

**Exploring experiences of care-workers participating in
laughter therapy**

by

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We don't laugh because we're happy, we are happy because we laugh.
— *William James*

DECLARATION OF ORIGINAL AUTHORSHIP

I declare that the mini-dissertation, *Exploring experiences of care-workers participating in laughter therapy*, which I hereby submit for the degree, Master of Arts in Counselling Psychology at the University of Pretoria, is my own original work. Where other people's work has been used (either from printed source, Internet or any other source), this has been properly acknowledged and referenced in accordance with departmental requirements.

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“The Lord will perfect that which concerns me” – Psalm 138:8.

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ABSTRACT

The study seeks to explore the experiences of care workers participating in laughter therapy. Community care workers play a vital role in the support of the HIV/AIDS infected and affected members of the community. However, the nature of this type of work contributes to high levels of emotional distress such as depression, anxiety and stress. The purpose of the study is 1) to explore the effects of working with orphans and vulnerable children (OVC) on the care workers and their experiences of participating in laughter therapy; and 2) the effects of laughter therapy on care workers' levels of depression and stress. Given that laughter has been found to have several positive effects, many variations of this intervention have been developed. For the purpose of this study, a specific type of laughter therapy was used, namely that of Aerobic Laughter Therapy (ALT).

The study was part of a project run by InHappiness Institution and was conducted at Nanga Vhutshilo in Soweto. The care workers at the centre provide care services for orphans and vulnerable children (OVC) affected by the HIV/AIDS epidemic. Purposive sampling was utilised to recruit seven care workers from the centre who participated in a laughter intervention.

The study was phenomenological in nature and utilized both qualitative and quantitative methodology. Quantitative data was collected through two questionnaires administered before and after the laughter therapy intervention: The Hospital Anxiety and Depression Scale (HADS) and the Perceived Stress Scale (PSS). The Wilcoxon Signed-Rank Test was used to compare pre- and post- results of the scale scores for each participant. Results showed a significant difference between the pre- and post-intervention assessment scores for both Anxiety and Depression (-2.226 ($p < 0.05$) and -1.876 ($p < 0.05$) respectively). In addition, the Wilcoxon signed rank test showed that the post-intervention total scores for PSS were significantly lower than the pre-intervention assessment total scores (-1.863). The significantly lower post-intervention assessment scores show that the laughter therapy intervention produced a positive change with regards to anxiety, depression and stress in the participants. Qualitative data was collected through pre and post – intervention face- to- face semi-structured interviews and were analysed using

Interpretative Phenomenological Analysis (IPA). The three themes that emerged from data analysis of the pre-intervention interviews were: motivation to become a care worker, work stresses and coping mechanisms. The five themes that emerged from the post-intervention interviews were: Initial reactions and expectations, effects on interpersonal relationships, improved effective coping ability, collective participation and laughter as a change agent.

The study revealed that care workers experience high levels of stress, and anxiety. These emotions manifested in emotional distress in the form of frustrations, exhaustion and feelings of being overwhelmed. Emotional distress was found to be related to care workers' personal involvement with their clients and high levels of emotional investment in them. Furthermore the study revealed the cyclic link that identification not only contributed to employment in such contexts, but it served to increase levels of personal involvement. Such personal involvement subsequently caused care workers to experience high levels of emotional distress when unable to meet the needs of the community in this respect.

Findings from this study support laughter, with specific reference to Aerobic Laughter Therapy (ALT), as a positive therapeutic intervention that can possibly improve behaviour with regards to coping with difficult situations and providing a buffer against the negative effects of stress. However, the sample used in this study was not sufficient to conclusively make a generalised finding.

KEY TERMS

Laughter; care-worker; HIV/AIDS; depression; anxiety; stress; positive psychology; orphans and vulnerable children; qualitative; quantitative; phenomenological

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CHAPTER 1: RATIONALE AND OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter provides an introduction into the impact of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) on children and care workers with specific reference to the psychological wellbeing of care workers. The chapter also provides some background information to this research with reference to laughter as a therapeutic intervention. Furthermore, it provides the aims of the study and lastly the overview of the chapters that follow.

1.2 IMPACT OF HIV/AIDS IN SOUTH AFRICA

HIV/AIDS has generated distinctive social and psychological conditions whereby death and loss have become everyday occurrences for many people affected by this widespread epidemic. According to UNAIDS (2010), an estimate of 33.3 million people were living with HIV at the end of 2009, of which an estimate of 2.6 million people were newly infected with the virus. “Although the annual number of new HIV infection had steadily decreased since 1999, this decrease was offset by the reduction in AIDS related deaths due to significant scale up of antiretroviral therapy over the past few years” (UNAIDS, 2010, p.16).

Despite high levels of antiretroviral treatment, there were an estimated 310.000 HIV related deaths in South Africa in 2009 (UNAIDS, 2010). Furthermore, the HIV/AIDS epidemic has left in its aftermath a generation of orphaned and vulnerable children (OVC) ages ranging from 0 - 18 years (UNICEF, 2009). The estimated number of children orphaned due to AIDS in South Africa ranges from 1.6 million to 2.4 million (UNICEF, 2009). These children are considered vulnerable when they are living under difficult circumstances. These include children living in poor households, those with sick and terminally ill parents, those living in child-headed households, those dependent on frail and disabled caregivers and those receiving inadequate care (UNICEF, 2009).

These statistics do not consider the children that are devastated and displaced by the effects of the virus. Children do not need to be infected to feel the impact of the virus. They are affected when HIV/AIDS infects one or both parents within their

family. The fibre of that household falls apart. Although accurate estimates are not available, millions of children have been made vulnerable by the impact of HIV/AIDS (UNAIDS, 2000).

In order to meet the demand to care for these children, the Department of Health and the Department of Social Development established a system of home-based care where trained care workers assist HIV/AIDS patients and their families in various capacities in their home context (Cameron, Coetzee & Ngidi, 2009). Furthermore, as a result of rising medical costs and hospitals overburdened with the demand, the aim was to dispense care to community level, placing the responsibility on Non-Government Organisations (NGOs) and Community Based Organisations (CBOs) (UNAIDS, 2010).

1.3 CARE WORKERS

Care is defined as the process of caring for somebody or something and providing what they need for their health and protection (Oxford Advanced Learner's Dictionary, 2000). For the purpose of this study, a care worker will include anyone who offers assistance in relieving physical, emotional, social or spiritual needs with an aim to reduce suffering, promote dignity and offer support not only to patients infected with HIV/AIDS but also to the children affected and those left behind (UNICEF, 2009).

People drawn to care work are often motivated by compassion for the sick and the suffering as well as personal experiences that may have fuelled the desire to be part of the struggle against the epidemic. Religious calling and duty are further motivating factors (UNAIDS, 2000). The care workers are not exempt from the psychological effects such as: fear, loss, grief, anger, stress and depression, related to this incurable disease (UNAIDS, 2000). This often has a huge impact on their emotional and physical resources as they attempt to support not only the patients and the patients' family but also keep their own families intact (UNAIDS, 2000).

In this process, the care workers often neglect their own wellbeing in order to focus on their patient's needs. However, in order to effectively care for their patients, caring for oneself becomes vital because of the stressful nature of their work

environment. Care workers need to take care of themselves to avoid the risk of developing burnout. It may not be enough to take vacations. It is essential to have a lifestyle that incorporates manageable stress-reducing techniques (Fitzgerald, n.d.). Laughter, associated with positive emotions, is used as a form of therapy, and has evolved as one of the interventions used to enhance the mental wellness of the care workers (Cousins, 1979).

Within the South African context, The International Happiness Institute implemented Aerobic Laughter Therapy (ALT) as a means to assist care workers involved in a community based support programme for orphaned and vulnerable children (OVC). This intervention was utilised to assist care workers to cope with the stress involved in their work environment (Gee, Jaffer & Matanda, 2010).

1.4 LAUGHTER AS A THERAPEUTIC INTERVENTION

Throughout the ages philosophers have considered laughter to be a significant element in the lives of people. This is clearly depicted in Proverbs 17:22 (New King James Bible) “A merry heart does good like medicine, but a broken spirit dries the bones”.

Laughter is something the reader will need little introduction to. According to Shaw (2011), people have an innate ability to laugh spontaneously, which is evident in the laughter of children. Provine (2001) proposes that children laugh more than adults. He ascribes this to the fact that laughter is associated with play and children tend to play more than adults. Furthermore, Fredrickson (2003) advocates that whether at play in a schoolyard or a game of basketball, the primary motivations may be to simply enjoy the moment however the benefits of play extend to building physical, intellectual, psychological and social competencies. The physical activity may lead to long term health and wellness, while the game-playing strategies will assist with problem-solving skills, and the fellowship may strengthen social bonds that may provide crucial support in the future.

Laughter in many instances is a behavioural reaction to humour. This behaviour creates possible positive physical and psychological changes within the body, as well as changes in the mind and spirit, which can combat the effects of stress

(Diener & Chan, 2011). Furthermore, laughter may contribute to the management of physical pain through the relaxation of the muscles and increase of oxygen intake. In addition, laughter can increase the heart rate and arouse the circulatory system, therefore giving one a general sense of well-being (Bennett & Lengacher, 2008).

The laughter phenomenon has had limited research exposure throughout the social sciences, hence this study aims to contribute to the existing body of knowledge.

1.5 BACKGROUND TO THE STUDY

This study forms part of a larger project run by the International Happiness Institute (InHappiness). InHappiness was founded in Mumbai, India in 2007. It is a non-profit organisation now working in Johannesburg, South Africa. They provide evidence-based positive psychology programs, such as The Healing with Happiness program, which effectively counters stress and depression and builds health and happiness in various targeted groups and settings (Gee, & Jaffer & Matanda, 2010). In South Africa, The Healing with Happiness program is used in settings such as: palliative care, home-based care, and Orphaned and Vulnerable Children (OVC) care. The program was developed during three years of practical trials and research to help individuals and groups combat the effects of stress and depression (Gee et al., 2010). The Healing with Happiness program utilises Aerobic Laughter Therapy (ALT) which is a cognitive behavioural technique developed by InHappiness. ALT is utilised as an intervention for enhancing mental wellness. The concepts ALT and laughter therapy will be used interchangeably throughout the study.

Laughter has been shown to quantitatively improve the affect of individuals who are in a capacity of helping others (Paddington, 1963; Sepulveda et al., 2003). Having said this, research and specifically qualitative investigations into these dynamics have been limited. As such, this study hopes to contribute towards those areas that lack sufficient research.

1.6 AIMS OF THE STUDY

This research focused on the exploration of the care-workers' experiences through participation in laughter therapy. Because this study forms part of a larger project in

which the effectiveness of laughter therapy is evaluated, it has focused specifically on the caregivers' subjective experiences of such interventions. Therefore, the main aim of the research is to explore the subjective experiences of care workers exposed to laughter therapy. The secondary aim of this study is to evaluate the effectiveness of laughter therapy as an intervention for HIV/AIDS care workers by decreasing their experience of depression and anxiety. Laughter can give them an outlet for the frustration and emotional distress experienced in their work environment.

1.7 OVERVIEW OF THE STUDY

This study consists of five chapters each contributing interdependently to the completeness and fullness of this study.

Chapter 1 provides the reader with an introduction by means of a background, aim and nature of the study.

Chapter 2 elaborates on and explores the previous literature reviews focusing on the effects of laughter on the psychological wellbeing of individuals with specific focus given to care workers.

Chapter 3 explains the theoretical perspective and methodology used in this study.

Chapter 4 presents a detailed description and discussion of the findings.

Chapter 5 provides a conclusion to the study incorporating recommendations for further research and implementation of therapy.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter begins by locating this research within a theoretical framework. The impact that HIV/AIDS has on families will be discussed to formulate an understanding of the role of the care workers within the South African context. Furthermore, the relevant literature on laughter as a complimentary therapy to promote mental health, amongst care workers, will be discussed.

2.2 THEORETICAL FRAMEWORK

The study makes use of Positive Psychology as the main theoretical framework. This paradigm was introduced by Martin Seligman at an American Psychology Association conference in 1998. He introduced the audience to a different discipline that focuses primarily on human strengths that can promote mental health. Seligman created a new direction and orientation for psychology which he termed Positive Psychology (APA President's address, 1998, p. 559-562).

Before the Second World War, psychology had three main objectives. The first objective was to diagnose and treat mental illness. The second was to enhance mental wellness through individual happiness and life fulfilment. The third was to recognise and build on personal talent (Boniwell, 2006). However, after the war the last two objectives somehow got lost, leaving the field to concentrate predominantly on mental illness. During this time the science of psychology focused mainly on the pathology of human functioning with the emphasis to address negative emotions such as anxiety, depression and anger (Boniwell, 2006). However, according to Seligman (2002), this way of thinking neglected the possibility that building an individual's strengths is possibly the most effective and powerful therapeutic intervention.

Positive psychology is intended to complement rather than replace traditional psychology. In order to redress the previous imbalance, the main focus in the treatment and prevention of mental illness should be on the building strengths of an individual. Thus the aim of positive psychology is to shift the focus from a mind-set

of treating the negative effects in life to building the best qualities in life (Passer & Smith, 2004; Seligman, 2002).

Positive psychology functions on three levels, namely: a subjective level, an individual level and a group level. At a subjective level, positive psychology looks at the perceptions of an individual's view of their life. Whereas, at an individual level, the emphasis is on positive traits and emotions, such as capacity for love, happiness, courage, perseverance, forgiveness, originality, future mindedness, spirituality, giftedness and wisdom. Furthermore, at a group level, positive psychology focuses on the factors that contribute to the advancement of good citizenship such as social responsibility, nurturance, altruism, respect, tolerance and work values (Seligman & Csikszentmihalyi, 2000).

In addition, Fredrickson (2001) claims positive emotions leads to personal well-being by broadening thought-action or expanding the individual's attention and ideas, thereby undoing the effects of negative emotions and increasing psychological resilience and personal resources. Furthermore, Fredrickson (2011) advocates that positive affective experiences contribute and have a long lasting effect on our personal growth and development.

For many years, scientists and lay persons have conducted studies in order to assess the benefits of laughter on an individual's physical and mental health (Kuiper & Martin, 1998; Wilkins & Eisenbraun, 2009). These studies have revealed that when a person laughs, the chemistry within the person's body changes. This chemical change helps to alleviate physical pain and contributes to feelings of psychological wellness. Furthermore, there is evidence that suggests that laughter can become a coping mechanism for the typical stress of life (Bennett, Zeller, Rosenberg & McCann, 2003). Hence tapping into a positive behaviour such as laughter, may alleviate the negative effects that care workers experience in their line of work.

2.3 THE IMPACT OF HIV/AIDS ON CHILDREN AND THEIR FAMILIES

Children affected by the death of their caregivers are usually referred to as orphans and vulnerable children (OVC) (Foster, Levine & Williamson, 2005). For the purpose

of this study, an OVC will be considered as a child under 18 years of age, who has lost either one or both parents to death, desertion or other means, and/or a child who has limited or no access to basic needs or rights (Skinner, Tsheko, Mtero-Munyati, Segwabe, Chibatamoto, & Mfecane, 2006).

