported in Table 6.1.

Based on the data presented in Table 6.1, it is observed that most of the participants reported a positive affect balance. Moreover, in Figure 6.1, fluctuations in affect balance for both experimental and control groups are depicted.

Figure 6.1

Prevalence of Affect Balance in the Experimental Conditions Throughout the Study



Note. Values reported are the percentage of participant responses ≥ Median

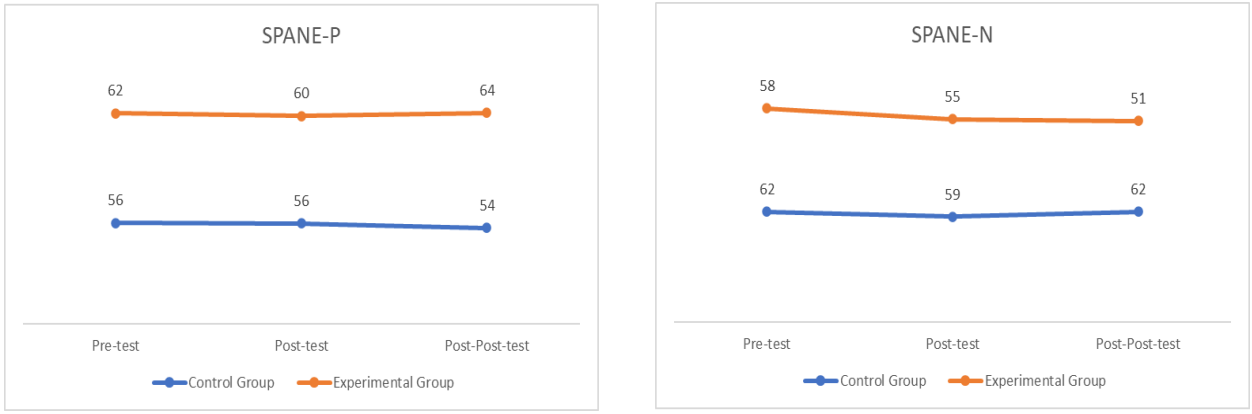
While the percentage of experimental group participants reporting affect balance scores equal to or greater than the median decreased from before the intervention to three months after it, the percentage of participant responses increased in the control group. The

results suggest that overall there was a prevalence of participants who experienced more positive than negative emotions during the study.

Further investigation revealed that a greater percentage of the experimental group reported positive emotions equal to or greater than the median than the control group; however, the reverse was true for negative emotions. Furthermore, in contrast to the control group, the percentage of the experimental group who reported more positive feelings increased, with a corresponding decrease in the percentage who reported negative emotions over the study. The results are displayed in Figure 6.2.

Figure 6.2

Prevalence of Positive and Negative Emotions in the Experimental Conditions Throughout The study



Note. Values reported are the percentage of participant responses ≥ Median

Overall, the prevalence of affect balance in the experimental and control groups was positive. A greater percentage of the experimental group reported experiencing more positive emotions and fewer negative emotions than the control group over the study.

6.4.2.4. Prevalence of Psychological Distress

The data in Table 6.4 indicate that there were fluctuations in levels of depression, anxiety and stress for both experimental conditions. Most of the sample reported normal to mild stress levels during each period of assessment. However, the experimental group

reported a higher prevalence of severe to extremely severe stress levels. The incidence of depression in both groups was predominantly normal to mild. Still, the experimental group recorded a higher predominance of severe to extremely severe depression levels than the control group. Interestingly, moderate to extremely severe levels of anxiety were prevalent in both groups throughout the study.

Table 6.4

Prevalence of Depression, Anxiety and Stress in Experimental and Control Groups at Pre-, Post- and Post-Post-Intervention

Group	N	N Missing	Classification	Pre-Intervention			Post-Intervention			Post-Post-Intervention		
				Depression	Anxiety	Stress	Depression	Anxiety	Stress	Depression	Anxiety	Stress
Experimental Group	78	pre-depression = 2 post-depression= 24 post-post-depression= 38 pre-anxiety = 9 post-anxiety= 26 post-post-anxiety= 38 pre-stress = 6 post-stress= 21 post-post-stress= 39	Normal	23 (30%)	17 (25%)	34 (47%)	16 (30%)	9 (17%)	20 (35%)	10 (25%)	7 (18%)	16 (41%)
			Mild	12 (16%)	10 (14%)	12 (17%)	6 (11%)	3 (6%)	11 (19%)	6 (15%)	2 (5%)	4 (10%)
			Moderate	17 (22%)	15 (22%)	13 (18%)	12 (22%)	8 (15%)	10 (18%)	7 (18%)	6 (15%0	7 (18%)
			Severe	10 (13%)	6 (9%)	9 (13%)	11 (20%)	10 (19%)	14 (15%)	6 (15%)	6 (15%)	8 (21%)
			Extremely Severe	14 (18%)	21 (30%)	4 (6%)	9 (17%)	22 (42%)	2 (4%)	11 (28%)	19 (48%)	4 (10%)
Control Group	71	pre-depression = 10 post-depression= 41 post-post-depression = 58 pre-anxiety = 11 post-anxiety= 38 post-post-anxiety= 60 pre-stress = 10 post-stress= 41 post-post-stress= 61	Normal	21 (34%)	14 (23%)	34 (56%)	11 (37%)	10 (30%)	18 (60%)	7 (54%)	3 (27%)	3 (30%)
			Mild	9 (15%)	7 (12%)	7 (11%)	5 (17%)	-	2 (7%)	1 (8%)	2 (18%)	4 (40%)
			Moderate	18 (30%)	18 (30%)	10 (16%)	5 (17%)	6 (18%)	5 (17%)	4 (31%)	1 (9%)	3 (30%)
			Severe	8 (13%)	7 (12%)	10 (16%)	3 (10%)	4 (12%)	2 (7%)	-	3 (27%)	-
			Extremely Severe	5 (8%)	14 (23%)	-	6 (20%)	13 (39%)	3 (10%)	1 (8%)	2 (18%)	-

6.4.2.5. Summation

Throughout the study, sample participants reported a prevalence of overall well-being, satisfaction with life and affect balance with slightly more positive than negative emotions. Simultaneously, there was a prevalence of mild to normal depression and stress levels accompanied by remarkably high levels of anxiety. Hence, both experimental and control groups reported flourishing despite levels of psychological distress.

However, across the study, fluctuations in the prevalence of the dimensions of flourishing were observed. Therefore, it was essential to investigate the significance of these changes in these different facets to determine if the intervention played any role in these changes. In the subsequent section, the statistical analyses of the differences within each experimental condition, followed by the differences between the experimental and control groups, are presented.

6.4.3. Determining the Significance of Differences in Flourishing Within the Experimental Group

This section aims to determine the significance of the reported changes in the prevalence of multidimensional flourishing, as measured by the MHC-SF, SWLS, SPANE and DASS-21 before, after and three months after the EAPPI, in the experimental group. Given the data's ordinal nature and non-normality, a Wilcoxon signed-rank test, a non-parametric statistical test, was conducted. The following are the statistical analysis results conducted on the pre-test vs post-test, pre-test vs post-post-test and post-test vs post-post-test data.

6.4.3.1. Pre-Test vs. Post-Test Comparison

The results of a Wilcoxon signed-rank test conducted to determine if there was a significant difference in the flourishing levels of the experimental group before and after attending the EAPPI are displayed in Table 6.5.

Table 6.5

Wilcoxon Signed-Rank Test Results for Experimental Group Flourishing Pre-Test vs Post-Test

Scales & Subscales	N	Pre-Test	Post-Test	z-value	p-value	Cohen's d
EWB	58	11.0	12.5	-3.28	**.001***	.95
SWB	54	14.0	19.0	-3.792	**<.001****	1.21
PWB	51	24.0	25.0	-1.032	0.302	
MHC-SF	46	48.0	55.0	-3.876	**<.001****	1.39
SWLS	59	22.0	28.0	-3.545	**<.001****	1.04
SPANE-P	55	21.0	23.0	-1.876	0.061	
SPANE-N	56	17.0	16.5	-2	**.046***	.56
SPANE-B	52	3.5	7.5	-1.714	.086	
Anxiety	47	14.0	18.0	-1.917	.055	
Stress	53	16.0	18.0	-0.141	.888	
Depression	53	14.0	16.0	-0.139	.89	
DASS-21	42	46.0	57.0	-0.791	.429	

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

Median values are reported in the Table.

* $p < .05$. ** $p < .001$.

The Wilcoxon signed-rank test results revealed statistically significant changes in some flourishing facets after attending the EAPPI. There was a statistically significant increase in overall well-being, z = -3.88, n = 46, p <.001. The effect size was d = 1.4, indicating a very large effect. The median score on the MHC-SF increased from the pre-test (Mdn = 48) to the post-test (Mdn = 55). In addition, the analysis showed a statistically significant increase in participant emotional well-being, z = -3.28, n = 58, p = .001. The effect size was d = .95, indicating a large effect. The median scores on the EWB subscale

increased from the pre-test (Mdn = 11) to post-test (Mdn = 12.5). There was a similar significant increase in participant social well-being, z= -3.79, n = 54, p <.001. The effect size was d = 1.21, demonstrating a large effect. This is indicated by the increase in SWB subscale median scores from the pre-test (Mdn = 14) to post-test (Mdn = 19). Furthermore, there was a significant increase in satisfaction with life, z = -3.55, n = 59, p <.001. The effect size was d = 1.04, representing a very large effect. From pre- to post-test, the median scores on the SWLS increased from Mdn = 22 to Mdn = 28. The experimental group also showed a significant decrease in the experience of negative feelings following the intervention, z = -2, n = 56, p = .046. The effect size was d = .6, indicating a medium effect. The median scores on the SPANE-N subscale decreased from the pre-test (Mdn = 17) to the post-test (Mdn = 16.5).

6.4.3.2. Pre-Test vs. Post-Post-Test Comparison

The results of a Wilcoxon signed-rank test statistical analysis that compared the difference in experimental group facets of flourishing scores before and three months after the intervention are shown in Table 6.6.

Table 6.6

Wilcoxon Signed-Rank Test Statistics for Experimental Group Flourishing Pre-Test vs Post-Post-Test

Scales & Subscales	N	Pre-Test	Post Post-Test	z-value	p-value	Cohen's d
EWB	39	11	12	-1.2	.23	
SWB	35	14	16	-1.352	.176	
PWB	36	23	25	-1.591	.112	
MHC-SF	32	48	55	-2.652	**.008***	1.06
SWLS	41	20	24	-1.5	.134	
SPANE-P	40	20	23	-1.2	.23	
SPANE-N	40	17.5	17	-0.167	.868	
SPANE-B	39	3	2	0.000	1.000	

Scales & Subscales	N	Pre-Test	Post Post-Test	z-value	p-value	Cohen's d
Anxiety	35	14	18	-1.945	.052	
Stress	37	18	16	-1.352	.176	
Depression	39	18	16	-0.986	.324	
DASS-21	33	48	54	-1.044	.296	

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

Median values are reported in the Table.

* $p < .05$.

A Wilcoxon signed-rank test revealed a statistically significant increase in overall well-being three months after participating in the EAPPI, z = -2.65, n = 32, p =.008. The effect size was d = 1.06, indicating a very large effect. The MHC-SF median score increased from the pre-test (Mdn = 48) to the post-post-test (Mdn = 55).

6.4.3.3. Post-Test vs Post-Post-Test Comparison

In Table 6.7, the results of a Wilcoxon signed-rank test statistical analysis comparing the difference in the experimental group's overall well-being, satisfaction with life, affect balance and psychological distress scores post- and post-post-test are displayed.

Table 6.7

Wilcoxon Signed-Rank Test Statistics for Experimental Group Flourishing Post-Test vs. Post-Post-Test

Scales & Subscales	N	Post-Test	Post Post-Test	z-value	p-value	Cohen's d
EWB	39	13.00	12.0	-2.089	**.037***	.71
SWB	35	18.00	16.00	-0.857	.391	
PWB	38	25.00	25.00	-0.167	.868	
MHC-SF	32	54.50	52.00	-0.359	.719	
SWLS	40	24.50	28.00	-1.460	.144	

Scales & Subscales	N	Post-Test	Post Post-Test	z-value	p-value	Cohen's d
SPANE-P	39	24.00	23.00	-1.460	.144	
SPANE-N	40	17.00	16.50	-0.676	.499	
SPANE-B	38	8.00	3.00	-2.109	**.035***	.73
Anxiety	36	17.00	18.00	-0.348	.728	
Stress	36	18.00	18.00	-0.676	.499	
Depression	36	16.00	14.00	0.000	1.000	
DASS-21	32	58.00	48.00	-0.359	.719	

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

Median values are reported in the table.

* $p < .05$.

The Wilcoxon signed-rank test results revealed a significant decrease in participant emotional well-being from after to three months after the intervention, z = -2.09, n = 39, p <.05. The effect size was d = .71, indicating a medium effect size. From post-test to post-post-test, the median scores on the EWB decreased from Mdn = 13 to Mdn = 12.

In addition, participant affect balance decreased significantly from post-test to post-post-test, z = -2.11, n = 38, p <.05. The effect size was d = .73, indicating a medium to large effect. The median scores on the SPANE-B subscale decreased from post-test (Mdn = 8) to post-post-test (Mdn = 3).

6.4.3.4. Summation

The results revealed that the experimental group experienced moderate to large increases in certain aspects of flourishing after the EAPPI. The participants reported significantly increased levels of overall well-being (MHC-SF) and satisfaction with life (SWLS), along with a significant decrease in negative feelings (SPANE). However, their levels of psychological distress remained constant throughout (DASS-21). In addition, the

participants reported a significant increase in overall well-being three months after the intervention. Although there was a moderate decrease in their emotional well-being three months after the intervention, it was not significantly different from their pre-test scores. There was no significant change in participant satisfaction with life, affect balance and experience of negative affect from the post-test to three months later. This last finding suggests that the improvements in flourishing experienced by the participants after the EAPPI were maintained three months later.

6.4.4. Determining the Significance of the Changes in Flourishing Within the Control Group

To determine if there were any statistically significant changes in the measures of the facets of flourishing among the control group, a comparison of the repeated measures sample medians was necessary. Wilcoxon signed-rank tests were conducted to determine any significance in the changes on the pre-vs post-test, pre- vs post-post-test and post vs post-post-test data. The results of these analyses are presented in Tables 6.8, 6.9 and 6.10, respectively.

Table 6.8

Results of a Wilcoxon Signed-Rank Test Statistics for Control Group Flourishing Pre- vs Post-Intervention

Scales & Subscales	N	Pre-Test	Post-Test	z-value	p-value
EWB	31	12	12	-0.189	.85
SWB	28	15	15.5	-0.567	.571
PWB	28	26	27		.541[b]
MHC-SF	23	53	56		.678[b]
SWLS	32	23.5	25	-0.183	.855
SPANE-P	28	21.5	20	-1.925	.054
SPANE-N	30	18	16	-0.77	.441
SPANE-B	26	5	2.5		1.000[b]
Anxiety	30	10	14	-1.114	.265
Stress	28	14	12	0.000	1.000

Scales & Subscales	N	Pre-Test	Post-Test	z-value	p-value
Depression	27	14	12		.690[b]
DASS-21	20	36	34		.824[b]

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21. Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

Table 6.9

Results of a Wilcoxon Signed-Rank Test Statistics for Control Group Flourishing Pre- vs Post-Post-Intervention

Scales & Subscales	N	Pre-Test	Post-Post-Test	z-value	p-value
EWB	11	12	11		1.000[b]
SWB	10	17.5	17		.754[b]
PWB	11	24	25		.754[b]
MHC-SF	8	54.5	54.5		1.000[b]
SWLS	12	24	26		.774[b]
SPANE-P	11	20	21		.754[b]
SPANE-N	12	16.5	17		1.000[b]
SPANE-B	11	5	2		1.000[b]
Anxiety	10	13	12		.344[b]
Stress	9	12	16		.727[b]
Depression	9	18	16		1.000[b]
DASS-21	5	52	36		.375[b]

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

Table 6.10

Results of a Wilcoxon Signed-Rank Test Statistics for Control Group Flourishing Post- vs Post-Post-Intervention

Scales & Subscales	N	Post-Test	Post-Post-Test	z-value	p-value
EWB	11	11	9		1.000[b]
SWB	8	15.5	17		1.000[b]
PWB	9	22	25		1.000[b]
MHC-SF	7	53	56		1.000[b]
SWLS	11	25	25		.227[b]
SPANE-P	9	19	25		.125[b]
SPANE-N	10	17	17.5		1.000[b]
SPANE-B	9	2	4		.453[b]
Anxiety	11	16	12		.344[b]
Stress	9	12	16		.453[b]
Depression	10	12	9		1.000[b]
DASS-21	6	37	34		.687[b]

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

The Wilcoxon signed-rank test found no significant difference in the median scores of the control group's MHC-SF, SWLS, SPANE and DASS-21 scale and subscale pre- vs post-test, pre- vs post-post-test and post- vs post-post-test.

6.4.4.1. Summation

No significant differences were found in the flourishing facet scores of the control group throughout the study. This implies that the control group's optimal well-being, satisfaction with life, slight positive affect balance and psychological distress levels were consistent throughout the study despite the prevalence of severe anxiety during the study.

6.4.5. Determining the Significance of Differences in Changes in Flourishing Between the Control and Experimental Group

In the following section, whether there were any statistically significant differences between the independent experimental and control groups related to the flourishing measures is examined. To test for significance, Mann-Whitney *U* tests were conducted on the data, comparing the median scores of the control and experimental groups on the MHC-SF, SWLS, SPANE and DASS-21 scale and subscales at three different time points: pre-test, post-test and post-post-test.

6.4.5.1. Experimental and Control Groups Pre-Test Difference in Flourishing

In Table 6.11, the results of a Mann-Whitney *U* test to identify any differences between the experimental and control groups prior to the intervention are presented.

Table 6.11

*Mann-Whitney **U** Test Results on Pre-Test Flourishing Scales and Subscales Scores*

Scales & Subscales	Group	*n*	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
EWB	Experimental	75	64.45				
	Control	64	76.51				
	Total	139		1984	-1.771	.077	
PWB	Experimental	71	61.09				
	Control	64	75.66				
	Total	135		1782	-2.168	**.030***	.4
SWB	Experimental	73	63.24				
	Control	60	71.58				
	Total	133		1916	-1.243	.214	
MHC-SF	Experimental	66	54.70				
	Control	54	67.59				
	Total	120		1399	-2.022	**.043***	.4
SWLS	Experimental	77	68.06				
	Control	68	78.59				
	Total	145		2238	-1.507	.132	
SPANE-N	Experimental	72	72.88				
	Control	65	64.70				
	Total	137		2061	-1.212	.226	
SPANE-P	Experimental	73	66.83				

Scales & Subscales	Group	*n*	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
	Control	62	69.38				
	Total	135		2178	-0.379	.705	
SPANE-B	Experimental	70	62.99				
	Control	60	68.43				
	Total	130		1924	-0.824	.410	
Anxiety	Experimental	69	66.17				
	Control	60	63.66				
	Total	129		1990	-0.382	.703	
Stress	Experimental	72	68.85				
	Control	61	64.82				
	Total	133		2063	-0.602	.547	
Depression	Experimental	76	72.01				
	Control	61	65.25				
	Total	137		2090	-0.992	.321	
DASS-21	Experimental	65	58.48				
	Control	48	54.99				
	Total	113		1464	-0.561	.575	

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

* p < .05.

The statistical analysis determined that before the intervention, the only significant difference between the control and experimental group was that the former group reported slightly higher overall positive and psychological well-being. A Mann-Whitney U test revealed that on the MHC-SF, the control group (Mdn = 53, n= 54) scored significantly higher than the experimental group (Mdn = 48, n = 66), $U = z$ = -2.02, p= .04. The effect size was d = .4, representing a small to medium effect.

Furthermore, on the PWB subscale, a Mann-Whitney U test revealed that the control group showed significantly higher scores (Mdn = 26, n= 64) when compared to the experimental group (Mdn = 24, n= 71), $U = z$ = -2.17, p= .03. The effect size was d = .4, indicating a small to medium effect.

6.4.5.2. Experimental and Control Groups Post-Test Difference in Flourishing

The results of a Mann-Whitney *U* test that examined any post-intervention differences between the experimental and control groups are displayed in Table 6.12.

Table 6.12

*Mann-Whitney **U** Test Results on Post-Intervention Flourishing Scale and Subscale Scores*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
EWB	Experimental	60	47.89				
	Control	32	43.89				
	Total	92		877	-0.694	.488	
PWB	Experimental	55	42.39				
	Control	29	42.71				
	Total	84		792	-0.057	.955	
SWB	Experimental	58	49.20				
	Control	30	35.42				
	Total	88		598	-2.405	**.016***	.5
MHC-SF	Experimental	52	41.29				
	Control	26	35.92				
	Total	78		583	-0.987	.324	
SWLS	Experimental	60	48.36				
	Control	33	44.53				
	Total	93		909	-0.656	.512	
SPANE-N	Experimental	60	45.48				
	Control	32	48.42				
	Total	92		899	-0.506	.613	
SPANE-P	Experimental	58	50.93				
	Control	32	35.66				
	Total	90		613	-2.663	**.008***	.6
SPANE-B	Experimental	57	49.21				
	Control	31	35.84				
	Total	88		615	-2.349	**.019***	.5
Anxiety	Experimental	52	45.13				
	Control	33	39.65				
	Total	85		748	-0.999	.318	
Stress	Experimental	57	46.68				
	Control	30	38.92				
	Total	87		703	-1.365	.172	
Depression	Experimental	54	44.32				
	Control	30	39.22				
	Total	84		712	-0.922	.357	
DASS-21	Experimental	49	41.13				

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney U	z-value	p-value	Cohen's d
	Control	26	32.10				
	Total	75		484	-1.710	.087	

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

* $p < .05$.

The results revealed that after the EAPPI, there were several measures on which the experimental group scores differed significantly from those of the control group. On the SWB subscale, a Mann-Whitney U test revealed that the experimental group (Mdn = 19, n= 58) reported a significantly different increase in social well-being compared to the control group (Mdn = 14.50, n= 30), $U = 598$, z = -2.41, p= .016. The effect size was d = .5, indicating a medium effect. Similarly, on the SPANE-B, a Mann-Whitney U test showed that the experimental group (Mdn = 8, n= 57) experienced a significantly greater positive affect balance than the control group (Mdn = 3, n= 31), $U = 615$, z = -2.35, p= .016. The effect size was d = .5, representing a medium effect. In support of the results on the SPANE-B, the Mann-Whitney U test results demonstrated that on the SPANE-P, the experimental group (Mdn = 23, n= 58) reported a significantly greater number of positive emotions than the control group (Mdn = 20, n= 32), $U = 613$, z = -2.66, p= .008. The effect size was d = .6, demonstrating a medium effect.

6.4.5.3. Experimental and Control Groups Post-Post-Test Difference in Flourishing

In Table 6.13, the results of a Mann-Whitney U test to determine any differences between the experimental and control groups' levels of flourishing three months after the intervention are displayed.

Table 6.13

*The results of a Mann-Whitney **U** Determining Differences Between Experimental and Control Group Post-Post-Test Flourishing*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-score	*p*-value	Exact Sig. [2*(1-tailed Sig.)]
EWB	Experimental	41	27.80				
	Control	13	26.54				
	Total	54		254.00	-0.255	0.799	
PWB	Experimental	40	26.68				
	Control	11	23.55				
	Total	51		193.00	-0.622	0.534	
SWB	Experimental	38	25.18				
	Control	11	24.36				
	Total	49		202.00	-0.168	0.866	
MHC-SF	Experimental	36	23.94				
	Control	10	21.90				
	Total	46		164.00	-0.427	0.670	.684[b]
SWLS	Experimental	42	27.73				
	Control	13	28.88				
	Total	55		261.500	-0.228	0.819	
SPANE-N	Experimental	41	27.73				
	Control	13	26.77				
	Total	54		257.00	-0.193	0.847	
SPANE-P	Experimental	42	28.08				
	Control	13	27.73				
	Total	55		269.50	-0.070	0.944	
SPANE-B	Experimental	41	26.87				
	Control	13	29.50				
	Total	54		240.50	-0.527	0.598	
Anxiety	Experimental	40	27.69				
	Control	11	19.86				
	Total	51		152.50	-1.550	0.121	
Stress	Experimental	39	26.17				
	Control	10	20.45				
	Total	49		149.50	-1.133	0.257	.264[b]
Depression	Experimental	40	29.26				
	Control	13	20.04				
	Total	53		169.50	-1.875	0.061	
DASS-21	Experimental	38	24.96				
	Control	8	16.56				
	Total	46		96.50	-1.610	0.108	.109[b]

Note. EWB = Emotional well-being, PWB = Psychological well-being, SWB = Social well-being, MHC-SF = Mental health continuum short form, DASS-21 = Depression, Anxiety and Stress Scale 21.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

The results of the post-post-test Mann-Whitney *U* tests revealed no significant differences between the experimental group and control group on the dimension of flourishing scales and subscales.

6.4.5.4. Summation At the beginning of the study, the experimental group reported significantly lower overall and psychological well-being levels than the control group. However, there was no significant difference in the two groups' levels of life satisfaction, affect balance and psychological distress before the intervention. However, after the intervention, the experimental group reported significantly higher levels of social well-being, positive affect balance and positive emotions than the control group. The control group maintained their initial levels of flourishing across the study, as indicated by the nonsignificant results. Three months after the intervention, there were no significant differences in experimental and control groups' levels of flourishing, as demonstrated by a lack of significant differences in the median scores on the MHC-SF, SWLS, SPANE and DASS-21 scales and subscales. Over the study, both groups' levels of psychological distress remained unchanged, as reflected by the lack of significant differences in any of the measure scores. Despite the continued experience of elevated levels of anxiety, the results indicate that after the EAPPI, the experimental group reported significantly higher levels of flourishing in comparison to the control group.

To further understand the significant changes observed in the experimental group, the influence of demographic factors was determined. However, with regard to the control group,

there was no need to determine the impact of demographic variables as the lack of significant differences in the measure scores suggests stability in their flourishing.

6.4.6. Determining the Effect of the Demographic Variables on Flourishing

In the following section, the non-parametric statistical analysis results testing the null hypothesis that the experimental group distribution of significant scores on the measures would be the same across gender, age, education level, employment status and number of intervention sessions attended are presented.

6.4.6.1. Gender

The reported categories for gender were male and female. The results of the independent samples Mann-Whitney *U* test are presented in Table 6.14. This test tests the null hypothesis that no difference exists in the distribution of significant scores on the flourishing measures across the gender categories.

Table 6.14

*Summary of Results of the Independent Samples Mann-Whitney **U** Test for the Distribution of Flourishing Measure Scores Across Gender Categories*

Timing of Test & Scale & Subscale	N	Test Statistic	Mann-Whitney *U*	*z*-value	Asymptotic Sig.(2-sided test)	Exact Sig.(2-sided test)
Pre-EWB	75	597	597	1.049	.294	
Post-EWB	60	248	248	-1.049	.294	
Post-Post-EWB	41	119	119	0.521	.602	.627[c]
Post-SWB	58	374.50	374.50	1.898	.058	
Post-Post-SWB	38	126.50	126.50	1.228	.220	.229[c]
Pre-MHC-SF	66	439	439	0.865	.387	
Post-MHC-SF	52	260.50	260.50	1.174	.240	
Post-Post-MHC-SF	36	115	115	1.063	.288	.307[c]

Pre-SWLS	77	429.50	429.50	-1.223	.221	
Post-SWLS	60	342	342	0.657	.511	
Post-Post-SWLS	42	106.50	106.50	-0.054	.957	.958[c]
Pre-SPANE-N	72	358	358	-1.460	.144	
Post- SPANE-N	60	337.50	337.50	0.576	.565	
Pre-SPANE-B	69	429	429	0.350	.726	
Post- SPANE-B	54	238	238	0.022	.983	
Post-Post-SPANE-B	40	127	127	0.932	.351	.363[c]

Note. EWB = Emotional well-being subscale, SWB = Social well-being subscale, MHC-SF = Mental Health Continuum-Short Form total scale, SWLS = Satisfaction with Life scale. pre = pre-test, post = post-test & post-post = post-post-test.

p = .05. [c] = the exact significance displayed for this test.

The results of the Mann-Whitney *U* test determined no difference in the distribution of significant scores on the flourishing measure scores for males and females.

6.4.6.2. Age

There were three participant age categories: 18 - 20, 21 - 35 and 36 - 64. The results of the independent Kruskal-Wallis test, presented in Table 6.15, indicate the retention of the null hypothesis across the age categories, with the exception of the post-post-SWLS.

Table 6.15

Summary of Results of the Independent Samples Kruskal-Wallis Test for the Distribution of Flourishing Measure Scores Across Three Age Categories

Timing of Test & Scale & Subscale	**N**	***df***	***X*2**	**Sig.[a.b]**	**Cohen's *d***
Pre-EWB	75	2	2.061[a]	.357	
Post-EWB	60	2	.189[a]	.910	

Post-Post-EWB	41	2	1.954[a]	.376	
Post-SWB	58	2	1.700[a]	.427	
Post-Post-SWB	38	2	5.442[a]	.066	
Pre-MHC-SF	66	2	1.848[a]	.397	
Post-MHC-SF	52	2	1.906[a]	.386	
Post-Post-MHC-SF	36	2	4.121[a]	.127	
Pre-SWLS	77	2	.125[a]	.940	
Post-SWLS	60	2	2.849[a]	.241	
Post-Post-SWLS	42	2	7.126[a]	**.028***	.778
Pre- SPANE-N	72	2	2.576[a]	.276	
Post- SPANE-N	60	2	1.486[a]	.476	
Pre-SPANE-B	69	2	.937[a]	.626	
Post- SPANE-B	54	2	1.880[a]	.391	
Post-Post- SPANE-B	40	2	3.413[a]	.181	

Note. EWB = Emotional well-being subscale, PWB = Psychological well-being subscale, SWB = Social well-being subscale, MHC-SF = Mental Health Continuum-Short Form total scale, SWLS = Satisfaction with Life scale. pre = pre-test, post = post-test & post-post = post-post-test.

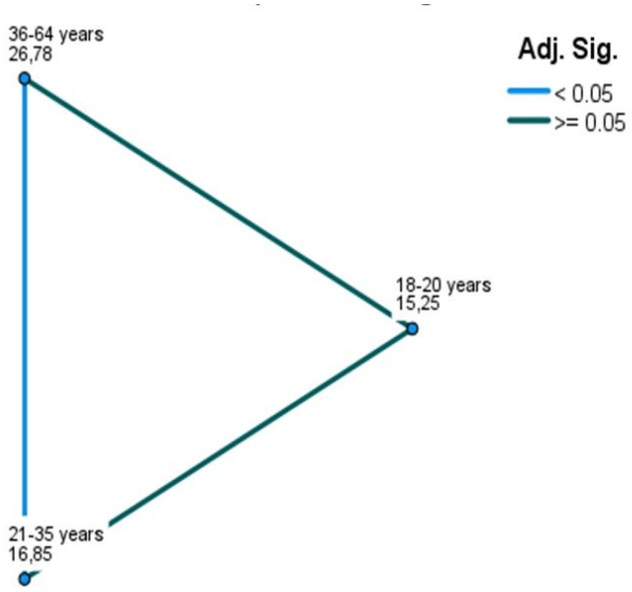
[a]. p = .05. [b]. Asymptotic significance is displayed.

* p <.05

Subsequently, a pairwise comparison of the age categories on the post-post-SWLS rank scores was conducted (Figure. 6.3).

Figure 6.3

Pairwise Comparison of Age Category on the Post-Post-SWLS Scores



Note: Each node shows the sample average rank score for the age category

A Kruskal-Wallis test revealed a statistically significant difference in satisfaction with life levels three months after the intervention across the different age categories, $X2$ (2, n=42) = 7.13, p =.028, with a medium to large effect size d = .78. A pairwise comparison indicated that the oldest age group (36-64 years) recorded a significantly higher mean rank score (26.78) on the SWLS three months after the intervention than those in the youngest age group (21-35 years, p = 0.031), whose mean rank was 16.85.

6.4.6.3. Education Level

Participant education levels were categorised as none, Grade 8 - 11, Matric (Matric equivalent) and tertiary. A Kruskal-Wallis test revealed that the distribution of significant scores on the measures was the same across the education categories; hence, the level of education did not affect the participant scores. The results are displayed in Table 6.16.

Table 6.16

Summary of Independent Samples Kruskal-Wallis Test Results for the Distribution of Flourishing Measure Scores Across Levels of Education Categories

Timing of Test & Scale & Subscale	N	df	z-value	Sig. [a.b]
Pre-EWB	73	3	3.817[a]	0.282
Post-EWB	58	2	.978[a]	.613
Post-Post-EWB	40	2	.976[a]	.614
Post-SWB	56	2	.197[a]	.906
Post-Post-SWB	36	2	5.128[a]	.077
Pre-MHC-SF	65	3	3.993[a]	.262
Post-MHC-SF	50	2	1.512[a]	.470
Post-Post-MHC-SF	35	2	2.138[a]	.343
Pre-SWLS	75	3	4.107[a]	.250
Post-SWLS	58	2	2.984[a]	.225
Post-Post-SWLS	40	2	4.512[a]	.105
Pre-SPANE-N	70	3	3.574[a]	.311
Post- SPANE-N	58	2	4.603[a]	.100
Pre-SPANE-B	68	3	4.825[a]	.185
Post- SPANE-B	52	2	3.921[a]	.141
Post-Post- SPANE-B	38	2	2.378[a]	.304

Note. EWB = Emotional well-being subscale, SWB = Social well-being subscale, MHC-SF = Mental Health Continuum-Short Form total scale, SWLS = Satisfaction with Life scale. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. p =.05. [b]. Asymptotic significance is displayed.

6.4.6.4. Employment Status

The participants' employment status was categorised as employed and unemployed. The results of the independent samples Mann-Whitney U test conducted to evaluate the null

hypothesis that the distribution of significant scores on the measures was the same across the employment status categories is shown in Table 6.17.

Table 6.17

*Summary of Results of an Independent Samples Mann-Whitney **U** Test for the Distribution of Flourishing Measure Significant Scores Across Employment Status Categories*

Timing of Test & Scale & Subscale	**N**	**Test Statistic**	**Mann-Whitney *U***	***z*-value**	**Asymptotic Sig. (2-sided test)**	**Exact Sig. (2-sided test)**	**Cohen's *d***
Pre-EWB	74	402	587.50	-0.928	.354		
Post-Post-EWB	40	207	207	0.205	.838	.851	
Post-SWB	57	343	343	-0.920	.357		
Post-Post-SWB	37	168.50	168.50	-0.076	.939	.940	
Pre-MHC-SF	65	359	359	-2.108	**.035***		.541
Post-MHC-SF	51	296	296	-0.529	.597		
Post-Post-MHC-SF	35	160.50	160.50	0.248	.804	.807	
Pre-SWLS	76	638.50	638.50	-0.790	.430		
Post-SWLS	59	357	357	-1.104	.270		
Post-Post-SWLS	41	243.50	243.50	0.876	.381		
Pre-SPANE-N	71	745	745	1.457	.145		
Post-SPANE-N	59	528	528	1.465	.143		
Pre-SPANE-B	68	427	427	-1.667	.095		
Post-	53	428	428	1.434	.152		

Timing of Test & Scale & Subscale	N	Test Statistic	Mann-Whitney *U*	*z*-value	Asymptotic Sig. (2-sided test)	Exact Sig. (2-sided test)	Cohen's *d*
SPANE-B							
Post-Post-SPANE-B	39	180	180	-0.296	.767	.771	

Note. EWB = Emotional well-being subscale, SWB = Social well-being subscale, MHC-SF = Mental Health Continuum-Short Form total scale, SWLS = Satisfaction with Life scale. pre = pre-test, post = post-test & post-post = post-post-test.

* $p < .05$.

A Mann-Whitney U test revealed that the distribution of the MHC-SF scores was different in the employed and unemployed categories before the intervention. The employed group reported significantly greater overall well-being, as indicated by higher mean rank scores on the MHC-SF (Mean rank = 40.14, n= 32) than the unemployed group (Mean rank = 35.49, n= 42), $U = 359{,}000$, z = -2.108, p= .035, with a medium effect size (d = .5). However, after and three months after the intervention, the distribution of the measure scores was the same for both the employed and unemployed groups.

6.4.6.5. Number of Intervention Sessions Attended The categories of intervention sessions attended were 1-3, 4-5 and 6-8 sessions. A Kruskal-Wallis test examined the distribution of the significant scores on the study measures across the categories of the number of intervention sessions attended. The results of this analysis, displayed in Table 6.18, revealed that the number of sessions attended did not affect the distribution of significant scores on the flourishing measures.