With regards to HIV/AIDS, the probability that both parents will die, increases when initially only one parent is infected. This is due to the fact that parents may infect each other (Van Devanter, Thacker, Bass & Arnold, 1999). Children within a household where parents are infected are vulnerable long before the death of the parent or care giver. These vulnerable children watch as their care givers progressively get more ill and eventually die (Desmond, Michael & Grow, 2000). Furthermore, they may lose their family and their identity and may be exposed to a diverse range of difficulties. Such difficulties may include augmented food insecurity, discrimination, stigmatisation, sexual abuse and limited access to education which reduces their financial opportunities (Desmond et al., 2000). Neglected care and security tends to lead to a higher probability that these children will be exposed to exploitative child labour and abuse. Consequently, they face increased vulnerability to HIV infection. In addition, these vulnerable children may have inadequate care from the extended family members because many of these adults may themselves be living with HIV/AIDS. Families are further impoverished because time and funds are spent to care for the increased number of HIV/AIDS infected relatives (Foster, Levine & Williamson, 2005).

2.3.1 Impact on the psycho-social well-being of children

According to Richter, Foster and Sherr (2006), psychosocial well-being of children can be defined as the positive developmental result of their physical, social and mental wellness. The wellness of children is established by a combination of their abilities and their social and physical environment. Within prolonged difficult circumstances, it is critical that the survival and development of children depend on their psychosocial well-being. Children, like most people, require love, affection and stability to develop optimally, especially when they are faced with persistent difficulties and deprivation (Fredrickson, 1998). During children's' developmental stages, their psychological, material and social needs are best met through their

caregivers. However, disadvantaged conditions, such as limited access to services, deprived environmental conditions, scarce physical supplies, and social uncertainty, negatively impact children's development. Many of these conditions could lead to children struggling to reach their expected growth level and possibly becoming prone to severe and chronic illness. Furthermore, their lack of energy may hinder them from engaging and actively learning from their environment thereby increasing the likelihood of delays in their physical and psychological development. This is particularly true in the early developmental stages where a child's development is susceptible to environmental deficits. Young children are especially vulnerable to growth retardation and infectious illnesses. This deprivation is further aggravated by the negative economic effects of HIV/AIDS (Richter et al., 2006).

Brandt (2005) concluded that children of HIV infected mothers tend to receive lower levels of protective support than other children. Chandon and Richter (2009) argue that compromised parenting, mediated by poor maternal mental health, may have the most prominent negative effect on children's development. Furthermore, families financial resources are greatly reduced when breadwinners become ill and die. This is further compounded when these limited resources are used for medical assistance to care for other sick family members. In addition, young children face instability when they are moved from one home to another when they lose their parents or caregivers. These incidents occur at a time when loss and instability is most detrimental for the young children (Chandon & Richter, 2009).

Children and young people experience the illness or death of a parent as traumatic. According to Armstrong (2000) stress is a condition that an individual experiences when faced with an unsettling, frustrating and difficult situation. To buffer the effects of stress caused by the traumatic environment the children are faced with, children require the support of family or the community. Support is not merely meeting the children's physical needs but also their psychological, emotional and social needs (Armstrong, 2000). This view is supported by Foster, Levine and Williamson (2005) who advocate that it is imperative to meet the psychosocial needs of orphans and other vulnerable children because of the trauma and stress they have endured.

2.3.2 Taking care of Orphan and Vulnerable Children (OVC)

Within the South African context, a large number of children who have been orphaned or affected by HIV/AIDS, are mainly cared for by either their immediate families or by the extended families (Foster et al., 2005). Traditional practices within the South African context, place preference on integrating the orphans into their families instead of placing them in institutions. Frequently, this care is provided by grandparents or older siblings. However children with no living relatives are often placed in foster care or form child-headed households (Townsend & Dawes, 2009).

A study commissioned by the Nelson Mandela Children's Fund ((Vermaak, Mavimbela, Chege & Esu-Williams, 2004) to investigate the challenges faced by households that care for the children affected by HIV/AIDS yielded the following findings: (The Population Council, 2012).

Firstly, within the study sample, approximately one in every five children were orphans. Five percent had lost their mother and sixteen percent had lost their father, while two percent had lost both parents. In addition, 39 percent among the orphans were living with the grandparent(s) while 16 percent lived with a parent but in the grandparent's house.

Secondly, children who are orphaned or affected by an ailing parent have low school enrolment and attendance. The study showed that due to financial constraints, illness and pregnancy, seven percent of children, aged 7-18 years, were not enrolled in school. When comparing orphans to non-orphans, the study showed that orphans and children living with ailing parents frequently drop out of school because of the need to care for their parents which contributes to poor school performance. Children affected by HIV/AIDS often lag behind their peer group which could be indicative of children starting their education late or high failure rates.

Thirdly, the findings of the study showed that half the households within the study were headed by females. When comparing female and male-headed households, it was reported that female-headed household were economically poorer than male-headed households.

Fourthly, furthermore, a large number of households were headed by an elderly person with no formal education. Two-thirds of the household members were closely related to the head while the balance had an extended family relationship with the head of the house. In addition, the survey found that two percent of the households, within the study, were headed by young people aged 14-24 years while 21 percent were headed by an elderly over the age of 65 years.

Fifth, most of the households reported an average monthly income of R800 or less which is at or below the poverty line. Moreover, only 34 percent of households indicated that they received income from full time employment, 13 percent were part time employed, eight percent received income from casual employment and 16 percent were self-employed.

Sixth, amidst the hardship, most respondents still displayed positive connectedness to their community. Most of the participants believed that people in their communities usually worked together to help a family in need. This belief instilled trust amongst the members of the community. In addition, they stated that the children were socially active within their community.

In conclusion, the findings of the study revealed that poverty is widespread. The economic ability of households to support and care for OVC is extremely low and creates risk. Factors that contribute to the decrease of economic ability include sickness, death and households headed by women and the elderly with limited resources. Furthermore, the findings above indicate that although the extended family plays an integral part in the care of OVC, many live below the poverty line. This highlights the necessity for external organisations to assist these families in order to meet the developmental needs of children (The Population Council, 2012).

2.4 CARE WORKERS WITHIN THE SOUTH AFRICAN COMMUNITY CONTEXT

Various terms are used to describe individuals who work as care workers in communities. Care workers can include Palliative Caregivers, Community Caregivers (CCG) and Home-based Carers. Within the South African context, the care workers will carry out functions related to caring for HIV/AIDS affected community members. It can be noted that though distinctions have been made

between the different types of care, these demarcations are highly blurred at the grassroots level. Many care workers work across these demarcations, therefore the categories should not be regarded as limited or conclusive.

2.4.1 Palliative Care

The World Health Organization (WHO) defines palliative care as a field that focuses on the assistance of families who are confronted with a life-threatening sickness. Care workers provide services to improve the quality of life for the patient as well as their family members. This is accomplished through programmes that support early detection of pain and other physical problems in order to prevent and alleviate suffering whether physical, psychosocial or spiritual (Sepulveda, Marlin, Yoshida & Ulrich, 2002).

The establishment of the hospice movement for palliative care began in response to the pressing need of terminally ill cancer patients to alleviate the pain they were experiencing (Addington-Hall & Higginson, 2001). However, during the 1980's, the question was raised whether AIDS patients should be admitted to hospices as well. The WHO supported the viewpoint to include AIDS patients into hospice care. Endorsements were made by WHO to include HIV/AIDS as a life threatening illness that warrants palliative care treatment (WHO, 2002). Furthermore, Sepulveda et al. (2003) advocate that palliative care encompasses a full range of care throughout the stages of a life threatening illness and not only in the final stage.

Studies have shown that palliative care is a vital element of health care in that it has proven to effectively improve the quality of life for not only the patients, but also for their families (Addington-Hall & Higginson, 2001; Sepulveda et al., 2002).

2.4.2 Community Care

Uys and Cameron (2003) advocate that community and family based care appear to be the best approaches to meet a child's security and socialisation needs. Furthermore, this would depend on the strength of the relationship between the care workers and the children (Kay, 2001). According to Kay (2001) warmth, responsiveness and the care workers' ability to empathise and communicate effectively with the children is of paramount importance.

Research conducted by Uys (2002) found that care workers were generally recruited from among the many unemployed people within affected communities. These workers are trained to physically and emotionally support the affected households. However, these care workers are often themselves burdened with their own personal needs which could negatively influence the care given to the children and their families (O'Neill & McKinney, 2003). Accordingly, Cameron, Coetzee & Ngidi (2009) advocate that there is a need to support the Community Care workers with their emotional needs through providing interventions that reduce stress levels.

2.4.3 Home-Based Care

Many children are affected by HIV/AIDS as their parents, caregivers, families and members of their communities are infected with HIV and subsequently have died due to AIDS. These children end up living either in different households or with their extended families. A household can be defined as a group of people living together, who are usually financially interdependent. Traditionally, extended families involve a much wider system of relations that include multiple generations and can extend to relatives outside the household. However, this care provided by the extended family may be adequate, provided that the caregiver has the financial means required to support the children (Foster, Levine & Williamson, 2005).

When impoverished households are faced with the added burden of the implications of HIV/AIDS, there is little else they can do but continue to survive with the limited resources available. Research has indicated that orphaned children tend to cope better if they remain in familiar surroundings even if it is not with their biological families. However, this places tremendous, overwhelming pressures upon households that absorbed orphaned children (Dorrington, Johnson, Bradshaw & Daniel, 2006).

The care workers who participated for this study are called Community Care workers. They offer a service to the members of the Soweto community.

These services include, namely:

- Distribution of monthly food parcels to members of the community.

- Assistance with access to relevant grants.
- Community education programmes.
- Home visits and palliative care.
- Assistance with household chores.
- Identifying relevant needs of the families and referrals to relevant institutions.
- Offering mediations and counselling for families.
- Assisting with food gardening initiatives and maintenance of such initiatives.

2.5 IMPACT ON CARE WORKERS

Although many studies highlighted the positive impact of doing community care work on the care workers within the HIV/AIDS context (Guinan, McCallum, Painter, Dykes & Gold, 1991; Linsk & Poindexter, 2000), there are also negative effects on care workers as persons. Some of these negative impacts are stress and depression.

2.5.1 Stress

Care workers experience stress due to the nature of the work that they do (Armstrong, 2000). Providing care to people in need is often regarded as a very rewarding and altruistic vocation. However, the pressures associated with healthcare delivery can exacerbate the stresses encountered when conditions of employment are not favourable (Van den Berg et al., 2006).

According to Shapiro, Brown and Biegel (2007) the negative results of stress on individuals working in a caring capacity, include depression, anxiety and emotional exhaustion. Furthermore, stress may have a negative effect on the effectiveness of the care that they provide, because stress can negatively affect one's attention and concentration. In addition, stress may increase the probability of burnout, a condition that involves depersonalisation, emotional exhaustion and a sense of low accomplishment (Felton, 1997).

Van Dyk (2001) proposes that nothing is more stressful and draining on the caregiver's resources than caring for patients with HIV infections or AIDS. Van Dyk (2001, p.282) states that in South Africa "the enormous need for care leaves the community with no other choice but to care for their own sick". In South Africa, the

caregivers comprise family members, particularly women, volunteers working for AIDS care programmes (formal volunteers trained by the organisations for whom they work), health care professionals, and traditional healers.

The Joint United Nations programme on HIV/AIDS (UNAIDS, 2000) mentions five contributing factors that can potentially increase stress levels among health care workers caring for HIV infected patients. Firstly, staff fears of potential exposure to and contraction of HIV contribute towards increasing stress levels. Secondly, personal identification with the suffering of people with AIDS has also been found to elevate stress levels. According to UNAIDS (2000), many care workers have experienced personal losses either of a relative, friend or colleague. This makes it difficult for care workers to be professionally detached from their jobs when they are not on duty. This increases the risk of stress. Similar observations were made by Palmer (1995). According to Palmer (1995), care workers personally affected by HIV may experience a loss of boundaries between their professional and personal life, leading to exhaustion and possible burnout. Thirdly, over-involvement with people with AIDS and their families has also been found to contribute to the exacerbation of stress levels. Apart from frequent deaths of patients, dealing with families who had experienced the loss of a loved one to AIDS is a source of stress for the care worker. In addition to the above, stigma and discrimination associated with HIV/AIDS may increase stress levels as they are not only targeting the infected individual but also the uninfected care worker working in this field. Palmer (1995,) states that

workers may be uncomfortable relating to patients from high risk groups such as sex workers, homosexuals and intravenous drug users... caring for these patients may be distressing for the care workers because they may feel stigmatised themselves. (p.21)

Lastly, the stress levels of care workers were elevated through job dissatisfactions, concerning areas of job security, work environment, teamwork, job recognition, and lack of support from superiors, personal growth and training (Palmer, 1995). This research was done more than 15 years ago. Care workers still experience many of these problems (Mabota, 2013).

There are vast amounts of literature illustrating stress as a major factor affecting people's mental and physical health. Stress is seen as a complex interaction of environmental influences and an individual's perceived ability to cope (Passer & Smith, 2004). A study conducted by Turner and Catania (1997) with caregivers aged between 18 and 49, found that lower income care workers had more stress in comparison to higher income care workers as they were burdened by their inability to meet the needs of their care receivers.

According to Lazarus (1999) stress is defined as an individual's perception that their internal resources are insufficient to combat the external demands placed on their lives. Stress is often accompanied by mental and physical symptoms. This results from a disruption in the balance between demands and the ability of the individual to respond to the demands especially if these demands are perceived too high to cope with.

Most people use two types of coping. Problem-focused coping is used predominantly in situations where the individual assesses the possibility that something constructive can be done. Emotion-focused coping tends to prevail when individuals perceive that the stressor is something that cannot immediately change but that it must be tolerated (Folkman, 2011).

Folkman and Moskowitz (2000) conducted a study of AIDS care workers in order to explain the coping mechanisms utilised by individuals who are consistently exposed to chronic stressors. Irrespective of the chronic conditions to which they were exposed, the care workers were found to create and sustain positive viewpoints. The evidence from this study indicated that the individuals participating in the study utilised the meaning-based coping processes of positive reappraisal, problem-focused coping, and the integration of ordinary life events with positive meaning. This research identified a third category of coping strategies and concluded that people can feel good even in negative circumstances. Studies conducted by Grunfeld, Whelan, Zitzelsberger, Willan, Montesanto and Evans (2000), indicated that health care workers exposed to prolonged periods of high stress levels were at risk to experience burnout, a syndrome that is characterised by physical and emotional exhaustion, depersonalisation and low productivity (Maslach, 1993).

2.5.2 Depression

Depression has been generally defined as a condition that affects the mood of an individual. The severity of this condition ranges from mild to pathological involving feelings of hopelessness and helplessness (Sadock & Sadock, 2007). According to Goldberg and Steury (2001) depression is among the most debilitating mental health issues globally that may negatively impact the work performance of the affected.

A study conducted by Pirraglia et al. (2005) found that the work load associated with taking care of people infected by HIV/AIDS was strongly linked to depression amongst the care workers. Results from this study indicated that 50 percent of the care workers that participated in the study presented with depression (Pirraglia et al., 2005). In a South African study involving 50 HIV Counselling and Testing (HCT) counsellors, Mabota (2013) found an average score indicating of a mild level of depression amongst them.

From the abovementioned factors, it can be seen that care workers are somewhat vulnerable to high levels of stress and the negative consequences that this can have on their affect. Given that they are in a position of caring for others, it is imperative that their own physical and psychological wellbeing be upheld and maintained. Van Dyk (2001, p.286) states that "...it is important for the self-preservation of care-workers and for their emotional survival that they should take care of themselves". As part of taking care of themselves, this study aims to explore the benefits of laughter therapy on the mental wellness of the care-workers.

2.6 LAUGHTER AS A FORM OF INTERVENTION

For the purpose of this study, the following differentiation will be made between humour, mirth and laughter: Humour is the cognitive perception of playful absurdity, mirth is the positive emotion that accompanies humour and laughter is the respiratory-vocal behaviour that communicates this emotion to others (Fry, 1992). The phenomenon of laughter has been studied from different disciplines such as philosophy and science. Philosophers have tried to understand this phenomenon by developing theories and models while scientists studied the effect empirically.

2.6.1 Conceptualization of laughter

Certain phenomena seem to be untapped by scientific and empirical investigations. Laughter may be a phenomenon that is empirically hidden and that lacks scientific explanation; however it is a familiar expression for most individuals. The phenomenon of laughter has remained largely unstudied throughout the development of the human and social sciences. Having said this, laughter has been the subject of consideration by a long and honourable list of thinkers, from the Greek philosophers to modern psychologists.

There have been numerous theories which have attempted to explain laughter. The oldest theory that goes back as far as Plato, Aristotle and Hobbes is the “superiority theory”. This theory is currently the most widespread theory of laughter. The superiority theory advocates that laughter is an expression of a person’s feelings of superiority over another person (Duncan, 1985).

An additional theory developed by Kant and Schopenhauer (1892) was the “incongruity theory” which states that laughter is often a reaction to the perceived observation of some incongruity. The third, and latest traditional theory, was noted by Herbert Spencer and Freud and aptly named the “relief theory” based on the premise that laughter is the release of surplus nervous energy (Morreall, 1986). The three theories will be highlighted briefly.

2.6.1.1 Superiority Theory

According to Plato, self-ignorance is what makes a person laughable. The laughable person is the one who thinks of himself more highly than he ought to (Morreall, 1983). Aristotle agreed with Plato in that laughter was basically a form of ridicule. He stated that one should only laugh at others’ minor misfortunes because it was morally inappropriate to laugh at serious ones. Both men believed it preferable to avoid humour because it was harmful to a person’s character (Morreall, 1983). The belief in the Superiority theory remained unchanged until the seventeenth century English philosopher Thomas Hobbes suggested a revised version. He postulated that laughter was facilitated by the sudden glory of seeing oneself as better than others (Boyd, 2004). He observed that those who laugh often are the same as those who are greedy of applause from everything they do well. He sees laughter as

arising from joy, primarily from the feeling of one's own achievement or the realization of one's own ability. The realization of one's own superiority can be triggered by the presentation of the misfortunes of others. When others are seen to be completely incapable, one's own self-image is heightened by comparison. For this reason people become joyous and are moved to laugh at the infirmities and ludicrousness of others. Words associated with this theory include thrashing laughter, ridicule, grandeur and hostility (Boyd, 2004).

2.6.1.2 Incongruity Theory

Immanuel Kant (1892) is considered the originator of the incongruity theory. He describes the ridiculous as being essential for a lively, uncontrollable laugh (Veatch, 1998). This theory focuses on the cognitive aspects of humour that trigger laughter such as finding something funny because it is expected to be one way when unexpectedly it goes another way. Morreall (1983) defines humorous amusement as taking pleasure in a rational and emotional shift. This theory attempts to explain the laughter demonstrated by babies while playing a game of peek-a-boo. The incongruity theory postulates that laughter is a certain kind of reaction to something perceived as incongruent.

Arthur Schopenhauer (1964) offered a different variation on Kant's explanation in that he indicated that what is laughable is a "mismatch between conceptual understanding and perception" (Morreall, 1983, p.17).

2.6.1.3 Relief Theory

Relief theorists, Herbert Spencer and Sigmund Freud, attempt to explain humour through a tension-release model. Freud's theory proposes that the repression of certain forbidden thoughts, build up tension and nervous energy (Goldstein & McGhee, 1972). Laughter is the mechanism used to discharge this nervous energy in a more acceptable manner. Freud further suggests that the release of this energy is pleasurable as demonstrated by the good feelings that laughter provides (Goldstein & McGhee, 1972).

Furthermore these theorists deliberate the important structures and psychological processes that produce laughter. Freud describes relief as a release from restraints,

restrictions or controls that are physiological, psychological or social in nature. Sex and hostility are the repressed drives that generally lead to laughter (Martin, 1998). The main function of a joke is to allow a person to express “morally unacceptable desires” (Morreall, 1983, p.103). Freud saw laughter as a release of psychic energy while Spencer viewed laughter as a safety valve that releases energy built up in the nervous system (Morreall, 1983).

2.6.1.4 Morreall's New Theory

Morreall (1983), a modern philosopher and one of a few contemporary laughter therapists, advocates three elements and benefits of laughter, an aesthetic experience, a form of mental liberation and lastly a way of interpreting one's life as a whole.

Morreall (1983) claims that his new theory shows how humour and laughter can be a path to mental health as it may provide an individual with some form of relief from the mundane aspects of human existence. He further advocates that distancing oneself from the mundane aspects of everyday life allows one to be free from being overwhelmed by a situation in which one has little or no control. Hence laughter interventions may possibly benefit the care workers, who are confronted with stressful and mundane aspects in their everyday work environment. Therefore, laughter may lessen the burden of mental anguish by relieving the mind from worry. Laughter may also assist care workers to create emotional distance from the stresses that they are exposed to in their work environment.

Furthermore, Morreall (1983) advocates that humour and laughter are conducive to living a healthy life since it allows one to cope better with stressful situations. Moreover, it can markedly reduce tension and the results of stress. A good sense of humour allows one the ability to be more flexible in his/her approach to any situation. Morreall (1983, p.39) refers to this flexibility as the "pleasant psychological shift". This shift may allow the individual to distance him or herself to see the big picture instead of worrying about the trivial and uncontrollable happenings in life.

2.6.2 Emerging approach to laughter

Traditional psychology has more often than not emphasised the shortcomings of individuals rather than their strengths and potentials. In contrast, positive psychology aligns its focus with mental health rather than mental illness (Snyder & Lopez, 1998). The essence of Positive Psychology is captured in the following statement (Seligman, 2002):

The message of the Positive Psychology movement is to remind our field that it has been deformed. Psychology is not just the study of disease, weakness, and damage; it also is the study of strength and virtue. Treatment is not just fixing what is wrong; it also is building what is right. Psychology is not just about illness or health; it is about work, education, insight, love, growth, and play. And in this quest for what is best, Positive Psychology does not rely on wishful thinking, self-deception or hand-waving; instead it tries to adapt what is best in the scientific method to the unique problems that human behaviour presents in all its complexity. (p. 4)

Given that laughter has been found to have several positive effects, many variations of this intervention have been developed. For the purpose of this study, a specific type of laughter therapy was used, namely that of Aerobic Laughter Therapy (ALT). An understanding of this type of laughter therapy would be of much value, and as such is discussed below.

2.6.3 Aerobics Laughter Therapy (ALT)

According to the Association for Applied and Therapeutic Humor (AATH), therapeutic humour is defined as “an intervention that promotes health and wellness by stimulating a playful discovery, expression or appreciation of the absurdity or incongruity of life’s situations. This intervention may enhance health or be used as a complementary treatment of illness to facilitate healing or coping, whether physical, emotional, cognitive, social or spiritual” (AATH Board of Directors, 2000). Based on this definition, ALT utilises techniques that promote playfulness and expression of the frustrations and stressors of life.

ALT sessions typically begin with warm up techniques, which include stretching, clapping and body movements. These techniques promote childlike playfulness to assist in breaking down inhibitions. Participants are then led through a series of breathing techniques, followed by numerous laughter exercises that combine acting and playful visualization techniques (Kataria, 2002). Some examples of exercises suggested are the following:

- Electric shock – Shaking hands and imagining receiving an electric shock from the other person’s hand.
- Balloon popping – Trying to pop each other’s imaginary balloons.
- Age Laughter – Imagine how your laugh will sound when you are double your current age or half your current age as well as when you were a child and an infant.

These exercises, when combined with the strong social dynamics of group behaviour, can lead to prolonged and wholehearted unconditional laughter.

According to InHappiness founder, Bill Gee, ALT is comprised of several elements. Firstly, education is provided on the science of stress and happiness and how these factors affect physical and mental health. Happiness, stress, depression, emotional intelligence and other measures are taken before, during and after ALT programmes to verify results and allow programme management. Lastly, ALT is delivered according to rigorous standardized procedures ensuring consistent delivery and results.

2.6.4 Positive Psychology and laughter

As previously discussed, Positive Psychology is based on the premise that positive emotions can lead to an enhancement in psychological wellbeing. Therefore, laughter can be linked to Positive Psychology as it places individuals in a position of developing an affinity towards positive emotions, and the expression thereof, which in turn also has a positive influence on their affect.

Traditionally there is a major misunderstanding about laughter, as it is often connected to silliness and frivolousness, with an assumption that it has no link to the

relevant and serious things of life (Junkins, 1999). Hence, any attempted suggestion that laughter can possibly play an important role in the treatment of something as serious as depression is frequently dismissed.

The use of laughter, as an integral part of the healing process, is based on the premise that laughter is a primary cathartic trigger, enabling the release of previously unexpressed emotions (Junkins, 1999). Provine (2001) proposes that laughter may be linked with play and playful behaviour. Upon entering adulthood many adolescents learn to distinguish the appropriateness of laughter and this transition can at times stifle an individual's ability to express him/herself in a playful manner. Therefore, the need to maintain the ability to take things playfully becomes crucial (Shaw, 2011). In order to achieve this it is necessary to reverse earlier conditioning and reconnect into play which is a "socio-physiological state of instinctive life. It is not only something that we *do* but something we *are* while we do it" (Eastman, 1937, p.16).

In addition, Goodheart (1994) advocates that people have misconceptions about needing reasons to laugh. Cognitive processing is essential in solving problems and discerning information but when it comes to laughter and enjoying the experience of laughter, rationalising can be counterproductive.

2.6.5 Laughter as a Therapeutic Intervention

Laughter as a therapeutic intervention, allegedly originated in the 1970s. During this time, Norman Cousins, a Professor at the University of California publicised his experiences in overcoming a serious chronic disease by subjecting himself to continuous viewings of his favourite comedy shows. He advocated that ten minutes of laughing gave him two hours of drug-free pain relief (Cousins, 1979).

Berk et al. (1989) examined the effects of laughter on neuroendocrine hormones that are involved in classical stress responses. They concluded that joyful laughter modifies or reduces some of the neuroendocrine hormone levels that are associated with stress. The research was conducted using ten healthy male participants. Five experimental participants watched an hour-long comedy while five control participants did not. Blood samples were taken from each of the ten participants

before and after the viewing. The samples taken from the experimental group showed more rapid decreases in cortisol levels. Furthermore, test samples also revealed that the level of natural killer (NK) cells increased through laughter.

Similar results were found in a study conducted by Bennett, Zeller, Rosenberg and McCann (2003). They concluded that the stress hormone, cortisol, decreased more rapidly in participants in an experimental group that was exposed to a humorous video of their choice, compared to participants in the control group that viewed a tourism video. This method followed the assumption that the participants would choose a movie style that they found the most humorous, and thus maximise the effects of the stimulus. The findings supported the beneficial effects of exposure to a humorous stimulation on self-reported stress levels, as persons viewing the humorous video reported significantly decreased stress following the video, compared with the participants in the distraction or control group.

In addition, laughter may not only buffer the effects of stress but may play an important role in enhancing the pleasures of positive life events (Martin, Kuiper, Olinger & Dance, 1996). According to Colom, Alcover, Sanchez-Curto and Zarate-Osuna (2011) laughter activates the subcortical regions with specific reference to the nucleus accumbens, a key component of the mesolimbic dopaminergic system. This system is a reward system that provides pleasure when something valued is obtained.

According to Goodheart (1994) laughter may be utilised as one of the major cathartic practises for releasing or healing emotional pain. When people laugh, they are releasing painful feelings which have been repressed over a long period of time. No matter how immeasurable the pain is, the body will keep releasing pain cathartically until there is no longer a need.

During the formative years, children are conditioned to laugh when it is socially appropriate. This conditioning negatively influences the application of laughter as a therapeutic intervention. Individuals tend to feel uncomfortable and fear losing control cathartically when exposed to laughter, crying, or anger expressions. On the contrary, losing control of one's' emotions cathartically, allows one to regain control

of one's life through flexible, creative and caring means (Goodheart, 1994). Furthermore, this promotes wellbeing.

2.7 SUMMARY

The HIV/AIDS epidemic has produced a vast number of children who are orphaned and made vulnerable because of the devastations of the disease. Within the South African context, looking after these children rests mainly on the community care workers. Care workers in this field are faced with numerous physical and emotional challenges that affect their personal well-being, with specific reference to their moods and stress levels. Within a Positive Psychology framework, the benefits of laughter were explored as a therapeutic intervention to increase the well-being of the care workers.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

In this chapter the methods used to conduct the research will be discussed. Areas that will be focused on cover the aim of the study, the research design, how the participants were selected and the methods utilised to collect and analyse the data. Furthermore, validity and ethical considerations will be deliberated and will culminate in a conclusion.

3.2 AIM OF THE RESEARCH

This study aims to explore, namely, (1) the effects of working with OVC on the experiences of care workers; (2) the care workers' experiences of participating in laughter therapy; and (3) the effects of laughter therapy on care workers' levels of depression and stress.

3.3 RESEARCH DESIGN

Broadly speaking, there are two major approaches to research, namely qualitative and quantitative (Terre Blanche, Durrheim & Painter, 2006). The latter seeks for facts or causes of a social phenomenon, whilst the former attempts to understand human behaviour from the participant's own frame of reference. These two approaches could be viewed as opposites, but in fact, each approach to research has its own goal and focus (Creswell, 2009).

According to Onwuegbuzie and Johnson (2004), using both approaches is an attempt to legitimise the use of multiple approaches in answering research questions, instead of restricting or constraining the researchers' choices. Using a mixed methodology is inclusive, pluralistic, and complementary. Hence researchers can opt by taking an eclectic approach to method selection and conduct of the research, since "... phenomena investigated in the social sciences are so enmeshed that a single approach cannot succeed in encompassing human beings in their full complexity" (Mouton & Marais, 1990, p.169-170).

Mixed methods research is a methodology or style of conducting research that involves collecting, analyzing and integrating both quantitative and qualitative

research data in a study. The rationale of this type of research is that using both qualitative and quantitative research provides a better understanding of a research problem than using either research approach in isolation (Creswell, 2009). Johnson and Onwuegbuzie (2004) supports Creswell's philosophy of utilizing a mixed method approach, which is less restrictive and takes a more eclectic approach assisting researchers to answer the research question. Johnson and Onwuegbuzie (2004) propose that when the qualitative data analysis is given considerably higher priority, the analysis essentially is a qualitative dominant mixed analysis. In such an approach, the researcher takes a constructivist, poststructuralist or critical stance, with respect to the mixed analysis process. In addition, the inclusion of quantitative data is likely to provide more rigorous interpretation of data. This is the approach that will be followed in this research.

The quantitative areas of the study make use of a statistical analysis, specifically the Wilcoxon Signed-Rank Test (Field, 2009). The qualitative aspects of the study make use of the Interpretive Phenomenological Analysis (IPA). IPA falls under the broader paradigm of Phenomenology which deals with persons as opposed to subjects. As human beings, people attempt to make sense of all their experiences. Through mental acts, people strive to impose meaning upon the world. Edmund Husserl, a key developer of phenomenology, denied that natural science was the only form of science. He wanted to develop a science of phenomena that would clarify how it is that a certain phenomenon is experienced and presents itself to human awareness (Spinelli, 2005).