Table 6.18

Summary of Results of an Independent Samples Kruskal-Wallis Test for the Distribution of Flourishing Measure Significant Scores Across the Number of Sessions Attended

Scale and Subscales And Time of Test	N	*df*	*z*-value	Sig. [a.b]
Pre-EWB	75	2	0.260[a]	.878
Post-EWB	60	2	0.332[a]	.847
Post-SWB	58	2	1.246[a]	.536
Pre-MHC-SF	66	2	0.680[a]	.712
Post-MHC-SF	52	2	0.650[a]	.723
Pre-SWLS	77	2	0.854[a]	.652
Post-SWLS	60	2	4.394[a]	.111
Pre-SPANE-N	72	2	2.109[a]	.348
Post-SPANE-N	60	2	1.874a	.392
Pre-SPANE-B	69	2	3.470a	.176
Post- SPANE-B	54	2	3.667a	.160
Post-Post- SPANE-B				.[c]

Note. EWB = Emotional well-being subscale, SWB = Social well-being subscale, MHC-SF = Mental Health Continuum-Short Form total scale, SWLS = Satisfaction with Life scale. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. p = .05. [b]. Asymptotic significance is displayed. [c]. There is only one group with valid data.

6.4.7. Synopsis of the Effect of the EAPPI on Flourishing

The results revealed that the sample was flourishing, as indicated by the majority of participants who reported high levels of overall well-being, greater satisfaction than dissatisfaction with life and a predominantly positive affect balance despite experiencing psychological distress as indicated by high anxiety levels. It is noteworthy that at the

beginning of the study, the control group reported significantly higher levels of overall and psychological well-being than the experimental group.

The control group's flourishing levels remained stable across the study, as reflected by the non-significant changes in the flourishing scales and subscales. In contrast, the experimental group reported notable increases in their levels of flourishing after the intervention, as indicated by their significant increases in overall well-being (MHC-SF), satisfaction with life (SWLS) and a significant decrease in negative feelings (SPANE) after the intervention. The participants' overall well-being significantly increased three months after the intervention. Moreover, there was no significant change in participant satisfaction with life, affect balance and experience of negative affect from after the intervention to three months later. Hence, the participants maintained their post-intervention improvements in flourishing at the three-month follow-up.

Before the intervention, the experimental group reported psychological and optimal well-being levels significantly lower than the control group; this was no longer the case after the intervention. Additionally, after the intervention, the experimental group reported significantly higher levels of social well-being, affect balance and positive emotions than the control group. These significant differences in the facets of flourishing were no longer present three months after the intervention. Similar to the control group, the experimental group's level of psychological distress (DASS-21), specifically severe levels of anxiety, remained unchanged throughout the study. No significant difference was measured between the experimental and control groups' psychological distress at any point during the study.

Furthermore, gender, level of education, employment status and the number of sessions attended did not affect the significant flourishing facet score increases. Interestingly, the eldest participants reported the highest levels of flourishing three months after the intervention. Hence, the study determined that the EAPPI positively affected flourishing, as

evidenced by the significant increases in flourishing facets, the effects of which continued three months after the intervention. However, the intervention did not influence psychological distress.

6.5. Investigating the Impact of the EAPPI on Adult Meaning

The following section presents the statistical analysis results investigating the EAPPI's impact on meaning. The participants completed self-report questionnaires and NSMS and PMP-B to measure changes in their search for meaning and presence of meaning, respectively, over the study. These measures were valid and reliable in the study context, as reported in Section 5.5.2.1.

6.5.1. Descriptive Statistics for Meaning

The descriptive statistics for the experimental group at pre-, post- and post-post-test on the meaning variables NSMS and PMP-B are displayed in Table 6.19.

Table 6.19

Descriptive Statistics for Sample Meaning at Pre-, Post- and Post-Post-Intervention

			Pre-Intervention								Post-Intervention								Post-Post-Intervention							
Group	**Variable**	**N Obs**	**N Miss**	**N**	**Mean**	**Median**	**Min**	**Max**	**Skew**	**Kurt**	**N Miss**	**N**	**Mean**	**Median**	**Min**	**Max**	**Skew**	**Kurt**	**N Miss**	**N**	**Mean**	**Median**	**Min**	**Max**	**Skew**	**Kurt**
NSMS																										
	Positivesearch		6	72	30.88	33.00	6.00	42.00	-1.20	1.72	21	57	29.65	31.00	11.00	42.00	-0.76	0.09	37	41	29.59	31.00	6.00	42.00	-0.94	0.96
Experimental group	NegativeSearch	78	5	73	29.40	30.00	9.00	42.00	-0.46	-0.43	23	55	27.04	29.00	6.00	42.00	-0.57	0.29	37	41	27.29	28.00	6.00	41.00	-0.35	-0.63
	NSMS		9	69	60.30	64.00	29.00	84.00	-0.65	-0.22	24	54	56.61	59.00	17.00	84.00	-0.71	0.40	39	39	58.38	59.00	23.00	84.00	-0.45	0.27
	Positivesearch		7	64	27.00	29.00	6.00	42.00	-0.71	0.03	39	32	28.97	30.00	12.00	42.00	-0.38	-0.23	60	11	26.73	28.00	11.00	38.00	-0.58	-0.00
Control group	NegativeSearch	71	14	57	26.00	28.00	6.00	42.00	-0.54	-1.09	37	34	28.32	28.00	10.00	42.00	-0.27	-0.51	60	11	28.36	27.00	8.00	40.00	-0.54	-0.71
	NSMS		17	54	53.91	61.00	12.00	84.00	-0.68	-0.56	40	31	57.87	59.00	24.00	84.00	-0.37	-0.16	61	10	53.40	53.00	39.00	71.00	0.53	0.89
PMP-B																										
	Achievement		5	73	5.51	6.00	1.00	7.00	-1.19	1.29	19	59	5.77	6.00	1.00	7.00	-1.67	3.19	37	41	5.63	6.00	2.00	7.00	-1.27	2.33
	Relationship		10	68	4.70	4.67	1.00	7.00	-0.24	-0.47	23	55	5.25	5.67	1.00	7.00	-0.82	0.26	43	35	5.23	5.67	1.67	7.00	-0.79	0.46
	Religion		5	73	6.32	7.00	3.00	7.00	-1.42	1.17	22	56	6.21	7.00	1.33	7.00	-2.01	4.31	38	40	5.81	6.33	2.67	7.00	-0.90	-0.51
	Self-transcendence		4	74	5.77	5.83	2.33	7.00	-1.00	1.06	19	59	5.77	6.00	1.00	7.00	-1.44	2.10	36	42	5.43	5.50	2.67	7.00	-0.49	-0.76
Experimental group	Self-acceptance	78	2	76	5.13	5.00	1.00	7.00	-0.53	0.93	20	58	5.60	5.67	1.00	7.00	-1.22	1.99	40	38	5.28	5.33	2.00	7.00	-0.53	-0.21
	Intimacy		1	77	4.73	5.00	1.00	7.00	-0.61	-0.58	20	58	5.18	5.67	1.00	7.00	-0.77	-0.27	37	41	4.99	5.33	1.00	7.00	-0.75	-0.24
	Fair treatment		5	73	4.27	4.33	1.00	7.00	-0.04	-0.05	18	60	4.87	5.00	1.00	7.00	-0.67	0.03	37	41	4.63	4.67	1.00	7.00	-0.53	0.45
	PMP-B		18	60	5.23	5.17	3.57	7.00	0.06	-0.36	27	51	5.55	5.76	1.14	7.00	-1.38	2.63	46	32	5.20	5.19	2.33	6.52	-1.04	2.74
	Achievement		8	63	5.39	6.00	1.00	7.00	-1.09	0.19	38	33	4.96	5.00	1.67	7.00	-0.22	-0.94	59	12	5.53	5.83	3.00	7.00	-0.68	-1.11
	Relationship		14	57	5.34	5.67	1.00	7.00	-0.89	0.66	39	32	4.97	5.17	2.00	7.00	-0.39	-0.69	61	10	4.90	5.00	2.67	6.00	-1.25	0.42
	Religion		7	64	6.06	7.00	1.00	7.00	-1.89	2.82	38	33	5.36	6.67	1.00	7.00	-0.91	-0.57	60	11	5.76	7.00	2.00	7.00	-1.38	0.56
	Self-transcendence		4	67	5.40	6.00	1.00	7.00	-0.94	0.66	36	35	4.97	5.33	1.00	7.00	-0.68	-0.41	58	13	5.49	5.67	2.33	7.00	-1.22	0.97
Control group	Self-acceptance	71	10	61	5.36	5.67	1.33	7.00	-0.63	-0.11	40	31	5.46	6.00	1.67	7.00	-1.12	0.99	58	13	5.23	5.00	1.67	7.00	-0.99	1.47
	Intimacy		12	59	5.16	6.00	1.00	7.00	-0.96	-0.29	38	33	5.49	6.00	2.33	7.00	-0.71	-0.49	59	12	4.86	5.33	1.33	7.00	-0.45	-0.95
	Fair treatment		9	62	4.55	4.83	1.00	7.00	-0.51	-0.59	36	35	4.63	5.00	1.00	7.00	-0.25	-0.56	60	11	4.42	5.00	1.00	7.00	-0.70	-0.71
	PMP-B		22	49	5.28	5.38	1.19	7.00	-1.24	2.56	45	26	5.31	5.29	3.19	7.00	-0.02	-0.64	62	9	5.13	5.57	2.10	6.52	-1.42	0.91

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form

6.5.2. Prevalence of Meaning in the Sample Throughout the Study

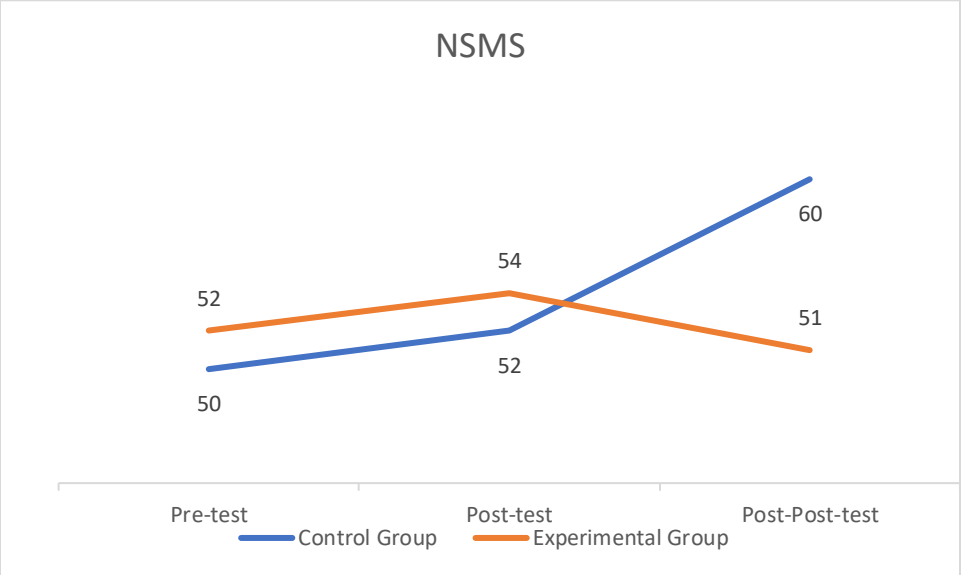
A preliminary investigation on changes in participant meaning was conducted by examining the prevalence of search for and presence of meaning before, after and three months after the intervention. The prevalence of participant search for and presence of meaning was calculated by determining the percentage of participants who reported responses equal to or greater than the median on the NSMS and PMP-B scale and subscales at pre-, post- and post-post-test, respectively. The median values for meaning are displayed in Table 6.19.

6.5.2.1. Prevalence of Search for Meaning

About half of the participants in the experimental and control groups (52% and 50%, respectively) reported searching for meaning in life before the intervention (Figure. 6.4). Throughout the study, the prevalence of participants searching for meaning showed fluctuations. After three months of the intervention, while 60% of the participants in the control group reported searching for meaning, 51% in the experimental group reported searching for meaning.

Figure 6.4

The Prevalence of Participant Search for Meaning Across the Study Period

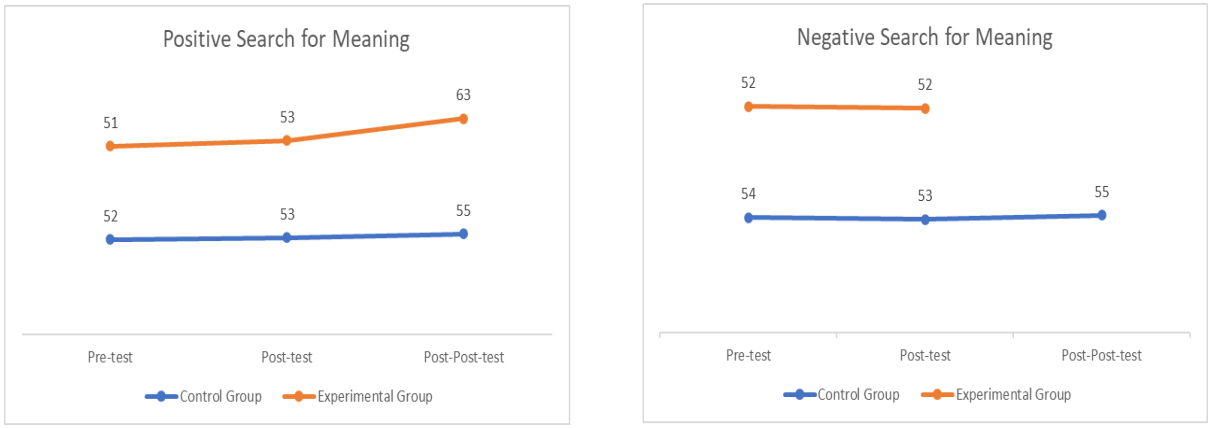


Note. Values reported are the percentage of participant responses ≥ Median

During the study period, the prevalence of positive search for meaning in the experimental group increased from 51% to 63% of the group, while 52% of them consistently reported negative orientation to search for meaning (Figure. 6.5). It was not possible to determine the prevalence of the experimental group's negative search for meaning three months after the intervention due to missing data. An equal percentage of participants reported positive and negative search for meaning in the control group over the study.

Figure 6.5

The Prevalence of Participants Positive and Negative Search for Meaning Across the Study



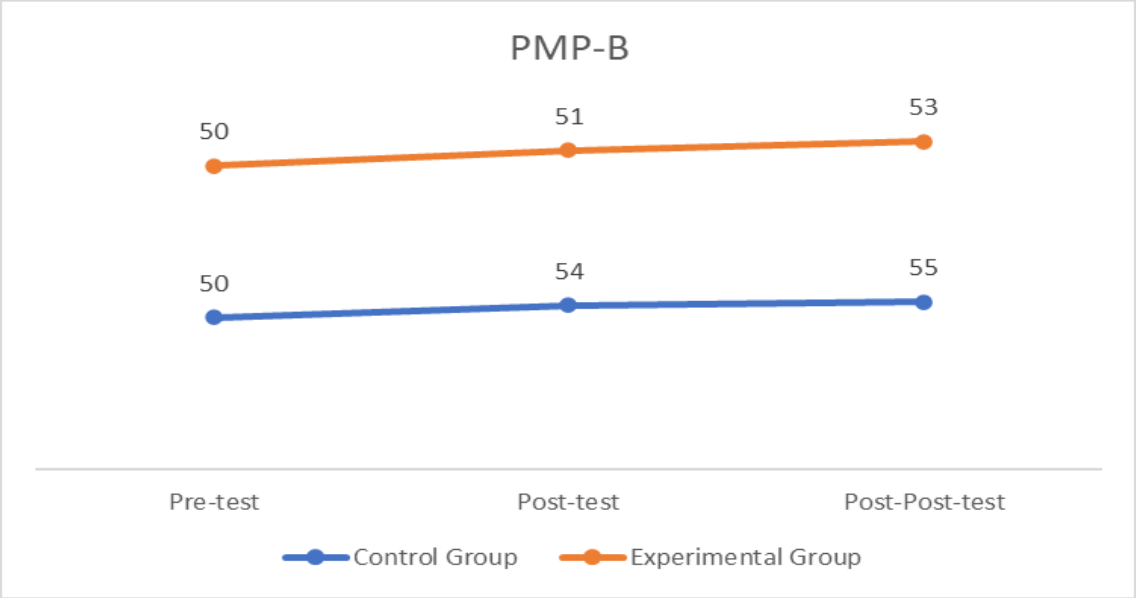
Note. Values reported are the percentage of participant responses ≥ Median

6.5.2.2. Prevalence of Presence of Meaning

Half of the participants in both groups reported experiencing the presence of meaning in life at the beginning of the study. The prevalence of meaning presence increased for both groups over the study (Figure. 6.6). However, after the intervention and three months later, a lower percentage of the experimental group (post= 51% and post-post= 53%) reported overall presence of meaning when compared to the control group (post = 54% and post-post = 55%).

Figure 6.6

Prevalence of Presence of Meaning for Experimental and Control Groups Over the Study Period

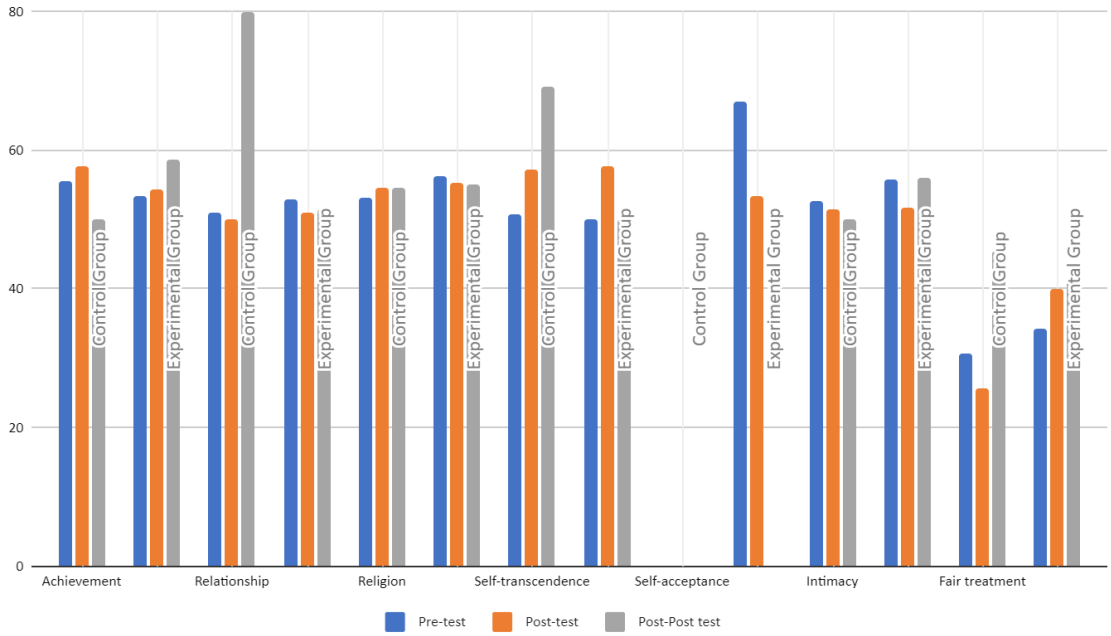


Note. Values reported are the percentage of participant responses ≥ Median.

Further examination of the data revealed fluctuations in the number of participants in both groups who reported the presence of specific sources of meaning throughout the study (Figure. 6.7).

Figure 6.7

Percentage of Participant Responses Reporting Presence of Specific Sources of Meaning



Note. Values reported are the percentage of participant responses ≥ Median. Due to missing data, the prevalence of self-acceptance as a source of meaning for the control group, and the experimental group post-post test,was not able to be calculated.

The participants identified various sources of meaning across the study. There was a sizeable increase in the prevalence of fair treatment as a source of meaning in both groups: experimental (34% to 41%) and control (31% to 45%). Furthermore, the number of participants in the experimental group who reported achievement as a source of meaning increased from 53% before the intervention to 59% three months after the intervention. In contrast, at the beginning of the study, 51% of the control group recognised relationships and self-transcendence as sources of meaning. However, the number of participants who reported these two sources of meaning fluctuated markedly at post- (80%) and post-post-testing (69%).

Approximately half the participants in both groups reported searching for meaning and identified the presence of sources of meaning in life before the intervention. The prevalence of participants searching for meaning showed fluctuations throughout the study. The number of experimental group participants who reported positive meaning orientation increased from half to almost two-thirds from the beginning to the end of the study. The number who noted a negative meaning orientation remained constant at approximately half of the group. Similarly, about half of the control group reported a positive and negative search for meaning across the study. In accordance with the participant search for meaning was the finding that approximately half of the sample reported the presence of sources of meaning in life across the study assessment points. The sources of meaning that showed the greatest fluctuation in prevalence were achievement, relationships, self-transcendence and fair treatment.

Based on these results, it was imperative to examine the fluctuations in the aspects of meaning to determine the impact of the intervention. In the subsequent section, the statistical evaluations employed to investigate the variations in meaning within and between the experimental and control groups are detailed.

6.5.3. Investigating Changes in Meaning Within the Experimental Group

In this section, whether the reported changes in the experimental group meaning scores on the NSMS and PMP-B as repeatedly measured before, after and three months after the intervention were significant is examined. Given the non-normality of the data, a Wilcoxon signed-rank test was conducted to determine any significance in the change in scores of the experimental group. The statistical analysis results of the pre-test vs post-test, pre-test vs post-post-test, and post-test vs post-post-test data are provided.

6.5.3.1. Pre-Test vs Post-Test Comparison

The Wilcoxon signed-rank test results comparing the experimental group NSMS and PMP-B scale and subscales median scores before and after the intervention are presented in Table 6.20.

Table 6.20

Summary of the Wilcoxon Signed-Rank Test Results for Pre- vs Post-Intervention Differences in Experimental Group Scores on the Meaning Scales & Subscales

Scales & Subscales	N	Pre-Test	Post-Test	*z*-value	*p*-value	Cohen's *d*
Positive search	52	32.0	31.0	-0.722	.47	
Negative search	53	29.0	29.0	-2.286	**.022***	.66
NSMS	48	64.0	59.0	-2.385	**.017***	.73
Achievement	56	6.0	6.0	-1.556	.12	
Relationship	48	4.7	5.2	-2.006	.045	
Religion	52	7.0	7.0	-0.189	.85	
Self-transcendence	57	5.7	6.0	-0.99	.322	
Self-acceptance	56	5.2	5.7	-1.193	.233	
Intimacy	57	5.0	5.7	-1.459	.145	
Fair treatment	57	4.3	5.0	-2.334	**.02***	.65
PMP-B	39	5.4	5.7	-1.644	.100	

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form. Median values are reported in the table.

* $p < .05$.

A Wilcoxon signed-rank test indicated a statistically significant decrease in participant search for meaning, z = -2.39, n = 48, p <.05, The effect size was d = .7, indicating a medium to large effect. The median scores on the overall NSMS decreased from the pre-test (Mdn = 64) to the post-test (Mdn = 59). Participants significantly decreased negative search for meaning, z = -2.29, n = 53, p <.05. The effect size was d = .7, demonstrating a medium to large effect. The median scores on the negative search subscale were pre-test (Mdn = 29) to post-test (Mdn = 29). In addition, the participants reported a

significant increase in their perception of fair treatment as a source of meaning in life, z = -2.33, n = 57, p =.02. The effect size was d = .7, representing a medium to large effect. The median scores on the PMP-B fair treatment subscale increased from the pre-test (Mdn = 4.3) to the post-test (Mdn = 5).

6.5.3.2. Pre-Test vs Post-Post-Test Comparison

The results of a Wilcoxon signed-rank test statistical analysis comparing the differences in the experimental group NSMS and PMP-B scale and subscale scores before and three months after the EAPPI is displayed in Table 6.21.

Table 6.21

Summary of the Wilcoxon Signed-Rank Test Results for Pre- vs Post-Post-Intervention Differences in Experimental Group Scores on the Meaning Scales & Subscales

Scales & Subscales	N	Pre-Test	Post-Post-Test	z-value	p-value
Positive search	36	32.00	30.50	-0.177	.860
Negative search	39	28.00	28.00	0.000	1.000
NSMS	35	61.00	59.00	-0.177	.860
Achievement	39	6.00	6.00	0.000	1.000
Relationship	29	4.67	5.33	-1.54	.124
Religion	37	6.67	6.33		.093[b]
Self-transcendence	39	5.67	5.67	-0.5	.617
Self-acceptance	36	5.17	5.33	0.000	1.000
Intimacy	40	5.33	5.33	-0.696	.486
Fair treatment	38	4.33	4.67	-1.945	.052
PMP-B	21	4.95	5.14		.189[b]

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form. Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

With regard to the participant search for and presence of meaning, the Wilcoxon signed-rank tests revealed no statistically significant differences in the experimental group NSMS and PMP-B total scales and subscales median scores over the period pre- to post-post-test.

6.5.3.3. Post-Test vs Post-Post-Test Comparison

Table 6.22 presents the results of a Wilcoxon signed-rank test statistical analysis comparing the post-test and post-post-test differences in experimental group NSMS and PMP-B scale and subscale scores.

Table 6.22

Summary of the Wilcoxon Signed-Rank Test Results for Post-Test vs Post-Post-Test Differences in Experimental Group Scores on the Meaning Scales & Subscales

Scales & Subscales	N	Post-Test	Post-Post-Test	*z*-value	*p*-value
Positive search	39	30.00	31.00	-0.171	.864
Negative search	39	28.00	28.00	0.000	1.000
NSMS	36	59.00	58.50	-1.237	.216
Achievement	40	5.83	6.00	-1.114	.265
Relationship	31	5.00	5.67	-0.196	.845
Religion	36	6.83	6.50		.541[b]
Self-transcendence	40	6.00	5.67	-0.348	.728
Self-acceptance	36	5.33	5.33	-0.183	.855
Intimacy	40	5.17	5.33	-0.676	.499
Fair treatment	40	5.00	4.67	0.000	1.000
PMP-B	29	5.71	5.19	-0.567	.571

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form. Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

A Wilcoxon signed-rank test revealed no statistically significant differences in the experimental group NSMS and PMP-B total scales and subscales median scores from post- to post-post-test.

6.5.3.4. Summation

The results revealed a fluctuation of between half and two-thirds of the group members reporting meaning seeking and meaning orientation throughout the study. The experimental group participants reported a statistically significant decrease in their search for meaning, particularly in the negative search for meaning and a significant increase in their perception of fair treatment as a source of meaning in life after the intervention. However, there were no significant differences in their search for and identification of meaning three months after the intervention compared to before and after the intervention. These results suggest that the participants' changes in meaning remained stable over time after the intervention.

In addition, there were fluctuations in the prevalence of meaning-seeking and presence of meaning in the control group. In the subsequent section, the outcomes of the statistical analysis performed on the control group data collected from the meaning measure scales and subscales are presented.

6.5.4. Investigating Changes in Meaning Within the Control Group

A comparison of the repeated measures sample medians investigated whether the control group changes in NSMS and PMP-B scores were statistically significant. Hence, Wilcoxon signed-rank tests were conducted to determine any significance in the changes on the pre-vs post-test, pre-vs post-post-test and post-vs post-post-test data. The results of the respective analyses are displayed in Tables 6.23, 6.24 and 6.25.

Table 6.23

Wilcoxon Signed-Rank Test Result Statistics for Pre- vs Post-Intervention Differences in Control Group Scores on the Meaning Scales & Subscales

Scales & Subscales	N	Pre-Test	Post-Test	*z*-value	*p*-value
Positive search	32	29.5	30	-0.548	.584
Negative search	30	32	28	0.000	1.000
NSMS	27	64	59	0.000	1.000
Achievement	31	6	5	-1.155	.248
Relationship	25	5.67	5		.096[b]
Religion	31	7	6.67		.017[b]
Self-transcendence	34	5.83	5.33	-0.743	.458
Self-acceptance	26	5.83	6		.824[b]
Intimacy	30	6	5.83	-0.385	.7
Fair treatment	31	5	5	0.000	1.000
PMP-B	18	5.88	5.38		.629[b]

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form. Median values are reported in the table.

[b] = binomial distribution used implies that the sample was small; therefore, the exact test was used.

$p = .05$

Table 6.24

Wilcoxon Signed-Rank Test Result Statistics for Pre- vs Post-Post-Intervention Differences in Control Group Scores on the Meaning Scales & Subscales

Scales & Subscales	N	Pre-Test	Post-Post-Test	*z*-value	*p*-value
Positive search	11	30.00	28.00		1.000[b]
Negative search	10	28.50	31.50		.180[b]
NSMS	10	56.00	53.00		.754[b]
Achievement	10	5.00	6.33		.727[b]
Relationship	6	6.00	5.33		1.000[b]
Religion	9	6.67	7.00		.687[b]

Scales & Subscales	N	Pre-Test	Post-Post-Test	*z*-value	*p*-value
Self-transcendence	12	5.33	5.67		.344[b]
Self-acceptance	11	5.67	5.00		.727[b]
Intimacy	11	5.33	5.67		1.000[b]
Fair treatment	9	6.00	4.67		.508[b]
PMP-B	4	4.95	5.69		1.000[b]

Note. PMP-B = Personal Meaning Profile brief form. Median values are reported in the table.

[b] = binomial distribution used implies that the sample was small; therefore, the exact test was used.

$p = .05$

Table 6.25

Wilcoxon Signed-Rank Test Result Statistics for Post- vs Post-Post-Intervention Differences in Control Group Scores on the Meaning Scales & Subscales

Scales & Subscales	N	Post-Test	Post-Post-Test	*z*-value	*p*-value
Positive search	10	29.50	27.00		.344[b]
Negative search	9	34.00	26.00		.070[b]
NSMS	8	59.00	53.00		.070[b]
Achievement	11	5.00	6.00		.180[b]
Relationship	7	5.67	5.00		.687[b]
Religion	9	7.00	7.00		1.000[b]
Self-transcendence	12	5.33	5.67		.754[b]
Self-acceptance	11	5.00	5.33		1.000[b]
Intimacy	9	5.33	5.00		1.000[b]
Fair treatment	10	4.00	4.83		1.000[b]
PMP-B	6	5.29	5.69		1.000[b]

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form. Median values are reported in the table.

[b] = binomial distribution used implies that the sample was small; therefore, the exact test was used.

$p = .05$

6.5.4.1. Summation

While the prevalence of meaning-seeking and presence of meaning sources increased in the control group throughout the study, the Wilcoxon signed-rank tests determined no significant difference in the control group NSMS and PMP-B scale and subscale median scores. Hence, the control group participants' perceptions of meaning orientation and sources of meaning present in life did not change significantly during the study.

Subsequently, it was essential to investigate whether the variations in the search for meaning and the presence of meaning measure scores between the experimental and control groups were significant. The statistical analysis results for the differences between the two groups are thus presented.

6.5.5. Investigating the Significance of the Differences in Meaning Between the Experimental and Control Groups

The purpose of this section is to investigate whether there were any statistically significant differences between the experimental and control groups in relation to the meaning measures. Accordingly, Mann-Whitney *U* tests were conducted to compare the NSMS and PMP-B scale and subscale median scores of the two groups at three points: pre-test, post-test and post-post-test.

6.5.5.1. Experimental and Control Groups Pre-Test Differences in Meaning

The results of the Mann-Whitney *U* test are presented in Table 6.26. This test compared the median scores of the experimental and control groups on the NSMS and PMP-B scales and subscales before the intervention.

Table 6.26

*Mann-Whitney **U** Test Result Statistics of the Difference Between Experimental and Control Groups on the Meaning Scale and Subscales Pre-Intervention*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
Positive Search	Experimental	72	77.85				
	Control	64	57.98				
	Total	136		1631	-2.939	**.003***	.5
Negative Search	Experimental	73	70.18				
	Control	57	59.50				
	Total	130		1739	-1.607	.108	
NSMS	Experimental	69	66.71				
	Control	54	55.98				
	Total	123		1538	-1.657	.097	
Achievement	Experimental	73	68.02				
	Control	63	69.06				
	Total	136		2265	-0.155	.877	
Relationship	Experimental	68	54.93				
	Control	57	72.62				
	Total	125		1390	-2.734	**.006***	.5
Religion	Experimental	73	70.38				
	Control	64	67.43				
	Total	137		2236	-0.475	.635	
Self-acceptance	Experimental	76	65.43				
	Control	61	73.45				
	Total	137		2047	-1.186	.236	
Self-transcendence	Experimental	74	74.70				
	Control	67	66.92				
	Total	141		2206	-1.140	.254	
Intimacy	Experimental	77	63.16				
	Control	59	75.47				
	Total	136		1861	-1.817	.069	
Fair treatment	Experimental	73	63.43				
	Control	62	73.38				
	Total	135		1930	-1.479	.139	
PMP-B	Experimental	60	52.43				
	Control	49	58.14				
	Total	109		1316	-0.939	.348	

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form

* $p < .05$

A Mann-Whitney U test revealed that before the intervention, the experimental group (Mdn = 33, n= 72) had a significantly greater positive search for meaning than the control group (Mdn = 29, n= 64), U = 16, z = -2.939, p = .003. The effect size was d = .5, indicating a medium effect. Furthermore, the results showed that on the relationship subscale of the PMP-B before the intervention, the control group (Mdn = 5.67, n= 57) scored significantly higher than the experimental group (Mdn = 4.67, n= 68), U = 1390 z = -2.73, p = .006. The effect size was d = .5, representing a medium effect.

6.5.5.2. Experimental and Control Groups Post-Test Differences in Meaning

A Mann-Whitney U test was employed to investigate the differences between the experimental and control groups NSMS and PMP-B scale and subscale median scores after the intervention (Table 6.27).

Table 6.27

*Mann-Whitney **U** Test Result Statistics of the Difference Between Experimental and Control Groups on the Meaning Scale and Subscales Post- Post-Intervention*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
Positive Search	Experimental	57	46.29				
	Control	32	42.70				
	Total	89		838.50	-0.629	.529	
Negative Search	Experimental	55	44.19				
	Control	34	46.31				
	Total	89		890.50	-0.376	.707	
NSMS	Experimental	54	42.76				
	Control	31	43.42				
	Total	85		824	-0.119	.905	
Achievement	Experimental	59	51.92				
	Control	33	36.80				
	Total	92		653.50	-2.633	**.008***	.6
Relationship	Experimental	55	45.98				
	Control	32	40.59				
	Total	87		771	-0.965	.335	
Religion	Experimental	56	48.77				

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
	Control	33	38.61				
	Total	89		713	-1.913	.056	.4
Self-acceptance	Experimental	58	45.60				
	Control	31	43.87				
	Total	89		864	-0.304	.761	
Self-transcendence	Experimental	59	52.47				
	Control	35	39.11				
	Total	94		739	-2.319	**.020***	.5
Intimacy	Experimental	58	44.52				
	Control	33	48.61				
	Total	91		871	-0.715	.474	
Fair treatment	Experimental	60	49.88				
	Control	35	44.79				
	Total	95		937.50	-0.872	.383	
PMP-B	Experimental	51	41.21				
	Control	26	34.67				
	Total	77		550.50	-1.213	.225	

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form.

* $p < .05$

A Mann-Whitney U test revealed that after the intervention, the experimental group scored significantly higher than the control group on the achievement and self-transcendence subscales of the PMP-B. Achievement was identified as a moderately more significant source of meaning for the experimental group (Mdn = 6, n= 59) when compared to the control group (Mdn = 5, n= 33) U = 653.500 z = -2.63, p= .008. The effect size was d = .6, indicating a medium effect. Comparable results related to self-transcendence as a source of meaning were obtained. The experimental group (Mdn = 6, n= 59) scores were significantly greater than the control group (Mdn = 5.33, n= 35), $U = 739$ z = -2.32, p= .020. The effect size was d = .5, representing a medium effect.

6.5.5.3. Experimental and Control Groups Post-Post-Test Differences in Meaning

The results of a Mann-Whitney *U* Test comparing the differences between the experimental and control group post-post-test median scores on the NSMS and PMP-B scales and subscales are shown in Table 6.28.

Table 6.28

*Mann-Whitney **U** Test Result Statistics of the Difference Between Experimental and Control Groups on the Meaning Scale and Subscales Post-Post-Intervention*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-score	*p*-value	Exact Sig. [2*(1-tailed Sig.)]
Positive Search	Experimental	41	27.74				
	Control	11	21.86				
	Total	52		174.50	-1.144	.253	
Negative Search	Experimental	41	26.01				
	Control	11	28.32				
	Total	52		205.50	-0.449	.654	
NSMS	Experimental	39	26.33				
	Control	10	19.80				
	Total	49		143	-1.291	.197	.205[b]
Achievement	Experimental	41	26.84				
	Control	12	27.54				
	Total	53		239.50	-0.140	.889	
Relationship	Experimental	35	23.70				
	Control	10	20.55				
	Total	45		150.50	-0.674	.500	.510[b]
Religion	Experimental	40	25.54				
	Control	11	27.68				
	Total	51		201.50	-0.440	.660	
Self-acceptance	Experimental	38	25.96				
	Control	13	26.12				
	Total	51		245.50	-0.033	.974	
Self-transcendence	Experimental	42	27.52				
	Control	13	29.54				
	Total	55		253	-0.399	.690	
Intimacy	Experimental	41	27.17				
	Control	12	26.42				
	Total	53		239.000	-0.150	.881	
Fair treatment	Experimental	41	26.38				
	Control	11	26.95				

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-score	*p*-value	Exact Sig. [2*(1-tailed Sig.)]
PMP-B	Total	52		220.500	-0.112	.910	
	Experimental	32	20.27				
	Control	9	23.61				
	Total	41		120.500	-0.741	.459	.466[b]

Note. NSMS = New Search for Meaning Scale, PMP-B = Personal Meaning Profile brief form. [b] = binomial distribution used implies that the sample was small; therefore, the exact test was used.

$p = .05$

The Mann-Whitney *U* tests found no statistically significant differences between the experimental and control groups in the post-post-test NSMS and PMP-B median scores.

6.5.5.4. Summation

Prior to the intervention, the experimental group reported a significantly higher positive search for meaning than the control group. At the same time, the control group reported relationships as a significantly greater source of meaning than the experimental group. After the intervention, there was no significant difference in the groups' search for meaning. With regard to the presence of meaning, after the intervention, the experimental group reported achievement and self-transcendence as significantly higher sources of meaning than the control group. Three months after the intervention, there were no significant differences in the experimental and control groups' search for meaning and perception of the presence of meaning. Before concluding that the EAPPI had an effect on the reported significant changes in meaning-seeking and presence of meaning sources, it was imperative to understand the influence of the categorical demographic variables. Due to the lack of significant differences in the control group meaning measure scores, it was unnecessary to include them in the subsequent statistical analysis stage.

6.5.6. Investigating the Influence of the Demographic Variables on Experimental Group Significant Meaning Changes

In the following section, the non-parametric statistical analysis that evaluated the null hypothesis that the experimental group distribution of significant scores on the meaning measures would be the same across gender, age, education level, employment status and number of intervention sessions attended is detailed. The description of the categories is the same as that described in Section 6.4.6.

6.5.6.1. Gender

The results of the independent samples Mann-Whitney *U* test that determined no difference in the distribution of significant scores on the study meaning measures across the gender categories, male and female are displayed in Table 6.29. It was concluded that the perception of search and presence of meaning was the same for both genders.

Table 6.29

Summary of Results of an Independent Samples Mann-Whitney U Test for the Distribution of Meaning Measure Scores Across Gender Categories

Scale and Subscale and Timing of Test	N	Test Statistic	Mann-Whitney *U*	*z*-value	Asymptotic Sig.(2-sided test)	Exact Sig.(2-sided test)
Pre-Negative Search	73	508.500	508.50	0.701	.483	
Post-Negative Search	55	284.500	284.50	0.541	.588	
Post-Post-Negative Search	41	110.500	110.50	0.203	.839	.843[c]
Pre-NSMS	69	421.500	421.50	0.240	.810	
Post-NSMS	54	288.500	288.50	1.118	.264	
Post-Post-NSMS	39	110.000	110.00	1.051	.293	.314[c]
Pre-Fair Treatment	73	424.500	424.50	-0.909	.363	
Post-Fair Treatment	60	335.500	335.50	0.541	.589	
Post-Post-Fair Treatment	41	117.500	117.50	0.463	.643	.653[c]

Note. Negative Search = Negative Search for Meaning Subscale, NSMS = New Search for Meaning Scale. pre = pre-test, post = post-test & post-post = post-post-test.

Asymptotic significance is displayed.

[c] = exact significance displayed for this test.

p =.05.

6.5.6.2. Age

The results of a Kruskal-Wallis test, presented in Table 6.30, revealed no difference in the distribution of significant scores across the three age categories on the meaning measures. One may conclude that age did not influence participant search and presence of meaning.

Table 6.30

Summary of Results of an Independent Samples Kruskal-Wallis Test for the Distribution of Meaning Measure Scores Across Age Categories

Scale and Subscales & Time of Test	N	df	z-value	Sig.[a.b]
Pre-Negative Search	73	2	0.016[a]	.992
Post-Negative Search	55	2	1.202[a]	.548
Post-Post-Negative Search	41	2	1.542[a]	.463
Pre-NSMS	69	2	.271[a]	.873
Post-NSMS	54	2	2.056[a]	.358
Post-Post-NSMS	39	2	2.361[a]	.307
Pre-Fair Treatment	73	2	1.662[a]	.436
Post-Fair Treatment	60	2	2.837[a]	.242
Post-Post-Fair Treatment	41	2	3.601[a]	.165

Note: Negative Search = Negative Search for Meaning Subscale of NSMS, NSMS = New Search for Meaning Scale. Fair Treatment = Fair Treatment Subscale of PMP-B. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. p = .05. [b]. Asymptotic significance is displayed.

6.5.6.3. Education Level

In Table 6.31, the results of a Kruskal-Wallis test for the distribution of significant scores on the meaning measure that were not significantly different across participant levels of education are presented. Accordingly, one may conclude that the level of education did not influence how the experimental group perceived meaning.

Table 6.31

Summary of Results of an Independent Samples Kruskal-Wallis Test for the Distribution of Meaning Measure Significant Scores Across Levels of Education Categories

Scales and Subscales and Timing of Test	N	df	z-value	Sig.[a.b]
Pre-Negative Search	71	3	3.607[a]	.307
Post-Negative Search	53	2	2.450[a]	.294
Post-Post-Negative Search	39	2	1.683[a]	.431
Pre-NSMS	68	3	1.946[a]	.584
Post-NSMS	52	2	1.624[a]	.444
Post-Post-NSMS	37	2	.986[a]	.611
Pre-Fair Treatment	71	3	3.178[a]	.365
Post-Fair Treatment	58	2	1.887[a]	.389
Post-Post-Fair Treatment	39	2	5.089[a]	.079

Note. Negative Search = Negative Search for Meaning Subscale of NSMS, NSMS = New Search for Meaning Scale. Fair Treatment = Fair Treatment Subscale of PMP-B. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. p = .05. [b]. Asymptotic significance is displayed.

6.5.6.4. Employment Status

A Mann-Whitney U test revealed that before and after the intervention, there was no difference in the distribution of significant scores on the meaning subscales across the employment categories. However, three months after the intervention, there was a difference

in the distribution of the total NSMS scores across the employed and unemployed categories (Table 6.32).

Table 6.32

*Results of an Independent Samples Mann-Whitney **U** Test for the Distribution of Meaning Measure Significant Scores Across Employment Status Categories*

Scales and Subscales & Timing of Test	N	Test Statistic	Mann-Whitney *U*	*z*-value	Asymptotic Sig.(2-sided test)	Exact Sig.(2-sided test)	Cohen's *d*
Pre-NSMS	68	613.000	613	0.661	0.509		
Post-NSMS	53	380.000	380	0.572	0.567		
Post-Post-NSMS	38	250.500	250.50	2.063	0.039*	**.038*[c]**	.71
Pre-Fair Treatment	72	658.000	658	0.258	0.796		
Post-Fair Treatment	59	445.500	445.50	0.253	0.800		
Post-Post-Fair Treatment	40	257.000	257	1.564	0.118		

Note. Negative Search = Negative Search for Meaning Subscale of NSMS, NSMS = New Search for Meaning Scale. Fair Treatment = Fair Treatment Subscale of PMP-B. pre = pre-test, post = post-test & post-post = post-post-test.

Asymptotic significance is displayed.

[c] = exact significance displayed for this test.

* $p < .05$.

Three months after the intervention, the unemployed members of the experimental group reported a significantly greater overall search for meaning (Mean rank = 23.03 , n= 20) when compared to their employed contemporaries (Mean rank = 15.58, n= 18) U = 250.50, z = 2.06, p= .008. The effect size was d = .7, indicating a medium to large effect.

Further investigation explored whether there was a difference in meaning orientation across the employment categories within the significant change in overall search for meaning

difference at post-post-testing. The results of a Mann-Whitney *U* test that investigated the distribution of post-post positive and negative search for meaning across the employment categories are presented in Table 6.33.

Table 6.33

*Results of a Mann-Whitney **U** Test Investigating the Distribution of Post-Post-NSMS Subscale Scores across Employment Categories*

NSMS Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
Positive Search	Employed	28	21.89				
	Unemployed	22	30.09				
	Total	50		409	1.977	**.048***	.6
Negative Search	Employed	29	22.12				
	Unemployed	21	30.17				
	Total	50		402.50	1.928	.054	

Note. Positive Search = Positive Search for Meaning Subscale of NSMS, Negative Search = Negative Search for Meaning Subscale of NSMS. NSMS = New Search for Meaning Subscale.

Asymptotic significance is displayed.

* p < .05

The results of the Mann-Whitney *U* test revealed that three months after the intervention, the unemployed members of the experimental group reported a significantly greater positive search for meaning (Mean rank = 30.09, n= 22) when compared to their employed contemporaries (Mean rank = 21.89, n= 28), U = 409.000 z = 1.98, p= .048. The effect size was d = .6, demonstrating a medium effect.

6.5.6.5. Number of Sessions Attended

The results of a Kruskal-Wallis test (Table 6.34) showed no significant difference in the distribution of significant scores on the meaning measure across the number of intervention sessions attended. The number of sessions attended did not impact the significant difference in participant meaning scores.

Table 6.34

Summary of Results of an Independent Samples Kruskal-Wallis Test for the Distribution of Meaning Measure Significant Scores Across the Categories of Number of Sessions Attended

Scales and Subscales & Timing of Test	N	*df*	*z*-value	Sig.[a.b]
Pre-Negative Search	73	2	0.552[a]	.759
Post-Negative Search	55	2	0.213[a]	.899
PostPost-Negative Search				.[c]
Pre-NSMS	69	2	1.595[a]	.450
Post-NSMS	54	2	0.356[a]	.837
PostPost-NSMS				.[c]
Pre-Fair Treatment	73	2	0.780[a]	.677
Post-Fair Treatment	60	2	1.780[a]	.411
PostPost-Fair Treatment				.[c]

Note. Negative Search = Negative Search for Meaning Subscale of NSMS, NSMS = New Search for Meaning Scale. Fair Treatment = Fair Treatment Subscale of PMP-B. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. $p = .05$. [b]. Asymptotic significance is displayed. [c]. There is only one group with valid data.

6.5.7. Synopsis of the Effect of the EAPPI on Meaning

During the study, over half of the experimental and control group participants consistently indicated they were searching for meaning and could identify the presence of sources of meaning in life. However, there were fluctuations in the prevalence of meaning throughout the study. Initially, approximately half of the experimental group participants

reported a positive search for meaning, which increased to close to two-thirds of the group three months after the intervention. Furthermore, both groups reported a substantial increase in the prevalence of fair treatment as a source of meaning. However, the groups reported differences in the prevalence of various sources of meaning such as relationship (control group) and achievement (experimental group).

Non-parametric statistical analysis was conducted to investigate if there were any significant differences in the experimental and control group meaning scores. At the study's outset, the experimental and control groups differed significantly with regard to aspects of meaning. While the experimental group reported a moderately greater positive search for meaning, the control group identified relationships as a mildly more important source of meaning. After the intervention, the experimental group identified achievement and self-transcendence as moderately more important sources of meaning than the control group. In addition, after the intervention, the experimental group reported a decreased search for meaning. In contrast, the control group reported an increase in the search for meaning. Therefore, there was no longer a significant difference between the groups meaning orientation. Three months after the intervention, there was no significant difference between the groups' search for meaning and presence of meaning sources.

Further analysis revealed that the control group's search for and presence of meaning remained stable across the study, as indicated by the lack of significant differences on the NSMS and PMP-B scale and subscale scores at the three assessment time points. The experimental group reported a significant difference in meaning scores after the intervention. First, after the intervention, the experimental group reported a significant decrease in their overall search for meaning, particularly in their negative meaning orientation. Second, the same group identified fair treatment, achievement and self-transcendence as significantly stronger sources of meaning after the intervention. A comparison of the search for and the

presence of sources of meaning scores from before the intervention to three months later as well as after the intervention to three months later yielded no significant differences. This suggests that the reduction in search for meaning and negative meaning orientation coupled with the increase in the perception of fair treatment, achievement and self-transcendence as significant sources of meaning remained constant three months after the intervention.

Moreover, there was no difference in the experimental group meaning-seeking and the presence of sources of meaning between the gender, age and education level categories. In addition, the number of sessions attended did not influence the significant changes in meaning reported. Interestingly, three months after the intervention, the unemployed reported a higher overall search for meaning, specifically a higher positive search for meaning, than their employed contemporaries.

Consequently, after attending the EAPPI, the analysis revealed that participants reported significant favourable long-term changes in meaning-seeking and the presence of sources of meaning in life. Overall meaning-seeking, especially negative meaning orientation, decreased for participants while their perception of the presence of sources of meaning, particularly fair treatment, achievement and self-transcendence increased. Three months after the intervention, the experimental group maintained the changes in meaning. In addition, the results revealed that unemployed members of the experimental group experienced a long-term increase in overall meaning-seeking and positive meaning orientation.

6.6. Ascertaining the Influence of the EAPPI on Adult Hope

In this section, the statistical analysis that ascertained the influence of the EAPPI on hope is presented. The participants completed self-report questionnaires on locus of hope (LoHS) and perceived hope (PHS) at three different time points. In Section 5.5.2.1, the validity and reliability of the hope measures in the study are reported.

6.6.1. Descriptive Statistics for Hope

The descriptive statistics for the experimental group on the hope variables at the pre-test, post-test and post-post-test are presented in Table 6.35.

Table 6.35

Descriptive Statistics for Sample on Hope at Pre-, Post- and Post-Post-Intervention

			Pre-Intervention								Post-Intervention								Post-Post-Intervention							
Group	Variable	N Obs	N Miss	N	Mean	Median	Min	Max	Skew	Kurt	N Miss	N	Mean	Median	Min	Max	Skew	Kurt	N Miss	N	Mean	Median	Min	Max	Skew	Kurt
LoHS																										
	INT		10	68	3.28	3.38	2.25	4.00	-0.26	-0.47	22	56	3.25	3.38	1.13	4.00	-1.39	3.28	38	40	3.22	3.25	2.25	3.88	-0.43	-0.20
	EXTPA		9	69	2.94	3.13	1.00	4.00	-0.73	-0.47	22	56	3.07	3.25	1.00	4.00	-1.02	0.62	44	34	2.97	3.25	1.00	3.88	-1.06	0.14
Experimental group	EXTPE	78	12	66	2.45	2.50	1.00	4.00	-0.15	-0.70	23	55	2.63	2.75	1.00	4.00	-0.36	-0.68	39	39	2.60	2.63	1.00	3.88	-0.23	-1.15
	EXTSP		10	68	3.63	3.81	2.50	4.00	-1.03	0.05	20	58	3.58	3.88	1.50	4.00	-1.81	3.33	40	38	3.47	3.63	1.88	4.00	-1.10	1.00
	LoHS		28	50	3.04	3.00	2.22	3.91	0.08	-0.87	27	51	3.15	3.22	1.22	4.00	-1.21	2.48	46	32	3.09	3.17	2.16	3.91	-0.47	-0.65
	INT		13	58	3.37	3.38	2.13	4.00	-0.42	-0.11	36	35	3.12	3.38	1.63	4.00	-0.78	-0.11	59	12	3.09	3.44	1.50	3.63	-1.69	1.65
	EXTPA		15	56	3.10	3.25	1.25	4.00	-0.84	-0.18	38	33	3.05	3.00	1.25	4.00	-0.75	-0.07	60	11	2.97	3.38	1.13	4.00	-0.73	-0.88
Control group	EXTPE	71	15	56	2.87	3.00	1.00	4.00	-0.60	0.16	37	34	2.73	2.75	1.13	4.00	-0.28	-0.48	59	12	2.70	3.06	1.00	3.63	-1.08	-0.00
	EXTSP		14	57	3.61	3.88	1.63	4.00	-1.88	3.94	37	34	3.38	3.75	1.00	4.00	-1.49	1.92	60	11	3.24	3.63	1.25	4.00	-1.28	0.36
	LoHS		21	50	3.28	3.25	2.22	4.00	-0.47	0.35	39	32	3.10	3.17	1.63	4.00	-0.86	0.79	62	9	3.03	3.25	1.72	3.75	-1.02	-0.07
PHS																										
Experimental group	PHS	78	2	76	22.70	23.50	5.00	30.00	-1.09	2.21	20	58	24.29	25.00	10.00	30.00	-1.10	1.28	37	41	22.88	24.00	4.00	29.00	-1.69	3.25
Control group	PHS	71	10	61	23.51	24.00	8.00	30.00	-1.00	1.85	40	31	22.52	25.00	3.00	30.00	-1.30	1.79	58	13	22.23	24.00	4.00	29.00	-1.65	2.13

Note. INT = Internal locus of hope, EXTPA = External locus of hope - family as a source of hope, EXTPE = External locus of hope - peers as a source of hope, EXTSP = External locus of hope – spiritual higher being as a source of hope, LoHS = Locus of Hope Scale, PHS = Perceived Hope Scale

6.6.2. Prevalence of Hope in the Sample Throughout the Study

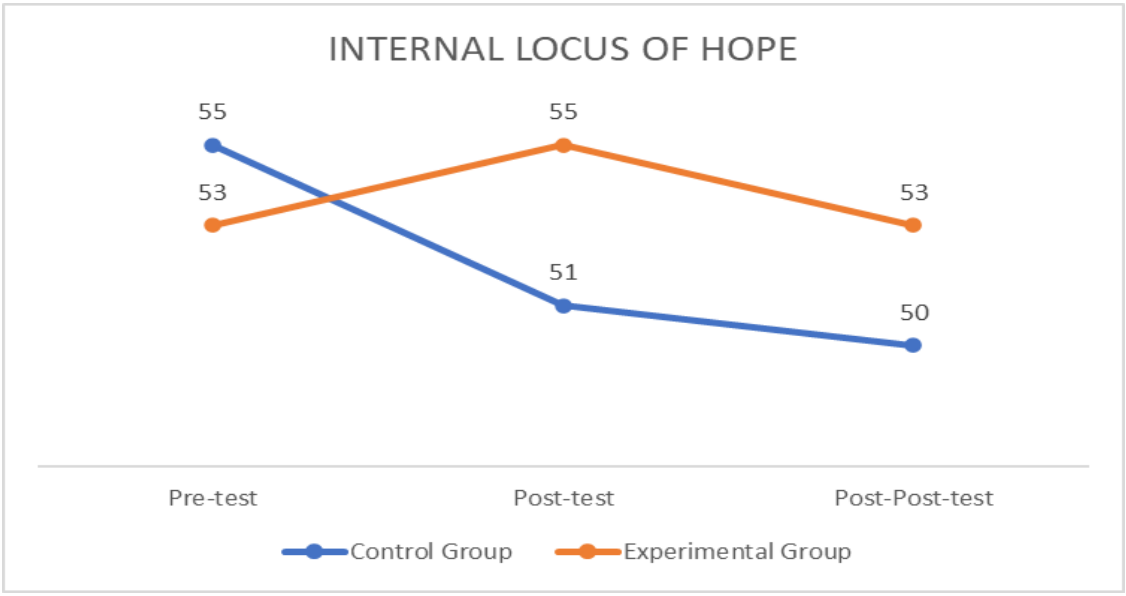
A preliminary investigation concerning the prevalence of hope in the experimental conditions was conducted by exploring the percentage of participant responses equal to or above the median on the LoHS subscales and the PHS before, after the intervention and three months later.

6.6.2.1. Prevalence of Locus of Hope

Over half of the experimental and control groups reported an internal locus of hope equal to or above the median throughout the study (Figure. 6.8). At the start of the study, fewer participants in the experimental group reported internal locus of hope than in the control group. However, this increased after the intervention. It is noteworthy that three months after the intervention, the percentage of experimental group participants who reported an internal locus of hope decreased to the pre-intervention number. At three months, a higher percentage of the experimental group than control group reported an internal locus of hope.

Figure 6.8

Prevalence of Internal Locus of Hope in the Experimental and Control Groups Across the Study Period



Note. Values reported are the percentage of participant responses ≥ Median

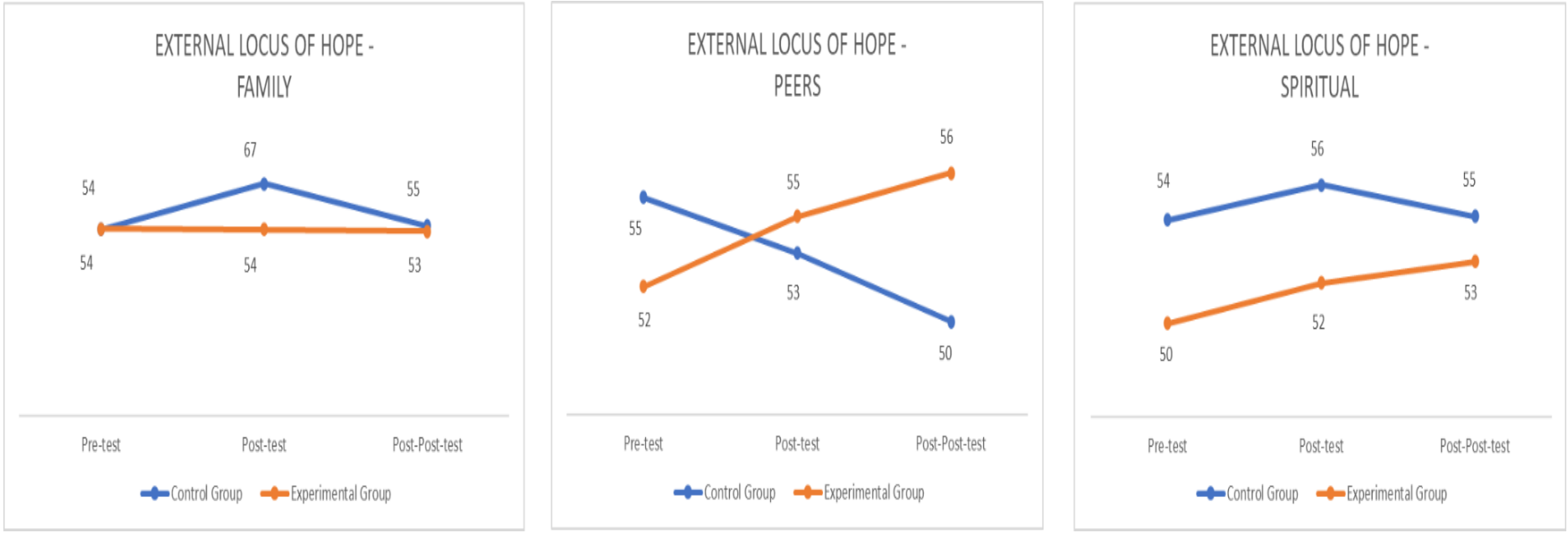
With regard to external loci of hope, 50% of the participants in both experimental groups reported placing hope in family, peers and spiritual practices across the study (Figure. 6.9). There was a fluctuation in the prevalence of putting hope in external loci within participants of both groups, with a consistent increase in the number of experimental group participants reporting peers and spiritual practices as loci of hope across the study. The prevalence of family as a locus of hope appeared stable in comparison to the control group after the intervention and three months later.

6.6.2.2. Prevalence of Perceived Hope

At the beginning of the study, there were more in the control group (54%) than in the experimental group (50%) who perceived life as hopeful (Figure. 6.10). The prevalence of perceived hope in the control group, approximately 54%, remained stable over the study. There was a sharp increase in the number of participants in the experimental group (59%) who perceived their lives as hopeful after the intervention. Although this number declined over the three months after the intervention, the percentage of the experimental group (54%) who perceived their life as hopeful three months after the intervention was higher than before, equalling the prevalence of hope in the control group.

Figure 6.9

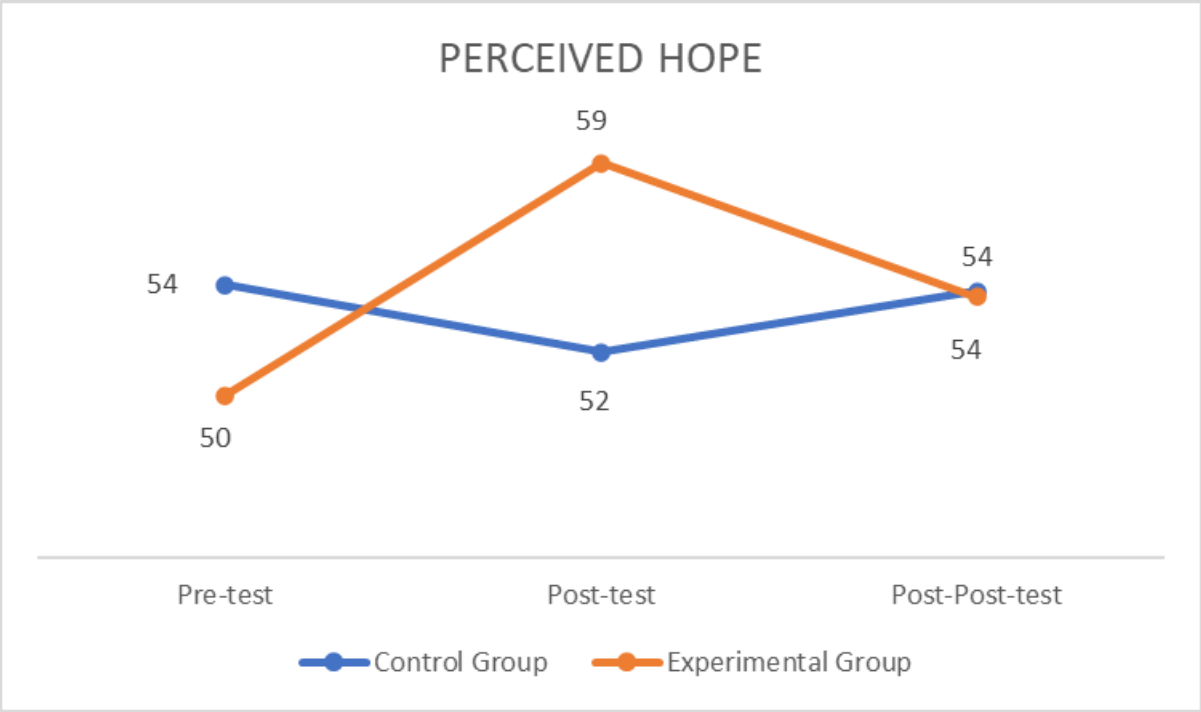
Prevalence of External Loci of Hope for Experimental and Control Groups Across the Study Period



Note. Values reported are the percentage of participant responses ≥ Median

Figure 6.10

Prevalence of Experimental and Control Group Perceived Hope Throughout the Study



Note. Values reported are the percentage of participant responses ≥ Median

6.6.2.3. Summation

Over the study, more than half of the participants in both groups placed hope in internal and external sources and perceived their lives as hopeful. However, the prevalence of hope fluctuated in the sample across the study. Therefore, it was necessary to investigate the significance of these changes in the dimensions of hope to establish if the intervention influenced the changes. In the following section, the statistical analyses that ascertained the differences in hope within and between the experimental and control conditions are presented.

6.6.3. Ascertaining Changes in Hope Within the Experimental Group

The purpose of this section is to ascertain any significant changes in hope prevalence among the experimental group, as measured by the LoHS and PHS before, immediately after and three months after the intervention. The Wilcoxon signed-rank test was employed to determine any significance in the changes in the participant median scores. The statistical analysis and results of the pre-test vs post-test, pre-test vs post-post-test and post-test vs post-post-test data are thus presented.

6.6.3.1. Pre-Test vs. Post-Test Comparison

A Wilcoxon signed-rank test was conducted on the pre-vs post-test median scores of the LoHS and PHS hope measures to ascertain if there was a significant difference in experimental group hope after attending the EAPPI. The results of the statistical analysis are displayed in Table 6.36.

Table 6.36

Wilcoxon Signed-Rank Test Result Statistics for Differences in Experimental Group Pre- vs Post-Test Hope

Scales & Subscales	N	Pre-Test	Post-Test	*z*-value	*p*-value	Cohen's *d*
INT	48	3.4	3.4	-0.474	.635	
EXTPA	50	3.3	3.3	-0.452	.651	
EXTPE	47	2.5	2.8	-0.915	.36	
EXTSP	50	3.9	3.9	-0.329	.742	
LoHS	33	3.0	3.1	-0.696	.486	
PHS	56	23.0	25.0	-3.081	**.002***	.90

Note. INT = Internal locus of hope, EXTPA = External locus of hope - family as a source of hope, EXTPE = External locus of hope - peers as a source of hope, EXTSP = External locus of hope – spiritual higher being as a source of hope, LoHS = Locus of Hope Scale, PHS = Perceived Hope Scale. Median values are reported in the table.

* $p < .05$.

The Wilcoxon signed-rank test revealed a significantly substantial increase in experimental group perceptions of hope in their life, z = -3.081, n = 56, p <.05. The effect size was d = .90, indicating a large effect. From the pre-test to the post-test, the median scores on the PHS increased from Mdn = 23 to Mdn = 25.

6.6.3.2. Pre-Test vs. Post-Post-Test Comparison

The results of a Wilcoxon signed-rank test statistical analysis that compared g the difference in experimental group LoHS and PHS scores before and after the intervention are displayed in Table 6.37.

Table 6.37

Wilcoxon Signed-Rank Test Result Statistics for Differences in Experimental Group Hope Pre- vs Post-Post-Test

Scales & Subscales	N	Pre-Test	Post-Post-Test	*z*-value	*p*-value
INT	35	3.38	3.13	-0.359	.719
EXTPA	32	2.94	3.25	-0.945	.345
EXTPE	33	2.25	2.75	-1.486	.137
EXTSP	31	3.88	3.63		.307[b]
LoHS	22	2.89	3.13		.134[b]
PHS	40	23.00	24.00	-0.696	.486

Note. INT = Internal locus of hope, EXTPA = External locus of hope - family as a source of hope, EXTPE = External locus of hope - peers as a source of hope, EXTSP = External locus of hope – spiritual higher being as a source of hope, LoHS = Locus of Hope Scale, PHS = Perceived Hope Scale. Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

A Wilcoxon signed-rank test revealed no statistically significant differences in the experimental group LoHS and PHS total scale and subscales median scores over the period pre-test to post-post-test.

6.6.3.3. Post-Test vs Post-Post-Test Comparison

In Table 6.38, the results of a Wilcoxon signed-rank test statistical analysis comparing the difference in experimental group NSMS and LoHS and subscale scores post-test and post-post-test are displayed.

Table 6.38

Wilcoxon Signed-Rank Test Result Statistics for Differences in Experimental Group Hope Post- vs. Post-Post-Intervention

Scales & Subscales	N	Post-Test	Post-Post-Test	*z*-value	*p*-value
INT	39	3.38	3.25	-1.69	.091
EXTPA	31	3.13	3.25		1.000[b]
EXTPE	37	2.63	2.63	0.000	1.000
EXTSP	38	3.88	3.63	-1.323	.186
LoHS	29	3.22	3.22	-0.743	.458
PHS	40	26	24	-1.460	.144

Note. INT = Internal locus of hope, EXTPA = External locus of hope - family as a source of hope, EXTPE = External locus of hope - peers as a source of hope, EXTSP = External locus of hope – spiritual higher being as a source of hope, LoHS = Locus of Hope Scale, PHS = Perceived Hope Scale. Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

The Wilcoxon signed-rank tests revealed no statistically significant differences in the experimental group LoHS and PHS total scale and subscales median scores over the period post-test to post-post-test.

6.6.3.4. Summation

The statistical analysis revealed that after the intervention, the participants' perceptions of hope increased significantly. This considerable gain remained stable three months after the intervention, as indicated by the lack of significant change in PHS median scores between the post- and post-post-test. Conversely, the analysis ascertained no significant differences in the internal and external loci of hope across the study. This result suggests that the placement of hope in internal and external loci remained stable for the experimental group participants.

In the following section, the statistical analysis results of the observed changes within the control group hope scores are described.

6.6.4. Ascertaining the Significance of the Changes in Hope Within the Control Group

To ascertain if the control group differences in scores on the repeated hope measures were statistically significant, the Wilcoxon signed-rank test was conducted on the pre-test, post-test and post-post-test data. The statistical analysis results are displayed in Tables 6.39, 6.40 and 6.41.

Table 6.39

Wilcoxon Signed-Rank Test Result Statistics for Differences in Control Group Hope Pre-Test vs Post-Test

Scales & Subscales	N	Pre-Test	Post-Test	*z*-value	*p*-value
INT	30	3.5	3.38	-1.54	.124
EXTPA	30	3.19	3.13	-0.385	.7
EXTPE	29	2.88	2.75		1.000[b]
EXTSP	31	3.88	3.75		.383[b]
LoHS	26	3.19	3.17		.424[b]
PHS	29	23	25		1.000[b]

Note. INT = Internal locus of hope, EXTPA = External locus of hope - family as a source of hope, EXTPE = External locus of hope - peers as a source of hope, EXTSP = External locus of hope – spiritual higher being as a source of hope, LoHS = Locus of Hope Scale, PHS = Perceived Hope Scale. Median values are reported in the table.

[b] = binomial distribution used, implies that the sample was small; therefore, the exact test was used.

Table 6.40

Wilcoxon Signed-Rank Test Result Statistics for Differences in Control Group Hope Pre-Test vs Post-Post-Test

Scales & Subscales	N	Pre-Test	Post-Post-Test	z-value	p-value
INT	9	3.63	3.38		.180[b]
EXTPA	8	3.13	2.69		.070[b]

EXTPE	8	3.19	3.06	.453[b]
EXTSP	8	3.81	3.56	.125[b]
LoHS	5	3.16	3.41	.375[b]
PHS	11	23.00	24.00	.754[b]

Note. INT = Internal locus of hope, EXTPA = External locus of hope - family as a source of hope, EXTPE = External locus of hope - peers as a source of hope, EXTSP = External locus of hope – spiritual higher being as a source of hope, LoHS = Locus of Hope Scale, PHS = Perceived Hope Scale. Median values are reported in the table.

[b] = binomial distribution used implies that the sample was small; therefore, the exact test was used.

Table 6.41

Wilcoxon Signed-Rank Test Result Statistics for Differences in Control Group Hope Post- vs Post-Post-Intervention

Scales & Subscales	N	Post-Test	Post-Post-Test	z-value	p-value
INT	11	3.5	3.38		1.000[b]
EXTPA	10	3.25	3.19		.727[b]
EXTPE	11	3	3		1.000[b]
EXTSP	10	3.81	3.56		.289[b]
LoHS	8	3.31	3.23		.727[b]
PHS	10	24	25.5		.508[b]

Note. INT = Internal locus of hope, EXTPA = External locus of hope - family as a source of hope, EXTPE = External locus of hope - peers as a source of hope, EXTSP = External locus of hope – spiritual higher being as a source of hope, LoHS = Locus of Hope Scale, PHS = Perceived Hope Scale. Median values are reported in the table.

[b] = binomial distribution used implies that the sample was small; therefore, the exact test was used.

The Wilcoxon signed-rank tests revealed no significant differences in the control group median scores on the LoHS and PHS scales and subscales from pre-test to post-test, pre-test to post-post-test and post-test to post-post-test.

6.6.4.1. Summation

There were fluctuations in the prevalence of loci of hope and perceived hope observed in the control group throughout the study. The Wilcoxon signed-rank tests determined no significant difference in the LoHS and PHS scale and subscale median scores. Hence, one may conclude that there was no significant change within the control group's hope and that their levels of hope remained stable during the study period.

Thereafter, it was essential to investigate whether variations in the locus of hope and perceived hope scores between the experimental and control groups were significant. The statistical analysis results for the differences in hope between the two groups are subsequently presented.

6.6.5. Ascertaining the Significance of the Differences in Hope Between the Experimental and Control Groups

The aim of this section is to inform whether there were any statistically significant differences between the independent experimental and control groups with regard to the hope measures. Accordingly, Mann-Whitney U tests were conducted to compare the LoHS and PHS scale and subscale median scores of the control and experimental groups at three points in time (pre-test, post-test and post-post-test).

6.6.5.1. Experimental and Control Groups Pre-Test Differences in Hope

In Table 6.42, the results of the Mann-Whitney U tests on the LoHS and PHS pre-test data to ascertain the differences between experimental and control group levels of hope before the intervention are presented.

Table 6.42

*Mann-Whitney **U** Test Results Ascertaining the Difference in Pre-Test Hope Data Scores Between the Experimental and Control Groups*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value	Cohen's *d*
INT	Experimental	68	59.80				
	Control	58	67.84				
	Total	126		1721	-1.236	.216	
EXTPA	Experimental	69	60.51				
	Control	56	66.06				
	Total	125		1761	-0.853	.394	
EXTPE	Experimental	66	52.82				
	Control	56	71.73				
	Total	122		2109	-2.950	**.003***	.6
EXTSP	Experimental	68	60.88				
	Control	57	65.53				
	Total	125		1275	-0.742	.458	
LoHS	Experimental	50	42.46				
	Control	50	58.54				
	Total	100		1794	-2.773	**.006***	.6
PHS	Experimental	76	66.24				
	Control	61	72.43				
	Total	137		848	-0.910	.363	

Note. INT=Internal locus of hope, EXTPA=Family as external locus of hope, EXTPE= Peers as external locus of hope, EXTSP= Spirituality as external locus of hope, LoHS=Locus of Hope Scale, PHS= Perceived Hope Scale.

* $p < .05$.

The Mann-Whitney U tests indicated that on the overall LoHS, the control group (Mdn = 3.25, n= 50) scored significantly higher than the experimental group (Mdn = 3, n= 50), $U = 1794$ z = -2.77, p= .003. The effect size was d = .6, demonstrating a medium effect. In addition, on the EXTPE subscale, the control group (Mdn = 3, n= 56) scored significantly higher than the experimental group (Mdn = 2.50, n= 66), $U =$ z = -2.95, p= .006. The effect size was d = .6, indicating a medium effect.