This approach allows the researcher to explore how people experience, define and understand a phenomenon such as laughter as depicted in this study. In this study the care workers were guided towards communicating their stories in their own words. Such stories comprised of their experiences while partaking in laughter therapy and the effects laughter had on their mental wellness.

According to Smith and Osborn (2003) IPA is specifically aimed at exploring how participants make sense of their personal and social worlds by exploring the personal perceptions and meanings attributed to an object or an experience.

Phenomenology deals with persons as opposed to subjects. A person is a whole being, complete with past experiences, attitudes, beliefs and values. They live in a world of experience, complete with both cultural and social influence communicated through the use of language from a particular individual's frame of reference (Willig, 2008). In the research process, the researcher aims to get as close to the participants' lived experiences as possible, even though the researcher's own perceptions may obscure the research process. However, this is necessary in order to understand the personal world of another through a process of interpretation (Willig, 2008).

According to Ahmadnezhad (2000) using a mixed method approach can be complimentary in that it combines both qualitative and quantitative analysis to seek convergence among the results.

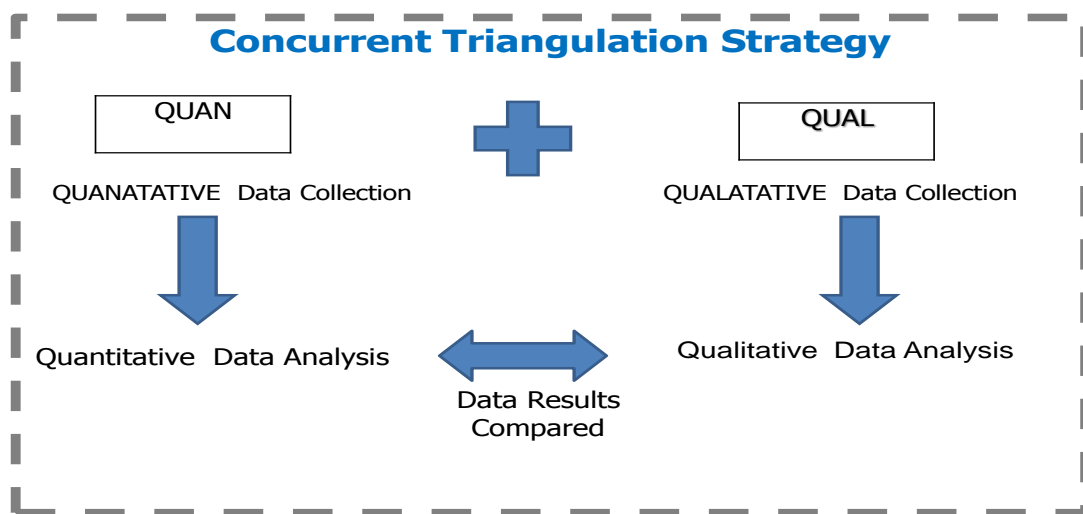


Figure 1 Mixed Methods Framework adapted by Elham Ahmadnezhad.

Furthermore, Creswell (2009) advocates that the qualitative and quantitative data collection can happen concurrently, as depicted in Figure 1 above using Elham Ahmadnezhad framework . Ideally the weight is equal between the two methods, but often in practice priority may be given to one or the other. Creswell's dominant-less dominant models of combination guided this study, with the dominant model being

the qualitative methodology and the less dominant model the quantitative methodology.

Bryman (2006) advocates that utilizing the mixed methods approach allows for greater validity through the corroboration of both quantitative and qualitative data. It also draws on the strengths of each approach while giving a more holistic and complete understanding of the phenomenon under exploration. Furthermore, a mixed methods approach allows for an exploration of both outcomes (through quantitative investigations) and processes (through qualitative investigations). The use of both approaches allows for the integrity of the findings to be enhanced as the qualitative data builds on the general quantitative data.

3.4 CONTEXT OF THE RESEARCH

The researcher had previously participated in workshops offered by InHappiness Institution. To obtain permission to do the research the researcher approached the director of InHappiness Institution. The director agreed that the researcher could conduct the research using the participants of the next laughter therapy group. The researcher was provided with the opportunity to conduct the research at Nanga Vhutshilo in Soweto.

Nanga Vhutshilo is an integrated child/family centered program for orphans and vulnerable children (OVC). The care workers provide services for HIV/AIDS infected and affected children, their caregivers and families. The project was based on the premises of Nonto Primary School in Dlamini, Soweto. The organization has been in operation for over 7 years and provides psycho-social, educational, nutritional and household support programs for over 300 children and their families (Nanga Vhutshilo website, 2012). This Non-Profit Organisation was selected because of their involvement with HIV infected and affected children and their families.

The research was conducted in Soweto. Soweto was previously the predominately black-labor township of Johannesburg faced with many challenges during the past apartheid era. Soweto inherited the aftermath of the apartheid era with poor living conditions, high unemployment rate, poverty and a mass influx of migrants seeking work. The infrastructure of Soweto is currently upgraded to combat the historical

lack of decent urban planning. Within this context, Nanga Vhutshilo was established to support and empower this community (Nanga Vhutshilo website, 2012).

3.5 SAMPLING

In phenomenological research the primary aim of sampling is to collect specific information in order to access a deeper understanding of the participants' experiences. In this research participants were selected via purposive sampling. Purposive sampling is a sampling method that selects individuals that meet particular criteria (Terre Blanche, Durrheim & Painter, 2006). In this study this sampling method is appropriate since the participants were required to meet certain inclusive criteria which comprised of the following:

- The care workers participated in the ALT program provided by InHappiness starting at the time the research was done.
- English proficiency comparative to a grade twelve qualification. This will ensure that the interviews could be conducted in English so that the richness and meaning of language will not be lost in the process of translation. Verbal fluency and ability to communicate feelings, thoughts and perceptions were established through referrals made by the director of Nanga Vhutshilo, the community centre employing the care workers.

A total of 10 care workers were selected, but only 7 partook in the laughter intervention. The reason for this was because 3 of the care workers that were interviewed in the pre-test were no longer employed by the institution.

3.6 DATA COLLECTION

Data was collected through two methods namely:

- Personal face-to-face semi-structured interviews before and after completion of laughter therapy sessions (Qualitative).
- Pre- and post-questionnaires (Quantitative).

3.6.1 Qualitative

3.6.1.1 Interviews

According to Terre Blanche et al. (2006) interviews provide researchers with the opportunity to get to know people through conversation. Interviews were an

appropriate method of data collection for this study because they allowed the interviewer to create an environment of openness and trust wherein the selected participants were able to express their views openly. Interviewers do not participate with the purpose of expressing their own feelings and thoughts. They rather focus on the experiences as seen from the interviewee's perspective. Each participant was interviewed before and after the intervention of laughter therapy.

Questions were predetermined in order to tap into participants' experiences and were asked in a systematic and consistent order. The open-ended questions permitted the participants to tell their experiences using their own words. The following are examples of questions that were asked:

- Pre-intervention interview
 1. Can you tell me about how you became involved in care work?
 2. What stressors do you encounter in your work?
- Post-intervention interview
 1. What does laughter therapy mean to you?
 2. Describe your experience of laughter as a care worker.
 3. In what way has laughter influenced the way you view your work and life in general.

An outline of the questions appears in Appendix IV (page 92) and V (page 93).

The face-to-face interviews were conducted in the participants' place of work and were approximately half an hour long. The interviews were tape recorded, with the permission of the participants, using a digital voice recorder. The contents were then transcribed verbatim for analysis.

3.6.2 Quantitative

Two questionnaires were administered before and after the laughter therapy intervention: The Hospital Anxiety and Depression Scale (HADS) and the Perceived Stress Scale (PSS).

3.6.2.1 Hospital Anxiety and Depression Scale (HADS)

The Hospital Anxiety and Depression Scale (HADS) was used to assess levels of anxiety and depression among care workers. The scale was developed by Zigmond and Snaith (1983) and was found to be a reliable instrument for detecting states of depression and anxiety amongst patients in non-psychiatric settings. Furthermore the scale has been extensively translated and used in numerous clinical and non-clinical settings. The HADS contains 14 items and consists of two subscales that measure levels of anxiety and depression. Items that relate to anxiety include “I feel tense or wound up” and “I feel restless and have to be on the move”. Items that relate to depression include “I have lost interest in my appearance.” Each item on the questionnaire has four possible indicators of the frequency with which the person experiences such a feeling. These are scored on a four-point scale, from 0-3. This means that a person can score between 0 and 21 for either anxiety or depression. Scores of 11 or more on either subscale are considered to be a significant indication for depression and anxiety, while scores of 8–10 represents 'borderline' cases and 0–7 are indicative of acceptable mental wellness (Zigmond & Snaith, 1983).

Research conducted by Bjelland, Dahl, Haug and Neckelmann (2001) concluded that HADS is a questionnaire that performs well in screening for depression and anxiety in non-psychiatric respondents. Furthermore, a study conducted by Mykletun, Stordal and Dahl (2001) confirmed that both the anxiety and depression subscales were found to be internally consistent, with a Cronbach coefficient of 0.80 for anxiety and 0.76 for depression. A large population was used in this study.

3.6.2.2 Perceived Stress Scale (PSS)

According to Cohen, Karmarck and Mermelstein (1983), the PSS scale is the most widely used psychological instrument for measuring perception of stress. The PSS is a 10 item scale that measures the degree to which particular events in one’s life are considered stressful. The higher the score, the greater the indication of perceived stress experienced. Items in this scale consist of questions such as “How often have you felt nervous or stressed?” and “How often have you felt confident about your ability to handle your personal problems?” Participants rated how often they had experienced these feelings in the last month on a 5-point Likert scale ranging from 0 (*never*) to 4 (*very often*). Reliability with regards to the internal

consistency is found to be 0.82 and test-retest reliability found to be 0.77 (Cohen et al., 1983, Remor, 2006). Cohen et al. (1983) established that the stress scale was also a significant predictor of appraised stress levels for a heterogeneous community group. This instrument has been used in South African research investigating depressive symptoms and perceived stress in South African adults (Hamad, Fernald, Karlan & Zinman, 2008). Results of the above research indicated a Cronbach's alpha of 0.72.

3.7 RESEARCH PROCESS

The researcher approached the Director of Nanga Vhutshilo to assist in identifying the potential participants. Thereafter, the initial interviews were scheduled by her at a time and place convenient to the participants. During the individual interviews, the researcher introduced herself and explained the purpose of the study. At the beginning of each interview the participants were informed that they are permitted to withdraw from the process at any time, without penalty. Participants were assured that any information that was given for this research would be treated as confidential and their anonymity would be protected. After this, written consent was obtained from each care worker (Appendix I). The participants were given an opportunity to express any uncertainty that they may have had. At the beginning of the session, the researcher assisted the participants with completing the two questionnaires. Thereafter the pre-intervention interviews were recorded. During the first day, some of the participants were unavailable to partake in the project and were rescheduled for the following week. The quantitative and qualitative data were collected simultaneously.

Two weeks after the completion of the pre-intervention data collection, the participants and their colleagues were introduced to the trainers of InHappiness laughter programme. The initial sessions aimed to introduce the participants to Aerobic Laughter therapy through education of laughter and numerous childlike techniques. Thereafter, the participants were required to participate, with their colleagues, in daily 10 to 15 minutes of group laughter sessions. The researcher did not attend these sessions but has had previously attended laughter group sessions offered through InHappiness Institute.

The post-intervention interviews were conducted after a period of one month. However, three of the participants were no longer employed at Nanga Vhutshilo and only the remaining seven participants were used in this study. During the post-intervention individual interviews, the participants were asked to complete the same two questionnaires. This was followed by a recorded interview where the researcher asked questions pertaining to the participants' experience during the laughter sessions and the effects this has had on their personal well-being. The post-intervention interviews were approximately half an hour each and were all completed on the same day.

The researcher found that some of the participants utilised the interview sessions to express some of the hardships that they had encountered in their lives. The telling of the participants' stories may have had therapeutic value. However, this was not the intention of the research process and referrals to counsellors at Baragwaneth Hospital were recommended.

No financial remuneration was offered for participating in this project. However, refreshments were available during both sessions.

3.8 METHOD OF DATA ANALYSIS

3.8.1 Qualitative

The Interpretive Phenomenological Analysis (IPA) methodology was used in this study. According to Smith and Osborn (2003), IPA is specifically aimed at exploring how participants make sense of their personal and social world.

Smith and Osborn (2008) mention that in IPA a double hermeneutic is involved, whereby the researcher is trying to understand the participants while the participants are attempting to make sense of their own world. This recognises that the construction of an interpretative account is a product of the relationship between a researcher and participant and is shaped by their encounter. IPA combines empathetic hermeneutics with questioning hermeneutics. Empathetic hermeneutic is essentially an attempt to understand the world and lived experiences of the participants, while questioning hermeneutics involve the use of open ended

questions aimed at eliciting additional information relating to the phenomenon that is being studied (Smith & Osborn, 2008).

Willig (2008) advocates that there are four stages of analysis in IPA:

1. Reading and re-reading of the text.
2. Inducing themes. Themes should naturally arise from the data collected.
3. Cluster themes. The purpose of this stage is to generate groups or clusters of themes and to identify super-ordinate categories that propose a sorted relationship between the two groups.
4. Finally, a summary table of the structured themes is produced.

In addition, Willig (2008) states that once the data has been analysed, the researcher may endeavour to integrate the summary tables into a comprehensive list that reflects the collective experiences of the group. It is important that the integration process produces a list of master themes that illustrate the quality of the participants' shared experiences of the phenomenon being explored. The researcher took the following steps in obtaining a list of the master themes.

Step 1 – Listening to recorded interviews, transcribing verbatim and preparing first transcripts. This was done for both the pre- and post-interviews.

Step 2 – Information was tabulated according to themes.

Step 3 – Themes were clustered based on their connectedness to form higher order themes.

Step 4 – Data from transcripts and the interpretation thereof were rechecked by a colleague to verify the validity of the interpretation.

Step 5 – Narrative accounts of the themes generated were supported through paraphrasing extracts from the transcripts. Direct quotes were also included to make the voice of the participants heard.

3.8.1.1 Role of the researcher in IPA

Since IPA requires the researcher to understand and interpret the world of the participant, it is important that the researcher maintains a reflexive attitude to the process when analysing the data (Willig, 2008).

Smith and Osborne (2008) refer to a double hermeneutics in which the researcher is attempting to make sense of the meaning the participants ascribe to their world. Meanings acquired from the analysis of the transcriptions are influenced by interpretation. Although the aim of IPA is to grasp a deeper understanding of the participant's lived experiences, this can only be attained through the researcher's close engagement with the participant's transcripts. In this way, the analysis is both phenomenological, in that it represents the participants worldview, and interpretative in that it is dependent on the researcher's own ideas and viewpoints.

The researcher maintained an awareness of her biases and viewpoints throughout the analysis process and focused primarily on the worldview of the participants. This was provided through sincere and honest descriptions. Furthermore, the researcher maintained a journal throughout the research process to enable her to minimise her assumptions and focus on the participants' lived experiences. Maintaining this awareness was a vital component in order for the researcher to produce authentic results rather than reflections of her own expectations.