6.6.5.2. Experimental and Control Groups Post-Test Differences in Hope

In Table 6.43, the results of the Mann-Whitney *U* Tests on the LoHS and PHS post-test data that determined the differences between experimental and control group levels of hope before the intervention are displayed.

Table 6.43

*Mann-Whitney **U** Ascertaining the Difference in Post-Test Hope Data Scores Between the Experimental and Control Groups*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney *U*	*z*-value	*p*-value
INT	Experimental	56	47.69			
	Control	35	43.30			
	Total	91		885.50	-0.774	.439
EXTPA	Experimental	56	45.41			
	Control	33	44.30			
	Total	89		901	-0.196	.845
EXTPE	Experimental	55	43.79			
	Control	34	46.96			
	Total	89		868.50	-0.563	.574
EXTSP	Experimental	58	48.85			
	Control	34	42.49			
	Total	92		849.50	-1.124	.261
LoHS	Experimental	51	42.97			
	Control	32	40.45			
	Total	83		766.50	-0.463	.643
PHS	Experimental	58	47.15			
	Control	31	40.98			
	Total	89		774.50	-1.076	.282

Note. INT=Internal locus of hope, EXTPA=Family as external locus of hope, EXTPE= Peers as external locus of hope, EXTSP= Spirituality as external locus of hope, LoHS=Locus of Hope Scale, PHS= Perceived Hope Scale.

$p = .05$.

Concerning participant levels of hope after the EAPPI, the Mann-Whitney *U* tests revealed no statistically significant differences between the experimental and control groups LoHS and PHS scale and subscale scores.

6.6.5.3. Experimental and Control Groups Post-Post-Test Differences in Hope

The results of a Mann-Whitney *U* test conducted to ascertain the significance of the differences between the experimental and control group's LoHS and PHS scales and subscales scores three months after the intervention are presented in Table 6.44.

Table 6.44

*Mann-Whitney **U** Test Results Ascertaining the Difference in Post-Post-Test Hope Data Scores Between the Experimental and Control Groups*

Scales & Subscales	Group	N	Mean Rank	Mann-Whitney U	*z*-score	*p*-value	Exact Sig. [2*(1-tailed Sig.)]
INT	Experimental	40	26.23				
	Control	12	27.42				
	Total	52		229	-0.240	.810	
EXTPA	Experimental	34	22.40				
	Control	11	24.86				
	Total	45		166.50	-0.543	.587	.593[b]
EXTPE	Experimental	39	25.59				
	Control	12	27.33				
	Total	51		218	-0.356	.722	
EXTSP	Experimental	38	25.08				
	Control	11	24.73				
	Total	49		206	-0.073	.942	
LoHS	Experimental	32	20.73				
	Control	9	21.94				
	Total	41		135.50	-0.268	.789	.793[b]
PHS	Experimental	41	27.17				
	Control	13	28.54				
	Total	54		253	-0.275	.783	

Note: INT=Internal locus of hope, EXTPA=Family as external locus of hope, EXTPE= Peers as external locus of hope, EXTSP= Spirituality as external locus of hope, LoHS=Locus of

Hope Scale, PHS= Perceived Hope Scale. [b] = binomial distribution used implies that the sample was small; therefore, the exact test was used. p = .05.

The Mann-Whitney U tests indicated no statistically significant differences between the experimental and control groups' LoHS and PHS scale and subscale scores three months after the intervention.

6.6.5.4. Summation

Before the intervention, the control group reported moderately greater placement of hope in different loci overall, specifically placing more hope externally in peers than the experimental group. Interestingly, after the intervention and three months later, the groups had no significant differences in hope. Given that the experimental group levels were significantly lower than those of the control group before the intervention, the experimental hope levels increased and were comparable to those of the control group after the intervention. The increase in experimental group hope remained three months after the intervention.

It was crucial to examine the influence of categorical demographic variables before drawing any conclusions about the reported significant changes in experimental group hope related to the EAPPI. There were no significant differences in the control group hope measure scores. Consequently, there was no need to consider them in the subsequent statistical analysis.

6.6.6. Ascertaining the Influence of the Demographic Variables on Hope

In this section, the non-parametric statistical analysis that tested the null hypothesis that the experimental group distribution of significant scores on the hope measures would be the same across the categories of gender, age, education level, employment status and number of intervention sessions attended is detailed. The description of the categories is the same as that described in Section 6.4.6.

6.6.6.1. Gender

The results of the independent samples Mann-Whitney *U* test that determined no difference in the distribution of significant scores on the study hope measures for males and females are displayed in Table 6.45. The results reveal no difference in perceived hope between males and females.

Table 6.45

Summary of Results of an Independent Samples Mann-Whitney U Test for the Distribution of Hope Measure Scores Across Gender Categories

Scale and Subscale and Timing of Test	N	Test Statistic	Mann-Whitney U	z-value	Asymptotic Sig.(2-sided test)	Exact Sig.(2-sided test)
Pre-PHS	76	522.500	522.50	0.006	0.995	
Post-PHS	58	320.000	320	0.515	0.607	
Post-Post-PHS	41	109.000	109	0.762	0.446	.473[c]

Note. PHS = Perceived Hope Scale. pre = pre-test, post = post-test & post-post = post-post-test Asymptotic significance is displayed.

[c] = exact significance displayed for this test.

p = .05.

6.6.6.2. Age

The results of a Kruskal-Wallis test, presented in Table 6.46, found that there was no difference in the distribution of significant scores across the three age categories on the hope measures. Consequently, one may conclude that age did not influence participant perceptions of hope.

Table 6.46

Summary of Results of an Independent Samples Kruskal-Wallis Test for the Distribution of Hope Measure Scores Across Age Categories

Scale and Subscales & Time of Test	N	*df*	*z*-value	Sig.[a.b]
Pre-PHS	76	2	2.072[a]	.355
Post-PHS	58	2	1.951[a]	.377
Post-Post-PHS	41	2	1.170[a]	.557

Note. PHS =Perceived Hope Scale. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. $p = .05$. [b]. Asymptotic significance is displayed.

6.6.6.3. Education Level

Table 6.47 displays the results of a Kruskal-Wallis test for the distribution of significant scores on the hope measure. The results revealed that the scores were not significantly different across participant levels of education, which one may conclude did not influence participants' perceived hope.

Table 6.47

Summary of Results of an Independent Samples Kruskal-Wallis Test for the Distribution of Hope Measure Scores Across Levels of Education Categories

Timing of Test & Scales and Subscales	N	*df*	*z*-value	Sig.[a.b]
Pre-PHS	74	3	2.754[a]	.431
Post-PHS	56	2	.951[a]	.622
Post-Post-PHS	40	2	1.583[a]	.453

Note. PHS =Perceived Hope Scale. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. p = .05. [b]. Asymptotic significance is displayed.

6.6.6.4. Employment Status

A Mann-Whitney *U* test revealed that the distribution of PHS significant scores was not significantly different across employment categories. The results of the statistical analysis are shown in Table 6.48. One may conclude that being employed or not did not influence the participants' perceived hope.

Table 6.48

*Summary of Results of an Independent Samples Mann-Whitney **U** Test for the Distribution of Hope Measure Scores Across Employment Status Categories*

Scales and Subscales & Timing of Test	N	Test Statistic	Mann-Whitney *U*	*z*-value	Asymptotic Sig.(2-sided test)
Pre-PHS	75	639.500	639.50	-0.521	.602
Post-PHS	57	398.000	398	-0.032	.974
PostPost-PHS	41	261.000	261	1.340	.180

Note. PHS = Perceived Hope Scale. pre = pre-test, post = post-test & post-post = post-post-test.

Asymptotic significance is displayed.

p = .05.

6.6.6.5. Number of Sessions Attended

A Kruskal-Wallis test results (Table 6.49) showed no significant difference in the distribution of significant scores on the hope measure across the number of intervention sessions attended. One may conclude that the number of sessions attended did not influence the significant difference in participants' hope scores.

Table 6.49

Summary of Results of an Independent Samples Kruskal-Wallis Test for the Distribution of Hope Measure Scores Across the Categories of Number of Sessions Attended

Scales and Subscales & Timing of Test	N	*df*	*z*-value	Sig.[a.b]
Pre-PHS	76	2	.952[a]	0.621
Post-PHS	58	2	.753[a]	0.686
Post-Post-PHS				.[c]

Note. PHS =Perceived Hope Scale. pre = pre-test, post = post-test & post-post = post-post-test.

[a]. p = .05. [b]. Asymptotic significance is displayed. [c]. There is only one group with valid data.

There were no significant differences in the distribution of the significant scores on the hope scales and subscales across the demographic categories. Hence, age, gender, level of education, employment status and the number of sessions attended did not affect the significant change in perceived hope reported by the experimental group participants after attending the intervention.

6.6.7. Synopsis of the Effect of the EAPPI on Hope

The results revealed that the prevalence of locus of hope and perceived hope in the sample fluctuated between half and two-thirds of the participants throughout the study. The experimental group's prevalence of finding hope in peers and spiritual practices increased after the intervention. In comparison, the percentage of people in the control group placing hope in external loci remained consistent across the study period. Interestingly, before the intervention, the prevalence of perceived hope was lower in the experimental group than in the control group. However, after the intervention, there was an increase in the percentage of experimental group participants who perceived life as hopeful. While the prevalence

decreased three months after the intervention, a greater percentage of experimental group participants still perceived their life as hopeful compared to before the intervention.

Non-parametric statistical analysis of the LoHS and PHS scale and subscale scores indicated significant differences. At the outset of the study, the control group reported significantly higher placement of hope in internal and external loci, particularly in locating hope in peers in comparison to the experimental group. Experimental group perceptions of locations of hope increased in that there was no significant difference between them and the control group after the intervention.

The control group did not report any significant changes in levels of hope on either the LoHS or PHS at the three different assessment times. Therefore, the control group's levels of hope remained constant throughout the study. On the contrary, after the intervention, the experimental group reported a large statistically significant increase in perceived hope. Furthermore, this gain remained stable three months after the intervention. Consequently, it was ascertained that the EAPPI's positive influence on participant perceptions of hope was long-lasting.

6.7. Quantitative Phase Conclusion

The purpose of the study was to evaluate the impact of an EAPPI on the flourishing, meaning and hope of adults in a South African resource-constrained community. The prevalence survey revealed that most sample respondents flourished during the study period. They reported elevated levels of overall well-being, greater life satisfaction and more positive emotions than negative ones. Simultaneously, they reported increased levels of psychological distress, as indicated by consistent reports of severe anxiety. In addition, over half of the participants reported seeking meaning and identified the presence of sources of meaning in life and internal and external loci of hope, combined with the perception that life is hopeful.

According to non-parametric statistical analysis, the control group participants did not experience significant changes in their flourishing, meaning and hope levels during the study period. In contrast, the experimental group reported significant changes in dimensions of flourishing, meaning and hope after the intervention. Improvements in flourishing after the intervention included increased overall well-being and life satisfaction, accompanied by decreased negative emotions. Moreover, their overall well-being continued to be significantly improved three months after the intervention, with the eldest participants reporting the highest levels of optimal well-being at the three-month follow-up assessment. It is noteworthy that despite the enhancements in flourishing, the intervention did not affect psychological distress as the participant levels of anxiety remained high throughout the study. After the intervention, the experimental group reported a significant decrease in their search for meaning, particularly in their negative search for meaning. They identified fair treatment, achievement and self-transcendence as significantly stronger sources of meaning after the intervention. There was no significant difference in the strength of the changes three months after the intervention, indicating that the reduction in search for meaning and negative meaning orientation, coupled with an increase in the perception of fair treatment, achievement and self-transcendence as significant sources of meaning,, remained in the long-term. Notably, unemployed intervention participants experienced long-term increases in overall meaning-seeking and positive meaning orientation. Furthermore, the participants' perception of life as hopeful significantly increased following the intervention. This gain remained stable three months after the intervention. It is noteworthy that gender, level of education and number of sessions attended did not influence the significant increases in levels of flourishing, meaning and hope after the intervention.

In conclusion, the quantitative results suggest that the EAPPI enhanced adult flourishing, meaning and hope. Moreover, the older and unemployed participants living in the resource-constrained community of Diepsloot experienced long-lasting benefits.

While the results of the qualitative data analysis are presented in Chapter 7, the mixed-methods data integration of quantitative and qualitative findings are detailed in Chapter 8. Furthermore, the joint display analysis meta-inferences to provide an enhanced understanding of the effect of the EAPPI on participant flourishing, meaning and hope are also discussed in Chapter 8 (Teddlie & Tashakkori, 2006)

Chapter 7. Qualitative Findings

7.1. Introduction

Chapter 7 details the qualitative findings that address the research question: How did participants subjectively experience the equine-assisted positive psychological intervention (EAPPI)? The researcher conducted a reflexive thematic analysis by employing Braun and Clarke's six-phase approach to thematic analysis, as described in Section 5.7.2. This approach affords a thorough exploration of the participants' experiences of the EAPPI by examining the interaction between the researcher's interpretive perspective and the data (Braun & Clarke, 2006, 2020, 2022; Byrne, 2022). The analysis was conducted on the transcriptions of 12 semi-structured interviews with participants who had attended at least 75% of the intervention sessions. Through inductive and deductive coding, the analysis revealed patterns that concur with the research question. The phases of the thematic analysis process that unveiled multi-dimensional insights into the impact of the EAPPI on the participants' lives are systematically presented in the chapter.

7.2. Thematic Analysis Process

7.2.1. Phase 1: Data Familiarisation

The researcher spent considerable time becoming familiar with the data during the initial research phase. This involved listening to audio recordings multiple times as well as reading and re-reading the interview transcriptions to acquire an in-depth understanding of the data. Immersion in the data was imperative to become familiar with the depth and breadth of the content (Braun & Clarke, 2006, 2023). In accordance with Braun and Clarke's recommendations for this analysis phase, the researcher began by identifying trends in the data and marking interesting text extracts in the interview transcripts. This provided the foundation for ongoing analysis in preparation for the next coding phase.

7.2.2. Phase 2: Generation of Initial Codes

In this phase, the entire dataset was reviewed. Short descriptive labels or codes were assigned to relevant information (text) related to the research question before the codes were grouped into code categories (Braun & Clarke, 2006). The process of assigning codes was reflective, flexible and organic, thus enhancing familiarity with the data and leading to the interpretation of new patterns of meaning. Although the codes were concise, they provided sufficient detail to be considered independently and convey the shared characteristics among the composite data items related to the research topic (Braun & Clarke, 2019). Moreover, the codes represented the researcher's interpretations of patterns of meaning across the dataset and served as the building blocks around which the sub-themes and themes were later constructed.

Microsoft Excel was employed to document the iterations of familiarisation with the data, the coding process and prospective themes. The initial codes supported by examples of relevant verbatim data extracts are displayed in Table 7.1. However, not all collated data extracts are included. The participants' pseudonyms appear after the data extracts in brackets.

Table 7.1

Phase 2 Thematic Analysis: Generated Codes with Data Extract Examples

Codes	Data Extract Examples
Enhanced self-awareness and self-acceptance	*"You have to accept yourself as and know that you are not perfect and someone somehow you're weak. That's you've got your strength, your weakness. The same way as you having those weaknesses. That's the same as other people."* (Thandeka) *"The program is helping us to … to identify ourself... Yeah, we start learning about ourself. It helped me a lot, I don't wanna lie,it really helped me alot"* (Amahle) *"I started seeing my features in another way. The confidence I grew, how I talked to people, what I valued. What's more important to me? Yeah, what do I appreciate?"* (Lerato)
Personal growth and transformation through the intervention	*"The program helped me with personality growth, I gaining a bit of confidence around people. since I've joined the group now I realize that okay I can be among people. So at times when I think of the group sessions and the fact that I managed to say something, that triggers an excitement feeling in me that I managed to break through some of my personality or life barriers. I thought was impossible to achieve, yeah!"* (Jabu) *"It (the intervention) empower you, yeah, to be someone special because when we come here someone greeted you with a smile and you feel home, you feel welcome, yeah and good…yeah, or more than good*."(Gugu) *"I've been incarcerated… Even if you've done one mistake you can make everything right for the whole life. Meaning accept yourself and the show the people that you are a changed person. And then move forward."* (Sandile)
Intervention psychoeducation and skills taught were successfully integrated into daily life, yielding benefits.	*"the whole mindfulness technique… because it helps you. You start by calming yourself down after calming yourself down and then you start realizing whatever is happening around you. If your thoughts are if you are getting thoughts, you start thinking about those thoughts. You accept them, after accepting them you can just say "okay, now these thoughts they came in. They are there and it's something that's happening."* (Thabo) *"Sometimes there is a lot of stress, lots of stress….These programs helped me that I learned to calm myself you know just calm. I can go outside and take a walk…when you're walking, you focus on your foot the way you walk, you know that sound when you walk. I'll take a deep breath you know, counting, to make you relax. Those was experience of which I didn't know about, and you can do those things at home, you know to calm yourself down."* (Bongi) *"The emotions and all the topics that we learned about personal well-being are so important."* (Amahle) *"The breathing exercises are top-notch… I managed to calm myself down."* (Lerato)
Shifted from initial scepticism to enjoyment and benefit	*"We are here not knowing…It's helpful...The time we come here, yeah, the light is coming.Yeah, and we have to touch animals. The first time, we never touches the animal. Nor played with the animal… Because you know it change our lives... Take care of the nature, and the nature take care of you.""* (Gugu) *"For me to turn the horses it was like amazing because I never touched a horse in my life, and then it was very good for that. Then I also realized that you can talk to the horses even if you don't talk mouth to mouth, but you can really gain something lot of things from the horses because like, I learn a lot of things."* (Busi)

Codes	Data Extract Examples
	"I was unsure, because it involved horses, I really didn't know much about horses. But then when the time goes and I realised that this is it's very nice for everyone and use your legs and experience a lot of things that you didn't know we can use for all the benefit. So it was an experience I was able to touch even horses. I never did that before, so it was amazing." (Bongi)
Challenging psychosocial circumstances	*"I've been in prison for my mistake, and I got punished for that….I showed remorse and I am on parole"* (Sandile) *"Before I started the program, I can say life wasn't going very nicely for me… I sometimes felt like the whole world has turned on me. It was hard, very hard."* (Thabo) *"I lost my husband…Why I'm suffering? I can't pay for my child's groceries."* (Bongi) *"The stress we have, in places there's poverty, and then there is abuse, there's GBV all those things."* (Bongi)
Psychological distress before the intervention	*"I was overwhelmed with so many things and even wanted to take my own life... I would just sleep and stress about it every day, this "hurt me too much… I was always down"* (Amahle) *"I was depressed for two years...I do not have food...all the trauma, all the tragedy."* (Mbali) *"The time I came here to start the program we have a lot of stress….There's many thing around me that hurt me so much… I have disability…unemployed…not know where to get food. He abusing me too much. He abuse me too much, called me names. Yeah it is not good "* (Gugu) *"I've been depressed, anxiety was hitting hard."* (Lerato)
Relief of stress, anxiety and depression, suicidality and grief	*"After my mother died everything became black. I was having difficulties mourning and grieving. Ever since, I joined the program everything has calmed down… The program has helped me alot to accept and then to let go."* (Sipho) *"It had positive impact because sometimes or three quarters of my days I could be in happy moods. I not getting stressed I could get very much funny upon seeing my friends. Just here as far as life is concerned."* (Mpho) *"Before the program like I didn't think that life had a purpose like I didn't think my life was important. I didn't take my life seriously sometimes I even wanted to take my own life...the program really helped me too much… right now I'm so energetic and happy. Everyday I wake up and then be in a good mood. I'm so grateful."* (Amahle) *"This programme helped me a lot, especially calming myself…the skills to calm, or just take a walk outside, you know that breathing exercises."* (Bongi)
Feeling and functioning better despite the hardships of life	*"There are going to different life situations in terms of maybe sometimes you get stressed or something... know that in life there is sweet and sweat… to succeed in life you need to have sweat first so you can go under ups and downs. Then if you are in down conditions you could accept it, realise what it is and how can I solve it from there you could get into happy times*."(Mpho) *"Before I started the program, I can say life wasn't going very nicely for me… I sometimes felt like the whole world has turned on me. It was hard, very hard. Even now, it's still hard…Before I was like okay, these things are happening and I would just give up and say, yeah, hey, I'm tired of this life, these things, everything is just coming at me, all sides, but nowadays I feel better."* (Thabo) *"After my mother died everything became black. I was having difficulties mourning and grieving. Ever since, I joined the program everything has calmed down… The program has helped me alot to accept and then to let go."* (Sipho)

Codes	Data Extract Examples
Experienced increased positive and decreased negative emotions and the dialectical balance of emotions.	*"I was angry...with shame...but when I come here (to the intervention) everything just goes. I feel relaxed and feel happy, then I'm good."* (Sandile) *"Now I'm always happy. Whenever I wake up, I wake up with a smile and then, looking forward to the day. And then, doing what I love most".* (Sipho) *"So like it is okay to be angry and happy at the same time. Yeah, it's okay to be scared, it's okay to be afraid all those emotions. Yes but if they all come together you must just let them be and they will go. Yeah, you go with the process, if you angry you must just be angry. If you are happy you must just be happy."* (Amahle)
Enhanced positive relationships	*"In my experience relating to the program, one thing that made me feel good was a feeling of being accepted by a group of strangers."* (Jabu) *"When you are alone there is nothing that is achievable. Now immediately when you start establishing friendships, immediately when you start establishing relationships, immediately when you start building an atmosphere of love, we are able to grow together. Now I have grown from that."* (Mbali) *"They know my dad is coming from Shumbashaba… each and everyone want to when I come there they want to be next to me and listen."* (Sandile)
More engaged and satisfied with life	*"It's the program. I'm able to accept nowadays that things happen and they don't only happen to me, they happen to everyone and I have to continue with life even though those kind of things happen… Some people have problems worse than me. So I can just say, "okay come back to the problems. I can't control this problem and I can't do anything about it, so for now, let me just let it go, leave it. And accept that it's happened and just continue."* (Thabo) *"I can see that okay the life is still a long way to go and I can still live without the nothing even if I'm there I'm in nature I don't even realize I need to be there I need to do that I just see free like everything is okay with me."* (Busi) *"Yeah I'm happy [laughing] all the time because, when I enter my house, I was not smiling not I was, yeah angry. But since I come here (mm) I smile... Yeah, we have to live our life (mm) we have to live happy every day because life is too short and we have to tell the people we love that we love them because you never know, maybe tomorrow it's not going to come."* (Gugu)
Adopted a meaning-seeking mindset	*"Before the program like I didn't think that life had a purpose like I didn't think my life was important. I didn't take my life seriously. Sometimes I even wanted to take my own life. Yeah 'cause I didn't see my purpose on earth. So the program helped me to be able to start taking life seriously we all have a purpose on this earth. Yes, and we all have a meaning and we belong here…Life is a beautiful thing."* (Amahle) *"We are not here to decorate the land [laughing] and just be there. There is a purpose about us and it's only you who can discover what really it is your purpose and do whatever it takes to reach that goal. That you were called to do. It's like we all have it our own assignments. My assignment is not the same as your assignment is not the same as other people's assignment. It is mine. So it is my responsibility to make sure that I do what I was called to do."* (Thandeka) *"If I am alive, that means I have a meaning, and I do have something to do in my life. So in that living I could focus what to do all the good things needed in humans' life"* (Mpho)
Identified meaning and purpose in life	*"What gives me meaning purpose in life what pushes me to keep going forward is that, I always want to be a better person in life. I want to be a person who can be fit enough to help others who cannot help themselves. So, because I know I'm good with, I'm like, I'm a helpful person so I always thought if I can build myself and prepare myself for future I can get a chance in the future to help others who cannot help themselves so that's what gives or what pushes me*

Codes	Data Extract Examples
	right now, it's like to work hard and be fit enough to help others and, because I love animals also, one of the things that pushed me, that gets me up to work harder is that, I want to have animals in my life. Like I want to help those animals that are maybe abandoned or maybe in the streets, or maybe that those that are sick and cannot get medicine. Yeah that's what pushes me." (Jabu) *"We are not here to decorate the land [laughing] and just be there. There is a purpose about us and it's only you who can discover what really it is your purpose and do whatever it takes to reach that goal. That you were called to do. It's like we all have it our own assignments. My assignment is not the same as your assignment is not the same as other people's assignment. It is mine. So it is my responsibility to make sure that I do what I was called to do."* (Thandeka) *"I know why I am here, I am not here by mistake. I can sit down and say there's no work. There's many, many people want to do hair and you have to cook for for contract this. Lot of people working. You have to go there and serving your food. And [laughing] if I need to I know how to counsel someone."* (Gugu)
Realisation of personal worth	*"It doesn't matter where you grew up, you can do better than that. So the mindset is more stronger than everything as long as you put your mind to that thing."* (Sipho) *I didn't know that I'm appreciated I matter. Believing in yourself, knowing that no one can replace you. Maybe they can replace some things, but not you specifically. I don't think no one can become you. Being unique no one can replace you. Yeah, I believe in myself!"* (Lerato) *"Life does have meaning…everyone has a purpose. You can be rich, you can be poor but everyone has a purpose."* (Bongi)
Transforming life's hardships into meaning	*"Now the the bent grass. The bent grass taught me that even if in afflictions, even in everything that happens eventually the grass will be green. And when we analyze the bent grass, it was much more greener after being bent...Even in afflictions there is a purpose for those afflictions. Even in everything that we go through, there is a goal. There is a target the afflictions are preparing us for."* (Mbali) *"By touching the the animal, the, horses and the ponies it makes me (eh) realise that everything can happen… Yeah there is a reason for everything. I've been incarcerated for some years…I've done it, a crime, then I have to be punished, that's the reason and then I accept. And I showed their remorse. I've got parole…I come outside to make things different."* (Sandile) *"So it has open my mind to how can I help other people?Yes, because (um) I've experienced some of the things that (um) I have struggled talking about them or dealing with them so the program has helped me a lot to come up with (um) ways how to help other people how can I teach them to to have self-love, self-compassion, how to be kind. Because to be honest (um) our community here is, they are growing apart (um) I I've seen a lot of hatred (uh) amongst them. So I want to to to build that thing among them, to know that's not the the the right thing to do. So they must be kind to one another so that's one of the things that I I'm still trying to to find a way how can I reach to them."* (Sipho)
Shifting from hopelessness to hopefulness	*"There's always a way, that's what keeps me going every day. Even if like this I can see this, this is bad, this is impossible, this is huge, this is big. But there is always a way… You still have that gut in you to stand up and do whatever you planned to do. Whether someone is there for you or is not. If you can just*

Codes	Data Extract Examples
	have that little spark in me, that little energy nest that you can do it. I think we will be okay." (Thandeka) *"Before the program I think, like I said before, that I didn't take my life serious. I always had doubts about my life… But after the program like I can see that life is a beautiful thing. We must look life at a different angle and try new things. If this one doesn't succeed, you move on to the next thing. And then until you succeed and done failing anything."* (Amahle) *"Before I was like okay, these things are happening and I would just give up and say, yeah hey, I'm tired of this life these things are everything is just coming at me, all sides, and sometimes I feel like the whole world has turned on me, but nowadays I feel better."* (Thabo)
Motivated to pursue goals and dreams despite challenges	*"You know, I want to see myself there on top. Yeah. And now I want to I want to it's like it's good and I want to open my own business serious. You know, I have. You know if I can start. I don't know [laughs]. But one day, if I can have push to start my own business because (mm). Yeah, there's no work but even there is no work if we can do what God give you, God give us talent."* (Gugu) *"I discovered what was hidden in me for a very long time, I want to be a carer, so I will register to get a professional carer training next year. I had to Google professional way. So I will register to get a professional carer training next year. And I will, I'm pursuing it!"* (Thandeka) *"But now in the middle and after the program. I know I'm not working now I don't have money but now I but I can see my views there I can see that I'm going there and I'm going to succeed with what I want to do."* (Busi)
Others inspire hope	*"You know, I am no longer for myself, but I am for others so that there may be change that circulates. Change begins with me, but change does not end with me."* (Mbali) *"If you have hope sticking to someone will add extra hope and after that you would get much hopeful. So it needs to have friends or relatives to get motivated into that hope."* (Mpho) *"God…he's always positive for me…I can see that to be positive with God it helps a lot. It's really God is there."* (Busi)
Equines provide beneficial embodied (sensory) experiences	*"I was unsure, because it involved horses, I really didn't know much about horses. But then when the time goes and I realised that this is it's very nice for everyone and use your legs and experience a lot of things that you didn't know we can use for all the benefit. So it was an experience I was able to touch even horses. I never did that before, so it was amazing."* (Bongi) *"By touching the the animal, the, horses and the ponies it makes me (eh) realise that everything can happen… Yeah there is a reason for everything. I've been incarcerated for some years…I've done it, a crime, then I have to be punished, that's the reason and then I accept. And I showed their remorse. I've got parole…I come outside to make things different…The fresh air that you feel and then you forgot… for that moment. Then, when you go back, everything must go back to normal. You won't be angry anymore."* (Sandile) *"I touched the horses, I can feel that this thing is like a free… When I'm there, I'm in nature. I don't even realise I need to do that, I just see free, like everything is okay with me…, To turn the horses it was like amazing because I never touched a horse in my life. Then I also realized that you can talk to the horses even if you don't talk mouth to mouth, but you can really gain something lot of things from the horses."* (Busi) *"Everything that has happened is rooted to nature. Now, when mind is in nature where there is no noise where there is no destruction where there is no afflictions and all that the mind is free is relaxed, forgetting about the situations that are happening wherever the mind."* (Mbali)

Codes	Data Extract Examples
Feeling better due to interactions with the equines and environment	*"I love the horses. So horses helped me calm down, being one with nature is so amazing… Being there every Tuesday and seeing those animals really helped calm me down. Because, you know when when you're on you're (uh) starting those periods days, moods days and you like moody the whole day. But when you see something you love the mood changes…love the mood changes... I cry less now."* (Lerato) *"It's good things there are, I feel love with I I'm in love with animal [laughs] yeah. Serious. And yeah, I was down. Now do you know, I'm happy. There's many thing around me that hurt me so much, but yeah since I came here now no. I'm okay serious, I'm okay."* (Gugu) *"I can see that okay the life is still a long way to go and I can still live without the nothing even if I'm there I'm in nature I don't even realize I need to be there I need to do that I just see free like everything is okay with me."* (Busi) *"I learned that the horses are very friendly. So there is nothing wrong with your friend, your horses. Of which you relax more, when you are around the horses takes all your worries away...takes your mind off things, you know, on a daily basis, you'll find yourself laughing. You'll find yourself amazed the things that they do."* (Bongi)
Equines are agents of transformation	*"It's good things there are, I feel love with I I'm in love with animal [laughs] yeah. Serious. And yeah, I was down. Now do you know, I'm happy. There's many thing around me that hurt me so much, but yeah since I came here now no. I'm okay serious, I'm okay."* (Gugu) *"I don't have experience at home with horses and all that but now I'm able to talk about it you know, those animals that relationship with the animals so I did learn a lot and overcome fears in this world."* (Busi) *"When we are with the animals (equines). I can see they don't have a fence, but they stay in Shumbashaba. So, I realise. Next time I will have a fence so I don't take shortcuts. What I realised is that everyone has a choice, as long as you are free you have a choice... Choice and chance are golden together."* (Sandile)
Equines are impactful characters in personal stories of transformation	*"Most people when they see a donkey, they despise a donkey compared to a horse. The donkey is background character, it does things in its secret corner. It doesn't want applauses, it doesn't want to be recognised but it serves. I took the characteristic of a donkey as a serving character. Now, taking that character to me [laughs] to yeah to me, it happens that I'm a serving character."* (Mbali) *"They (equines) welcome us. They look at us the same, not that you are walking with that stick, you will not you have to go that side no no. Yeah, they treated the same and we are smiling. And yeah, we are happy family like in my blood in my [laughs] we are happy family. Yeah, and we share [laughs] everything, yeah."* (Gugu) *"What about us humans? We are fighting…I do have options to open my mind and talk to a person. You know, but I continue to fight. The animals are not fighting…they are not relatives but they are all there they become relatives. They understand and they do have that good relationship. So if animals can do that. Why can't we?"* (Bongi)
Overcoming fears and becoming courageous through equine interactions	*"So I saw from the start I was scary, but as we continue I become to love animals to like, to overcome that fear."* (Lerato) *"I was afraid of any moving animal, and I learned to love animals and overcome that fear. Actually, I was scared of nothing [laugh]. It's just there was this fear or a phobia you grow up." This fear in you and it's crippling, and prevents a person from experiencing different opportunities such as*

Codes	Data Extract Examples
	having a dog as a best friend, travelling and experiencing the beauty of places different to where you are, and other cultures." (Thandeka) *" ""I come here yeah I was scared. I don't know what's going to happen. Yeah and I was down yeah. But the time I came here to start the the program. Yeah it's helpf- it's helpful because we sat down and do n- nothing and we have lot of stress. And the time we come here, yeah, the light is coming. I'm going to take love, and (mm) trust, and (mm) you know courage. And you know, and take that thing back to the community, to tell the community about the nature."* (Gugu)
Equines are teachers and role models of positive relationships	*"So when you're with animals, you get to learn more about life like there are things that you can control and things that you can't change. So things that you'll always have to have."* (Thabo) *"I saw a horse and how does it react to different kinds of situations so I could feel that all also people can live differently upon their environment, sure."* (Mpho) *"The other one (equine) kick another one (equine), and then the other one move back showing I don't like what you are doing. So even if life will fall down and then you stand up, you move forward. That person have done wrong and then you move on. Even if he don't come and apologise, don't worry, let it go."* (Sandile) *"How to know this horse right now is not in the mode of acceptance tolerance, you could know that this day this horse is not in good minds. I could trace this to my friends that sometimes you could see your friend in good times he or she might react in smile but when he or she is angry upon seeing him you could see that this person today he is not in good mood. So you need to know…get at least acceptance and tolerance thereafter and discussing issues and resolving the issue".* (Mpho) *"We are fighting….The animals are not fighting, but they are not talking you know. I believe they are not relatives but they are all there they become relatives. But they do understand, they do have that good relationship. You so if animals can do that, why don't we?"*(Bongi)
Equines and environment are metaphors and symbols for self and life	*"Now the the bent grass. The bent grass taught me that even if in afflictions, even in everything that happens eventually the grass will be green. And when we analyze the bent grass, it was much more greener after being bent...Even in afflictions there is a purpose for those afflictions. Even in everything that we go through, there is a goal. There is a target the afflictions are preparing us for."* (Mbali) *"The black beauty horse, because of it's darkness. Because I'm also dark, okay I don't see beauty in myself in that way, but now the esteem is more because of the black beauty. I am comparing myself with it, how its hair is shiny and how I love my hair. How dark it is, how firm it stands, how clean it is."* (Lerato) *"The horses are like us…they act like us. They are always together through hard times and good times. They can't hide their emotions. If the other horse is not fine you can see that he will start reacting."* (Amahle)
Realising identity – I know who I am	*"Shumbashaba helped me a lot. Serious. It helped me a lot to know myself. To know what I want in life to know (mm) how to take care of me. How to say no. Yeah to abuser, yeah. And how to smile. I was angry all the time. I think I came through it because you know, I'm not speaking disability. [Laughs] I know I'm feeling happy. I do have disability, but I'm not feeling that thing. I'm look like anyone else."* (Gugu) *"I think you must just be you. You must not let other people's achievements who let you down, to think that you can't do anything. No, we all came to this earth to conquer and then we must just be ourself."* (Amahle)

Codes	Data Extract Examples
	"It (the intervention) *did help me to discover myself. To also discover what actually do I really want to do with my life. Actually from my early age I always wanted to be a carer or but you see a carer, a carers like knowing people they are injured or they are from hospital they need someone that could help them."* (Lerato) *"Meaning accept yourself and then show the people that you are a changed person And then move forward…I must accept who I am."* (Sandile) *"I learn a lot of things here. You teach me this and that. Then I know who I am if I don't want something now, I don't want it. Then like I've got love, love for people. I always like to work for the people. I can take with me forever is that (um). Like to to learn who you are, it's very important for me to be who you are. We really need to because really, I didn't know,) is value myself (laughing). with my own… my natural I'm me I am myself and I'm beautiful, is the way God made me."* (Busi)
Established identity and a sense of belonging through connections to God	*"It's spiritual (uh) (uh) experience. (Um) Before the the the the program and I've been there I had (uh) I had questions for God. Okay well I had a problem with God. So when they asked this question (uh) (uh) (um): "where do you belong?". Belonging what is belonging? Now God was like, "you belong to me. And when you belong to me, there are are are different places that you are not supposed to be". But He says that, "if you belong to me, then there are different places that you are not* *be in. There are different groups that you are not going to associate yourself with in because they may change your character". Now (uh)when we were here, we were telling a lot about characters and I'll be like,"okay, characters, characters, characters". Then God gave me a character of a tree. There's a tree, before a tree grows it it is a seed. I have planted a seed in you so that it may grow. Now when a seed grows (uh) in the ground, it has roots. Now you are rooted in me, meaning that you belong in me and when you grow I want you to be a tree that will be firm and a tree that will bear fruit, so that when you are when people approach you, when people (uh) come to you, they may have fruits that will bring life. Because, they, there are trees that when you eat you you can feel good, you know no it's this this can bring death too. So as you are telling me, I want you to contribute unto the world, whatever the world that needs contribute unto it so that they may have life (uh) each and every person that feels with okay I am not okay I am not well. Contribute because you are rooted in me, so you may bring change even if it is the only tree and and and in the wilderness, even if it's the only tree. As long it is there, it will bring change, so that's the character that God brought."* (Mbali) *"Wow, it makes me think about the strength of the of the human spirit. And it shows me that I'm not alone even God is there with his he is always with me because I think about okay God I want to do this, but I don't have it, but it comes in my mind really that no, you're gonna succeed. Relationship with God relationship with other because love the other people as you love yourself."* (Busi) *"I must accept who I am with them talk to God always pray to God, and God doesn't give you the work that you can't hold."* (Sandile)
Established identity and a sense of belonging through connections to others	*"You come and share the experiences and talk to the people. Communication. Then you realise that no. Here, somewhere, somewhere, somewhere I've done mistakes. Sharing experiences in life I'm not the only one who got problems. And everyone had their problems, but their our problems are not the same. That's when I'm sharing (uh) learning is sharing. We share everything and then we learn from each other(Mm)"* (Sandile)