3.8.2 Quantitative - Analysis of Questionnaires

Pre-and post-scores for each participant on the two questionnaires used were compared in cross tables to determine whether change took place. This process was used to determine which items illustrated the change that took place. This process was administered by the Statistical Department at the University of Pretoria. Thereafter, the Wilcoxon Signed-Rank Test (Field, 2009) was used to compare pre-and post- results of the scale scores for each participant. It is a nonparametric test that is used to analyse differences in paired scores. The analysis was done using the Statistical Package for the Social Sciences (SPSS version 20.0).

3.9 VALIDITY AND RELIABILITY OF THE RESULTS

In any research inquiry, the importance of establishing the trustworthiness of data is crucial to the credibility of the study. Methodological rigor is significant in a study using a mixed methods design.

Within quantitative research reliability is the degree to which results can be repeated and the validity refers to the degree to which the conclusions are valid. In the

description of research instruments these aspects were addressed. However, with a qualitative paradigm reliability and validity are replaced by dependability and credibility respectively. These aspects of the study depend on the rigor of the research process and interpretation of the data.

The researcher needs to respond to the following requirements in qualifying the qualitative research:

3.9.1 Credibility

Credibility refers to the degree to which the findings are convincing and believable (Van der Riet & Durrheim, 2006). In order to substantiate the researcher's interpretation, the inclusion of the participants' quotes throughout the qualitative analysis was utilised. Furthermore, according to Patton (1999), there are four types of triangulation that can contribute to the verification of qualitative research: methods triangulation, triangulation of sources, analyst triangulation and theory/perspective triangulation. The researcher utilised methods triangulation which involved comparing data collected from both qualitative and quantitative methods. In addition, the researcher maintained reflexivity throughout the process of the study through the recordings of her encounters, thoughts and emotions in a journal. This ensured self-monitoring in order to increase objectivity and eliminate preferences. Finally, the researcher liaised with colleagues and supervisors with regards to the data analysis.

3.9.2 Dependability

Van der Riet and Durrheim (2006) describe dependability as the extent to which the data reflects the findings that are congruent with the research process. This research will be dependable due to the interpretation based on the thorough and detailed analysis of the transcribed interviews within the contextual interactions.

3.10 ETHICAL CONSIDERATIONS

The study was approved by the Ethical Committee of the Human Sciences Faculty of the University of Pretoria. Furthermore, the researcher gained permission from the founder of InHappiness to do the study.

The following ethical principles were followed during the research process (Terre Blanche et al., 2006):

- Principle of Autonomy requires that the participants are aware that their involvement is voluntary and only for the purpose of the research, and they have the freedom to withdraw at any time. This requirement was communicated to the participants verbally and through an informed consent form which was signed and dated by both the researcher and the participants.
- Principle of Anonymity advocates that participant's identity will be protected in any publication that may arise. The confidentiality of participants in this research was maintained by using pseudonyms.
- Principle of Nonmaleficence requires the researcher to ensure that no harm will come to the research participants. This includes any physical, emotional or psychological harm. In the event that the participant experiences emotional turmoil during the process, they will be provided with the option to receive counselling during or after the research process.

Principle of Justice ensures that all participants are expected to be treated with fairness and equity during all stages of the research.

The participants signed informed consent forms in which they agreed to voluntarily participate in the research process.

3.11 SUMMARY

This chapter presented the study's research methodology. The research design was outlined within the context of the study. A discussion was followed and motivation given for utilising a mixed methods approach to enrich and enhance the findings of the study. In addition, data collection, ethical implications as well as the process of transcribing and analysis of the data was discussed in detail. In the next chapter the researcher reports on the results of the study based on the research methodology as outlined in this chapter.

CHAPTER 4: RESULTS

4.1 INTRODUCTION

This chapter reports on the results of the study. The results will be given in the following format: Firstly, the background information on the participant sample is given. Their motivation for being care workers is highlighted (qualitative data). Secondly, the results of the pre-and post-assessment (quantitative data) will be given and thirdly, the results from the interviews will be presented (qualitative data). In the discussions section the results will be integrated.

4.2 PARTICIPANTS

Three male and seven female adults were selected from the community based support programme Nanga Vhutshilo operating in Soweto. Participants were recruited through the director of Nanga Vhutshilo depending on their availability and suitability to the study. One male and two females completed the pre-assessment questionnaires but did not participate in the laughter therapy sessions. Thus, a total of seven participants, two males and five females, are included in this study. Their ages ranged from twenty to thirty eight ($M = 28.83$, $SD = 7.441$).

To protect the identity of those that participated in this research, pseudonym names have been used throughout this study.

4.2.1 Biographical information of the participants

Table 1 provides a summary of the participant's biographical information as was collected from the initial interview.

Table 1: Biographical Information

Participant Name¹	Age (in years)	Gender	Number of years as a care worker
Mpho	32	Female	3 years
Victoria	34	Female	6 years
Precious	38	Female	5 years
Thandi	34	Female	3 years
Gift	29	Male	7 years
Mpumi	20	Female	6 months
Kenzo	20	Male	2 years

A short biographical description of each participant is given below.

4.2.1.1 Mpho

Mpho is a 32 year old black female with an NQ4 (Social Auxiliary) qualification. She is a single mother of a one year old boy. During the interview she spoke openly about her experiences as a care worker. She was introduced to care work by chance:

It happened by chance. I must not lie. It happened by chance. I was sitting at home and then I saw an advertisement that they needed Social Auxiliary workers.

Mpho's work at the care centre made her realise that although she only responded to the advertisement because she needed employment, working with the children was very rewarding for her. She enjoyed connecting with the children and helping them cope better with the negative conditions they live in.

4.2.1.2 Victoria

Victoria is a 34 year old black female. She is married and has two boys. She became a care worker because she needed employment and she was not in a financial position to study further to fulfil her dream of being a nurse. She sees herself more as a volunteer because the salary is very minimal. Victoria experiences

¹ Pseudonyms used

her work frustrating and gets easily irritated. She ascribes this to the limited financial resources available to the centre to care for the children:

It was not my will to be a care giver. I want to go further my study but I was not having money.

4.2.1.3 Precious

Precious is a single 38 year old black female. She has a passion to help her community, especially the children. Events in her life did not permit her to pursue her studies in Social Work but since she joined Nanga, she believes that indirectly she has arrived at the place she wanted to be:

When I came I find out that they were dealing with children and then for me it was a bonus to say, you know even though I will not be able to be a social worker, I'm at the place where I wanted to be.

Precious's parents both passed away while she was very young and she identifies with the orphaned children she is currently taking care of at Nanga. According to Precious, her challenging background led to her having depressive tendencies and earlier this year she attempted suicide because her emotional pain was too great for her. She feels that her purpose in life is to help children who are in similar situations to the ones she experienced as a child.

4.2.1.4 Thandi

Thandi is a 34 year old single black mother with two children. Like most of the participants, she too identifies with the plight of the children and their families. When her mother passed away, she was left to take care of her siblings. She describes herself as a church going person and her belief is her main source of strength.

I think it's kind of personal, as I said that now, my mother passed on in 2004. It's like now I'm living with my mother's children.

4.2.1.5 Gift

Gift is a 29 year old black single male. He describes himself as a responsible hard worker. When Gift completed his grade 12 he struggled to find employment and his mother, who was working as a caregiver at Nanga, suggested that he joins them until he found another position. However, working with the children and their families has been rewarding for Gift and he feels that he can make a difference in their lives. Gift recognises that he has a very responsible position and at times finds that he goes the extra mile for the families under his care:

The one like my real family. Those people you know. Even the one weekend I just go and visit those families, I just from home take just the a long walk to Protea and see how they are doing.

During the first interview with Gift, he relayed a frustrating story about one of the families under his care. The family was repeatedly inconvenienced by the hospital where their young child had to have an operation to remove a growth from his neck. According to Gift, the appointment was repeatedly moved forward. However, during the second interview, Gift was so excited to tell me that he managed to find a way for the young child to have this operation. His reaction was confirmation to him telling me that the families he looks after seems to have become a part of his own family.

4.2.1.6 Mpumi

Mpumi is a 20 year old black single female and was the only participant who was herself a beneficiary at Nanga. When she became an orphan at a very young age, she was cared for and looked after by the care workers at the Nanga Centre. She wants to share the love that she was shown back to her community through her work as a care giver. The best part of her work is communicating with the children and seeing the love and the smiles on their faces when they receive something from her. Although she finds her work challenging, especially knowing the hardships the children face at their homes, she believes that she is making a difference in their lives:

I don't have parents, so I was a child out here that was a beneficiary here. So I decided that what they did for me here at Nanga Vhutshilo, I would like to do more to other kids.

Like most of the participants, Mpumi sees herself as a Christian and believes that when times get tough, she turns to God for strength and help. She believes that there are some things she cannot change and she accepts that this is the way life is.

4.2.1.7 Kenzo

Kenzo is a 20 year old black single male. Although he is a care worker at Nanga, he considers himself more of a soccer coach organising teams for the children to play during their holidays. He too decided to be a care worker because of his background. He felt that he lacked someone to care for him when he was young. He feels a responsibility towards the children to ensure that they grow up feeling cared for.

I never had someone to be my care worker. Then almost my situation is almost their situations. So I decided to be a care worker so that I can inform them and help them grow and be strong.

4.3 RESULTS OF QUANTITATIVE ANALYSIS

Two questionnaires; the Perceived Stress Scale (PSS) and the Hospital Anxiety and Depression Scale (HADS); were administered before and after the laughter therapy intervention. This was done to determine whether the experience of laughter therapy contributed to reducing stress and depression amongst caregivers involved with HIV affected and infected children.

4.3.1 The Hospital Anxiety and Depression Scale (HADS)

The HADS is a self-assessment scale which was developed for detecting symptoms of anxiety and depression in non-psychiatric patients from a medical outpatient department (Zigmond & Snaith, 1983). A score of above 11 points is a significant indication of either anxiety or depression, but less than 8 points is insignificant – it means no significant indication of depression and anxiety.

Table 2 – Differences in anxiety and depression between pre- and post-intervention scores

Total Score	N	Mean	Std. Deviation	Wilcoxon	Probability
Anxiety – Pre intervention	7	11.14	2.410	-2.226	0.016
Anxiety – Post intervention	7	7.29	1.704		
Depression – Pre intervention	7	6.57	1.988	-1.876	0.039
Depression – Post intervention	7	3.43	1.618		

In the pre-intervention assessment the group average score for anxiety was above the cut-off point of 11 which is a significant indication of anxiety (Zigmond & Snaith, 1983). In the post-intervention assessment the group average was lower than 8, indicating insignificant levels of anxiety.

The Wilcoxon signed rank test for the anxiety scores were -2.226 ($p < 0.05$). This implies that the post-intervention assessment total scores for Anxiety were significantly lower than the pre-intervention assessment total scores at the 5% level.

The depression scores for both pre- and post-intervention assessments were below the cut off of 8. The level of depression experienced by the participants was therefore not significant. The Wilcoxon signed rank test showed a significant difference between the pre- and post-intervention assessment scores for Depression as well. The Wilcoxon signed rank test = -1.876 ($p < 0.05$). This implies that the post-intervention assessment total scores were significantly lower than the pre- total scores for Depression at the 5% level.

The participants thus experienced significantly less anxiety and depression after being involved in the laughter therapy sessions.

4.3.2 The Perceived Stress Scale (PSS)

This scale is a 10-item questionnaire measuring participants' perception of stressful events. Scores can range from zero to 40 with higher scores representing greater levels of stress than lower scores. The table below reflects the level of stress during the pre- and post-laughter therapy interventions.

Table 3 – Differences in stress between pre- and post-intervention scores

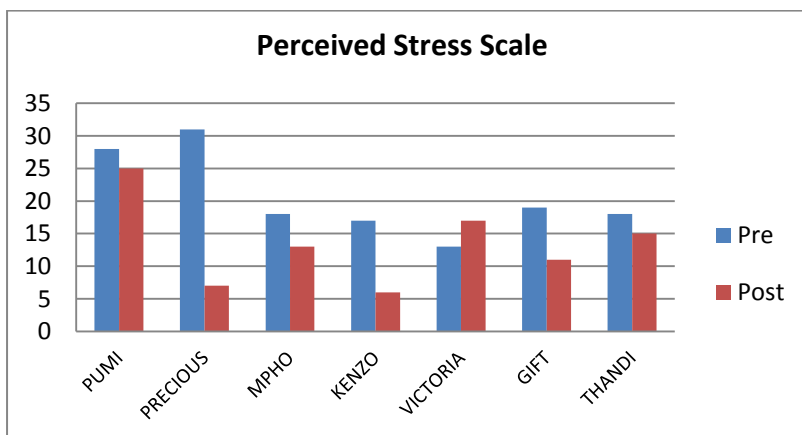
Total Score:	N	Mean	Std. Deviation	Wilcoxon	Probability
Stress – Pre intervention	7	20.57	6.451	-1.863	0.039
Stress – Post intervention	7	13.43	6.477		

The Wilcoxon signed rank test showed that the post-intervention total scores for PSS were significantly lower than the pre-intervention assessment total scores ($p < 0.05$).

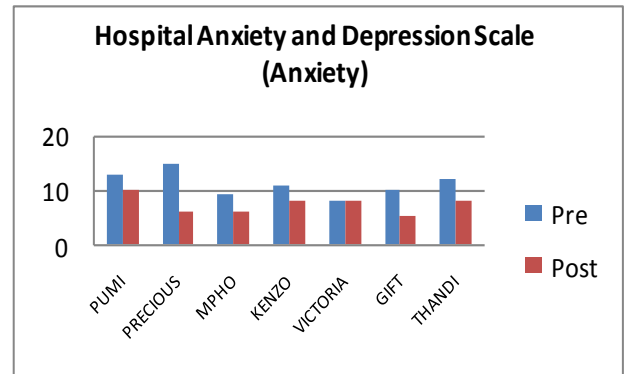
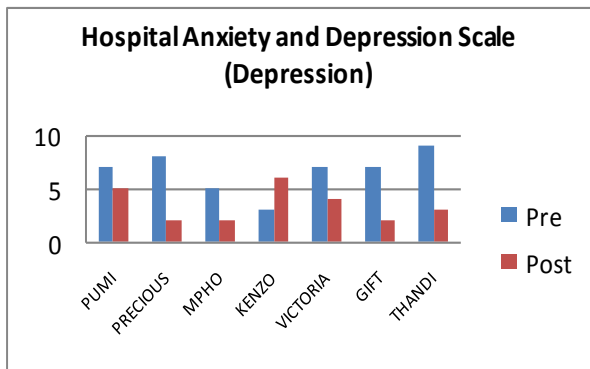
The significantly lower post-intervention assessment scores show that the laughter therapy intervention produced a positive change with regards to anxiety, depression and stress in the participants.

4.3.3 Analysis of results per participant

The scores of each participant were plotted in a format of a graph to identify the participants that changed most due to the intervention. .



Graph 1: results of pre and post intervention test analysis (PSS)



Graph 2 & 3: results of pre- and post-intervention test analysis (HADS)

This analysis shows some interesting results. Most of the participants experienced less stress, anxiety and depression after the therapy sessions. It was especially Precious that experienced the largest differences between pre- and post-intervention assessments with regard to all scales: stress, anxiety and depression. She will be used as a case study to illustrate the impact of the therapy in her life (section 4.4).

Thandi experienced the highest level of depression before the intervention. Thandi and Gift reported significantly less depression after the intervention.