Codes	Data Extract Examples
	"I experienced that even if you can leave maybe your family relatives and go to another group of people, I feel life is just the same because I could chat and I would chill with those different people." (Mpho) *"Shumbashaba empower you, yeah it will empower you [laughs]. Empower you yeah, to be someone special yeah, be someone special because (mm) this smile here when we come here someone greeted you, greeted you smile and you feel home. you feel welcome, yeah and good I don't know. I don't know, can I say good, or? Yeah more than good."* (Gugu)
Established identity and a sense of belonging through connections to nature	*"That nature, yes, the effect of nature what makes me is like I I like me to myself, I I really like nature. I feel like when when I'm outside there of the nature. Then I can feel that okay. It brings me very real pleasure happiness you know (Mm) that I can see that okay the life is still a long way to go and I can still live without the nothing even if I'm there I'm in nature I don't even realize I I need to be there I need to do that I just see free like everything is okay with me."* (Busi) *"Nice experiences I had was being with the animals. And the last two weeks we were there, when we were taking the walk into the forest area. Yeah, that was nice because it reminded me of home and where I came from and it's bringing me back to …. now it's taking me to where I am."* (Thabo) *"The way I see here, yeah you do love animal. You do have you do love nature, yeah, and I'm grateful for that. Because you know it change our lives. Take care of the nature and the nature take care of you."* (Gugu) *"What pushes me right now, it's like to work hard and be fit enough to help others and, because I love animals also, one of the things that pushed me, that gets me up to work harder is that, I want to have animals in my life. Like I want to help those animals that are maybe abandoned or maybe in the streets, or maybe that those that are sick and cannot get medicine. Yeah that's what pushes me."* (Jabu)
Motivated to seek ways to promote flourishing in the community	*"Yeah... before the program I thought that helping the community was just a waste is my time it was just a waste of time so after that after the program I am able to help my community and I'm willing to do more than what I was doing."* (Amahle) *"I'm going to take love, and (mm) trust, and (mm) you know courage. And you know, and take that thing back to the community, to tell the community about the nature."* (Gugu) *"Now I would really like to achieve more in helping people. Maybe open an NGO or being there for the community, giving back."* (Lerato) *"I have that (um) that wish and hope that that this thing could go further and help others…Honestly, I'm working with kids right? So they need they need to grow up knowing that their values are more important than everything and then (um) like I've said the community that we we in they have so much hatred among them. I want to have my own program my own, my own organisation (um) like the the one (Shumbashaba's) running, because it's so so helpful I won't lie it's so helpful and is it if if it was up to me i would go every day yeah If it was up to me so but (um) well considering my future I'm I'm willing to to to do anything so that I can help other people (um) reach out to them and then and have a have a a close a close relationship with them"* (Sipho)
Agency to advocate for and take actions that enhance flourishing in the community	*"I'm going to take love, and (mm) trust, and (mm) you know courage. And you know, and take that thing back to the community, to tell the community about the nature."* (Gugu) *"They come to work and have different emotions, they're sad, upset, they are angry, they are bitter. It's easy for me to help them to calm down, or transfer these things… that you know to them. My colleague, we have different*

Codes	Data Extract Examples
	languages that was a challenge. With different values and different backgrounds so sometimes it clashes with our work. But now to respect other peoples values, doesn't matter I like them or don't. But mind this so its really important to respect someone else's values." (Busi) *" I was doing the presentation at (redacted) woman's group. They was doing stress and depression, so then I share that information with them. You know too many times I take that bit home and then start rewinding and then you know if I can d this, I'll have that peace that I'm looking for."* (Bongi) *"What I can also tell them (friends) or give to them it's the mindfulness (uh) exercises because my friends need them more. They're more in a depressed world than me, you know. I would really like to help them calm their nerves down and not think about suicidal thoughts. Yes, and telling them how important they are, complementing them, making sure that they know that I (uhm) value them as my friends. Yeah, letting them know how important they are to me*." (Lerato)
Transitioned from scepticism to support for the intervention	*"We are here not knowing…It's helpful...The time we come here, yeah, the light is coming. I'm going to take love, and (mm) trust, and (mm) you know courage. And you know, and take that thing back to the community, to tell the community about the nature."* (Gugu) *"The people they didn't, they don't know what they are here for. They just say no maybe we're going to learn, and we're going to have at a later stage something to bring home. Afterwards we see, no there is nothing to take home. They started to enjoy the program. They started to enjoy each company. And then that's when I realised (oh) people come with different perceptions. This diligence, what I show is this diligence. I'm not alone. This diligence to make things right."* (Sandile) *"Okay when we start the program, I didn't know what is all about the program. Because like the first day I came here, I thought maybe gonna climb on the horses. But anyway I was wrong. But for me to turn the horses it was like amazing because I never touched a horse in my life, and then it was very good for that. Then I also realized that you can talk to the horses even if you don't talk mouth to mouth, but you can really gain something lot of things from the horses because like, I learn a lot of things…. You teach me this and that. Then I know who I am."* (Busi) *"Can like the program continue? And develop more places, because I feel like we were the first, we were part of the…it must just continue being. Shumbashaba and allowing other people to come and visit the program mustn't stop because it's helping a lot of people,"* (Lerato)
Breaking down the myths and stigma regarding mental health	*"People would tell you that a man is not supposed to cry. Men can't feel sad. Children don't get stressed. It's like they're telling you that you shouldn't have those emotions… In the program, you told us that it's okay to have those emotions."* (Jabu) *"I've had difficulties mourning and grieving for my mom. I remember someone from my family suggested that , how about I go for counselling? The I said no I'll be fine, I'll be good. …Yeah, so I had difficulties. Grieving with that, coping with that. But ever since I've joined the program everything has calmed down…the program has helped me a lot to accept and then to let go.Yeah, you mustn't hide (your) self, because, (you) can't find healing. You can't find healing while you keep quiet."* (Sipho) *"People are suffering out there, [yoh] they're suffering silently, they can't talk! But then with this program you will talk and you will be fine."* (Amahle) *"What I can also tell them (friends) or give to them it's the mindfulness (uh) exercises because my friends need them more. They're more in a depressed*

Codes	Data Extract Examples
	world than me, you know. I would really like to help them calm their nerves down and not think about suicidal thoughts. Yes, and telling them how important they are, complementing them, making sure that they know that I (uhm) value them as my friends. Yeah, letting them know how important they are to me." (Lerato)

Some data extracts appear multiple times because they were rich in meaning and hence, assigned to more than one code. The codes were categorised around a central organising concept interpreted from the data to produce initial themes in the following analysis phase (Braun & Clarke, 2019; Byrne, 2022).

7.2.3. Phase 3: Searching for Themes

Similar codes were collated in phase three by employing researcher-construed shared meanings to generate initial themes. Accordingly, the researcher was open to deriving themes for analysis from categories linked directly to the data in conjunction with those representing existing theoretical constructs. The codes were categorised by repeatedly reviewing and refining them into a combination of nine manifest and latent initial themes. The researcher reflected on the proposed themes to ensure internal consistency, coherence and distinctiveness. Simultaneously, all relevant coded data extracts in the identified theme were collated. Furthermore, the themes were repeatedly checked against one another and the original data set, as depicted in Figure 7.1 (Braun & Clarke, 2006; Joffe, 2012).

Figure 7.1

Generation of Initial Themes Through Categorising the Codes

INITIAL THEMES	CODES
Struggles of life in Diepsloot	• Challenging psychosocial circumstances • Psychological distress before the intervention
Self-discovery and personal growth	• Self discovery and transformation by participating in the intervention • Enhanced self-awareness and self-acceptance • Intervention psychoeducation and skills taught were successfully integrated into daily life, yielding benefits
Feeling and functioning better despite life's hardships	• Feeling good - increased positive and decreased negative emotions, and the dialectical balance of emotions | More engaged and satisfied with life • Functioning better despite the hardships of life - Enhanced positive relationships |Purpose in life |Personal growth • Reduction of psychological distress
Transcending difficulties to find meaning and purpose	• Adopted a meaning-seeking mindset • Identified meaning and purpose in life • Self discovery - personal worth • Transforming life's hardships into meaning
Hope that life can be better in the future	• Feeling that life can be better: Shifting from hopelessness to hopefulness • Motivated to pursue goals and dreams despite challenges • Others inspire hope • Breaking down the myths and stigma regarding mental health
Equines catalysed embodied experiences of well-being and personal transformation	• Equines provide beneficial embodied (sensory) experiences • Feeling better due to interactions with the equines and environment • Equines are agents of transformation • Equines are impactful characters in personal stories of transformation • Overcoming fears and becoming courageous through equine interactions
Equines fostered positive relationship and teaching dynamics	• Equines are teachers and role models of positive relationships • Equines and environment are metaphors and symbols for self and life

Realising identity and establishing a sense of belonging through connecting to self, others, God, and nature	• Realising identity – I know who I am!
	• Established identity and a sense of belonging through connections to:
	  ○ God
	  ○ Others
	  ○ Nature

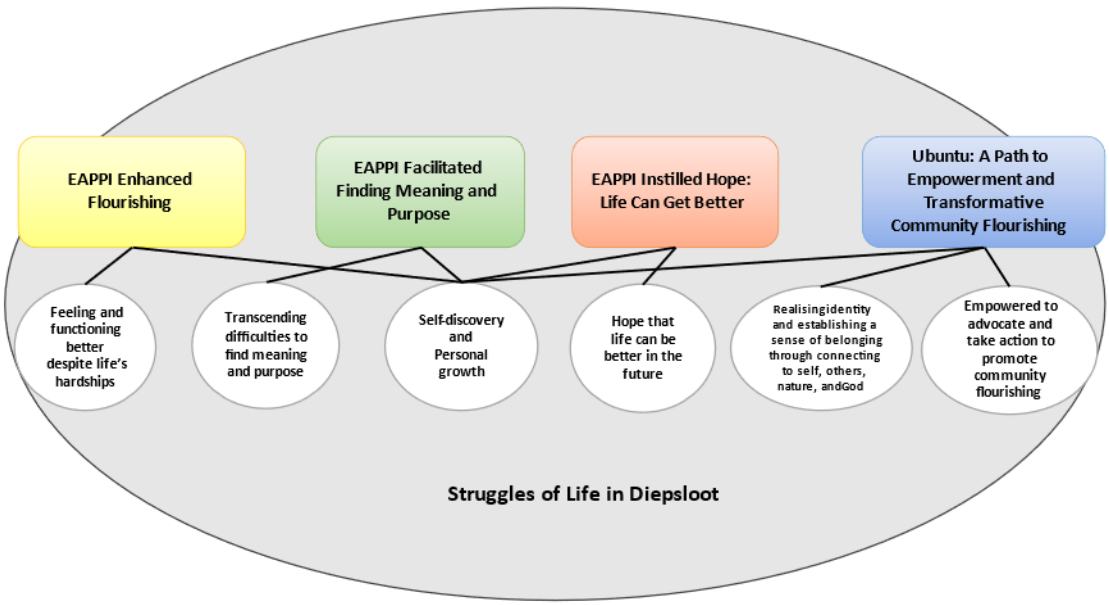
Empowered to advocate and take action to promote community flourishing	• Transitioned from scepticism to support for the intervention • Breaking down the myths and stigma regarding mental health • Motivated to seek ways to promote mental health in the community • Agency to advocate for and take actions that enhance mental health in the community

7.2.4. Phase 4: Reviewing Themes

The fourth phase comprised refining the themes identified in the previous phase. The researcher focussed on identifying the explicit themes using the semantic content and, subsequently, interpreted the significance of the patterns theoretically and reflected extensively on broader meanings and implications (Braun & Clarke, 2006, 2019). This phase involved a thorough review to ensure homogeneity within themes, validating the appropriateness of codes and text extracts in informing each theme. Furthermore, heterogeneity among themes was assessed to ascertain their relevance in illuminating the dataset (Braun & Clarke, 2006). Throughout the process, the researcher engaged in extensive ongoing reflection to generate four interrelated interpretive themes. Accordingly, it was decided that the sub-themes relating to the equines were content that fit into the themes of flourishing, meaning and hope. The thematic map of the reviewed initial themes and sub-themes is depicted in Figure 7.2.

Figure 7.2

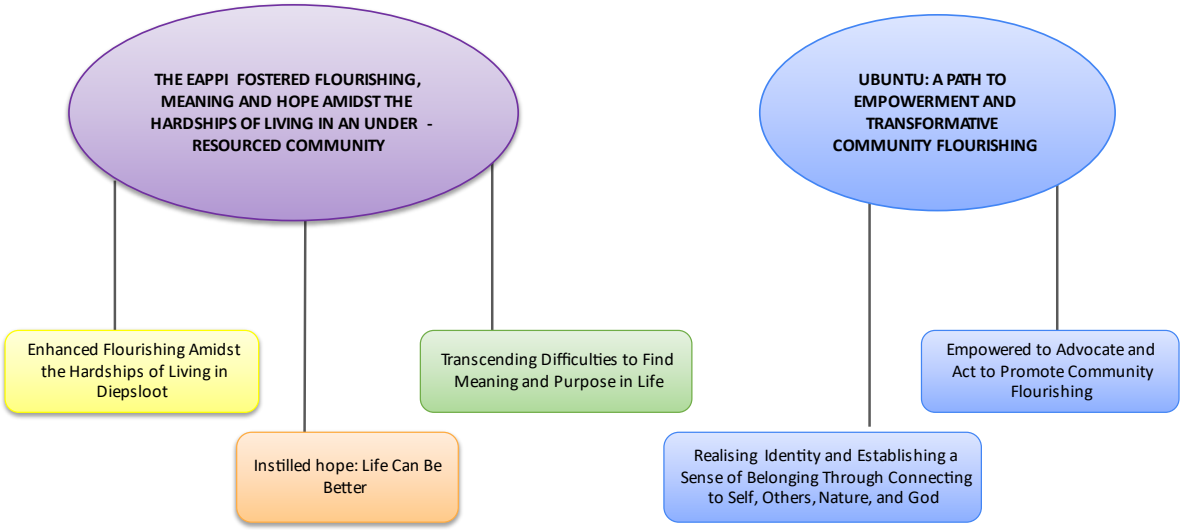
Reviewed Thematic Map, Showing Interrelations Between Themes and Sub-themes



The themes were later refined into two separate themes, which resulted in the final thematic map in Figure 7.3.

Figure 7.3

Final Thematic Map, Showing Two Main Themes with Sub-themes



7.2.5. Phase 5: Defining and Naming Themes

After creating the themes in phase 4, each theme was defined and further refined to identify its essence and confirm its clear associations with the research question. In this section, each theme is explained.

7.2.5.1. Theme 1: Equine-Assisted Intervention Fostered Flourishing, Meaning and Hope Amidst the Hardships of Living in an Under-Resourced Community

The participants' transformative experience attending the equine-assisted positive psychological intervention (EAPPI) is highlighted in theme 1. The participants purported that the EAPPI enhanced their ability to function optimally by fostering flourishing, meaning and hope despite the psychosocial challenges of residing in an under-resourced community. Three sub-themes emerged from the thematic analysis, shedding light on the rich tapestry of the participants' experiences: *Enhanced flourishing amidst the struggles of living in Diepsloot*, *Transcending difficulties to find meaning and purpose in life*, and *Instilled hope: life can be*

better. The first theme is substantiated by the sub-theme describing the pervasive psychosocial challenges participants faced as residents of Diepsloot. Subsequently, the participants' experiences living in Diepsloot while participating in the EAPPI are described. Thereafter, the three sub-themes are detailed.

The Struggles of Life in Diepsloot. The dire circumstances prevalent in South African under-resourced communities epitomised by Diepsloot's notorious challenges, as noted in Section 1.3, emphasise the significant psychosocial burdens the participants endured, thwarting their ability to function optimally. Amahle vividly depicted the depths of psychological distress as she grappled with suicidal ideation amid overwhelming adversity: "I was overwhelmed with so many things and even wanted to take my own life ... I would just sleep and stress about it every day, this hurt me too much …I was always down."

The participants' narratives revealed a complex web of psychosocial stressors intertwined with indicators of psychological distress, which illustrated the barriers to flourishing, meaning and hope. Gugu and Bongi epitomised daily multifaceted challenges, ranging from circumstantial hardships to existential questioning. Gugu spoke of the hardships many women in the community face, which, in her case, were exacerbated by living with a disability:

> The time I came here to start the programme we have a lot of stress. …There's many thing around me that hurt me so much … I have disability … unemployed … not know where to get food. He abusing me too much. He abuse me too much, called me names. Yeah it is not good.

Bongi posed existential questions related to the purpose of suffering. She shared,"I lost my husband. I ask myself, question myself, why me? Why I'm suffering? I can't pay for my child's groceries. I'll just think about my husband, I'll cry."

Thabo further illuminated the pervasive struggles of poverty, unemployment and insecurity plaguing the community, which perpetuated a cycle of despair and hopelessness.

Although the EAPPI did not bring about any tangible changes to these circumstances, Thabo, similar to other participants, suggested that following his participation, he experienced a profound shift in his perception and experience, indicating a marked improvement in his well-being:

> Before I started the programme, I can say life wasn't going very nicely for me … I sometimes felt like the whole world has turned on me. It was hard, very hard. Even now, it's still hard. … Before I was like okay, these things are happening and I would just give up and say, yeah, hey, I'm tired of this life, these things, everything is just coming at me, all sides, but nowadays I feel better.

All the themes and sub-themes, which highlight the participants' experiences of the EAPPI are situated within this backdrop of ongoing psychosocial challenges related to life in Diepsloot.

Equine-assisted Intervention Enhanced Flourishing Amidst the Struggles of Living in Diepsloot. This sub-theme examines the participants' experience of enhanced flourishing, a state of multidimensional well-being, due to their involvement in the EAPPI. As described in 3.2.2.5, this flourishing state encompasses both hedonic and eudaimonic aspects of well-being. While the hedonic aspect refers to a balance of positive and negative emotions and life satisfaction, the eudaimonic aspect alludes to positive relationships, meaning and purpose, and personal achievements. It is noteworthy that flourishing is accompanied by low levels of distress and mental illness (Keyes, 2002). Those who participated in the EAPPI shared that it had a positive and diverse impact on their lives, enabling them to flourish even in the face of adversity. They perceived flourishing as feeling and functioning better in spite of life's challenges. This enhanced flourishing was attributed to the psychoeducational content of the intervention and the equines, who facilitated embodied experiences of well-being and personal transformation as well as promoted positive relationships and teaching dynamics.

This sub-theme of enhanced functioning despite life's hardships was generated from the participants' reported experiences of enhanced hedonic and eudaimonic well-being in conjunction with a reduction in psychological distress. This theme was also informed by the sub-themes relating to the equines' role in enhancing facets of flourishing. Participants shared that they experienced a notable change in their hedonic well-being, reporting increased positive emotions and engagement and satisfaction with life. Sipho best expressed this positive shift: "Whenever I wake up, I wake up with a smile and then, looking forward to the day." The participants also reported a heightened awareness of the validity of all emotions and co-occurrence of pleasant (positive) and unpleasant (negative) emotions. Amahle asserted:

> It is okay to be angry and happy at the same time. Yeah, it's okay to be scared, it's okay to be afraid all those emotions. Yes but if they all come together you must just let them be and they will go. Yeah, you go with the process, if you angry you must just be angry. If you are happy you must just be happy.

The participants also realised that one's personal achievements and active engagement with life contribute to increased positive emotions. Jabu noted:

> I was valuing pleasure over achievement. Now after the programme it's the other way around. ... Feeling good to me is more of an excitement or worry-free feeling, usually after achieving something that one thought it's kind of impossible to achieve.

The participants described enhanced eudaimonic well-being as the experience of positive relationships in the intervention group, family and broader community as well as purpose in life and personal growth, all of which were buttressed by embracing life's dialectical nature. Mpho thus described how they acquired a deeper understanding of the dialectical nature of life, recognising that enhanced flourishing can emerge from embracing discomfort and adversity:

> There are going to different life situations in terms of maybe sometimes you get stressed or something ... know that in life there is sweet and sweat … to succeed in life you need to have sweat first so you can go under ups and downs. Then if you are in down conditions you could accept it, realise what it is and how can I solve it from there you could get into happy times.

Mpho thus alluded to the benefit of the psychoeducational content of the intervention, specifically attitude modification and problem-solving skills. He implied that the intervention promoted a positive change in attitude towards accepting things that were not in his control such as difficult life circumstances and existential challenges. He added that when things are within one's control, one has the responsibility to solve problems, resulting in enhanced functioning. Other participants agreed that this was a valuable lesson. Amahle confirmed, "The programme helped me to accept whatever that I'm going through." Thabo elaborated:

> It's the programme. I'm able to accept nowadays that things happen and they don't only happen to me, they happen to everyone. I have to continue with life even though those kind of things happen. I can't just say agh because now these things are happening to me I let me just sit here. I'll see them. I'll see those things later. And just continue stressing about those things being stressed while I all the time. So nowadays can just okay, these things are happening and they happen to anyone they can happen to anyone. Some people have problems worse than me. So I can just say okay come back to the problems. I can't control this problem and I can't do anything about it, so for now, let me just let it go, leave it. And accept that it's happened and just continue with life.

The equines were perceived to role model effective interpersonal relationships and provide positive relational experiences through the equine-human bond. Amahle noted, "We engage with them. We created a bond between us and them." The participants often reflected on

becoming aware of different perspectives regarding relational interactions that they had not previously considered, thus bringing hope by expanding the possibilities for life. Lerato mentioned that even though the equines were "unique, but different," they could "work together like a community." Thabo explained, "So when you're with animals, you get to learn more about life like there are things that you can control and things that you can't change. So things that you'll always have to have."

Bongi learned that communication is not limited to words: "Standing there watching them, you know, they communicate even they can't speak but you can see they communicating." She thus expressed amazement at how horses can establish non-violent and tolerant relationships, which humans often find difficult to do even though they possess the advantage of language: "The horses, doing whatever they're doing, going around, jumping, you know you can see they communicating … they can't speak, but they do communicate…" Bongi noted that the horses set an example of tolerance of diversity and positive relationships through their actions. She wondered why humans fight while horses live peacefully together, "What about us humans? We are fighting …I do have options to open my mind and talk to a person. You know, but I continue to fight." She reasoned that "the animals are not fighting … they are not relatives but they are all there they become relatives. They understand and they do have that good relationship. So if animals can do that, why can't we?"

Some of the others also noted that the equines exemplified relationships tolerant of diversity within communities. Thandeka explained how they respected differences, yet afforded each other individual space within the community: "You can see the way they behave, but they give each their space. Yes, they are different animals. They're living in the same crowd. … But they're giving each other (*space*). Let me say they accept each other." Likewise, Gugu described how the equines provided lessons on tolerating differences and shared her longing for her family relationship to be similar:

> Yeah we learned I learned many things. You know, donkey and horses. They stay together you know? They stay together like a happy family. But mm the people they don't do that. The time I saw that animal living in harmony, you know, I wish one day my family's going to be like that animals.

The participants indicated that humans could learn from equines to contribute to a more tolerant, accepting and peaceful community.

The participants also discussed implementing what they learned from the interactions with the horses in signficant relationships in the community. Sandile shared how his relationship with his family had improved: "They know my dad is coming from Shumbashaba … each and everyone want to when I come there they want to be next to me and listen." Mpho thus shared improvements in interpersonal conflict resolution abilities:

> How to know this horse right now is not in the mode of acceptance tolerance, you could know that this day this horse is not in good minds. I could trace this to my friends that sometimes you could see your friend in good times he or she might react in smile but when he or she is angry upon seeing him you could see that this person today he is not in good mood. So you need to know … get at least acceptance and tolerance thereafter and discussing issues and resolving the issue.

Furthermore, the participants frequently noted that the EAPPI catalysed personal growth, defined as self-discovery and increased capabilities to cope with life. Through this experience of self-discovery, they acquired a deeper insight and understanding of themselves and their aspirations. They discovered hidden talents, recognised their strengths and weaknesses, and experienced shifts in their self-perception. This journey of self-discovery was empowering, enabling participants to embrace their true selves and develop a more positive perception of themselves. Sandile who disclosed the shame he experienced due to being incarcerated simply stated that he learned, "I must accept who I am." Lerato shared her experience with one of the

horses that she encountered, which she experienced as a powerful metaphor for her journey of personal growth. She recounted how one of the horses symbolised her own struggles and she learned to become more self-accepting and confident in herself:

> The black beauty horse, because of its darkness. Because I'm also dark, okay I don't see beauty in myself in that way, but now the esteem is more because of the black beauty. I am comparing myself with it, how its hair is shiny and how I love my hair. How dark it is, how firm it stands, how clean it is.

Furthermore, the participants reported experiencing a reduction in psychological distress even when faced with challenging circumstances in Diepsloot. The intervention was a respite from significant distress, including suicidality, depression, grief and high levels of stress, thus affording light in life's darkness. They noted they experienced diminished emotional burdens and were learning to accept and cope with challenging emotions and situations. Lerato said, "I've been depressed, anxiety was hitting hard. The breathing exercises are top-notch. … I managed to calm myself down." Gugu explained that the physical contact with the equines helped stress reduction:

> The time I came here to start the programme we have a lot of stress. …There's many thing around me that hurt me so much. … And the time we come here, yeah, the light is coming on, we touch animals … you (Shumbashaba) really did change my life … I was down. Now, do you know I am happy. Since I came here now I'm okay, serious.

The participants repeatedly explained how embodied experiences with the equines catalysed their enhanced flourishing and relief from distress. This experience was thus encapsulated by Bongi, "At that moment, I'm here with your horses. It makes me feel better, and at least like I'm rebooting. I'll start from scratch." In an endeavour to understand why the equines elicited change, Gugu shared, "Touch the animals, play with the animals … change our

lives." Lerato suggested that the equines had a regulatory effect on her nervous system, which helped her to feel and function better. She explained, "So the horses helped me calm down, being one with nature is so amazing. I love the horses. … Seeing those animals really helped me calm down."

Several participants also recounted recognising their bodies' tangible sensory experience of fear. They described how the interactions with the horses facilitated their ability to encounter their fears, which were transferred to life. They explained how they were currently actively engaged with life despite those fears. Amahle spoke of an embodied experience of courage when she described the felt sense of facing fears and being brave: "It's because the first time when we were with the horses like we were scared of them. Yeah, we didn't even want to touch them. We were so scared of them …I must be brave. … If you are not brave you will always run from things. The programme has helped me to not be afraid. Life is a beautiful thing. Don't be scared of anything." Accordingly, she became the brave hero in her story, prepared to engage in life actively.

Thandeka spoke about how social and cultural narratives can create perceptions that animals are dangerous. She explained how she could challenge these beliefs in a safe space, transforming her "fear into love." Initially, Thandeka was "afraid of any moving animal", but as the intervention continued, she began "to love animals and overcome that fear." Her fear of animals may have been a protective state that was passed down intergenerationally. During South Africa's apartheid era, black people were dehumanised by being equated with animals (Katsere, 2022) and oppressive security forces used horses and dogs for mounted patrols of punitive control (de Vries & Swart, 2012). Thandeka learned that unchallenged beliefs can create unrealistic fears. The equine interactions allowed her to address self-imposed limitations founded in socio-cultural discourses so that she could function better: "Actually, I was scared of nothing [laugh]. It's just there was this fear or a phobia you grow up." She explained how "this

fear in you and it's crippling" prevents a person from experiencing different opportunities such as "having a dog as a best friend, travelling and experiencing the beauty of places different to where you are, and other cultures."

Connections to the equines and environment were recognised as having reciprocal benefits. Gugu thus noted this eloquently, "Take care of nature, and nature takes care of you." Through these sensory experiences of enhanced flourishing, the horses developed into metaphors and symbols in the participants' stories of transformation.

In essence, this theme describes how the equine interactions and intervention content served as a catalyst for participants' flourishing and reduction of psychological distress.

Meaning and Purpose Fostered by Participating in the Equine-assisted Intervention. The meaning and purpose sub-theme highlights how for the participants, the EAPPI fostered profound self-discovery and pursuit of meaning and purpose in life. The theme sheds light on the participants' transformative journey towards understanding life's inherent significance and embracing a meaning-oriented, purpose-driven mindset.

As described in Section 3.3.3.3, personal meaning is the interrelation of purpose, understanding, responsible action and enjoyment evaluation, facilitated through the dual processes of meaning-making and meaning-seeking (Wong, 1998b, 2012b).

The participants consistently reported that the intervention awakened them to the understanding that life possesses intrinsic meaning and purpose. They discovered insights about their significance through engaging with the equines and intervention content. They shared experiencing a sense of self-worth through understanding that they matter and are unique. Lerato reflected, "Believing in yourself, knowing that no one can replace you. Maybe they can replace some things, but not you specifically. I don't think no one can become you. Being unique no one can replace you. Yeah, I believe in myself!" Gugu confidently declared, "I know why I am here, I am not here by mistake!"

They also noted their powerful learning regarding the inherent meaning of life and the role of purpose as a driving force for meaningful action. Mpho eloquently captured this sentiment, "If I am alive, that means I have a meaning, and I do have something to do in my life." Amahle's testimony further emphasised the transformative power of this revelation. She candidly shared her journey from feeling insignificant and contemplating suicide to recognising the profound beauty and purpose inherent in life: "Before the programme … I didn't take my life seriously ... I didn't see my purpose on earth. So the programme helped me to ... start taking life seriously." This profound shift in perspective highlights the intervention's capacity to ignite a renewed sense of purpose and self-worth among participants.

Others, like Thandeka, articulated the understanding that every individual has a unique role to play in the world, which is accompanied by the responsibility to act accordingly:

> We are not here to decorate the land [*laughing*] and just be there. There is a purpose about us and it's only you who can discover what really it is your purpose and do whatever it takes to reach that goal. That you were called to do. It's like we all have it our own assignments. My assignment is not the same as your assignment is not the same as other people's assignment. It is mine. So it is my responsibility to make sure that I do what I was called to do.

Aligned with responsibility as an indicator of meaning in life, the participants reflected on the importance of recognising one's freedom to choose how to respond to life's challenges and opportunities. Sandile, who was on parole, shared learning through interactions with the equines helped him realise the meaning of personal responsibility; that while one has the freedom to choose, one is never free from the consequences thereof. He stated,

> When we are with the animals (equines), I can see they don't have a fence, but they stay in Shumbashaba. So, I realise. Next time I will have a fence so I don't take shortcuts. What I realised is that everyone has a choice, as long as you are

> free you have a choice. ... Choice and chance are golden together. Yeah, your choice if it (fence) is closed. You can jump. There's no problem. It's your own choice whether grab … [it] or leave it. ... The wisdom, the exercises we made. Yeah …take control of yourself … it is not easy to get a second chance.

Mbali reflected on the participants' expanded understanding of responsibility when she elucidated that responsibility transcends self-interest:

> The environment around you needs your contribution. The environment around you needs someone that will bring change. If we can analyse Diepsloot, the area where I stay what has been contributed … is theft, crime and all that pattern. You can bring change in your area instead of you being at home holding whatever … you come out of your comfort zone so that someone may receive something that will bring change in their life.

Furthermore, Jabu thus expressed the participants' experience of the transformative power of self-transcendence to enhance one's own life:

> What gives me meaning purpose in life what pushes me to keep going forward is that, I always want to be a better person in life. I want to be a person who can be fit enough to help others who cannot help themselves. So, because I know I'm good with, I'm like, I'm a helpful person so I always thought if I can build myself and prepare myself for future I can get a chance in the future to help others who cannot help themselves so that's what gives or what pushes me right now, it's like to work hard and be fit enough to help others and, because I love animals also, one of the things that pushed me, that gets me up to work harder is that, I want to have animals in my life. Like I want to help those animals that are maybe abandoned or maybe in the streets, or maybe that those that are sick and cannot get medicine. Yeah that's what pushes me.

Moreover, Mbali shared the powerful realisation: “Change begins with me, but change does not end with me.” Thus, the participants were empowered to take control of their lives and make positive changes in their communities, regardless of their challenges, by recognising their personal agency alongside the interconnectedness of human experiences.

Although not a universal experience, some participants found meaning and purpose through their faith and belief in God. They described how their spiritual beliefs provided comfort, guidance and inner strength during difficult times. Busi shared, “God … he’s always positive for me … I can see that to be positive with God it helps a lot. It’s really God is there.”

In summary, the participants subjectively experienced the EAPPI as an empowering and transformative journey that fostered their ability to pursue meaning and purpose amidst the struggles of living in Diepsloot.

Instilled Hope: Life Can Get Better. The third sub-theme elucidates that attending the EAPPI changed the participants’ outlook on life. Despite encountering difficult life circumstances, they became hopeful that life could improve in the future. Hope, as described in 3.4.2.4, is a multi-faceted combination of cognitions and motivations, where the individual and significant others are regarded as the agents of goal attainment cognitions (Bernardo, 2010). In conjunction with goal attainment cognitions, hope comprises hopeful feelings that emanate from trusting positive outcomes, especially in difficult situations beyond personal control (Krafft et al., 2019).

The participants shared how hope was a combination of having a dream for a better life and the courage to take action so that such dreams became life goals. They realised that following the intervention, they were more aware of their personal aspirations and objectives in various aspects of their lives. Amahle thus captured this sentiment:

> I always had goals. But then I didn’t know what must I do in order to achieve them. Because sometimes I feel like nah, I can’t do this it’s just a dream I won’t succeed. But

> then, after the programme I learned that nothing it's impossible like Mandela said it always seem impossible until it's done. So with my dreams and goals I think I'm going to achieve them all. I believe in myself. Yes!

Several participants reported acquiring greater courage, conviction and motivation to identify the necessary steps to achieve their goals. Thandeka proclaimed, "I discovered what was hidden in me for a very long time, I want to be a carer, so I will register to get a professional carer training next year. I had to Google professional way. So I will register to get a professional carer training next year. And I will, I'm pursuing it!"

Thabo and Amahle shared that they were changing their previous career paths. Thabo gained a sense of achievement by repairing computers, which afforded him direction regarding education and job prospects: "For now, I'd say I'd like to get that certificate, yes. And get a job, probably yeah, maybe in Cisco or somewhere in the big corporate companies." Amahle renewed her dream of becoming an electrical engineer after reassessing her fear of electricity and the belief that as a woman electrical engineering was too challenging for her. She was inspired by the programme's encouragement to be brave, recalling her initial fear of horses during the sessions. She thus expressed a newfound courage, emphasising the importance of facing fears and embracing life without hesitation, "If you are not brave you will always run from things. The programme has helped me to not be afraid. Life is a beautiful thing. Don't be scared of anything."

Lerato, on the contrary, explained that her aspirations were not only for herself but also for enhancing the lives of others. She reflected, "I dream that, wow, okay. For me, for the future to be at a better place full of joy. How my business can help other people to be happy." The participants expressed how the intervention had empowered them to reclaim agency over their lives and pursue their ambitions and goals with renewed vigour.

The supportive environment fostered during the intervention and interactions with fellow participants and facilitators inspired a sense of hope and belonging. Through shared experiences and mutual encouragement, the participants found solace in the realisation thatthey were not alone in their journey. Sipho reflected, “The one thing that made me to open up, hearing different views from the colleagues that we were entering with and hearing their opinions and their advices.” As a result of the intervention, the group felt a collective sense of hope that served as a powerful source of motivation and encouragement. This reinforced their belief that positive change was indeed possible for self and the community. Gugu reiterated this sentiment, “I’m going to take love … and trust … and peace …and harmony, and mm you know courage. Take that thing back to the community, to tell the community about the nature.”

The participants shared their experiences of enduring difficult situations despite experiencing extreme hardships in Diepsloot, including the loss of family members, poverty, food insecurity and unemployment. However,they spoke of finding hope in others, namely, family, friends, community and God. Mpho compelling shared this notion, “If you have hope, sticking to someone will add extra hope. After that you would get much hopeful. So it needs to have friends or relatives to get motivated into that hope.” Furthermore, Gugu reflected on discovering that one’s God-given unique strengths and talents instils hope: “We can do what God give you. God give us talent …”

Through open dialogue and experiential learning, presented in Section 7.2.5.2, the participants challenged prevailing myths and stigma surrounding mental health issues. They felt empowered to confront and address their mental health concerns in a safe and supportive space, free from judgement or discrimination. This experience of acceptance and understanding helped destigmatise and normalise mental health struggles, paving the way for greater hope and flourishing.