Victoria and Kenzo had contradictory results. Victoria reported more stress after the intervention; her levels of anxiety remained the same, while her experiences of depression were lower after the intervention. During the intervention period, Victoria had applied for a learner ship position that would give her a better opportunity in her life. Her elevated levels of stress could be contributed to her uncertainty of her capabilities to successfully complete the training. Similarly, Kenzo experienced less stress, but his depression scores were higher after the intervention. The therapy thus does not have the same impact on all participants.

The complexity of the process needs to be taken into account when interpreting the data. For this reason, the researcher has included a case study, utilising triangulation of quantitative and qualitative analysis, in order to enhance the value of the research and obtain a fuller and more substantial understanding of the topic being researched.

4.4 CASE STUDY

It is noted from Graphs 1, 2 and 3 above, that Precious changed the most from pre- to post- intervention assessment. It can be of value to study her as a case study to understand the changes that took place for her due to the laughter therapy sessions.

Precious is a single, black 38 year old female. She was born and raised in the Eastern Cape. When she was 6 years old her mother passed away and subsequently, while in Standard 5, her father passed away. She then moved to live with her grandmother with whom she had a very close relationship. In 2008, her grandmother passed away and Precious moved to Johannesburg. She initially lived with her uncle but the appalling conditions forced her to seek alternative accommodation. In 2005, Precious was diagnosed with HIV and this affected her emotions negatively to a point where she began contemplating suicide. This culminated in a suicide attempt earlier in the year of the research.

At the time of our first interview, Precious appeared depressed and was very emotional throughout the interview. She ascribed this to her identification with the children. Working with the HIV affected children triggers her unresolved emotional issues. For most of her life, Precious felt abandoned by her parents and this contributed to a deep loneliness that frequently escalated in periods of depression. Additionally, because of her short height, she reported being often bullied and teased at school. Her main coping mechanism was withdrawing into herself and avoiding any contact with others. This contributed to her feeling increasingly isolated and vulnerable.

Precious' stress levels were assessed pre and post the laughter intervention. Her pre-intervention assessment scores were compared to the post-intervention assessment scores on the Perceived Stress Scale. The results indicated a significant 77 percent improvement in her stress levels. Furthermore, her depression and anxiety levels were assessed using the Hospital Anxiety and Depression Scale. Her pre- and post-intervention assessment results indicated a significant 75% improvement in her depression level, and a significant 60 percent improvement was found in her anxiety levels.

During the follow up interview, the researcher noticed a marked transformation that had occurred in Precious. She displayed more optimism and vibrant energy to pursue her dream of becoming a motivator and social worker. She was more confident about her capabilities and is currently involved in the implementation of the laughter intervention with an independent counselling group she attends weekly. She has further indicated that since partaking in the laughter sessions, she has become more sociable and has a renewed interest to enjoy herself with her friends. Through the psycho-educational part of the laughter sessions, Precious came to realise that she has a choice in how she reacts to her circumstances. Some of the words she used to describe how she feels were joy, peace, love, playful and happy. She describes her reaction to the laughter therapy as follows: *“I think I am loving myself more and understanding that it’s up to me to want to be happy.”*

4.5 RESULTS OF QUALITATIVE ANALYSIS

This section reports on the themes that emerged from the qualitative data collected via the semi-structured interviews before and after participatory in the intervention. Quotations from these interviews are used to describe and illustrate the themes. Changes to the quotes have only occurred when it was necessary to clarify the participant’s experiences.

4.5.1 Pre- Intervention Analysis

The three themes that emerged from data analysis of the pre-intervention interviews were: motivation to become a care worker, work stresses and coping mechanisms. Each theme presented with numerous sub themes as illustrated in figure 2 below:

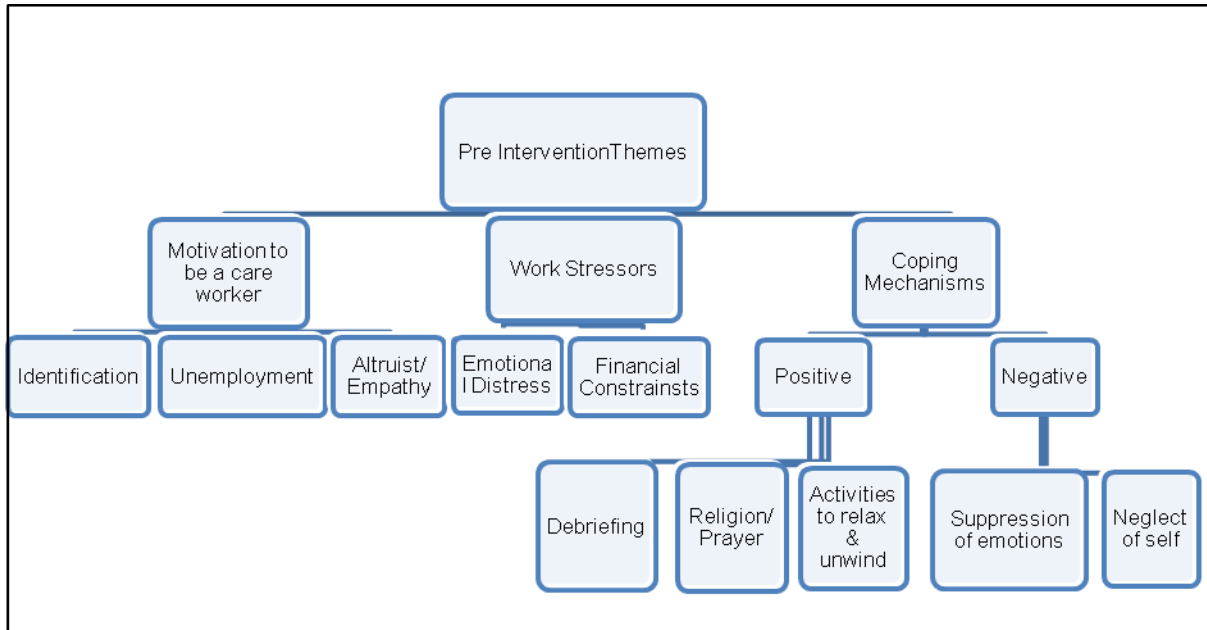


Figure 2: Representation of Pre intervention themes and sub themes

4.5.1.1 Motivation to become a care worker

- **Identification**

Most of the care workers that participated in this study were themselves affected by HIV/AIDS in various ways. Some were currently infected with the virus while others grew up in homes that were affected by parents and family members dying from HIV/AIDS. They reported a sense of responsibility towards their communities. Many of them grew up facing similar challenges that the children in their care were experiencing:

Maybe it's because of my growing up, you know seeing the challenges and like wanting to help other people. I would understand exactly where they're coming from. Maybe able to help them even though I won't be able to help them in everything, but the least I would do for them would be much appreciated (Precious).

I'm also an orphan. I don't have parents so I was once a child out here that was a beneficiary here. So I decided that what they did for me here at Nanga Vhutshilo, I would like to do more to other kids (Mpumi).

- **Unemployment**

The area where most of the care workers live and work has a high unemployment rate. Most of the participants' initial motivation to work as care workers was to meet their financial responsibilities and obligations. However, many felt that although this was the initial draw card, they had grown to find meaning in this type of employment:

I applied cause I had a matric but was not working. I applied and then it happened by chance. But yeah that's how it started. At first it was only to get a job. Then after when I understood what it was about, I started enjoying it (Mpho).

- **Altruistic/Empathy**

Most of the care workers voiced an understanding of the challenges the children were experiencing and felt that they can make a difference in the children's lives. This motivation was strongly linked to the care worker's ability to resonate with the experiences and circumstances the children were currently experiencing.

Being a care worker it's all about responsibility and loving and respecting other people. And putting yourself like under their shoes how they feel and all such situations (Gift).

I never had someone to be my care worker, then almost my situation almost their situations so I decided to be a care worker so that I can inform them and help them grow and be strong (Kenzo).

4.5.1.2 Work stresses

In their daily work duties, the care workers experience numerous challenges that contribute to stress. The sources of stress mostly identified will be highlighted below:

- **Emotional distress**

All the care workers conveyed feelings of emotional strain which for some included being stressed, exhausted, frustrated and at times overwhelmed especially as a result of the limited resources they had at their disposal:

To a certain extent it feels why am I here? Like you feel so useless like you can't help this person. They come to you thinking you'll help but you can't help, your hands are tied cause of policies and all that yeah (Mpho).It drains me, it drains me it puts me down like oh I wish if you know you go like if I had this I would you know yes but it drains you down (Mpho).

Mpho was very frustrated because of Government policies that were implemented for Nanga Vhutshilo stipulating that only HIV/AIDS affected and infected people may receive assistance from the centre. In her quote she wishes she had more resources to help the poor people that she has to refer elsewhere knowing that the other centres are in the same predicament.

One care worker reported that she got too personally involved in her clients' life. She would experience sleepless nights and often drifted into depression. Many of the participants experienced depressive symptoms as was evident in the results of the HADS questionnaire that was administered before the intervention.

The care workers were more familiar with the stress that accompanied their work than being depressed. However, many voiced feelings of intense sadness and "pains in my heart" that could possibly be an indication of their depressed moods.

Eish, I feel something in my heart that I'm not happy (Victoria).

Eish (deep sigh).Most of the time I cry about them. I would always cry about that but at the same time I would tell myself that there are things you cannot be able to do even though I want to help the children (Precious).

Some of the participants reported physical symptoms as a result of the stressors they encounter on a daily basis. They reported symptoms such as severe headaches, loss of appetite, fatigue and inability to focus on their work.

I have a lot of headaches hmmm and I sleep a lot. I don't have an appetite. I don't eat and I don't like noise. I'm a very emotional person and short tempered. I cry most of the time (Mpumi).

Sometimes like when I'm being stressed ne, I was suffering from severe headaches. Then I start thinking about that situation, and then my head would start to be sore (Gift).

- **Financial constraints**

Most of the participants reported that one of their main stress factors working in this environment was the limited financial resources that were available at the centre to meet the needs of the community. Some displayed anger and confusion towards the policies that government had implemented concerning the restrictions with regards to infected and affected families of HIV/AIDS. These restrictions limit their ability to assist poverty stricken children who were not affected or infected by HIV/AIDS.

It can become very difficult to tell the person and look them in the eyes and say I can't help you, go home. Even though you send them to other places but you know those places won't help. They come here because they saw you helping other people. Then they think oh they can help me as well (Mpho).

Hmmm like seeing the kids come here hungry and they have no clothes sometimes and then, like it's winter now, some come they're not warm. You can see like this one like they're not warm. They have not bathed and like seeing young kids taking care of their siblings and all, it's like you wonder it's very stressful like it makes your mind go like everywhere. You wonder you wanna do this, you wanna do that. You want to cover this you want to cover this child with clothes. I wish I had I wish I had (Mpho).

4.5.1.3 Coping mechanisms

Given that many aspects of their work environment would be hard to change, the care workers have adopted numerous approaches to help them cope more

effectively within this environment. These approaches can be subdivided into positive and negative depending on their long term effects.

Positive approaches:

- **Debriefing**

Several of the participants stated that they depend upon their co-workers to boost morale through positive attitudes. Most of the workers find comfort and relieve through regular debriefing sessions with the Director of the centre. For most of the workers, this is their main source of support. All of the participants described talking over their frustrations and fears with someone else as a way of coping with the stressors that they faced on a daily basis. Many said that sharing their feelings with co-workers allowed them to express their thoughts as a way to combat the “stuckness” and helplessness that they often felt when they were overwhelmed by the burdens and limitations of their work environment.

While many of the participants chose to talk things over with co-workers, others stated that they shared their feelings with close family members and friends.

Most of the time I would go to the director because she's able to see me when I'm down. Then she would ask what is the problem and I would debrief with her and tell her what is the problem (Precious).

Because I don't work alone so at least there's a group of people. I can bounce off the people that are strong. When you start saying that, they calm you down saying eh relax. You know sometimes, here at Nanga, I have this friend. She is my strength, when I feel weak and down I go to her (Mpho).

If it's too much for me I tell my husband or my mother I'm having this, this and this (Victoria).

- **Religion and Prayer**

Most of the participants found comfort and support in their religious beliefs. At times when the situations became overwhelming, they would turn to prayer for assistance and support.

Unfortunately, maybe because of not being able to have all the resources to help that person at that particular time, you know, or when a child comes and that child is sick maybe because of the HIV, I would go home and then pray about it and say to God can please spare their life, the life of that child (Precious).

Emotionally, you know, It's fortunate of me because I grew up on this kind of family that they always tell me that when you are kind of stressed, go to church. You know I think that I survived by that (Thandi).

- **Activities to relax and unwind**

Many of the participants described activities in which they engaged either at work or outside work that enabled them to deal with the pressure and frustration that resulted from the work environment. These activities allowed the participants to wind down and relax. Some of these activities include reading, listening to music, art and creativity or going for walks. These breaks allowed the participants to think and process what they had endured and to revitalize themselves to come back to the centre to face new challenges.

For me reading is one way, reading has been that for me. I also like music, like I de stress with music (Mpho).

I like creativity, like I like to do things like by my hands. So most of the time I would maybe draw. I'd paint because I like painting. I'd like find something that would you know make my mind to be concentrate. So I'd do that and when I'm doing creativity, you know, kind of like you know I'm in this space that I'm alone, I'm able to express myself like you know you are in your small heaven. And when you do that, because you concentrate, you focus and all my mind is on that. So there's no space for you, you know, to feel sad or to feel bad in that (Precious).

Like if I'm feeling sad I just go out and take a long walk (Gift).

Negative Approaches

- **Suppression of emotions**

Most of the participants reported that in order for them to effectively work with the children, they had to put their own feelings aside. Their primary concern was the wellbeing of the children. However, most voiced that this has had a negative impact on their own emotional wellbeing. Some of the participants became very emotional when talking about the problems they faced in their personal lives:

(Crying) It's very painful. You know my friends like to say I'm just the strong person. When they have their problems they will come to me. At times like I tell them that I might look like this strong person but inside I'm hurting and (crying) most of the time I do suppress my feelings and act as if nothing is happening, but I know deep inside it hurts (Precious).

Because like you have to snap (snaps fingers) out of it. When they come here you have to snap out of it. You have to like, you don't know where they coming from, you don't know what's happening to them there. You don't wanna take your stressors and put it on them. You want them to feel happy when they come here so that you can be their happy place (Mpho).

- **Neglect of self**

All the participants noted that it was their primary concern to meet the needs of the children. Often this has been at the expense of neglecting themselves. However, many realised that with minimal self-care comes a greater and intense feeling of helplessness and sadness:

When I am stressed of course I don't take good care of myself. And even my siblings will notice, sister what is happening? You know what is really happening. I can't, I lose concentration on maybe the things that I was supposed to do. I just end up forgetting them (Thandi).

I'm a very talkative person but when I'm stressed I'm not talking a lot, but after a while it's when I'm going to start revealing then talk but not talk the way I always talk

and you can see the way I was, the way I dress up myself, the way I'm always organised. When I'm stressed well you can see my hair is out of the way, my dressing is not proper (Mpumi).

4.5.2 Post Intervention themes

The main goal of the study was to explore the experiences of care workers who had undergone laughter therapy training. In addition, the benefits of laughter therapy with regards to depression, anxiety and stress were explored.

Each care worker's experience of laughter therapy was very similar. They reported that laughter played a very important role in their lives, that it made them feel well. The positive experience of the training programme generated much laughter during the interviews with each one of the care workers. They reported that laughter helped them to get through difficult situations, not only in the work place, but also in their personal lives. Laughter relieved tension within their work environment and strengthened the interactions between the care workers.

There were five themes that emerged from the interviews that were conducted after the care workers participated in one month of daily laughter therapy sessions:

1. Initial reactions and expectations
2. Effects on interpersonal relationships
3. Improved effective coping ability
4. Collective participation
5. Laughter as a change agent

These themes differed from the pre-intervention themes in that they were more relevant to the care workers' experiences with the laughter sessions and the effects the sessions had on their personal well-being.

4.5.2.1 Initial reactions and expectations

Most of the participants expressed feelings of doubt and scepticism with regards to the sustainability of laughter throughout the sessions:

I asked myself, am I going to laugh thirty minutes? I say in my head, no I can't be able to laugh thirty minutes (Victoria).

I was thinking that the session was just a waste of time. You should be rather than doing the laughter, you could have been done other things. So I thought this was just a waste of time (Mpumi).

However as the sessions progressed all the participants began enjoying themselves and a variety of emotions were experienced during the sessions. Some of the positive emotions that were recorded were joy/ happiness, relief and hope.

Joy

Okay it was fun, it was joyful, it was unexpected because okay I knew we were going to laugh but I didn't know like so much (Mpho).

In my heart I feel I have joy in my heart after laughing, you feel relieved. Eish, I don't know how to explain it but you feel you are happy, yes (Victoria).

Relief

I think like in my body as well I felt something like relieved, like all the stress is like you know when you feel weight on your shoulders, but then I felt relieved and I felt so light (Mpho).

Hope

But now I feel lighter because you know whatever they are going through, as much as I am not going through that, but they will get through it somehow. I give them hope. You laugh when you touch somebody and some kids have never been touched before. You touch them and they smile because laughter brings a smile to the face. Your own face like it opens up, like your eyes and everything when you laughing, and when you smiling that happens as well. And then you give the next person hope, there is hope even if they are in a bad situation (Mpho).

Immediately when you are laughing there is something that you will tell you that move from this situation you are in and go to another better situation. It gives you hope (Gift).

4.5.2.2 Effects on interpersonal relationships

For the care workers, laughter functioned as a binding factor in relationships. Most of the participants indicated that their relationships with colleagues, friends as well as family had improved since they introduced laughter into their situations. Some further indicated that it awakened them to want to be more sociable and interactive with others. Laughter worked as a way to make new acquaintances.

You know, before I used to be alone. I just need to be alone you know, but now I know to call them, let's sit together and I'm engaging much more with them than before. So you find through laughter you are able to engage with other people (Thandi).

I think so socially because I was this person you know, when my friends say, you know we have to go somewhere and I will say no next time, you know, because I will say no I am not feeling okay, I am not in the mood. But since after that they called me and said we need to go somewhere I didn't hesitate. I just really wanted to be with people, wanted to see other people you know. I couldn't like to stay in (Precious).

One female participant reported that her relationship with her children had improved because she was spending more time with them and teaching them to laugh together. Furthermore, yet another participant noted that she felt a pull to make amends with her estranged family. This, she attributes to the laughter sessions having given her courage to confront and make peace with past “scrabbles”.

4.5.2.3 Improved effective coping ability

The participants reported that laughter had changed the way they viewed situations. Laughter worked as an effective tool to help the participants see a negative incident in a positive light.

To me it tells me there is stress out there but you just have to like look at it in a different perspective, like not always stress about some things, and things are there to stress. But you just have to duck it, you know, and try it, you know, as much as they going to stress you but try and think, be level headed not go down with the stress (Mpho).

I used to worry a lot but now it's different. I used worry, hey I used to worry and even my family, we've got ups and downs you know I used to worry but through the laughter sessions after it's better. It's better because now I know how to control myself towards anger, towards bad emotions, thinking a lot. Yes it has helped a lot (Thandi).

4.5.2.4 Collective participation

Every morning the staff at Nanga Vhutshilo Centre meets as a group and have fifteen minutes of laughter therapy. The participants felt that laughing as a group had strengthened their work relationships.

Well here at Nanga you know since we started the laughter sessions I didn't see anyone having you know like problems or, I wouldn't say problems as such but issues. Because whenever maybe when someone tries to do something then one person would just start laughing you know, even if when we knock off we would laugh until everyone else goes his way or her way, so it has helped us (Precious).

At first you think I won't laugh, I don't like to laugh and I don't want to laugh. But it was so so easy considering we were doing it in a group (Mpho).

4.5.2.5 Laughter as a change agent

Most of the participants indicated some changes in their behaviours and in the way they view their situations.

By changing like if you want people change you have to change first. So I think by changing my behaviour, by changing the way I look at things and when I come to and I tell them about laughing, I should be laughing as well. I can't tell people laugh whiles I am moody then I have to change. I have to change my behaviour that way it will be I will be impacting my family and friends (Mpho).

You know they were amazed to hear that with only laughter it can be able to change your life (Precious).

4.6 RESEARCHER'S OBSERVATION

As the researcher, the most significant change I observed from the first set of interviews to the second was the mood change which was evident in the participants' continued laughter throughout the second interview. The participant that made the most impact on me was Precious who was unrecognisable during my second meeting with her. In our first meeting she presented as an extremely sad and depressed young lady who had attempted suicide a few months prior to our first interview. Her transformation was so significant that I could hardly believe this was the same person. The atmosphere at the centre had also subsequently elevated since they introduced the daily laughing sessions.

4.7 SUMMARY

This chapter focused on presenting the results of the research process. The effects of laughter therapy were analysed from a qualitative and quantitative approach. The findings suggest that laughter therapy may provide an effective intervention with regards to combating the effects of the care workers' stressful environment. In the next chapter the result of the qualitative and quantitative analysis will be integrated to enable the researcher to come to conclusions.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

If there's laughter then you're able to share feelings and communicate easier. Sharing helps people feel better and helps to know themselves better. For me I can say laughter brings something special out, very special. (Mpumi)

This chapter summarises the conclusions based on the research undertaken, and makes some recommendations for further research.

5.2 SUMMARY OF THE STUDY

The purpose of this study was firstly to explore the subjective experiences of care workers, involved in the caring of HIV/AIDS infected and affected children, exposure to laughter therapy and secondly to establish the impact that laughter therapy has to positively combat the stresses of working within the care workers' work environment. Laughter is a resource that is easily available and can be an effective tool to reduce stress and counteract the depressive state (Falkenberg, Buchkremer, Bartels & Wild, 2011; Ko & Youn, 2010). Morreall (1983) is unwavering in his belief that laughter is an important factor in understanding humanity. He believes that the human capacity to laugh contributes to the wellness of the individual.

Purposive sampling was utilised to recruit 7 care workers from the Nanga Vhutshilo care centre in Soweto who participated in a laughter intervention. Quantitative data was collected, pre- and post-intervention, using the Perceived Stress Scale and the Hospital Anxiety and Depression Scale. Furthermore, semi-structured interviews were conducted pre and post the laughter intervention to explore the care worker's experiences of the intervention.

5.3 DISCUSSION OF RESULTS

5.3.1 Pre-intervention findings

The HIV/AIDS pandemic presents the care workers that participated in this study, with a mammoth task to care for the infected and affected families. In carrying out their duties, they often neglect their own well-being. In the findings of the pre-test questionnaire it was found that this neglect could contribute to depression, anxiety

and elevated levels of stress. Most of the care workers come from poor socio-economic backgrounds and have few resources available to assist them with the negative psychological effects from their work that impacted on their personal lives.

During the pre-intervention interviews, several factors pertaining to the care workers' situation were explored. The main themes that emerged from these discussions included their motivation for becoming care workers, the stressors that they experience in their work environment and the coping strategies that they have adopted in order to combat these stresses. Each of these main themes are discussed below.

5.3.1.1 Motivation to become a care worker

An exploration of care workers' motivations for becoming involved in such work revealed that most were themselves affected by family illness, specifically that of HIV/AIDS. Many were infected by HIV and thus identified with the plight of the community in which they work. The role of identification in choosing such a career path was thus found to be quite prominent. Studies have shown that identification with a particular work group or organization yields greater job satisfaction, extra-role behaviours and involvement with such work (Dick, Knippenberg, Kerchreiter, Hertel & Wieseke, 2007). However, the role of such dynamics in relation to HIV care workers has not been specifically investigated. This research shows that there is also a down-side of over-identification which causes much stress in the lives of care workers (section 4.4.1.2).

Another motivation for such work was that of unemployment. All the care workers in the study had a matric level of education and thus found it extremely difficult to find alternative work. Similar motivations were shown in a study conducted by Lindquist, Tam, Friesema and Martin (2012) who found that care workers in the field of aged care were heavily influenced by the lack of other work opportunities.

Lastly, the pre-intervention findings revealed that a certain degree of altruism and empathy towards HIV/AIDS sufferers was an important motivating factor for care workers. This can be likened to the findings of the study carried out by Lindquist et

al. (2012) where 'love' for the senior patients was a motivator for working in aged care.

5.3.1.2 Work stresses

Studies have shown, that individuals working in an environment that requires caring for the sick and their families, are prone to high levels of stress and burnout which speaks to the lack of effective coping strategies (Grunfeld et al., 2000). Many studies have shown that care workers experience high levels of emotional distress as a result of the nature of their work (Felton, 1998; Mabota, 2013; Turner & Catania, 1997).

Similar findings were gathered in this study whereby it was revealed that care workers experience high levels of stress and anxiety. These emotions manifested in emotional distress in the form of frustrations, exhaustion and feelings of being overwhelmed.

Emotional distress was found to be related to care workers' personal involvement with their clients and high levels of emotional investment in them. The literature supports this notion, by emphasising the direct relation between personal involvement and levels of emotional distress in care workers (Collins, 2008; Storey & Billingham, 2001). Storey and Billingham (2001) found that care workers with excessive levels of emotional investment in their work had a greater affinity to stress and burnout.

In addition to the above, the care workers' emotional distress was found to be exacerbated by limited financial means of their work organisation which restricted their ability to optimally assist needy members of their community. High levels of personal involvement can thus be linked to the experience of distress in the event of not being able to financially assist a person in need.

The findings of this study showed that there seems to be an eminent cyclic link between identification and emotional distress. This is illustrated below.

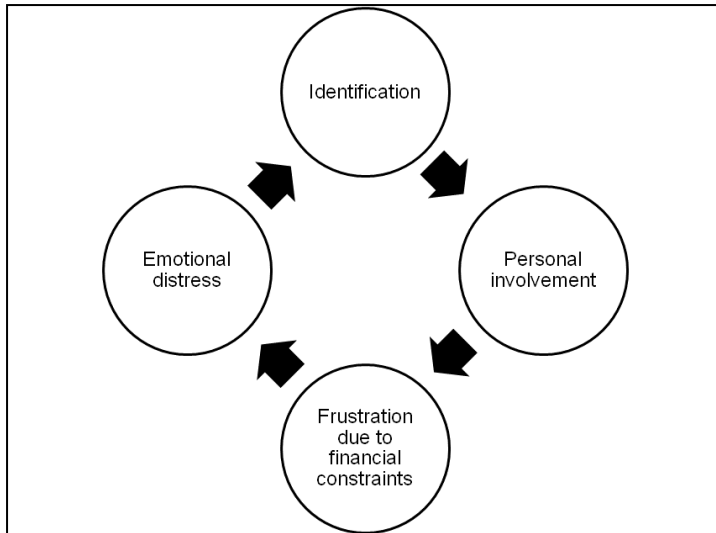


Figure 3: Cyclic link between identification and emotional distress

This illustration speaks to the abovementioned relationship between identification and seeking employment in care giving contexts. Not only does identification contribute to employment in such organisations, but it serves to increase levels of personal involvement. Such personal involvement subsequently causes care workers to experience high levels of emotional distress when unable to meet the needs of the community in this respect. This cycle needs to be kept in mind in the recruitment and selection process to identify capable care workers.

In order for these care workers to buffer the effects of such emotional distresses, they were found to have developed certain coping mechanisms. Such mechanisms included the use of support from co-workers, religious affiliations and relaxation activities. These will be elaborated on below.

5.3.1.3 Support from co-workers

Support from fellow co-workers in stressful work environments has been shown to work as an effective coping mechanism in combating emotional distress. Collins (2008) supports this notion by indicating that social support, whether formal or informal, is in fact one of the most important strategies in coping. Collins (2008) states that

formal support involves line management, supervision and appraisal systems. Informal support involves support from inside and outside the social work setting, involving, for example, family and friends. (p.1180)

The participants that formed part of this study were provided with formal forms of support from their management. In addition to this, they made use of informal support from their co-workers, family and friends. As a result, it could be said that their use of such support systems buffered their levels of distress.

5.3.1.4 Religious affiliations

Many of the participants reported making use of their religious beliefs and affiliations in times of overwhelmingly stressful situations. Many studies have shown similar trends in which religiosity was used as a coping mechanism (Ano & Vasconcelles, 2004; Ellison, Boardman, Williams & Jackson, 2001; Williams, Larson, Buckler, Heckman & Pyle, 2009).

Religious activities that were reportedly used by the participants included praying, going to church and similar other religious activities. These participants explained experiencing emotional relief and support through these pursuits. As mentioned by Moremi (2012, p. 46), *a sense of spirituality can be helpful to caregivers as they struggle to find meaning in what they are doing.*

5.3.1.5 Relaxation activities

The participants of this study reportedly utilised numerous kinds of relaxation activities such as reading, walking, creative arts and listening to music. They expressed feeling relieved during these activities as it allowed them to process their work circumstances. They gained a sense of rejuvenation through relaxation activities. Studies have shown that the use of activities, such as those mentioned above, are useful in reducing emotional distress (Landsbergis, 2006; Ridge, Wells, Denny, Cunningham & Chalder, 2011).

5.3.1.6 Defence mechanism of repression

According to Moremi (2012) care workers have a tendency of masking their true feelings in an effort to better cope with their work circumstances. This reflects the use of the defence mechanism of repression which, as stated by Melnick (2002), is ineffective in truly optimising their coping abilities.

Accordingly, many of the care workers in this study were found to make use of the defence mechanism of repression, which can be harmful. Furthermore, care workers reported experiencing high levels of self-neglect which may have contributed to their emotional distress and inability to cope effectively. Therefore, it can be seen that the findings of this study have brought about an understanding of a possible relationship between care workers' personal involvement and tendencies for self-neglect. This cyclic relationship is illustrated in the diagram below.

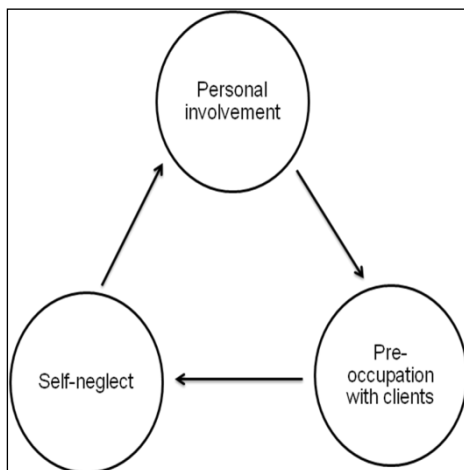


Figure 4: Relationship between personal involvement and self-neglect

The above illustration speaks to the mechanism by which care workers' high levels of personal involvement in their type of work contributes to pre-occupations with their clients. A high pre-occupation with their clients further results in self-neglect.