The participants described a notable shift from hopelessness to a newfound hopefulness. Through their interactions with the equines and engagement with the intervention content, they began to perceive the possibility of a brighter future, even when encountering their difficult life circumstances. Sipho thus encapsulated the power of this realisation: “It doesn’t matter where you grew up; you can do better than that.”

This shift reflected a deep internal transformation as the participants rediscovered hope as a guiding force in their lives. Busi reflected:

> I touched the horses, I can feel that this thing is like a free. … When I’m there, I’m in nature. I don’t even realise I need to do that, I just see free, like everything is okay with me. … To touch the horses it was like amazing because I never touched a horse in my life. Then I also realised that you can talk to the horses even if you don’t talk mouth to mouth, but you can really gain something lot of things from the horses.

In essence, the EAPPI provided a transformative experience that profoundly enhanced the participants’ subjective experiences of hope. The intervention empowered them o embrace hope as a guiding principle in their journey towards meaning in life and flourishing by fostering a sense of personal agency, fortitude and community support.

Summation. Theme 1 highlights the participants’ subjective experiences in the EAPPI as a transformative journey that significantly enhanced their ability to flourish, find meaning and maintain hope amidst the hardships of living in the under-resourced community of Diepsloot. The severe psychosocial challenges they experienced, including poverty, unemployment and insecurity served as a backdrop for their experiences. Despite these adversities, they reported enhanced flourishing, a greater awareness of meaning in life and a newfound sense of purpose and hope. The positive effects were made possible by the human-equine bonds, the psychoeducational content and the supportive environment of the EAPPI. The context of the EAPPI encouraged personal growth, self-discovery and the courage to pursue dreams and goals.

In essence, the EAPPI provided a transformative and empowering experience, which enabled participants to navigate life's challenges with renewed vigour and positivity.

7.2.5.2. Theme 2: Ubuntu: A Path to Empowerment and Transformative Community Flourishing

Exploring the participants' experiences in the EAPPI context generated a profound theme, which described their empowering dual journey of discovering personal identity and leveraging that empowerment to benefit others through transcendent action and care. In this section, the sub-themes that comprise this theme are elucidated: *Realising identity and establishing a sense of belonging through connecting to self, others, God and nature*, and *Empowered to advocate and take action to promote community flourishing.*

Realising Identity and Establishing a Sense of Belonging through Connecting to Self, Others, Nature and God. This first sub-theme was constructed from participant descriptions of realising their true identity. They vividly expressed how the intervention context acted as a catalyst, amplifying their ability to resolve identity-related existential anxieties through self-awareness. This extended beyond self-discovery to encompass the intricate interconnectedness of personal identity with the collective, represented by other group members, family and friends, nature and God. Most of the participants viewed the intervention experience as a transformative journey, which helped them answer the existential question Who am I? and truly realise their authentic selves.

Thandeka explained, "It (the intervention) was instrumental in my self-discovery." Busi echoed this sentiment, "I learn a lot of things here. You teach me this and that. Then I know who I am." Lerato, in sharing her newfound self-awareness, expressed gratitude for the intervention experience as it extended beyond herself to include her connectedness to others. She shared, "Yes, I now see myself as a wonderful person. I am grateful for being me [laughs], and I know someone out there is grateful for having me in their lives."

The participants' new sense of identity, enriched by the intervention, expanded to embrace others in the group, friends and family. Jabu's narrative beautifully illustrated the power of collective identity. He shared how the group members, through their support and understanding, helped him overcome his introverted nature, fostering a sense of belonging and acceptance that enabled him to become more comfortable engaging and being vulnerable in social situations:

> I'm an introvert, I'm an introverted person. The programme helped, the programme helped me with like confidence that I'm like around people. I grew up lacking confidence being around people like I always felt like my word wouldn't mean anything around people so, since I joined the programme, the programme had a lot of people who, made me feel free to say something and then with that opportunity like I learned to be open around people who are also who were also not in the group like I learned how to open up the bit … I appreciate the group … I liked to be around a group of people talking about life, so that's one of the experiences that I also gained.

Thabo added that the intervention environment was reminiscent of childhood, connecting him to his roots: "It was nice because it reminded me of home and where I came from." The participants fondly shared that their associations with group members grew into meaningful, supportive friendships. Lerato clearly expressed the value of the newly established friendships: "With the programme I think yeah the relationship we built is the friendship relationship because, we were strangers at some stage. Like when we get together we were strangers and the moment we get to understand each other that's when we started feeling free being around each other."

Mpho highlighted the mutual benefit of this social support network, noting how they assisted one another to solve problems and enhance life in general: "The programme helps you

to stick by your friends if you have a problem, how to solve that problem. You can get into your friends and get advice they could assist you in solving that problem and it helps standard of living." The beneficial experience of the intervention group friendships extended into life so that participants experienced enhanced relationships with family and friends. Amahle explained:

> It (*the intervention*) impacted to me very effectively because I can talk to people now. Like I'm so open to others, even my mother. I was someone who uh like sometimes I would just not say anything. But right now I can call her and talk to her about my problems and be open to her and then she will start comforting me and telling me how to deal with those problems. So the programme really helped me too much I'm so grateful.

Enhancing knowledge of self through connectedness to nature was an unanticipated benefit of the intervention. For many, it was a new realisation that humans are not separate from nature, bringing a bi-directional responsibility of care. Thabo thus expressed this sentiment:

> It teaches you about nature and human and a person, the way we think. We are not really that different from animals or nature. I can say what they brought is that they were showing us that we are in a way like them. We have different personalities, attitudes. So as we are able to do as humans we are able to do much more and we are able to think better than animals so. We are like animals, but we should also realise that we are humans and we should be able to also protect these animals.

Busi voiced how connecting with nature brought her happiness, providing a sense of freedom, self-acceptance and strength to face life's challenges:

> It's a free side you can see the nature there. That nature, yes, the effect of nature what makes me is like I, I like me to myself, I, I really like nature. I feel like when when I'm outside there of the nature. Then I can feel that okay. It brings me

> very real pleasure happiness you know mm that I can see that okay the life is still a long way to go and I can still live without the nothing even if I'm there I'm in nature I don't even realise I I need to be there I need to do that I just see free like everything is okay with me.

Gugu joyfully shared how she overcame shame to regain self-worth and thus became self-assured and confident:

> Just you and the nature, yeah. Be the the king of the jungle, yeah. Be [laughing] to me, you know, I like, I like mm lion lion, yeah. Lion is the king of the of the jungle. I apply that thing because I was scared all the time. Yeah, someone abuses me. I sad feel ashamed of myself. Ha I tell myself like no then I have to be like lion [imitates lion growling] all the time yeah, all the time. Yeah since I came here I know how to stand up for my- yeah then the. Be strong.

Lerato, Sipho and Gugu's experiences echoed a common sentiment within the group: the profound joy and mutual value of connecting with nature. Lerato enthusiastically related, " I just love nature, I just love animals and I just love the horses more [laughing]." Sipho shared, "Being close to nature, the environment itself is so relieving so yeah I had a wonderful experience there and it still does now ... being close to nature it's so mind-blowing". Gugu succinctly captured it, "Takecare of nature and nature will take care of you."

For some, the intervention environment served as a conduit to a higher power, God. Mbali described her experience as a "spiritual awakening," where her interactions with nature deepened her understanding of her faith and her place in the world:

> Then God gave me a character of a tree. There's a tree, before a tree grows it is a seed. I have planted a seed in you so that it may grow. Now, when a seed grows uh um in the ground, it has roots. Now you are rooted in me, meaning that you belong in me and when you grow I want you to be a tree that will be firm and a

> tree that will bear fruit, so that when people approach you, when people uh come to you, they may have fruits that will bring life. Because they, there are trees that when you eat you you can feel good, you know no it'sthis this can bring death too. So, at, as as you are telling me, I want you to contribute unto the world whatever the world that needs contribute unto it so that they may have life uh each and every person that feels with okay I am not okay I am not well. Contribute because you are rooted in me, so you may bring change even if it is the only tree and and and in the wilderness, even if it's the only tree. As long it is there, it will bring change, so that's the character that God brought, character of a tree.

Others such as Sandile and Gugu expressed how faith in God facilitates self-acceptance, fortitude and trust that life is as it should be. Sandile reflected, "I must accept who I am with them talk to God always pray to God and God doesn't give you the work that you can't hold".Gugu reinforced this observation, " Yeah, there's no work but there is work if we can do what God give you, God give us talent. Yeah we our own bosses."

Busi beautifully illustrated the profound strength of the human spirit, emphasising how an expanded sense of self rooted in interconnectedness with God and others fosters fortitude and a deep sense of belonging:

> Wow it makes me think about the strength of the of the human spirit. And it shows me that I'm not alone even God is there with his he is always with me because I think about okay God I want to do this, but I don't have it, but it comes in my mind really that no, you're gonna succeed. Relationship with God, relationship with other, because love the other people as you love yourself.

In the intervention group, members forged strong relationships and a supportive social network, experiencing the joy of belonging to an inclusive community. Gugu, a participant with

a disability, poignantly described the how the inclusive community provided a sense of belonging and acceptance:

> You know, sometimes when someone look at you, just say yoh you are nothing. Look, she just walking with the stick. She's nothing, she's gone, she's not going to make it like. They welcome us as we are, no, they look at us the same. Not that you are walking with that stick, you will not you have to go that side, no. They treated me the same and yeah, we are smiling. And yeah, we are happy family like in my blood in my [laughs] we are happy family. Yeah, and we share [laughs] everything. Yeah Shumbashaba yeah!

The participants' descriptions of realising their true selves through interconnectedness to self, others, nature and God were underscored by a deep sense of belonging within the group. Gugu elaborated, "They welcomed us. We are a happy family." Mbali summarised the experience as "Building of family … Ubuntu!"

Ubuntu, described in Sections 2.2.3 and 2.5.1, is portrayed as a complex web of interpersonal connections wherein an individual's identity is intertwined with a profound sense of belonging to the collective. This belongingness fosters a deep sense of solidarity, driven by altruistic acts of mutual assistance. Actions are directed towards the collective good, with the expectation that they will affect a group or community member positively (Desmond Tutu Peace Foundation, 2013; Metz, 2011). Through the lens of Ubuntu, the participants discovered strength in solidarity, which fostered a sense of belonging and empowerment essential for individual and community flourishing. Mbali thus illustrated this:

> Shumbashaba (intervention) is a programme is about community because immediately when you are there you start creating a relationship. A relationship what makes the community stronger. … Now immediately when you start establishing friendships, immediately when you start establishing relationships,

> immediately when you start building an atmosphere of love, we are able to grow together. Now I have grown from that. So, the programme is about community. How we enable community. How we strengthen community. How we spread love within the community. How we bring change within the community.

This sub-theme elucidates how the intervention helped the participants discover their true selves by collaborating and appreciating themselves, others, nature and God. The intervention experience promoted a significant sense of belonging and empowered the participants by embracing collective challenges through the concept of Ubuntu. This fostered an environment of kindness, compassion, and mutual support, ultimately enabling them to make meaningful changes in their communities, as described in the next sub-theme.

Empowered to Advocate and Take Action to Promote Community Flourishing. This sub-theme highlights the participants' Ubuntu-inspired solidarity and empowerment to take action towards improving community flourishing. The sub-theme focuses on the participants' collective spirit, which allowed them to tackle and reduce the stigma surrounding mental health issues and make altruistic efforts to benefit the entire community.

Initially, many participants harboured doubts about the intervention, reflecting broader societal attitudes towards mental health in under-resourced communities such as Diepsloot. Sandile explained:

> The people they didn't, they don't know what they are here for. … They started to enjoy the programme. They started to enjoy each company. And then that's when I realised oh people come with different perceptions. This diligence, what I show is this diligence. I'm not alone. This diligence to make things right.

Sandile's statement also suggested that as participants engaged with the intervention, their perceptions shifted, recognising its relevance and value in promoting flourishing. In learning to accept mental health or flourishing as a valid need, the participants began to

challenge the stigmas related to mental health, which resulted in advocacy and actions promoting mental health that extended into the community. As noted in Section 1.2, mental health is the state in which humans function optimally or flourish and is closely linked to the processes of meaning and hope. Mental health is distinct from, but related to mental illness. It is characterised by awareness of personal abilities, effective coping with life stressors and the ability to work productively and contribute to the community. Due to the lack of mental health resources in Diepsloot, especially for non-clinical populations (see Section 1.3), most participants such as Gugu had no prior experience with psychological or personal growth interventions. Furthermore, they had not previously participated in outdoor programmes with nature and animals. Gugu succinctly summarised the participants' transition from scepticism about the value of mental health nature-based interventions to recognising their benefits and potential to help others in the wider community:

> We are here not knowing. … It's helpful. ... The time we come here, yeah, the light is coming. I'm going to take love, and mm trust, and mm you know courage. And you know, and take that thing back to the community, to tell the community about the nature.

The participants explained that the self-discovery experiences empowered them to challenge mental health stigma in their communities. Mbali and Sandile echoed the sentiments of the participants with their respective statements: "We are able to grow together" and "Learning is sharing, we share everything and then we learn from each other." Additional participant growth experiences encompassed exploring and dispelling myths and negative stereotypes about mental health. Through open dialogue and vulnerability, they embraced self-compassion and emotional expression, overcoming barriers to mental health support. Jabu thus shared his journey of breaking free from societal expectations of masculinity, emphasising the importance of acknowledging and accepting one's emotions:

> People would tell you that a man is not supposed to cry. Men can't feel sad. Children don't get stressed. It's like they're telling you that you shouldn't have those emotions. … In the programme, you told us that it's okay to have those emotions.

Sipho's reflection on the significance of seeking help for emotional distress emphasised the role of the intervention in promoting acceptance and healing:

> I've had difficulties mourning and grieving for my mom. I remember someone from my family suggested that how about I go for counselling? The I said no I'll be fine, I'll be good. …Yeah, so I had difficulties. Grieving with that, coping with that. But ever since I've joined the programme everything has calmed down … the program has helped me a lot to accept and then to let go.Yeah, you mustn't hide (your) self, because, (you) can't find healing. You can't find healing while you keep quiet.

Furthermore, Amahle praised the intervention for creating a platform to openly address mental health and advocate for destigmatisation within communities: "People are suffering out there, yoh they're suffering silently, they can't talk! But then with this programme you will talk and you will be fine."

With the enhanced sense of belonging and resultant feelings of solidarity, some participants were motivated to find ways to assist the community. Amahle reflected:

> I think ... let me just say helping the community. Yeah. .. before the programme I thought that helping the community was just a waste of my time. It was just a waste of time so after the programme I am able to help my community. I'm willing to do more than what I was doing.

However, other participants experienced agency to act for the betterment of community flourishing. They noted how they used their experiences and the intervention's

psychoeducational content to help others in different community interactions. Lerato related sharing the mindfulness techniques with distressed colleagues:

> What I can also tell them (friends) or give to them it's the mindfulness uh exercises because my friends need them more. They're more in a depressed world than me, you know. I would really like to help them calm their nerves down and not think about suicidal thoughts. Yes, and telling them how important they are, complementing them, making sure that they know that I uhm value them as my friends. Yeah, letting them know how important they are to me.

While discussing the need for psychological interventions in the community, Sipho shared how the intervention empowered him to contribute to the well-being of community youth meaningfully:

> I have that um that wish and hope that that this thing could go further and help others. … Honestly, I'm working with kids right? ... How can I teach them to to have self-love, self-compassion, how to be kind because to be honest um our community here is is they are they they are they are they are growing apart um I I've seen a lot of hatred. … So they need they need to grow up knowing that their values are more important than everything and then um like I've said the community that we we in they have so much hatred among them. So if we can push that aside, and then make them aware of the values that are there so I think they can stop that thing, yeah, stop having hatred among themselves and the environment around me.

Bongi thus provided a good example of the mutual benefit of serving the community when she assisted survivors of gender-based violence:

> I was doing the presentation at the (redacted) GBV group. There is woman there. I was doing stress and women's depression. So then I share that information with

them. You know too many times they'll take that at home and then start rewinding. Then you know if I can do this, I'll have that peace that I'm looking for.

In essence, this sub-theme illustrates the transformative impact of the intervention on participants. Initially sceptical, they soon recognised the intervention's value in promoting flourishing. Through open dialogue, they challenged mental health stigma, embraced self-compassion and advocated for community mental health. They emphasised the importance of sharing their newfound knowledge and supporting others. This empowerment fostered a supportive, inclusive environment, which enabled them to address mental health openly and advocate for destigmatisation in their communities.

Summation.Theme 2 describes how through the intervention, the participants developed stronger connections with themselves, others, nature and God, leading to a profound sense of belonging and solidarity. They leveraged this empowerment to challenge mental health stigma, advocate for community well-being and take actionable steps towards enhancing community flourishing, reflecting the essence of Ubuntu. In summary, the theme *Ubuntu: A Path to Empowerment and Transformative Community Flourishing* encapsulates the profound impact of participating in the EAPPI on the development of participant identities. It fostered a sense of belonging to the collective and empowered participants to take measures to transcend and reshape mental health narratives in their under-resourced communities.

7.2.6. Phase 6: Final Write Up

The sixth phase of thematic analysis involves the culmination of the analysis process in which the themes are finalised and written up. However, delineating between the fifth and sixth phases can be somewhat ambiguous as they are intertwined throughout the entire analytic process. This study employed an embedded mixed-methods design, necessitating an extension of the two final phases to incorporate the merging of qualitative findings with quantitative results

through joint display analysis. The definition and finalisation of themes continued iteratively during the joint display analysis, obscuring the boundaries between the fifth and sixth phases. This recursive approach to writing constituted this chapter, the execution of the mixed-methods analysis and the ultimate completion of the final dissertation (Byrne, 2022). In Chapter 8, the integrated results are presented and discussed, thereby offering a more comprehensive understanding of the effect of the EAPPI on participant flourishing, meaning, and hope.

7.3. Qualitative Phase Conclusion

The study's qualitative findings, which were conducted using a reflexive thematic analysis of the qualitative data, were this chapter's focus. The analysis employed inductive/deductive and latent/manifest approaches and was guided by the six-phase recursive process developed by (Braun & Clarke, 2006, 2019, 2020, 2022, 2023). Thematic analysis captured the subjective experiences of the participants in two overarching themes, namely, (i) Equine-Assisted Positive Psychological Intervention Fostered Flourishing, Meaning and Hope Amidst the Hardships of Living in an Under-Resourced Community and (ii) Ubuntu: A Path to Empowerment and Transformative Community Flourishing.

These themes described the participants' subjective experiences of the EAPPI as a transformative journey marked by enhanced flourishing, meaning and hope amidst the severe psychosocial challenges of living in Diepsloot. Through the supportive environment of the EAPPI, enriched by human-equine bonds and psychoeducational content, the participants experienced enhanced optimal functioning and the courage to pursue their aspirations. In addition, the intervention helped participants address their existential anxieties related to identity, leading to stronger connections with themselves, others, nature and God and resulting in a profound sense of belonging and solidarity. They leveraged this sense of belonging to empower themselves to challenge mental health stigma, advocate for community well-being, and

take actionable measures towards enhancing community flourishing, reflecting the essence of Ubuntu.

Overall, the EAPPI appeared to provide an empowering experience that not only helped participants navigate their individual challenges with renewed vigour and positivity but also inspired them to contribute positively to their communities, reshaping mental health narratives and promoting collective flourishing. As noted previously, in Chapter 8, these themes are revisited during the mixed-methods integration process, where the quantitative and qualitative findings are combined through joint display analysis to conduct a more comprehensive analysis of the study results and subsequently discussed in relation to the existing literature.

Chapter 8. Mixed-Methods Integrated Results, Discussion and Conclusion

8.1. Introduction

In this chapter, the integrated results of the mixed-methods study are presented and discussed with reference to the literature. First, the data integration in which joint display analysis was employed to afford a comprehensive understanding of how the participants' experiences of the Equine-Assisted Positive Psychological Intervention (EAPPI) impacted their flourishing, meaning and hope is discussed. The combination of quantitative and qualitative data through the mixed methods design offered a multi-faceted insight into the intervention by revealing the statistical results in conjunction with the participants' richly nuanced personal experiences.

The integration of these data sets explored the intervention's efficacy more deeply to enhance participant flourishing, meaning and hope in a resource-constrained South African community. The limitations of the study as well as recommendations of how further research could build from these findings are also addressed in the chapter. Moreover, possible research that should be conducted in the future so that the significance of the findings becomes apparent and meaningful applications at the point of practical interventions are generated is outlined. In the final section of the chapter, the main insights from the study, which underline the potential for EAPPI to enhance the participants' lives, notwithstanding the very difficult situations so many were experiencing, are synthesised.

8.2. Mixed-Methods Integration of Data Through Joint Display Analysis

In this section, the mixed-methods data integration of the quantitative and qualitative data by joint display analysis is presented so as to answer the research question: How do the participants' experiences of the EAPPI augment the understanding of the intervention's impact on flourishing, meaning and hope? This approach to mixed-methods data integration (Bazeley, 2019; Creswell & Plano Clark, 2011; Fetters et al., 2013; Fetters & Molina-Azorin, 2017)

afforded a comprehensive understanding of the effect of an EAPPI on the flourishing, meaning and hope of the participants.

As outlined in Section 5.6.3, the joint display analysis involved an iterative process during which the researcher engaged with both datasets to identify intersections, linkages, contrasts and interpretations between the statistical results and qualitative themes. In this process, patterns where the datasets complemented, confirmed, expanded and/or were discordant from one another were identified. To facilitate the development of meta-inference, namely, overarching conclusions derived from integrating quantitative and qualitative data, the statistical results were displayed alongside the qualitative themes and sub-themes and substantiated by quotations from the participants (Younas & Durante, 2023). The final joint displays (Tables 8.1 to 8.3) visually aligned quantitative and qualitative findings for the relevant facets of each construct, enabling a comprehensive mixed-methods analysis. In Chapters 6 and 7, the complete quantitative results and qualitative findings, respectively, were presented.

8.2.1. Joint Display Analysis: The Effect of the Intervention on Participant Flourishing

The integrated results of the joint display analysis, which are presented in Table 8.1, reveals the meta-inferences indicating that the qualitative findings confirmed, expanded and were discordant from the quantitative data. The qualitative theme *The EAPPI fostered flourishing, amidst the hardships of living in an under-resourced community* augmented the statistical outcomes, providing deeper insights into the effect of the intervention on participant flourishing. The discussion of the resultant meta-inferences is organised as follows: first, confirmation of the baseline data; second, exploration of the discordant results; and finally, the expansion of results that provide additional depth to the findings.

Table 8.1

Joint Display Analysis Integrating Quantitative and Qualitative Findings of Intervention Effect on Participant Flourishing

	Quantitative Results *Comparison Between Experimental and Control Group*			Qualitative Findings Themes and Sub-themes Supported by Participant Quotes	Mixed-Methods Meta-Inferences
FLOURISHING	**Before Intervention**	**After Intervention**	**3 Months After Intervention**		
Overall Well-being	↑ **Exp < Cntrl** (p = .04, d = 0.4) *Flourishing: 53% Exp vs.55% Cntrl Languishing: 4% Exp vs. 3% Cntrl	↔ *Flourishing: 70% Exp vs. 63% Cntrl Languishing: 0% Exp vs. 6% Cntrl	↔ *Flourishing: 60% Exp vs. 63% Cntrl Languishing: 0% Exp vs. 9% Cntrl	**THE EAPPI FOSTERED FLOURISHING AMIDST THE HARDSHIPS OF LIVING IN AN UNDER-RESOURCED COMMUNITY** **Struggles of Life in Diepsloot** *"**Before I started the program, I can say life wasn't going very nicely for me**… I sometimes felt like the whole world has turned on me. **It was hard, very hard**." (Thabo; 26 years)* *"Female, **we struggle a lot as women** and with children at home. **The stress we have**, in places there's **poverty**, and then there is **abuse**, there's **GBV all those things**." (Bongi; 46 years)* *"Man, yeah he abusing me too much. **He abuse me too much, called me names**. Yeah it is not good. **We don't have a place to stay, we don't have something to eat**" (Gugu; 46 years)*	**Confirmed**
Social Well-being	↔	↑ **Exp > Cntrl** (p = .016, d = 0.5)	↔		
Psychological Well-being	**Exp < Cntrl** (p = 0.03, d = 0.4)	↔	↔	**Enhanced Flourishing Amidst the Hardships of Living in Diepsloot** *"There are **going to different life situations … sometimes you get stressed or something… know that in life there is sweet and sweat**… **to succeed in life you need to have sweat first so you can go under ups and downs**. Then if you are **in down conditions you could accept it**, realise what it is and **how can I***	**Expanded**
Affect Balance	↔	↑ **Exp > Cntrl** (p = .016, d = 0.5)	↔		

Positive Emotions	↔	↑ **Exp > Cntrl** (p = .008, d = 0.6)	↔

Comparison Within Experimental Group

FLOURISHING	**Before Intervention**	**After Intervention**	**3 Months After Intervention**
Overall Well-being		↑ (p < .001, *d* = 1.4)	↑ **> Before** (p = .008, d = 1.06)
Emotional Well-being		↑ (p = .001, *d* = .95)	↓ **< After** (p = .04, d = 0.7)
Social Well-being		↑ (p < .001, *d* = 1.2)	↔
Affect Balance		↔	↓ **< After** (p = .004, d = 0.7)
Negative Emotions		↓ (p = 0.048, *d* = 0.6)	↔
Life Satisfaction		↑ (p < .001, *d* = 1)	↑ **36 – 64 > 21 – 35 yrs** (p = 0.03, d = 1.2)

solve it *from there you could* ***get into happy times****." (Mpho; 33 years)*

*"Sometimes there is a lot of stress, lots of stress….****These programs helped me that I learned to calm myself*** *you know just calm. I can* ***go outside and take a walk****…when you're walking, you* ***focus on your foot the way you walk, you know that sound when you walk. I'll take a deep breath*** *you know, counting, to make you relax. Those was* ***experience of which I didn't know about, and you can do those things at home, you know to calm yourself down****." (Bongi; 46 years)*

"I love the horses*.* ***So horses helped me calm down, being one with nature is so amazing****… Being there every Tuesday and* ***seeing those animals really helped calm me*** *down. Because, you know when when you're on you're (uh) starting those periods days, moods days and you like moody the whole day. But when you see something you love the mood changes…****love the mood changes… I cry less now****." (Lerato; 22 years)*

"Positive functioning (mmm), you know I I have to live my my life positively because you know? (Mm) every day to worry about something not good (mm). They were calling me names (neh) they call me names, ***they call me you are nothing, before I come here****, you are nothing hey you're not going to walk again yeah you are not good. But you know?* ***No one going to tell me like that anymore*** *because, (mm) my life my life is...****Shumbashaba helped me a lot****. Serious.* ***It helped me a lot to know myself****. To know* ***what I want in life*** *to know (mm) how* ***to take care of me****.* ***How to say no****. Yeah to abuser, yeah. And* ***how to smile****. I was angry all the time. Yeah, sometimes when* ***we come here teaching us with animal.****" (Gugu, 46 years)*

Discordant

Reduction of Psychological Distress

"I was overwhelmed with so many things. ***I even wanted to take my own life. Just sleep and stress about it every day****, this hurt me too much… always down.*

Psychological Distress Extremely Severe & Severe	**31% Depression 39% Anxiety 19% Stress	↔ **37% Depression 61% Anxiety 19% Stress	↔ **43% Depression 63% Anxiety 31% Stress	*The program really helped me too much… **Right now I'm so energetic and happy**." (Amahle; 24 years)* *"I **'ve been depressed, anxiety was hitting hard. But now, I know how to maintain it**. And **the breathing in exercises are top notch** [laughs]" (Lerato; 22 years)* *"**Before we I started the program, I can say life wasn't going very nicely for me**...Because when I used to think about other things that are happening at home, I would get too much stress...Sometimes I feel like the whole world has turned on me, **but nowadays I feel better… It was hard, very hard. Even now it's still hard, but I'm able to accept it… I can say that the program helped**." (Thabo; 26 years)*

Note: Exp = Experimental group, Cntrl = Control group, EAPPI = Equine-assisted positive psychological intervention, * = % participants meeting criteria for diagnostic category Flourishing and Languishing (Keyes, 2002),
** % = percentage of participants scoring equal to or greater than the median, ↑ = significant increase, ↓ = significant decrease, ↔ = no significant difference.

8.2.1.1. Baseline Low Flourishing Levels.

The quantitative findings revealed that the experimental group reported significantly lower overall and psychological well-being levels at baseline (pre-intervention) compared to the control group before the intervention. Specifically, 47% and 45% of the experimental and control groups, respectively, were classified as “not flourishing.” In addition, approximately 20 - 40% of the experimental group reported high levels of psychological distress.

The sub-theme *Struggles of Life in Diepsloot* confirmed that the participants did not flourish before the intervention due to difficult psychosocial circumstances. They described challenges such as poverty, unemployment and violence, compounded by personal losses, including bereavement and disability. These adversities created a harsh environment that stifled their ability to flourish. Personal accounts detailed how these conditions precipitated overwhelming feelings of despair and hopelessness, contributing to low flourishing and psychological distress.

Moreover, demographic differences between the experimental and control groups may partially explain the disparity in pre-intervention flourishing levels. While 5% of the experimental group were immigrants, 9% experienced unemployment more than employment and 3% were students. In comparison, 7% of the control group, which comprised native South Africans, faced unemployment more often than employment. As noted in Chapter 1, immigrants in Diepsloot may face additional stressors, including xenophobia, discrimination and social exclusion, which can undermine their mental health and well-being. Similarly, higher unemployment rates in the experimental group may have contributed to lower baseline levels of flourishing because unemployment has been found to be strongly correlated with poor overall mental health and well-being (Mokwena & Mokwena, 2022; Pillay, 2019).

Students in the experimental group may have also been affected by stressors related to academic pressures and transitional life stages, negatively impacting their overall well-being

(Abdullah et al., 2020; Bantjes et al., 2023; Bantjes et al., 2016). These findings highlight the need for tailored interventions to address the diverse challenges different demographic groups face in under-resourced communities.

8.2.1.2. Psychological Distress.

The quantitative results revealed no significant differences in psychological distress between the experimental and control groups nor any notable changes in the experimental group across the measurement points. Before the intervention, over 30% of the experimental group reported severe to extremely severe levels of depression and anxiety and approximately 20% noted similar levels of stress. Although the percentage of participants who reported severe and extremely severe psychological distress increased following the intervention and at the three-month follow-up, this remained statistically non-significant.

In contrast, the qualitative findings indicated by the *Feeling and Functioning Better Despite Life's Hardships* sub-theme revealed an alleviation of psychological distress. The participants shared that the EAPPI offered temporary relief from daily adversities, reducing feelings of depression, anxiety, stress, grief and suicidality as well as improving their ability to manage difficult emotions. This divergence between the quantitative and qualitative data demonstrates a discordance related to psychological distress outcomes among the EAPPI participants.

This discrepancy may have stemmed from limitations in the sensitivity of quantitative tools such as the DASS-21. These tools may not fully capture the subtle changes in distress that participants perceive as normal. The DASS-21 primarily measures the severity of symptoms, potentially overlooking the nuanced emotional experiences that participants express qualitatively (Lovibond & Lovibond, 1995; Staunton et al., 2019). In addition, social desirability bias could influence qualitative reports, with participants possibly presenting a more favourable image of their distress levels (Babbie, 2021). Research has shown that while the DASS-21 is generally

reliable in African settings, it may have limitations in non-Western communities due to language barriers and construct validity issues (González-Rivera et al., 2020; Moya et al., 2022). To enhance accuracy and cultural relevance in future assessments, translating and standardising the DASS-21 into native languages, in conjunction with using multiple instruments to measure psychological distress, are recommended.

The participants attributed reduced psychological distress to improved emotional regulation and distress tolerance skills acquired through psychoeducation and specific techniques that were taught during the intervention such as mindfulness and journaling. Interactions with the horses also provided psychological benefits, with many participants reporting a greater capacity to handle negative emotions and experience enhanced relationships, thus contributing to overall well-being and flourishing. These qualitative insights concur with research that has demonstrated that equine-assisted interventions can alleviate anxiety, depression and stress (Burton et al., 2019; Chakales et al., 2020; Earles et al., 2015) while also fostering personal growth (Fournier et al., 2018; Frewin & Gardiner, 2005; Whittlesey-Jerome, 2014).

The discrepancies observed between the quantitative and qualitative results on psychological distress highlight the importance of adopting a mixed-method approach. While quantitative measures provide statistical validation, qualitative data are essential for capturing the intervention's nuanced personal impacts. This approach reveals a complex interplay between individual, environmental and intervention-related factors that can influence mental health in under-resourced contexts. Integrating both methods is crucial to fully understanding the richness of psychological interventions and their effects (Bachi, 2012; Clark & Ivankova, 2015; Plano Clark, 2017). Moreover, this discordant finding indicates the need for further investigation into psychological distress in multicultural, non-WEIRD contexts to better address cultural specificity and intervention efficacy.

8.2.1.3. Flourishing.

The quantitative data demonstrated significant improvements in social well-being, affect balance and positive emotions in the experimental group following the EAPPI. Notably, while there was a 20% increase in participants classified as flourishing, no participants were categorised as languishing. This positive change was sustained at the three-month follow-up. In contrast, the control group continue to exhibit languishing over the same period. Furthermore, while the experimental group maintained their higher levels of flourishing at the three-month follow-up, these levels, although not statistically significantly different from the control group, did not revert to baseline, which had been lower than that of the control group.

Post-intervention, the experimental group also reported significant increases in overall well-being, emotional and social well-being, life satisfaction, and a reduction in negative emotions, supporting the increased prevalence of flourishing. The participants noted a significant increase in overall well-being compared to before the intervention, combined with a reduction in emotional well-being and affect balance compared to after the intervention, at the three-month follow-up .

In essence, the quantitative results revealed that after the intervention and at the three-month follow-up, the participants reported increased overall well-being, an affect balance of more positive than negative emotions and sustained life satisfaction despite relatively high levels of psychological distress and ongoing adverse psychosocial living circumstances which may have contributed to the significantly lower emotional well-being scores three months after the intervention. Three months after the intervention the significant reduction in emotional well-being was reflected in the significant decrease in affect balance, which still reflected that the number of positive emotions exceeded the negative ones. Nevertheless, they also demonstrated a significant increase in overall well-being compared to the baseline level, indicating sustained improvements. These results suggest that the EAPPI promoted and sustained a participant

flourishing, comprising a dialectical balance of negative and positive components (Wong, 2016c).

The sub-theme *Enhanced Flourishing Amidst the Hardships of Living in Diepsloot* provided in-depth insight into the participants' flourishing beyond that captured by the quantitative data. While both data sets revealed improvements in hedonic and eudaimonic well-being aspects, the qualitative data provided a more nuanced understanding of how the participants experienced the EAPPI effect on their flourishing. The qualitative data expanded these findings, illustrating the profound effects of engaging with nature and equines. The participants shared how these interactions fostered a sense of calm, emotional regulation, self-acceptance and connectedness that extended beyond surface-level emotional shifts. These experiences suggest that flourishing, in this context, was not solely psychological but also deeply relational and embodied, rooted in the participants' direct interactions with their environment and the equines (Capaldi et al., 2015; Passmore & Holder, 2017; Passmore, Yang, et al., 2022). In times of reduced emotional well-being, such as three months later, the qualitative themes suggest that this embodied experience along with increased emotional regulation skills may be recalled so that they can flourish regardless of experiencing a lack of emotional well-being. This contributed to a grounded sense of balance and relief that the quantitative metrics could not fully capture.

Supporting this finding, in a meta-analysis, McMahan and Estes (2015) confirmed the beneficial effects of contact with nature on emotional well-being, thus demonstrating that natural environments can decrease negative affect. While no significant changes in positive affect were reported in this study, the qualitative data highlighted the participants' increased positive emotions, which they expressed as sentiments of contentment, reduced stress and happiness. This concurs with Capaldi et al. (2015) who established that natural settings enhance emotional well-being and reduce stress. Nature's stress-relieving effects, known to promote relaxation and

mental clarity, contributed to the participants' overall flourishing by alleviating psychological distress (Hoagwood et al., 2022; Yorke et al., 2013).

The participants also reported feeling more capable of managing adversity as they learned to embrace the complex dialectic of their positive and negative emotional and life experiences. This enhances the quantitative findings by demonstrating that flourishing involved more than temporary emotional improvement, but also encompassed the development of coping strategies and a renewed sense of direction and control over life (Wong, 2011a). Despite their challenging circumstances and measured long-term decrease in emotional well-being, the participants expressed experiencing less distress, a greater understanding of emotions and their impact, and an enhanced ability to flourish.

The EAPPI appeared to be particularly effective for the older participants who noted increased life satisfaction at the three-month follow-up. The qualitative data revealed that the older participants linked their life satisfaction to an increased awareness of the positive aspects of their struggles and found purpose and fulfilment through community contributions. This suggests that the intervention's psychoeducational and community-oriented components were particularly effective in fostering long-term hedonic well-being in this demographic group.

Furthermore, while the quantitative data indicated improvements in social well-being, the qualitative data revealed insights into how the participants experienced these changes. They described how the intervention fostered positive relationships in the group, with family members and the broader community, contributing to flourishing. This expanded view of social well-being reveals that it was not merely an individual experience but one deeply embedded in the community. The sense of support and belonging created during the intervention helped the participants to feel more connected to others, laying a foundation for sustained well-being. This resonates with the African concept of *Ubuntu – I am because you are, and you are because I am* – where flourishing is intrinsically linked to relational well-being and collective growth

(Desmond Tutu Peace Foundation, 2013; Metz, 2011). These experiences of *Ubuntu*, characterised by communal contributions and mutual support, reinforced the participants' sense of belonging and purpose (Keyes, 2005; Wong, 2010b). The integral relationship between meaning and flourishing in the participants' experiences is further explored in Section 8.2.2.1.

Similar to Cele et al.'s (2021) study among adults in Soweto, the participants from Diepsloot viewed their flourishing as relational, depending on reciprocal engagement with and responsibility to others. This relational perspective offers a richer understanding of social well-being beyond quantitative improvements in social functioning, including mutual support, shared experiences and collective flourishing. Furthermore, by contributing to the well-being of others and engaging in community support, the participants experienced self-transcendence, contributing to their sense of fulfilment and flourishing (Wong, 2021a).

While the quantitative data did not significantly reflect changes in psychological well-being, the qualitative data revealed in-depth insights into how the participants experienced psychological growth through the EAPPI intervention. Psychological well-being, a significant aspect of eudaimonic well-being, involves engaging with the existential challenges of life, including self-acceptance, purpose and personal growth (Keyes et al., 2002). The participants frequently mentioned that equine and nature-based interactions led them to reflect on their lives, fostering a stronger sense of purpose and self-acceptance, thus contributing to their personal growth.

The interactions with the equines facilitated opportunities for the participants to discover their authentic selves, embrace their strengths and weaknesses and experience self-acceptance. This concurs with Capaldi et al. (2015) who found that time spent in natural settings promotes psychological well-being by fostering a sense of freedom and self-expression. These experiences of connecting with nature and equines often triggered feelings of awe and a connection to something greater, contributing to meaning and purpose (Passmore & Holder, 2017; Passmore,

Yang, et al., 2022), thereby leading to more profound self-transcendent flourishing (Wong, 2010a, 2011b). Accordingly, the EAPPI's integration of nature-based activities expanded the participants' flourishing by promoting short-term emotional improvement and long-term personal development and fortitude.

Moreover, the participants emphasised that their psychological well-being was enhanced through this process of self-discovery, leading to a more holistic sense of empowerment and self-development. This expanded the quantitative findings, which primarily measured emotional shifts, by showing that flourishing involved growing stronger, becoming more self-aware and more capable of handling life's adversities over the long term (Ryff, 2014b; Wong, 2011b). The qualitative data offered a more comprehensive view of flourishing, revealing that psychological growth was integral to the participants' overall well-being.

The participants valued the multi-component nature of the EAPPI, which integrated emotional, psychological, social and environmental dimensions of well-being. The psychoeducational content was key to personal transformation, providing tools for self-awareness, emotional regulation and coping. The participants emphasised how combining equine interactions, nature and structured learning helped them develop emotional balance, self-acceptance and fortitude. This concurs with research that has accentuated the importance of psychoeducation in enhancing psychological well-being (Lyubomirsky & Layous, 2013; Ryff, 2014a).

The participants also reported the flexibility and choice they experienced in the different activity options was a beneficial aspect of the EAPPI. They noted the value of equine interactions, evidenced-based EPPI activities and freedom to choose which activities to include in their home practice. This is in accordance with research that has revealed that multi-component PPIs, which allow participants to choose activities that best meet their needs,

increase engagement, efficacy and cultural appropriateness (Lyubomirsky & Layous, 2013; Schueller, 2014).

Nature-based activities and group interactions also promoted a sense of connectedness and belonging, reinforcing hedonic and eudaimonic well-being. These insights support findings that have emphasised the importance of group-based psychoeducation in fostering community support and personal growth (Keyes, 2005; Passmore & Holder, 2017). The integration of nature and psychoeducation within the EAPPI possibly equipped the participants with long-term strategies for managing emotional and existential challenges, which were crucial for sustaining well-being in under-resourced environments (Passmore, Yang, et al., 2022).

By incorporating equines into therapeutic contexts that engage with nature, the EAPPI tapped into the therapeutic benefits attributed to nature. This approach concurs with findings that have supported nature's restorative impact on well-being. This study complemented and expanded Coetzee et al. (2022) who revealed significant improvements in adolescent psychological well-being after attending an equine-assisted intervention (EAPI) in the same under-resourced community. Both studies highlight the efficacy of EAPI in strengthening relationships, enhancing purpose in life, increasing self-acceptance and fostering personal growth (Ryff, 1989). Klontz et al. (2007) also found significant reductions in psychological distress and improvements in psychological well-being following EAPI in adults even though these effects diminished at a six-month follow-up. However, in this study, improvements in the experimental group's overall well-being, classified as flourishing, were sustained at the three-month follow-up despite the discordant outcomes related to psychological distress and their unchanged adverse living conditions.

Reviews have shown that while most EAPI studies have focused on ameliorating social and behavioural issues in children and adolescents, fewer have explored adult affective disorders in WEIRD contexts (Kendall et al., 2015; Lee et al., 2016; Selby & Smith-Osborne, 2013). This

study is one of the first to demonstrate EAPPI's efficacy in promoting adult flourishing in non-WEIRD contexts of adversity. It extends the scope of eco-EPPIs addressing mental health and flourishing to include equine-assisted interventions in natural environments.

The EAPPI offered a holistic approach to fostering flourishing among individuals facing significant psychosocial challenges. By addressing emotional, psychological, social and environmental dimensions, the intervention empowered the participants to build and sustain positive mental health despite adverse conditions. This comprehensive approach emphasises the EAPPI's efficacy in creating opportunities to foster flourishing, even in difficult environments.

8.2.2. Joint Display Analysis: The Effect of the Intervention on Participant Meaning

In Table 8.2, the joint display analysis regarding the effects of the intervention on participant meaning is presented. A detailed discussion of the results follows.

Table 8.2

Joint Display Analysis Integrating Quantitative and Qualitative Findings of Intervention Effect on Participant Meaning

Quantitative Results *Comparison Between Experimental and Control Group* MEANING	Before Intervention	After Intervention	3 Months After Intervention	Qualitative Findings Themes and Sub-themes Supported by Participant Quotes	Mixed-Methods Meta-Inferences
SEARCH FOR MEANING	↔ *52% Exp vs. 50% Cntrl	↔ *54% Exp vs.52% Cntrl	↔ *51% Exp vs.60% Cntrl	**THE EAPPI FOSTERED MEANING AMIDST THE HARDSHIPS OF LIVING IN AN UNDER-RESOURCED COMMUNITY** **Transcending Difficulties to Find Meaning and Purpose in Life** *"If **I am alive, that means I have a meaning,** and **I do have something to do in my life**. So in that living **I could focus what to do all the good things needed in humans' life**" (Mpho; unemployed)* *"**We are not here to decorate the land** [laughing] and just be there. **There is a purpose about us** and **it's only you who can discover what really it is your purpose and do whatever it takes to reach that goal, That you were called to do**. It's like we all have it our own assignments. **My assignment is not the same as your assignment is not the same as other people's assignment**. **It is mine**. So **it is my responsibility to make sure that I do what I was called to do**." (Thandeka; unemployed)* *"**When we are with the animals** (equines). **I can see they don't have a fence, but they stay in Shumbashaba**. So, I realise. **Next time I will have a fence so I don't take shortcuts**. What I realised is that **everyone has a choice, as long as you are free you have a choice... Choice and chance are golden together**." (Sandile; unemployed)* *"Now the the bent grass. **The bent grass taught me that even if in afflictions, even in everything that happens eventually the grass will be green.** And when we analyze the bent grass, **it was much more greener after being bent**...**Even in afflictions there is a purpose for those afflictions**. Even in everything that we go through, there is a goal. **There is a target the afflictions are preparing us for**." (Mbali)*	**Expanded**
Positive Search	**Exp > Cntrl** (p=.003, *d* = 0.5)	↔	↔		
MEANING IN LIFE	↔ *50% Exp vs. 50% Cntrl	↔ *51% Exp vs.54% Cntrl	↔ *53% Exp vs.55% Cntrl		
Relationships	**Exp < Cntrl** (p=.006, *d* = 0.5)	↔	↔		
Achievement	↔	↔	↔		
Self-transcendence	↔	↑ **Exp > Cntrl** (p=.02, *d* = 0.5)	↔		
Comparison Within Experimental Group **MEANING**	**Before Intervention**	**After Intervention**	**3 Months After Intervention**		

SEARCH FOR MEANING	↓ (p < .02, d = 0.7)	↑ **Unemployed > Employed** (p = .04, d = 0.7)	*"**I was valuing like pleasure over achievement** but **now after the program it's the other way around**." (Jabu)*
Positive Search	↔	↑ **Unemployed > Employed** (p = .048, d = 0.6)	**UBUNTU: A PATH TO EMPOWERMENT AND TRANSFORMATIVE COMMUNITY FLOURISHING** **Realising Identity and Establishing a Sense of Belonging Through Connecting to Self, Others, Nature, and God** *"**I learn a lot of things** here. You teach me this and that. **Then I know who I am** if I don't want something now, I don't want it. Then like **I've got love, love for people**. I **always like to work for the people**. I can take with me forever is that (um). Like to to learn who you are, it's **very important for me to be who you are**. We really need to because really, I didn't know,) is **value myself** (laughing). with my own… my natural I'm me **I am myself and I'm beautiful, is the way God made me.**" (Busi; unemployed)* *"**Shumbashaba is a program is about community** because immediately when you arrive in the program there is already a community that is established but we don't know we do not know one another. Now immediately **when you are there you have to start creating a relationship, a relationship what makes the community stronger.** So the program is about community. **How we enable community**. **How we strengthen community**. **How we spread love within the community**. **How we bring change within the community**. **You can establish your own belonging.**" (Mbali)* *"**Nice experiences I had was being with the animals (equines)**. And the last two weeks we were there, **when we were taking the walk into the forest area.** Yeah, that was nice because **it reminded me of home and where I came from and it's bringing me back** to …. now it's taking me **to where I am.**" (Thabo; unemployed)* *"**I must accept who I am** with them, talk to God always **pray to God**, and **God doesn't give you the work that you can't hold**." (Sandile; unemployed)* **Empowered to Advocate and Act to Promote Community Flourishing** *"Yeah… **before the program I thought that helping the community was just a waste is my time it was just a waste of tim**e so after that **after the program I am able to help***
Negative Search	↓ (p = 0.02, d = 0.7)	↔	

		my community *and* ***I'm willing to do more*** *than what I was doing." (Amahle)* *"* ***I was doing the presentation at (redacted) woman's group****. They was doing* ***stress and depression****, so then* ***I share that information with them****. You know too many times* ***they take that bit home*** *and then* ***start rewinding*** *and then* ***you know if I can do this****,* ***I'll have that peace that I'm looking for****." (Bongi)* *"What I can also* ***tell them (friends) or give to them it's the mindfulness (uh) exercises because my friends need them more****. They're more in a depressed world than me, you know.* ***I would really like to help them calm their nerves down and not think about suicidal thoughts.*** *Yes, and telling them how important they are, complementing them, making sure that they know that I (uhm)* ***value them as my friends****. Yeah,* ***letting them know how important they are to me****." (Lerato)*

Note: Exp = Experimental group, Cntrl = Control group, EAPPI = Equine-assisted positive psychological intervention, ↑ = significant increase, ↓ = significant decrease, ↔ = no significant difference.

* % = percentage of participants scoring equal to or greater than the median.

8.2.2.1. Meaning.

While the quantitative data revealed some statistically significant changes in the experimental groups' search for meaning and identification of the presence of meaning in life, as indicated by sources of meaning, the qualitative findings provided enhanced insights into the effect of the EAPPI on the participants' experience of meaning-seeking and finding personal meaning.

The quantitative data revealed changes in the experimental group's search for meaning. These participants reported a significantly greater positively oriented search for meaning before the intervention than the control group, suggesting they were concerned with determining their purpose and significance (Wong, 2019b). The qualitative theme *Transcending Difficulties to Find Meaning and Purpose* highlights the participant narratives that despite a desire for meaning before the EAPPI, they were unsure where to search and find meaning given the adverse circumstances of their life.

After the intervention, the experimental group reported a significant decrease in their overall search for meaning and their negatively oriented search for meaning. This decrease suggests that they were reconstructing their worldview and attributing meaning to their difficulties by integrating painful experiences with positive life views (Frankl, 1969, 1988a, 1988b). Viewing life as meaningful fosters adaptive coping mechanisms in stressful times or adversity. Frankl (1969, 1988a) emphasised that finding meaning in suffering can transform negative experiences into opportunities for growth, enhancing fortitude and optimal functioning. This suggests that the participants acquired a deeper understanding of existential meaning amidst the struggles of their lives (Wong, 2011b, 2019b). The participants' narratives support and further elucidate this finding in the sub-theme *Transcending Difficulties to Find Meaning and Purpose in Life and Realising Identity*. They attributed this to the EAPPI, allowing them to improve their ability to confront life's challenges and their subsequent effort to integrate

negative and positive experiences (Wong, 2010b, 2011b). The changes in searching for meaning were accompanied by a reported increase in the presence of specific sources of meaning of achievement, self-transcendence and fair treatment, which reflected their understanding of existential meaning as an effect of the EAPPI was enhanced. The participants' quotations in Table 8.2 provide additional insights that were not evident from the quantitative results. They acknowledged that the intervention helped them realise that life is unconditionally meaningful under all circumstances, even when living in adverse conditions in an under-resourced community. They also became more aware that humans are inherently meaning seekers and need to be open to the potential of meaning in life. They attributed this to the intervention's psychoeducational content and facilitation style that focused on self-discovery rather than didactic education. The participants noted that the facilitators encouraged a meaning-oriented mindset by highlighting the meaning potential of interactions rather than assigning meaning. This resulted in a profound realisation that they were solely responsible for discovering their own unique personal meanings. This experience increased their awareness that meaning can be found through their creative abilities, life experiences and attitude towards a difficult and unchangeable situation (Frankl, 1969).

The interactions with equines, nature and others, combined with the psychoeducational content, served as signposts that assisted the participants in identifying personal meaning beyond what was revealed in the quantitative data. This included finding sources of meaning through the awareness of freedom of choice and personal responsibility, taking responsibility for the outcomes of these choices, gaining knowledge of personal uniqueness and worth, self-discovery, experiencing positive relationships and self-transcendence (Fabry, 1988). The participant narratives described how intervention experiences (experiential values) led to a clearer understanding of personal strengths and weaknesses, facilitating a renewed sense of authenticity and increased self-acceptance. The realisation of personal worth, regardless of weaknesses, leads

to greater self-acceptance, enhanced coping with existential anxieties related to identity and a deepened sense of personal meaning (Fabry, 1988; Wong, 2012a).

The participants also described a rekindling of life's goals and purpose aligned to creative values. This contributed to a deeper understanding of their life situations, demonstrating that difficult times can lead to a greater purpose in life. The participants referred to the benefits of mindfulness in helping them to appreciate the present moment, identify purposeful goals and recognise the potential for meaning in each experience. This assisted them to transform negative experiences into opportunities for growth (Ciarrochi et al., 2022). Interactions with nature, facilitated through the equine interactional component of the EAPPI, played a significant role in helping the participants accept life's challenges and find meaning in adversity (Frankl, 1988a; Wong, 2010b).

The narratives shared by participants in the sub-themes *Transcending difficulties to find meaning and purpose in life* and *Realising identity and establishing a sense of belonging through connecting to self, others, nature and God* illustrate how the participants' sense of who they were and their purpose in life were connected to a sense of calling and the belief that even in difficult times, God had a specific purpose for their life. Although religion was not identified as a significant source of meaning quantitatively, the qualitative data revealed that the intervention nurtured their spiritual growth and fostered a sense of connection to something greater than themselves. The participants acknowledged feeling more connected to God and emphasised the importance of religion as a source of meaning. They reported that these spiritual experiences were facilitated through relationships with the equines and nature as set up through the EAPPI activities. This reflection concurs with international research on the relationship between spirituality and engagement with nature (Kamitsis & Francis, 2013). Furthermore, it supports research that has demonstrated religion is an important source of meaning within African cultures (Nell, 2014).

Furthermore, the qualitative data highlighted the importance of relationships and community connections. The participant narratives in the *Ubuntu: A path to empowerment and transformative community flourishing* theme stressed the value they placed on finding meaning together. The participants ascribed *Ubuntu*, described as a sense of belonging and support with the equines, to their enhanced sense of meaning. They further noted the value of shared goals and collective experiences, which generated a deep sense of connection and purpose among them.

The supportive group environment, the equine interactions and self-reflective practices not only strengthened connections with God but also built positive relationships within the intervention group, their families and the broader community, contributing to an increased sense of acceptance and enhanced sense of belonging (Frankl, 1988a; Lambert et al., 2013; Wong, 2014b). A sense of *Ubuntu* emerged as a vital component in this process as the participants felt a strong sense of communal support and collective growth, which bolstered their rediscovered identity and authenticity (Desmond Tutu Peace Foundation, 2013; Metz, 2011). This reinforced Wissing et al.'s (2014) finding that the essence of meaning in African communities revolves around connections and relationships.

The participants also shared how the increased feelings of connection to God and community they experienced as a result of participating in the EAPPI motivated them to use their time, talents and treasures to engage responsibly to benefit their local communities. Engaging in such self-transcendent actions reportedly afforded them a deep sense of fulfilment and purpose that was both culturally and personally relevant. This commitment to responsible self-transcendent action in the community reveals that the EAPPI impact extended beyond the individual to the community.

Self-transcendence through serving others and the greater good not only contributes to positive collective experiences of *Ubuntu* but also increases experiences of hedonic and

eudaimonic well-being, which are important existential components for flourishing (Wissing et al., 2021; Wong, 2010b, 2014a). As detailed in Section 3.3.4, meaning is a significant indicator of flourishing (Heintzelman & King, 2014; Martela & Steger, 2016) and is both a contributor to and an outcome of flourishing (Wong, 2012d). It protects flourishing and prevents languishing and psychological distress (Park, 2010). Specifically, searching for meaning is inversely correlated with flourishing (Park et al., 2010). This was true for the experimental group who reported a significant decrease in the search for meaning (see Table 8.2) and an increase in flourishing (see Table 8.1) after the intervention. Individuals with a strong sense of meaning are better equipped to face life's challenges as meaning promotes effective coping strategies, safeguarding flourishing (Frankl, 1988b; Heintzelman & King, 2014; Park, 2010; Wong, 2011b).

Interacting with equines requires participants to control and manage their emotional responses of trust, patience and empathy as well as develop skills such as goal-setting, decision-making and accepting responsibility for their choices (Esposito & Fournier, 2023). This process stimulates meaning-making and flourishing (Wong, 2012a), thereby contributing to the limited evidence base supporting the inclusion of equines in interventions on the development of meaning and promoting their inclusion as PPIs (Fine et al., 2015; Schroeder & Prasath, 2022).

Three months after the intervention, the unemployed participants reported a resurgence in their search for meaning, particularly a positively oriented search for meaning. The qualitative data helped to contextualise and offer insights into understanding this result. The themes of personal empowerment, responsibility and community action were particularly pronounced in these participants' narratives as they described how the EAPPI had helped them reframe their experiences of adversity and find new meaning in their roles in the community. Several participants described how they applied the skills they had learned during the intervention, including emotional regulation and goal-setting, to contribute to their communities through acts

of service. These self-transcendent actions, often framed within *Ubuntu's* context, afforded the participants a deep sense of fulfilment and purpose.

During the intervention, the participants reported being better able to manage stressors related to survival and basic needs. This was possibly influenced by the supportive relationships they experienced, such as SCT, who provided all the participants with transport money and snacks, for which some participants expressed gratitude during the interviews. However, the resumed search for meaning at the three-month follow-up should be understood in the context of unemployment, poverty and other psychosocial challenges that limit opportunities to pursue life goals and contribute to family and the community (Frankl, 1988a; Wong, 2010b, 2019b). In times of difficulty, the active search for meaning facilitates meaning reconstruction, personal growth and development, which is important for adjusting to new circumstances and maintaining mental health (Wong, 2011b, 2012a). These findings highlight the importance of community stakeholders addressing stressors, by providing transport and food, in interventions targeting the unemployed.

The qualitative data enhanced the quantitative data by revealing that the effect of the EAPPI was to empower the participants to meet the challenges of living in an under-resourced community directly and transform these challenges into opportunities for meaning, wisdom and growth, facilitating the emergence of their authentic, flourishing self (Whillans et al., 2020; Wong, 2012a). The joint display analysis results further showed that the EAPPI helped alleviate existential anxieties and enhanced a sense of meaning and flourishing. The latter contributed to the existing literature on the positive psychological effects of interactions with nature and animals, specifically equines (Amiot & Bastian, 2015; Heilmayr & Miller, 2021; Jones, 2017; Passmore & Howell, 2014). Because only a limited number of meaning-oriented interventions were found in the literature (Parks & Biswas-Diener, 2013; Wong & Roy, 2018), these findings

are promising in highlighting the importance of EAPPI as a culturally relevant and accessible community-based intervention that fosters the development of meaning.

8.2.3. Joint Display Analysis: The Effect of the Intervention on Participant Hope

The integrated results of the joint display analysis, presented in Table 3, show that the qualitative findings confirmed and expanded upon the quantitative results. The qualitative themes *The EAPPI Fostered Hope Amidst the Hardships of Living in an Under-Resourced Community* and *Ubuntu: A Path to Empowerment and Transformative Community Flourishing* augmented the statistical outcomes, thereby providing deeper insights into the EAPPI's effect on participant hope.

8.2.3.1. Pre-Intervention Low Hope Levels.

The statistical findings demonstrated baseline differences between the experimental and control groups' overall and external locus of hope subscale scores before the EAPPI. Furthermore, only half of the experimental group perceived their life as hopeful, indicating a lower prevalence of perceived hope than the control group. Furthermore, the qualitative sub-theme *Instilled Hope: Life Can Be Better* confirmed these low hope levels as reflected in the experimental group's narratives. This was further corroborated in Section 8.2.1 by the participant narratives regarding the *Struggles of Living in Diepsloot*, which highlighted that the hardships associated with living in Diepsloot perpetuated a sense of hopelessness and discontent. The participants felt overwhelmed by their adversities, reported a lack of agency and perceived few opportunities to improve their situation before the intervention. These findings are presented in Table 8.3 and subsequently discussed.

Table 8.3

Joint Display Analysis Integrating Quantitative and Qualitative Findings of Intervention Effect on Participant Hope

Quantitative Results *Comparison Between Experimental and Control Group* HOPE	Before Intervention	After Intervention	3 Months After Intervention	Qualitative Findings Themes and Sub-themes Supported by Participant Quotes	Mixed-Methods Meta-Inferences
Overall Locus of Hope	**Exp < Cntrl** (p=.006, *d* = 0.6) *INTLoH: 53% Exp vs.55% Cntrl	↔ *INTLoH: 55% Exp vs.51% Cntrl	↔ *INTLoH: 53% Exp vs.50% Cntrl	**THE EAPPI FOSTERED HOPE AMIDST THE HARDSHIPS OF LIVING IN AN UNDE-RESOURCED COMMUNITY** **Instilled Hope: Life Can Be Better** *"**Before I was like okay, these things are happening and I would just give up** and say, yeah hey, I'm tired of this life these things are everything is just coming at me, all sides, and **sometimes I feel like the whole world has turned on me,** but **nowadays I feel better.**" (Thabo) *"**But now** in the middle and after the program. I know **I'm not working** now **I don't have money but now** I but **I can see my views** there I **can see that I'm going there** and I'**m going to succeed with what I want to do**." (Busi) *"If you have hope **sticking to someone will add extra hope** and after that you would get much hopeful. So **it needs to have friends or relatives to get motivated into that hope.**" (Mpho) **UBUNTU: A PATH TO EMPOWERMENT AND TRANSFORMATIVE COMMUNITY FLOURISHING**	**Confirmed** **Expanded**
Peers as External Locus of Hope	**Exp < Cntrl** (p=.003, *d* = 0.6) *EXT-Peers: 52% Exp vs.55% Cntrl	↔ *EXT-Peers: 55% Exp vs.53% Cntrl	↔ *EXT-Peers: 56% Exp vs.50% Cntrl		
Comparison Within Experimental Group					

HOPE	Before Intervention	After Intervention	3 Months After Intervention
Perceived Hope	*PH = 50%	↑ (p=.002, *d* = 0.9) *PH = 59%	↔ *PH = 54%

Realising Identity and Establishing a Sense of Belonging Through Connecting to Self, Others, Nature, and God

"Shumbashaba is a program is about community because immediately when you arrive in the program there is already a community that is established but we don't know we do not know one another. ***Now immediately when you are there you have to start creating a relationship, a relationship what makes the community stronger. So the program is about community. How we enable community. How we strengthen community. How we spread love within the community. How we bring change within the community. You can establish your own belonging****." (Mbali)*

*"Wow, it makes me think about t****he strength of the of the human spirit****. And it shows me that* ***I'm not alone even God is there*** *with his* ***he is always with me*** *because* ***I think about okay God I want to do this, but I don't have it, but it comes in my mind really that no, you're gonna succeed****. Relationship with God relationship with other because love the other people as you love yourself." (Busi)*

"You know, ***I am no longer for myself, but I am for others*** *so that there may be change that circulates.* ***Change begins with me, but change does not end with me.****" (Mbali)*

Empowered to Advocate and Act to Promote Community Flourishing

*"****Just hope*** *(um) just* ***raise your arm and help others****." (Sipho)*

*"****Shumbashaba empower you****, yeah it will empower you [laughs]. Empower you yeah,* ***to be someone special yeah, be someone special****." (Gugu)*

*"****What pushes me right now, it's like to work hard and be fit enough to help others*** *and, because* ***I love animals*** *also,* ***one of the things that pushed me****, that gets me up to work harder is that,* ***I want to have***

	***animals in my life**. Like **I want to help those animals that are maybe abandoned or maybe in the streets, or maybe that those that are sick and cannot get medicine**. Yeah that's what pushes me." (Jabu)* *"**I have that** (um) that **wish and hope that that this thing could go further and help others**...Honestly, I'm working with **kids** right? So they need they **need to grow up knowing that their values are more important than everything** and then (um) like I've said **the community that we we in they have so much hatred among them**. **I want to have my own program** my own, **my own organisation** (um) l**ike the the one (Shumbashaba's) running**, **because it's so so helpful** I won't lie it's so helpful and is it if if it was up to me i would go every day yeah If it was up to me so but (um) well **considering my future I'm I'm willing to to to do anything so that I can help other people** (um) **reach out to them** and then and have a **have a a close a close relationship with them**" (Sipho)*

Note: INTLoH = Internal locus of hope, EXT-Peers = External locus of hope - Peers, PH = Perceived hope, Exp = Experimental group. Cntrl = Control group. ↑= significant increase, ↔ = no significant difference.
* % = percentage of participants scoring equal to or greater than the median.

Exposure to systemic adversity in under-resourced communities like Diepsloot has been shown to affect residents' hope negatively (Cahill, 2019; Flechtner, 2014). This, combined with the specific adverse challenges faced by members of the experimental group due to demographic factors, as explained in Section 8.2.1.1, may have further contributed to the baseline differences in hope between the two groups.

8.2.3.2. Hope.

The statistical results revealed that after the EAPPI, the baseline differences between the experimental and control groups in their Locus of Hope scores were no longer evident. Thus, there was an increase in the experimental group's locus of hope, as reflected in the prevalence scores, which were sustained at the three-month follow-up. However, the control group's prevalence of hope on the same aspects of this measure decreased over the same period even though it was not significant. Furthermore, in the experimental group, there was a significant increase in perceived hope after the EAPPI. Moreover, the group had a higher prevalence of perceived hope than before the intervention at the three-month follow-up. This relatively high level of hope, specifically, more than 50% of the group reporting scores equal to or greater than the median in an under-resourced context concurs with Guse and Shaw (2018) findings among South African university students. In accordance with global studies, there were no significant age and gender differences in hope (Scioli et al., 2011; van der Westhuizen et al., 2013).

The participant narratives, as displayed in Table 8.3, reflected in the qualitative sub-themes *Instilled hope: Life can be better*, *Realising identity and establishing a sense of belonging through connecting to self, others, nature and God* and *Empowered to advocate and act to promote community flourishing* indicated a multidimensional increase in hope extending

beyond the quantitative results. These narratives afforded enhanced insight into the participants' sources and perceptions of hope, which revealed a heightened awareness of personal dreams and empowerment to take actionable steps towards realising them.

The narratives demonstrated that through the EAPPI, the participants acquired self-knowledge related to their skills, strengths, passions, dislikes and weaknesses. This fostered the realisation that they were unique, worthwhile autonomous individuals who could shape their future within their limiting circumstances. This ensuing sense of personal empowerment, an internal source of hope, demonstrated their agency and motivation to pursue important life goals. This was not reflected in the quantitative data.

However, as evidenced in the sub-theme *Realising identity and establishing a sense of belonging through connecting to self, others, nature and God*, the participants' hope was deeply intertwined with relational connectedness, spiritual practices and a sense of community, thus reflecting a holistic view of flourishing that included an external locus of hope (Ahmed et al., 2004; Bernardo, 2010; Bernardo et al., 2018; Wilson et al., 2018). They noted that the EAPPI helped them to develop a greater appreciation for relationships with others, including family and friends, and a deeper connection to nature and God.

The participants shared that the EAPPI interactions with group members, equines and nature led to new and meaningful supportive relationships that extended beyond the intervention experience to include the surrounding community. They realised that their well-being was intricately intertwined with the well-being of others, including nature, animals and the broader environment. This elicited a profound awareness of the power of collective efforts to nurture hope, which, in turn, fostered a deep sense of belonging and responsibility that they

expressed through a desire to help one another, reflecting *Ubuntu (*Desmond Tutu Peace Foundation, 2013*;* Le-Grange, 2015*)*.

Spiritual beliefs also played a vital role in instilling hope, as many of the participants viewed their faith in God as a source of strength and perseverance. While the EAPPI content did not include spirituality, its culturally sensitive nature allowed the participants to incorporate spiritual practices and reflections, enhancing comfort and inspiration. It was attributed to awakened spiritual perspectives expressed as faith-based hope, indicating that belief in God and prayer provided the strength and courage to face difficulties. This nurtured an optimistic belief that life could improve. Their renewed connection to God reminded them of their responsibilities to self and community and provided a source of strength to keep moving forward, reflecting the transcendent nature of hope (Wong, 2016d; Wong et al., 2022). The combination of faith-based hope and hope for community well-being aligns with *Ubuntu* and is particularly relevant (Krafft et al., 2019; Slezáčková, 2017) as according to Frankl (1969), faith is the foundation of hope, especially when hope is lacking. This perspective is based on the belief that humans are inherently spiritual beings, which is crucial for navigating a world of dangers and uncertainties (Wong, 2020a).

A resultant action, as indicated in the sub-theme *Empowered to advocate and act to promote community flourishing*, was the engagement in self-transcendent community-based actions and witnessing the positive impact thereof. Many participants recognised opportunities to contribute (pathways) and gained confidence in their individual and collective abilities to effect positive change (agency) in their own and others' lives in the community. Others shared stories of rekindling hope amidst adversities by using their talents and time to serve others in

the community through acts of kindness and volunteerism, which fuelled their aspirations, hopes and flourishing.

In accordance with the EPP existential dialectical assumptions that life comprises both positive and negative events and adversity can be transcended through finding meaning and growth, the participant narratives revealed that the EAPPI encouraged self-detachment (mindfulness) and self-transcendence (meaning), which assisted them to transcend their stressful situations to discover new possibilities and hope by serving their communities (Wong, 2020a). Their descriptions in Table 8.3 encompassed experiencing self-transcendence as a sacrificial love directed away from self towards others (Frankl, 1988a) and accordingly transformed and empowered them for a higher purpose (Wong, 2020a).

The results of this study contribute to the limited empirical evidence on nature-based interventions, specifically those incorporating equines that found interactions positively impact perceived hope as primarily conceptualised by Krafft (Frederick et al., 2015; Passmore, Yargeau, et al., 2022). The statistical outcomes showed that the participants' perceived hope increased significantly following the eight-session EAPPI. Moreover, the joint display analysis results revealed how the qualitative data augmented the quantitative data by creating confirmatory and expanded meta-inferences. The qualitative data confirmed and provided context to the quantitative result of significantly lower hope in the experimental group in comparison to the control group before the intervention. In addition, the qualitative themes enhanced the understanding of the EAPPI's effect on instilling hope by providing nuanced insights into the participants' experience of affirmed self-worth and personal empowerment, fortified community and spiritual connectedness, engagement in actions that transcended self-

interest to serve a higher purpose and the courage to acknowledge and face the adversities of life.

The EAPPI effect on hope concurs with EPP. EPP emphasises the importance of faith in God or spiritual values, promotes love for others and nurtures meaningful relationships and activities to foster hope in an uncertain future beyond the control of the individual (Wong, 2020a). In essence, the EAPPI helped the participants enact Frankl's sense of tragic optimism as they acknowledged their pain and restored sources of hope (Frankl, 1969; Wong, 2012c). This demonstrates EAPPI's potential as an existential positive psychological intervention (EPPI) that fosters hope.

8.3. Limitations of the Study

While this study has made significant progress in addressing the research objectives and contributing to the existing body of knowledge on EAPPI in under-resourced community contexts, it is imperative to acknowledge its limitations. Despite meticulous methodology and thorough analysis, no study is without limitations.

8.3.1. Sampling Challenges

The study was found to have sufficient power based on the required minimum sample size determined by the power analysis described in Section 5.5.1. However, challenges associated with applied research in community settings were experienced (Goodkind et al., 2017; Proctor et al., 2009). While efforts were made to assign participants to the experimental and control groups randomly, because of factors beyond the researcher's control, the random assignment schedule was not applied consistently. Participant dropout, a common occurrence in longitudinal studies, was also encountered. Furthermore, the sample was drawn from one community by employing convenience sampling. All these factors imply that the findings

cannot be generalised to broader populations of adults and, accordingly, should be interpreted cautiously.

8.3.2. The Assessment Process

Multiple assessment measures of the theoretical constructs were employed to increase the reliability of the study. The measurement instruments were combined to form one questionnaire of 131 items, making it lengthy. The length and paper-and-pen nature of the questionnaire may have contributed to missing variables in the data. The participants may have become fatigued and/or made errors when turning the pages, resulting in omitted questions and/or sections. It is recommended that future research employs technology, such as an app or online platform, to administer the questionnaire with built-in controls. This will allow participants to progress through the questionnaire on an answered item-by-item basis, increasing participant engagement and reducing the risk of missing variables. However, implementing such technology in under-resourced contexts may be challenging due to a lack of resources such as smartphones, computers and data/Wi-Fi.

While most of the study assessment measures were deemed valid and reliable in South Africa, the meaning measures, in particular, which were not validated in this study's context, may have influenced the results. In addition, some of the measures are not well established outside university student groups and multi-cultural populations of lay people with low levels of education and employment. Moreover, the psychometric assessment and the semi-structured interviews were conducted in English, which may have posed challenges for some participants. Despite their self-identifying proficiency in English and pilot use of the measures to identify any potential difficulties with the language, it is acknowledged that English may have been

many of the participants' third or fourth language. Consequently, they may have misinterpreted the questions or lacked a depth in vocabulary to express their experiences.

8.3.3. Lack of Control of Novelty Effects

It is noteworthy that equine interventions are particularly vulnerable to novelty effects because participants may experience interacting with a horse or donkey as unusual and exciting (Anestis et al., 2014). In addition, the outdoor, nature-based setting may have contributed to novel experiences. Hence, the results may have indicated the effect of novelty rather than clearly attributed to the equine interactions. However, the participants' rich narratives of their interactional experiences with the equines counters the influence of novelty effects in the study.

8.4. Contributions of the Study

This study contributes to the evidence base of the efficacy of PPIs incorporating equines to enhance adult flourishing, meaning and hope in contexts of adversity. It makes several contributions to the current literature from theoretical, methodological, practical, policymaking and community stakeholder perspectives.

8.4.1. Theoretical Contributions

This study advances the field of PP, particularly within the paradigm of EPP. Wong (2010b, 2016c, 2020a) asserted that EPP acknowledges both the positive and negative aspects of life, viewing flourishing as an outcome of the personal growth experienced from confronting life's existential givens. The study supports this view as the participants reported psychological distress and adverse psychosocial life circumstances throughout the EAPPI, which led to increased flourishing after the intervention and at a three-month follow-up.

The participants' narratives highlighted an awakening to the potential meaning of their lives, motivating them to seek meaning through spiritual practices and self-transcendent actions

to serve God and the common good of the community (*Ubuntu*). This sense of purpose and connectedness, despite life's hardships, fostered flourishing and nurtured hope for a better future (Frankl, 1969, 1988a; Howell & Passmore, 2013; Wong, 2020a). These findings concur with Wong's (2016c) assertion that flourishing occurs in the context of existential concerns and daily stress, emphasising the role of meaning-making and spirituality in enhancing well-being.

Furthermore, this study contributes an African perspective to third-wave positive psychology, which focuses on the contextual and cultural complexities in understanding well-being (Lomas et al., 2021; Wissing, 2020). The participants' experiences reveal the importance of social connectedness (*Ubuntu*) and spiritual practices in the South African context, enriching the understanding of optimal functioning in non-WEIRD populations (van Zyl & Donaldson, 2023). This is in accordance with Wong's (2023) argument that researching existential givens and their unique cultural expressions enhances global knowledge on flourishing.

By integrating cultural and contextual factors that influence optimal functioning, the study provides a deeper understanding of how existential and cultural dimensions interact to foster flourishing, meaning and hope in adversity. These theoretical contributions support the comprehensive approach of EPP and contribute to the growing body of third-wave positive psychology literature.

8.4.2. Methodological Contributions

The mixed-methods design of this study, which integrated quantitative and qualitative data through joint display analysis, provides a comprehensive understanding of the intervention's impact, enhancing transparency and depth by visually juxtaposing quantitative and qualitative results. Joint display analysis has acquired attention across various fields for its ability to provide new insights and robust conclusions (Guetterman et al., 2021; Guetterman et

al., 2015; Svoboda & Guetterman, 2023). This study demonstrates the benefits of joint display analysis in advancing methodological practices in psychology, specifically positive psychology (Creswell & Plano Clark, 2017).

Furthermore, the joint display analysis revealed discordance between the quantitative and qualitative data on psychological distress, thus identifying a challenge in measuring psychological distress accurately and the need for refined measurement tools that capture participants' nuanced subjective experiences, thus contributing insight into the numerical trends and qualitative aspects of the participants' subjective experiences of flourishing to understand their behaviours and practices. It highlights the importance of using translated and culturally adapted measures coupled with the voices of the community members to ensure the validity, reliability and trustworthiness of findings across diverse population groups in South African communities.

8.4.3. Practical Contributions

The study advances the evidence base supporting eco-EPPIs as evidenced-based PPIs. PPIs are designed to promote positive emotions, behaviours and thoughts, thereby enhancing the well-being of individuals and groups (Schueller et al., 2014; Sin & Lyubomirsky, 2009). Eco-EPPIs extend traditional PPIs by cultivating biophilic tendencies, encouraging affiliation with nature to address existential concerns of freedom, death, isolation, happiness, identity and meaning. Affiliation with nature affords individuals the opportunity to be fully flourishing human beings (Passmore & Howell, 2014). By incorporating equines into PPI, this study enhances the research on the effectiveness of eco-EPPIs in addressing existential concerns and promoting flourishing through the multi-component inclusion of EPP activities and equine interactional activities.

By creating and evaluating an intervention grounded in eco-EPP theory, this study bridges the gap between scientific findings on positive outcomes and their practical application in the field (Jarden et al., 2021). The EAPPI revealed significant improvements in flourishing, meaning and hope among adults in the South African under-resourced community of Diepsloot, thus providing empirical support for integrating nature-based and existential components into PPIs. This novel approach to ecopsychology and EPP demonstrates the practical benefits of eco-EPPIs in enhancing well-being and addressing existential issues.

In the evolving field of EPPIs, there is a recognised need for diverse, multi-component and culturally sensitive interventions that address positive and negative aspects of life (Ng & Lim, 2019; Wong, 2021a; Worth & Lyle, 2022). The EAPPI implemented in this study exemplifies an innovative approach by incorporating equine interactions as a PPI component, thereby advancing the field (Wong & Roy, 2018). This expansion enriches the domain of positive mental health promotion, particularly in contexts of adversity, by offering a novel method to enhance flourishing, meaning and hope (Ciarrochi et al., 2022; Passmore & Howell, 2014).

The growing field of evidence-based equine-assisted psychotherapy by providing empirical support for the effectiveness of incorporating equines into psychological interventions promoting mental health is an additional practical contribution of the study. The EAPPI enhanced flourishing, meaning and hope among adults in the under-resourced community of Diepsloot, South Africa. This finding is particularly noteworthy as it extends the application of equine-assisted psychotherapy to non-clinical, culturally diverse and economically disadvantaged individuals (Kendall et al., 2015; Lee et al., 2016; Trotter & Baggerly, 2019).

The EAPPI demonstrated medium to large effect size gains in mental well-being immediately after and at a three-month follow-up, confirming its long-term efficacy. Although this is in accordance with the international literature on the positive impact of equine-assisted activities, it situates these benefits in a South African context, broadening the scope of existing research (Carr et al., 2020).

Furthermore, the cultural relevance of the intervention in promoting mental health has been supported by requests from Diepsloot community-based NGOs to the researcher to extend the implementation of the intervention to their members. Several of the study participants also contacted the researcher to enquire about opportunities to be trained in the facilitation approach and intervention content with application to animals or broader nature settings to allow them to promote mental health in their community service work.

By demonstrating the cultural appropriateness and effectiveness of the EAPPI in a South African community, this study addressed a gap in the literature regarding the relevance of EAPI across different cultural settings. It highlighted the potential for EAPI to be tailored to meet diverse populations' specific needs and contexts, enhancing their relevance and impact.

The development of a comprehensive intervention manual for EAPPI is a significant practical contribution of the study. This manual provides a structured framework for implementing the intervention, ensuring replicability and consistency across various settings. It includes detailed guidelines and psychoeducational content, facilitating broader adoption and rigorous evaluation of the intervention. This addresses the critical need for standardised, evidence-based practices in the field, promoting improved mental health outcomes (Anestis et al., 2014; Kendall et al., 2015).

This study advances the field of EAPI by providing robust empirical evidence of its effectiveness, demonstrating cultural adaptability and offering a practical manual to support widespread implementation. These contributions collectively enhance the credibility, applicability and impact of EAPI in diverse and under-resourced settings. In essence, this study contributes to the growing body of research findings that have revealed that involvement with nature, in particular equines and their environment, affords individuals the opportunity to become more fully flourishing human beings (Passmore & Holder, 2017).

8.4.4. Community Mental Health Promotion Contribution

The study emphasises the importance of culturally relevant interventions, incorporating elements of nature and animals and serves as a model for adapting mental health interventions to fit different cultural contexts (Mendenhall et al., 2017). These programmes address individual mental health needs while fostering collective well-being by integrating nature and animals into therapeutic settings. Accordingly, the findings have important implications for policymakers, mental health practitioners and community organisers to inform policy and practice in community mental health promotion, potentially leading to improved mental health metrics and enhanced community cohesion (Patel et al., 2018).

The EAPPI's importance for community mental health was highlighted when the researcher received requests from community organisations to implement the intervention with their members. Furthermore, several participants requested training in the approach and psychoeducational content so that they could contribute to the mental health of others in the programmes in which they were working. The latter indicates the potential for adapting the EAPPI to allow for task-shifting and sharing, as the World Health Organization et al. (2007) recommended, to improve access to primary mental healthcare.

Furthermore, it is recommended that policymakers and funders consider including mental health programmes to facilitate regular interaction with nature, including designing outdoor intervention activities, partnering with local parks and farms and encouraging stakeholders to engage in nature-based practices. Designing urban spaces that provide residents access to nature and animal-assisted interventions may significantly enhance entire communities' mental health and flourishing (Tomita et al., 2017).

By leveraging all available resources and assets in and outside affected communities, policymakers and hierarchical influencers can help South African communities become more resilient and independent of the state, fostering a culture of well-being and enhanced mental health.

8.5. Recommendations for Future Research

In light of the findings and limitations of this study, the following recommendations for future research are outlined:

- Based on the discrepancies between the statistical results and depth of the qualitative themes related to the same constructs, it is recommended that the measures should be translated into different African vernaculars and the meaning measures should be validated and standardised for the general population of South Africa.
- Unlike similar studies, there was no dosage effect on the number of sessions needed to see significant benefits in this study (Coetzee et al., 2022). However, it is imperative to investigate the dosage effects of the EAPPI further to optimise intervention efficacy and inform resource allocation and cost-effectiveness. This will also help improve treatment accessibility and promote evidence-based practice in both clinical and community contexts (Kendall et al., 2015; Maujean et al., 2015; Schultz et al., 2007).

- Given the EAPPI's multi-component nature and the fact that no control for novelty effect was implemented, it is recommended that the intervention be dismantled into its multiple components. As the equines were integrated into existing PPIs, a dismantling study may help to determine the extent to which the integration of equines affects treatment outcomes and to identify the specific areas of impact as suggested by Klontz et al. (2007).
- The study only focused on outcomes and not the mechanisms and processes of change. Given that the majority of the participants described embodied experiences while interacting with the equines, further research could focus on the mechanisms of change as understood, for example, by polyvagal theory (Esposito & Fournier, 2023; Porges, 2009).
- Based on the qualitative findings in which religion/spirituality emerged, it is recommended that future nature-based research on flourishing, meaning and hope incorporate this construct to determine whether biophilic tendencies and religion/spirituality correlate.
- Finally, it is recommended that a large-scale randomised control trial using the intervention protocol be replicated in diverse contexts in South Africa and internationally. It is advised that such research should explore longer-term effects and broader mental health outcomes, ensuring the development of culturally sensitive, effective and sustainable psychological interventions that incorporate equines.

8.6. Conclusion

The interpretations of the resultant meta-inferences derived from the mixed-methods analysis of quantitative and qualitative data through joint display analysis was presented and

discussed in this chapter. Furthermore, the study's limitations and contributions as well as recommendations for future research are outlined.

In conclusion, this study was conducted in Diepsloot, an under-resourced community that experiences severe psychosocial challenges, including extreme poverty, high unemployment, overcrowded housing and limited access to essential services. Consequently, individuals are at risk to suffer poor mental health outcomes. Furthermore, there is a lack of primary mental healthcare in Diepsloot, creating a need for effective mental health services that include culturally relevant, community-based interventions that promote flourishing, meaning and hope.

Consequently, the study aimed to develop, implement and evaluate the effect of an EAPPI on flourishing, meaning and hope among adults living in Diepsloot. The findings revealed that the EAPPI the researcher designed and implemented enhanced flourishing, fostered meaning and instilled hope among a group of adult residents in Diepsloot, South Africa, amidst significant psychosocial hardships. The findings further indicated that the EAPPI holds promise not only as a long-term mental health promotion tool but also as an effective community-based intervention for older and unemployed adults who are disproportionately affected by the challenges in under-resourced settings.

Grounded in the theoretical frameworks of ecopsychology and EPP, the intervention leveraged principles that emphasise human-animal connections and enhancing well-being through meaningful engagement. Despite some study limitations, the implications of this research are profound. The research has contributed to the evidence base supporting eco-EPPIs as PPIs, providing empirical support for integrating equines and existential components into

PPIs. Moreover, the study advances the growing body of research in animal-assisted interventions, particularly equine-assisted psychological interventions.

In light of South Africa's mental health crisis, the results suggest that the EAPPI is an appropriate, culturally relevant intervention that could be used to promote flourishing, meaning and hope among adults living in under-resourced communities.

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Appendix A: Information Letter

RESEARCH INFORMATION LETTER

Project Title: The effect of equine-assisted positive psychology intervention on flourishing, meaning and hope in adults living in under-resourced communities: A mixed-methods approach

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What is this study about?

There is very little research in South Africa that focuses on understanding the well-being of youth and adults. There are also very few community programmes that help people in townships to improve their sense of well-being by promoting flourishing, meaning and hope. In fulfilment of the requirements for a PhD in Psychology at the University of Pretoria this research aims to find out if participating in a horse-assisted well-being programme can enhance peoples' levels of flourishing, meaning and hope. It is also interested in peoples' personal experiences of the horse-assisted programme.

What will I be asked to do if I agree to participate?

1. You will be randomly assigned to one of two groups. The members of group one will participate in a weekly 90-minute horse-assisted programme for eight weeks. The members of group two will be wait-listed to attend the horse-assisted programme after this research study has been completed.
2. The horse-assisted programme involves hands-on experiences with horses where you and the other members of the group will be involved in activities that are designed to enhance your sense of well-being. The interactions with the horses take place on the ground, there will be no riding or teaching of horsemanship during the sessions. These sessions are facilitated by a two person team; a licensed psychologist or counsellor and a horse specialist who are trained to practice a specific model of horse-assisted counselling known as the Eagala Model.
3. Everyone will be asked to answer eight questionnaires at three points in time (i) before the horse programme, (ii) after the horse programme and (iii) three months after the end of the horse programme. It is estimated that it will take 30 minutes to answer the questionnaires.
4. If you participated in the horse programme you might be asked to volunteer to take part in a one-on-one interview with me. This interview will be a conversation about your experiences

of the horse programme and I expect it will not take longer than an hour. This interview will be recorded to help me to accurately capture what you tell me.

Would my participation in this study be kept confidential?

To help protect your identity and maintain the confidentiality of your contribution, you will be allocated a unique number and all questionnaires, notes, and audio recordings will be kept in a safe and secure location. All papers related to this study will be kept electronically in the Psychology department at the University of Pretoria for 15 years.

All participants and facilitators will be asked to sign a confidentiality clause as part of their consent to participate in the study in which they undertake not to disclose your identity, your participation or the content shared.

The only time your confidentiality will be broken is for ethical reasons; the facilitators are required by law to inform a third party if you have disclosed an intention to harm yourself or someone else.

The findings of the research might be published and presented at conferences in the future. Additionally, the findings may be used for future research. Whenever the findings are used nobody will know who you are and your answers will be destroyed should you withdraw from the study.

Audio recordings

This research project involves making audio recordings of the discussion in the one-on-one interview. These are being made to assist with the analysis of the data.

What are the risks of this research?

The potential risks of this research are minimal. However, there are some risks to being around horses on the ground, as they are large animals that can move very fast. The horses you will be involved with all work with people in horse programmes almost on a daily basis.

The horse facilities take measures to ensure the horses are suitable to do this work; they are selected for their good nature and are used to this work. Nobody is forced to make contact with the horses, if you are worried about being with the horses you can talk to me further about this.

What are the benefits of this research?

The study will provide you with the chance to experience, explore, problem-solve, discover, be creative, gain insight into yourself as well as to hopefully experience increased levels of well-being.

Will I be compensated to participate in this research?

There is no compensation for participating in this research.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or unfairly treated. If you withdraw from the study you will still be allowed to participate in the horse-assisted programme.

Is any assistance available if I am negatively affected by participating in this study?

It is not anticipated that participation in this study would result in any emotional discomfort. However, if this should arise, referrals to a community mental health service will be arranged by the principal researcher.

Referral source 1	Itsoseng Community Clinic Corner of Solomon Mahlangu and Hinterland Drive Mamelodi East Tel: 012 842 3515
Referral source 2	Shumbashaba Community Mental Health Service 112 Mnandi Road Diepsloot Agricultural Holdings Tel: 071 403 1286 / 064 475 6614
Referral source 3	SADAG Diepsloot Container Counselling Centre Tel**: 011 234 4837** For a suicidal Emergency contact: **0800 567 567** 24hr Helpline: **0800 456 789**
Referral source 4	Mental health professional facilitators of the horse-assisted programme by arrangement. Mr. Ruric Vogel | Ms. Caroline Erdmann | Mrs. Candida Muller | Mrs. Dorothy Robertson

What if I have questions?

This research is being conducted by Sharon Boyce who is a doctoral candidate in the department of Psychology at the University of Pretoria. If you have any questions about the research study itself, please contact Sharon on the following Tel:0845000672 or Email:shaboyce@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Supervisor Name	Dr. Nicoleen Coetzee
Address	Department of Psychology 11th Floor, Humanities Building Hatfield Campus University of Pretoria
Email	nicoleen.coetzee@up.ac.za
Head of Department Name (Co-supervisor)	Prof. Tharina Guse
Address	Department of Psychology 11th Floor, Humanities Building Hatfield Campus University of Pretoria
Email	tharina.guse@up.ac.za

This research has been approved by the University of Pretoria Research Ethics Committee, protocol number HUM007/1220

Appendix B: Questionnaire

Flourishing, Meaning and Hope Questionnaire

Date: _____

Biographical Questionnaire

Name :_____

Date of Birth : _____

Gender : | Male | | Female | | Other | Place a cross in the relevant box

Ethnicity: _____

Home Language: _____

Community of Residence: _____

Highest Level of Education: _____

Current Occupation: _____

Read the statements below and decide whether you agree or disagree with each statement. There is no right or wrong answer. Not everybody has the same answer. Choose the answer that feels right for you,
Colour in the dot in the box that represents your agreement with each of the statements.

	How much do you agree with the following statements?	**Strongly Disagree 1**	**Disagree 2**	**Slightly Disagree 3**	**Neither Agree Nor Disagree 4**	**Slightly Agree 5**	**Agree 6**	**Strongly Agree 7**
a.	Horses are big animals.	○	○	○	○	○	○	○
b.	Dogs are friendly animals.	○	○	○	○	○	○	○

MHC-SF

Name: _____ Date: _____

Instructions: Please answer the following questions by colouring the dot in the box that best represents how often you have experienced or felt the following…..

	During the PAST MONTH of often did you feel…..?	Never 0	Once or Twice 1	About Once a Week 2	About 2 or 3 Times a Week 3	Almost Everyday 4	Everyday 5
1.	happy	○	○	○	○	○	○
2.	interested in life	○	○	○	○	○	○
3.	satisfied with life	○	○	○	○	○	○
4.	that you had something important to contribute to society	○	○	○	○	○	○
5.	that you belonged to a community (like a social group, or your neighbourhood)	○	○	○	○	○	○
6.	that our society is a good place, or is becoming a better place, for all people	○	○	○	○	○	○
7.	that people are basically good	○	○	○	○	○	○
8.	that the way our society works makes sense to you	○	○	○	○	○	○
9.	that you liked most parts of your personality	○	○	○	○	○	○
10.	good at managing the responsibilities of your daily life	○	○	○	○	○	○

11.	that you had warm and trusting relationships with others	○	○	○	○	○	○
12.	that you had experiences that challenged you to grow and become a better person	○	○	○	○	○	○
13.	confident to think or express your own ideas and opinions	○	○	○	○	○	○
14.	that your life has a sense of direction or meaning to it	○	○	○	○	○	○

SWLS

Name: _____ Date: _____

Instructions: Below are five statements that you may agree or disagree with. Colour in the dot in the box that represents your agreement with each of the statements. Please be open and honest in your responding.

	How much do you agree?	**Strongly Disagree 1**	**Disagree 2**	**Slightly Disagree 3**	**Neither Agree Nor Disagree 4**	**Slightly Agree 5**	**Agree 6**	**Strongly Agree 7**
1.	In most ways my life is close to my ideal	○	○	○	○	○	○	○
2.	The conditions of my life are excellent.	○	○	○	○	○	○	○
3.	I am satisfied with my life	○	○	○	○	○	○	○
4.	So far I have gotten the important things I want in life.	○	○	○	○	○	○	○
5.	If I could live my life over, I would change almost nothing.	○	○	○	○	○	○	○

SPANE

Name: _____ **Date: _____**

Instructions: Please think about what you have been doing and experiencing during the past four weeks. Then report how much you experienced each of the following feelings, using the scale below. For each item colour the dot that indicates how much you experienced the feeling.

	How much have you experienced the following…?	**Very Rarely or Never 1**	**Rarely 2**	**Sometimes 3**	**Often 4**	**Very Often or Always 5**
1.	Positive	○	○	○	○	○
2.	Negative	○	○	○	○	○
3.	Good	○	○	○	○	○
4.	Bad	○	○	○	○	○
5.	Pleasant	○	○	○	○	○
6.	Unpleasant	○	○	○	○	○
7.	Happy	○	○	○	○	○
8.	Sad	○	○	○	○	○
9.	Afraid	○	○	○	○	○

10.	Joyful	○	○	○	○	○
11.	Angry	○	○	○	○	○
12.	Contented	○	○	○	○	○

DASS 21

Name: _____ Date: _____

Instructions: Please read each statement and colour the dot that indicates how much the statement applied to you over the PAST WEEK. There are no right or wrong answers. Do not spend too much time on any statement.

	How much have the following items applied to you over the PAST WEEK?	**Did Not Apply to Me 0**	**Applied to Me to Some Degree, or Some of the Time 1**	**Applied to Me a Considerable Degree or a Good Part of the Time 2**	**Applied to Me Very Much or Most of the Time 3**
1.	I found it hard to wind down	○	○	○	○
2.	I was aware of dryness of my mouth	○	○	○	○
3.	I couldn't seem to experience any positive feeling at all	○	○	○	○
4.	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	○	○	○	○
5.	I found it difficult to work up the initiative to do things	○	○	○	○
6.	I tend to over-react to situations	○	○	○	○
7.	I experienced trembling (e.g. in the hands)	○	○	○	○
8.	I felt that I was using a lot of nervous energy	○	○	○	○
9.	I was worried about situations in which I might panic and make a fool of myself	○	○	○	○
10.	I felt that I had nothing to look forward to	○	○	○	○
11.	I found myself getting agitated	○	○	○	○
	How much have the following items applied to you over the PAST WEEK?	**Did Not**	**Applied to Me to Some**	**Applied to Me a Considerable**	**Applied to Me Very**

		Apply to Me 0	Degree, or Some of the Time 1	Degree or a Good Part of the Time 2	Much or Most of the Time 3
12.	I felt it difficult to relax	○	○	○	○
13.	I felt down-hearted and blue / sad	○	○	○	○
14.	I was intolerant of anything that kept me from getting on with what I was doing	○	○	○	○
15.	I felt close to panic	○	○	○	○
16.	I was unable to become enthusiastic about anything	○	○	○	○
17.	I felt I wasn't worth much as a person	○	○	○	○
18.	I felt that I was rather touchy	○	○	○	○
19.	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	○	○	○	○
20.	I felt scared without any good reason	○	○	○	○
21.	I felt that life was meaningless	○	○	○	○

NSMS

Name: _____ Date: _____

Instructions: Please reflect for a few minutes and respond to the following statements as truthfully and accurately as you can by colouring the dot in the box for the most appropriate answer according to the scale

	How much do you agree?	Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neither Agree Nor Disagree 4	Slightly Agree 5	Agree 6	Strongly Agree 7
1.	I am trying to understand why I have problems with close relationships.	○	○	○	○	○	○	○
2.	I am seeking confirmation for my mission or purpose in life.	○	○	○	○	○	○	○
3.	I am searching for reasons for living in order to survive my ordeal.	○	○	○	○	○	○	○
4.	I am struggling to understand why bad things happen to good people.	○	○	○	○	○	○	○
5.	I want to find out why I am not satisfied with my life.	○	○	○	○	○	○	○
6.	Search for the meaning of life is a total waste of time.	○	○	○	○	○	○	○
7.	I am seeking to grasp the meaning of suffering and death.	○	○	○	○	○	○	○
8.	I want to find out what really matters in every stage of my life.	○	○	○	○	○	○	○
9.	I am always searching for ways to make a valuable contribution to the world.	○	○	○	○	○	○	○
10	There is no point in striving, because life is so hard and so short.	○	○	○	○	○	○	○
11	I am seeking to find out what life demands of me.	○	○	○	○	○	○	○
12	I am trying to figure out my rightful place in the world.	○	○	○	○	○	○	○

PMP-B

Name: _____ Date: _____

Instructions: This questionnaire is intended to identify what really matters in your life and measures people's perception of personal meaning in their lives. Generally a meaningful life involves a sense of purpose and personal significance. However, people often differ in what they value most, and they have different ideas as to what would make life worth living. The following statements describe potential sources of a meaningful life. Please respond by colouring the dot in the box that represents the most appropriate answer for you.

It is important to answer honestly on the basis of your own experience and beliefs

	How much do the following statements apply in your life?	**Not at All 1**	**2**	**3**	**Slightly / Moderately 4**	**5**	**6**	**A Great Deal 7**
1.	I believe I can make a difference in the world.	○	○	○	○	○	○	○
2.	I have someone to share intimate feelings with.	○	○	○	○	○	○	○
3.	I strive to make this world a better place.	○	○	○	○	○	○	○
4.	I seek to do God's will.	○	○	○	○	○	○	○
5.	I like a challenge.	○	○	○	○	○	○	○
6.	I take initiative.	○	○	○	○	○	○	○
7.	I have a number of good friends.	○	○	○	○	○	○	○
8.	I am trusted by others.	○	○	○	○	○	○	○
9.	I seek to glorify God.	○	○	○	○	○	○	○
10.	Life has treated me fairly.	○	○	○	○	○	○	○
11.	I accept my limitations.	○	○	○	○	○	○	○
12.	I have a mutually satisfying loving relationship.	○	○	○	○	○	○	○
13.	I am liked by others.	○	○	○	○	○	○	○
14.	I have found someone I love deeply.	○	○	○	○	○	○	○

	How much do the following statements apply in your life?	Not at All 1	2	3	Slightly / Moderately 4	5	6	A Great Deal 7
15.	I accept what cannot be changed.	○	○	○	○	○	○	○
16.	I am persistent and resourceful in attaining my goals.	○	○	○	○	○	○	○
17.	I make a significant contribution to society.	○	○	○	○	○	○	○
18.	I believe that one can have a personal relationship with God.	○	○	○	○	○	○	○
19.	I am treated fairly by others.	○	○	○	○	○	○	○
20.	I have received my fair share of opportunities and rewards.	○	○	○	○	○	○	○
21.	I have learned to live with suffering and make the best of it.	○	○	○	○	○	○	○

LOHQ

Name: _____ Date: _____

Instructions: In this part of the questionnaire, you will be asked to think about statements related to your goals. Please read each item and decide how the statement describes YOU. There are no right or wrong answers for the items. To answer the items colour the dot in the column that corresponds to your answer using the scale

	How does the following describe YOU?	Definitely False 1	Mostly False 2	Mostly True 3	Definitely True 4
1.	I can think of many ways for me to get out of a problem.	○	○	○	○
2.	I will attain my life goals by trusting God.	○	○	○	○
3.	I am confident that my family will support me in the goals that are important to me.	○	○	○	○
4.	I make my health a priority in life.	○	○	○	○
5.	I count on my friends to think of different ways of reaching the goals that are important to me.	○	○	○	○
6.	I energetically pursue my goals.	○	○	○	○
7.	My family has lots of ways of helping me attain my goals.	○	○	○	○
8.	There are many things I worry about.	○	○	○	○
9.	When I am discouraged, I know that God will provide ways to solve the problems I face.	○	○	○	○
10.	My friends always support me in the pursuit of my life goals.	○	○	○	○

11.	Even when I am discouraged, I know my family has ways to help me solve my problems.	○	○	○	○
12.	I feel tired most of the time.	○	○	○	○
	How does the following describe YOU?	**Definitely False 1**	**Mostly False 2**	**Mostly True 3**	**Definitely True 4**
13.	With the help of my friends, I am confident that I can reach my goals in life.	○	○	○	○
14.	There are lots of ways I can personally get around any problem.	○	○	○	○
15.	God will guide me well for my future.	○	○	○	○
16.	My family finds many ways to help me solve my problems.	○	○	○	○
17.	God has made my life successful.	○	○	○	○
18.	I am easily downed in an argument.	○	○	○	○
19.	My friends usually help me find many ways to get out of problematic situations.	○	○	○	○
20.	I can think of many ways for me to get the things in life that are important to me.	○	○	○	○
21.	I have been successful in life so far because of the support of my family.	○	○	○	○
22.	There are many ways around a problem, if one trusts in God.	○	○	○	○

23.	I've been successful in meeting my personal goals in life through my own efforts.	○	○	○	○
24.	My family has helped me meet the goals that I have set for myself.	○	○	○	○
25.	I worry about my health.	○	○	○	○
26.	I have been able to meet my goals because of my friends' help.	○	○	○	○
27.	Even when others get discouraged, I know I can find a way to solve a problem.	○	○	○	○
28.	God has many different ways of letting me attain my goals.	○	○	○	○
	How does the following describe YOU?	**Definitely False 1**	**Mostly False 2**	**Mostly True 3**	**Definitely True 4**
29.	I worry about the health of my family.	○	○	○	○
30.	My past experiences have prepared me well for my future.	○	○	○	○
31.	I feel bad about having to disagree with someone.	○	○	○	○
32.	My family works with me in pursuing my goals.	○	○	○	○
33.	When I am discouraged, I know my friend will think of ways to help me solve my problems.	○	○	○	○
34.	If it is God's will, I will meet the goals that I set for myself.	○	○	○	○

35.	I work with my friends to attain the important goals in my life.	○	○	○	○
36.	God always finds ways to help resolve my problems.	○	○	○	○
37.	I usually find myself worrying about something.	○	○	○	○
38.	My friends often find lots of ways to help me solve my problems.	○	○	○	○
39.	My family usually helps me in different ways when I get into problematic situations.	○	○	○	○
40.	I meet the goals I set for myself	○	○	○	○

PHS

Name: _____ Date: _____

Instructions: How do the following statements apply to YOU personally? Please colour the dot in the column that best represents this.

	How do the following statements apply to YOU personally?	**Strongly Disagree 0**	**Somewhat Disagree 1**	**Disagree 2**	**Somewhat Agree 3**	**Agree 4**	**Strongly Agree 5**
1.	In my life hope outweighs anxiety.	○	○	○	○	○	○
2.	My hopes are usually fulfilled.	○	○	○	○	○	○
3.	I feel hopeful.	○	○	○	○	○	○
4.	Hope improves the quality of my life.	○	○	○	○	○	○
5.	I am hopeful with regard to my life.	○	○	○	○	○	○
6.	Even in difficult times I am able to remain hopeful	○	○	○	○	○	○

Appendix C: Permission to use Locus of Hope Scale (LoHS)

APPLICATION TO USE LOCUS-OF-HOPE SCALES FOR RESEARCH

FOR USE BY STUDENTS, RESEARCHERS AND NONPROFIT ORGANIZATIONS

This application pertains to a request to use the following Locus-of-Hope Scale (please check one):

- √ 40-item (Trait) Locus-of-Hope Scale in English
- ___ 36-item (Trait) Locus-of-Hope Scale in Chinese (Traditional Orthography)
- ___ 20-item (Trait) Locus-of-Hope Scale in Filipino – Short Form
- ___ 16-item (Trait) Locus-of-Hope Scale in English – Short Form
- ___ 16-item State Locus-of-Hope Scale in Filipino – Short Form
- ___ 16-item State Locus-of-Hope Scale in English – Short Form

Name(s): Sharon Boyce

Organization: University of Pretoria, Department of Psychology

Complete address of organization: Department of Psychology, Humanities building, University of Pretoria, Lynnwood Road, Hatfield, Pretoria, South Africa

Position in organization: PhD candidate

Email: shaboyce@gmail.com Phone: +27 84 500 0672

Details on Use of Scale for Research

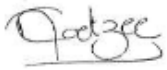
1. Research questions:

   MIXED METHODS QUESTION:
   What is the role of the Eagala Model intervention in facilitating flourishing, meaning and hope, in the lives of youth living in under-resourced communities?

   QUANTITATIVE QUESTIONS:
   What is the effect of the intervention on flourishing in youth?
   What is the effect of intervention on meaning in youth?
   What is the effect of the intervention on hope in youth?

   Qualitative Question:
   How do youth living in under-resourced communities subjectively experience the intervention?

2. Other variables to be included in the study: Flourishing and Meaning



Faculty adviser signature: _____

Date: 12th January 2021

Please send completed and signed form to
Allan B. I. Bernardo: allan.bernardo@dlsu.edu.ph

`Appendix D: Semi-structured Interview Guide

Qualitative Research Question: How do the participants subjectively experience the intervention?

Question 1: Briefly discuss the different experiences you had during the programme.

Question 2: Tell me what feeling good means to you and how the programme impacted that.

Question 3: Positive functioning is an umbrella term used to describe the different aspects of functioning well in daily life; such as experiencing positive relationships, a sense of self-acceptance and personal growth, feeling that life has meaning and purpose, as well as that you contribute and participate in social aspects of life.

Question 4: How does positive functioning occur in your own life, and what effect, if any, did the programme have on this?

Question 5: How has your view of what really matters in life changed from before to after the programme?

Question 6: Share with me how the programme influenced your dreams for the future and what you would like to achieve.

Question 7: What from the programme will you take with you into the future?

Question 8: What would you tell a friend about this programme?

Appendix E: Ethical Approval Letter from the University of Pretoria

Faculty of Humanities
Fakulteit Geesteswetenskappe
Lefapha la Bomotho

18 March 2021

Dear Ms SD Boyce

Project Title:	The role of the Eagala Model in facilitating flourishing, meaning and hope in youth living in under-resourced communities: A mixed-methods approach
Researcher:	Ms SD Boyce
Supervisor(s):	Prof C Guse Dr N Coetzee
Department:	Psychology
Reference number:	15196357 (HUM007/1220)
Degree:	Doctoral

I have pleasure in informing you that the above application was **approved** by the Research Ethics Committee on 18 March 2021. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should the actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely,

Prof Innocent Pikirayi
Deputy Dean: Postgraduate Studies and Research Ethics
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail: PGHumanities@up.ac.za

Research Ethics Committee Members: **Prof I Pikirayi (Deputy Dean);** Prof KL Harris; Mr A Bizos; Dr A M de Beer; Dr A dos Santos; Ms KT Govinder Andrew; Dr P Bufuta; Dr T Johnson; Prof D Maree; Mr A Mohamed; Dr I Ncomé; Dr C Puttergill; Prof D Reyburn; Prof M Suen; Prof E Taljaard; Prof V Thebe; Ms B Tsebe; Ms D Mokalapa

Appendix F: Community Organisation Research Permission Letter

SHUMBASHABA COMMUNITY TRUST
IT196/2013 | PBO 930044412 | 147-433NPO
Plot 112 Mnandi Road
Diepsloot Agricultural Holdings
2069
E-mail: **accounts@shumbashaba.com**
Website: www.shumbashaba.co.za
Facebook: www.facebook.com/shumbashaba

SHUMBASHABA

15 January 2021

To whom it may concern,

Authorisation to conduct academic research at Shumbashaba Community Trust

This letter serves to confirm that Sharon Boyce (ID 6603130042083) has been granted permission to conduct research at Shumbashaba Community Trust. It is understood that the primary aim of the study is to determine the role of an Eagala Model intervention, on flourishing, meaning and hope in youth living in under-resourced communities.

Shumbashaba Community Trust will be responsible for identifying and selecting approximately 100 adult participants aged between 18 and 26 years from the surrounding disadvantaged communities it serves. Additionally, Shumbashaba will implement the 8-session Eagala Model psychological intervention required for the research project. It is understood that this research is not funded and there is no compensation to either Shumbashaba Community Trust, or the participants of the research.

Should you require any additional information, please don't hesitate to contact me.

Yours faithfully,

Dudley Baylis

Trustee

Appendix G: Informed Consent Form (Quantitative Phase)

THE QUANTITATIVE PHASE OF THE STUDY
WRITTEN CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (**participant name**), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and risks, and anticipated inconveniences of participation.

STATEMENT	AGREE	DISAGREE	NOT APPLICABLE
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without any consequences or penalties.			
I understand that information collected during the study will not be linked to my identity and I give permission to the researchers of this study to access the information.			
I understand the importance of keeping information about others confidential and agree to, protect the confidentiality of the other group members.			
I understand that this study has been reviewed by, and received ethics clearance from Research Ethics Committee Faculty of Humanities of the University of Pretoria.			
I understand who will have access to personal information and how the information will be stored with a clear understanding that I will not be linked to the information in any way.			
I understand how this study will be written up and published.			
I understand how to raise a concern or make a complaint.			
I consent to being audio recorded.			
I consent to have my audio recordings be used in research outputs such as publication of			

articles, thesis and conferences as long as my identity is protected.			
I give permission to be quoted directly in the research publication whilst remaining anonymous.			
I give permission that the data can be used for future research.			
I have sufficient opportunity to ask questions and I agree to take part in the above study.			

Name of Participant	Date	Signature

Appendix H: Informed Consent Form (Qualitative Phase)

QUALITATIVE PHASE OF THE STUDY
WRITTEN CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (**participant name**), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and risks, and anticipated inconveniences of participation.

STATEMENT	AGREE	DISAGREE	NOT APPLICABLE
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without any consequences or penalties.			
I understand that information collected during the study will not be linked to my identity and I give permission to the researchers of this study to access the information.			
I understand the importance of keeping information about others confidential and agree to, protect the confidentiality of the other group members.			
I understand that this study has been reviewed by, and received ethics clearance from Research Ethics Committee Faculty of Humanities of the University of Pretoria.			
I understand who will have access to personal information and how the information will be stored with a clear understanding that I will not be linked to the information in any way.			

I understand how this study will be written up and published.			
I understand how to raise a concern or make a complaint.			
I consent to being audio recorded.			
I consent to have my audio recordings be used in research outputs such as publication of articles, thesis and conferences as long as my identity is protected.			
I give permission to be quoted directly in the research publication whilst remaining anonymous.			
I give permission that the data can be used for future research.			
I have sufficient opportunity to ask questions and I agree to take part in the above study.			

_____ _____ _____

Name of Participant Date Signature