5.3.2 Post-Intervention Findings

The focus of the post-intervention interviews was to establish the effects of laughter therapy on such a group, together with their subjective experiences of such an intervention. Three main findings on the experience and impact of the laughter intervention came to the fore through these interviews. These findings comprised of increased positive emotional experiences, improved social interactions and improved effective coping abilities, all of which were contributed to the laughter therapy intervention.

5.3.2.1 Positive emotional experiences

The quantitative results showed that participants of the laughter intervention reported significantly less stress, anxiety and depression after the intervention. Lower levels of negative emotions were accompanied by the experience of positive emotions. The participants experienced emotions such as joy, happiness, relief and hope following their participation in the laughter intervention. Fredrickson's (2001) broaden-and-build theory of positive emotions emphasises the process by which individuals' daily experiences of positive emotions multiply over time to build an array of substantial personal internal resources. As such, the participants' exposure to laughter therapy sessions on a daily basis facilitated the development of an entire repertoire of positive emotions which contributed to the alleviation of negative emotional experiences such as feelings of depression and anxiety. The generating of positive emotions served to combat the effects of stress which includes a negative viewpoint.

Collins (2008) speaks of the manner by which high levels of stress lead to the development of a negative outlook on one's circumstances. According to Beck (1979) there is a cyclic relationship between an individual's emotions, cognitions and behaviours as illustrated below.

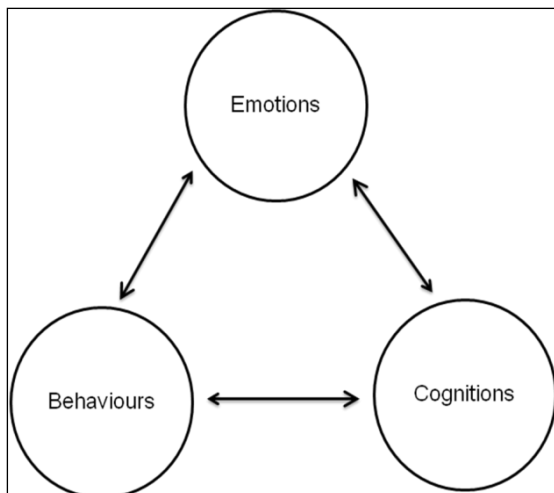


Figure 5: Cyclical relationship between emotions, cognitions, behaviours

It can be seen that negative emotions will influence negative cognitions which in turn negatively impact the person's behaviours and subsequently reinforce their negative emotions. This creates a vicious cycle. The use of the laughter interventions allowed for the breaking of this vicious cycle, through the introduction of positive behaviour. These positive behaviours have their cyclic effect on the individual's emotions and cognitions, and are continuously reinforced and broadened through continuous use. Laughter induces a form of relaxation that allows people to feel rather than to think. It tends to bypass the cognitive system and focuses on the emotions. Once positive emotions are activated, it re-energizes a person to take a new viewpoint of life and make better judgements.

5.3.2.2 Improved social interactions

The section above elaborated on the cyclic influence of positive cognitions that are generated through activities such as laughter therapy. These positive cognitions not only have their effect on an individual's wellbeing, but they also have a positive impact on their behaviours towards themselves and others. This allows for the development of more positive interactions with co-workers, family members and friends. Such positive social interactions serve to reinforce their positive emotions, thereby creating a sustainable system of wellness. Furthermore, Waugh and Fredrickson (2006) propose that positive emotions may influence individuals to be more sociable and have more successful social interactions. Studies have indicated that positive emotions may lead to a greater possibility that one would initiate a conversation with a stranger. The social interactions between strangers can contribute to increased positive emotions. Thus a cycle of increased positive emotions is activated (McIntyre, Watson, Clark & Cross, 1991; Vittengl & Holt, 2000).

Many researchers have found that positive social interactions aid in the development and maintenance of psychological wellness (Collins, 2008; Helbesleben, 2006; Medland, Howard-Ruben & Whitaker, 2007). Hence, this falls in line with the findings of this study.

5.3.2.3 Improved effective coping abilities

The participants utilised both positive and negative coping strategies prior to the intervention. However, in order for them to carry out their work effectively, their emotions were predominantly overlooked and ignored, thereby leading to the accumulation of negative emotions. Such accumulations had a negative effect on their levels of stress and emotional wellness.

The use of laughter has been shown to allow for the cathartic release of accumulated emotions (Goodheart, 1994). Participants were given the daily opportunity to express and release the emotions that they had ignored for so long. It is for this reason that many of the participants expressed feeling a sense of relief through the intervention. The release of these negative emotions in conjunction with the abovementioned infusing of positive emotions allowed for the development of a positive mind-set.

5.4 CONCLUSIONS

This study was directed to establish a cost effective intervention to promote the wellbeing of the care workers working with HIV/AIDS affected and infected families. The pre- intervention questionnaires yielded results that indicated elevated levels of stress, anxiety and depression. Care workers in this study were exposed to daily sessions of laughter therapy. Statistical findings of the post-intervention questionnaires showed significant improvement in the care workers psychological wellbeing and were supported by the data from the qualitative interviews. The results indicated that care workers made gains in the following dimensions of wellbeing:

- positive emotional experiences,
- improved social interactions and
- improved effective coping abilities.

Results showed that this intervention produced significant increases of positive emotions which in turn resulted in an increase of personal resources ranging from improved coping strategies to positive effects of interpersonal relationships. In turn

these changes positively influenced the worker's wellbeing and reduced depressive and anxiety symptoms. Thus, the results of this study revealed a positive connection between laughter and wellbeing, especially with reference to stress, depression and anxiety levels. This supports the results of similar previous research indicating how laughter and positive affect can contribute to psychological wellbeing (Colom et al., 2011; Martin et al., 1993).

5.5 PERSONAL REFLECTIONS

The research is based on my own personal curiosity. Being exposed to a world I have limited understanding of gave me the opportunity to explore new realities as well as expand and challenge my own thinking. During the research, I became aware of the care workers' lived experiences with HIV and AIDS, which I was only distantly aware of before. What made a significant impact on me was their ability to mask their own feelings in order to bring joy to the children that they perceived needed it more than they did. This sacrificial act only intensified the despair and deep emotional distress I encountered amongst the care workers. It was evident in my interview sessions with the care workers that a platform was necessary to allow these workers to express and release their pent up emotions. The laughter intervention I participated in before had allowed me the opportunity to deal with my own suppressed emotions. Furthermore, my research has enriched me professionally with regards to laughter as a therapeutic intervention. It encouraged me to pursue the relevance of laughter as an intervention for not only psychological wellbeing but also its contribution to physical health.

Undertaking this research has been one of the most enjoyable, difficult and challenging feats attempted during my years of study. The main reasons follow hereunder:

I underestimated the time needed to complete the research from the onset. This was partly due to the interdependency of this study and the larger project undertaken by the InHappiness Institution. This study formed part of the InHappiness intervention and had to be synchronised with the implementation of the intervention.

My initial reaction to the suggestion to use the mixed methods approach was one of hesitation and apprehension. However, due to the sample size, I opted to use this methodology in order to provide the necessary significant validation and weighting that this study required.

The care workers working at Nanga Vhutshilo were keen to participate in this study. They went out of their way to assist me and in the process of data collection a positive rapport was developed between us. I was touched by the commitment of these care workers to their community and their willingness to open up and share their personal experiences in order to help people in similar situations. Although at times it was difficult to verbally communicate with some of the care workers, it was more their expression of joy that communicated to me the positive impact that laughter had on them.

5.6 LIMITATIONS

The major challenge during this research was the lack of peer reviewed literature available on laughter therapy and its benefit to enhance mental health. There is a tremendous amount of contemporary literature on the topic of laughter and laughter therapy, yet very little literature exists on academic empirical studies on laughter. It was thus difficult to develop the background of the study on a solid literature review.

The small sample size was limiting the results of the study and the applicability of the results to other similar groups. Due to the nature of qualitative research the results may have been different if the research was done with another group of caregivers.

Furthermore, some limitations with the language capabilities of the participants were encountered. Although all the respondents had passed matric through medium English, a large percentage of the participants had limited understanding of English which was evident during the interview process as most instructions had to be explained using basic English.

Due to time constraints, the period between the pre- and post-intervention assessments was one month. Even though this limited period yielded significant

positive results, a recommendation would be that the period between pre- and post-assessment be extended in future studies.

5.7 RECOMMENDATIONS

In a country such as South Africa where HIV/ AIDS has reached epidemic levels, care workers play an important role in providing community service. This research emphasized that care workers who identify with HIV and the plight of patients often volunteer for such positions. Identification and over involvement with clients contribute to high levels of emotional distress. This should be taken into account in the selection of care workers and in their training to provide care to families. Care workers should be trained and supported to deal with their own feelings so that a process of over identification does not take place. They should receive supervision and support to counteract over involvement.

The caregivers are often overwhelmed with the responsibility of caring for the infected and affected families. The need for a cost effective intervention that can assist in the wellbeing of care workers has become of paramount necessity. Laughter and all the benefits it can potentially provide can be a cost effective intervention that can positively contribute to the wellness of the care workers and the clients they support. The significant positive results that were attained in this study seem to point to the realisation that continued engagement in laughter sessions can possibly reduce the stress, depression and anxiety levels of the care workers.

Based on the findings of this research it can be recommended that future research attend to the benefits of laughter as an intervention for mental and physical health utilising larger samples and establishing the sustainability of laughter over a prolonged period of time. Furthermore, additional research is required in order to substantially validate the effectiveness of this therapy on mental health.

Findings from this study support laughter, with specific reference to Aerobic Laughter Therapy (ALT), as a positive therapeutic intervention that can possibly improve behaviour with regards to coping with difficult situations and providing a buffer against the negative effects of stress. However, the sample used in this study is not sufficient to conclusively make a generalised finding.

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APPENDIX I: LETTER OF CONSENT



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Department of Psychology

Informed Consent
Research conducted by: Irene Hatzipapas

Dear Participant

This letter is an invitation to participate in a study I am conducting as part of my Master's degree in the Department of Psychology at the University of Pretoria under the supervision of Prof. Maretha Visser. The following information has been compiled to enable you to be fully informed about the research study you have been invited to take part in. It is important that you feel comfortable about your contribution and that the process takes place in an atmosphere of trust and transparency. If any aspect of it seems unclear, or should any matter of concern arise, please feel free to discuss it at all times.

The research is an extension of the InHappiness project in which you will be participating in in 2012
Your participation in this study is very important because we would like to hear from you how you have experienced participating in laughter therapy.

Participation in this study is voluntary and it would involve two interviews of approximately half an hour each. The first interview will be prior to the laughter therapy intervention and the last interview will be after one month of intervention. Two questionnaires will be administered to assess levels of depression and stress pre and post intervention.

You may decline to answer any of the interview questions if you wish and you may decide to withdraw from this study at any time without any negative consequences. With your permission, the interview will be audio recorded to facilitate the data collection process. Shortly after the interview has been completed, I will send you a copy of the transcript to give you the opportunity to confirm the contents of our conversation and to add or clarify any points that you wish.

Be assured that all information you provide will be treated with the utmost of respect and confidentiality at all times. Fictitious names (pseudonyms) will be used and your identity will not be revealed in any dissertation or report pertaining to this study. With your permission, anonymous quotations may be used.

Data collecting during this study will be retained for fifteen years in a locked safe and only researchers associated with this study will have access. There are no known or

anticipated risks and discomfort to you as a participant in this study. However, should you wish follow-up sessions due to this study you will be referred to an appropriate service.

If you have any questions pertaining to this study or you would like additional information to assist you in reaching a decision about participation, please contact me at 0824521561 or you can also contact my supervisor, Prof Maretha Visser at 012 420 2549.

I would like to assure you that this study has been reviewed and received ethical clearance through the Ethics Committee by the faculty of Humanities at the University of Pretoria. However the final decision about participation is yours. I hope that the results of my study will be of benefit to other care workers as you.

No remuneration is given for participation.

Thank you in advance for your assistance with this project.

Yours Sincerely

Irene Hatzipapas

CONSENT FORM

I have read the information presented in the letter pertaining to the study conducted by Irene Hatzipapas, under the supervision of Prof Maretha Visser, of the Department of Psychology at the University of Pretoria. I have had the opportunity to ask questions related to this study, to receive satisfactory answers to my questions.

I am aware that I have the option of allowing my interviews to be audio recorded to ensure an accurate recording of my responses.

I am aware that two questionnaires will be administered (pre and post) to assess levels of depression and stress.

I am also aware that the excerpts from the interviews may be included in the dissertation and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time without penalty, by advising the researcher and that this project has been reviewed by the Faculty of Humanities, and received ethical clearance through the Ethics Committee at the University of Pretoria.

I was informed that should I have any comment concerns resulting from my participation in this study, I may contact the Supervisor of the project, in the department of Psychology, Prof Maretha Visser on 012 420 2549.

- i. With full knowledge of all the above mentioned, I agree, of my own free will, to participate in this study. YES NO
- ii. I agree to have my interview audibly recorded. YES NO
- iii. I agree to the administering of questionnaires. YES NO
- iv. I agree to the use of anonymous quotations in a dissertation or publication that comes of this research. YES NO

Participant's Name: _____

Participant's Signature: _____

Researcher's Name: Irene Hatzipapas

Researches Signature: _____

Signed at _____ on this the _____ day of _____ 2012

APPENDIX II: PERMISSION LETTER FROM ETHICS COMMITTEE



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Office of the Deputy Dean

2012-03-26

Dear prof Maree,

Project: Exploring experiences of palliative care-workers
participating in laughter therapy
Researcher: I Hatzipapas
Supervisor: Prof M Visser
Department: Psychology
Reference number: 11303515

I am pleased to be able to tell you that the above application was **approved** (with comment) by the **Postgraduate Committee** on 14 February 2012 and by the **Research Ethics Committee** on 23 February 2012. 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.

The Committee requests you to convey this approval to the researcher.

We wish you success with the project.

Sincerely

Prof John Sharp
Chair: Postgraduate Committee &
Research Ethics Committee
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail: john.sharp@up.ac.za

APPENDIX III: BACKGROUND INFORMATION

Background Information

Name:

Age:

Place of birth:

Status:

Children:

Educational Level:

Occupation:

Describe your personality:

APPENDIX IV: QUESTIONS - PRE- INTERVENTION

Research data collecting – Laughter therapy- May 2012

Semi – structured interview questions

Pre Intervention session

1. How long have you been a care worker?
2. What is your understanding of being a care worker?
3. What were your reasons for becoming a care worker?
4. What do you enjoy about your work?
5. What don't you enjoy about your work
6. How do you deal with upsetting problems?
7. How do you know when you are stressed?
8. How does it show physically?
9. How does it show emotionally?
10. How do you know when you're depressed?
11. How does it show physically?
12. How does it show emotionally?
13. What are the sources of stress for you within your work environment?
14. How do you manage stress at work?
15. Does stress/depression affect your work with the children in your care?
16. How do you act towards them when you are feeling stressed or depressed?
17. How do you act towards others when you are stressed/depressed?
18. Describe any techniques that you use when you find yourself stressed or depressed?
19. Have you heard about the laughter programme you are going to participate in? What is your expectation?
20. Describe what made you laugh as a child?
21. Describe what makes you laugh as an adult?
22. How many times a day would you say you laugh?
23. Describe what this phrase means to you "laughter is spontaneous".
24. Describe the last time you had a good belly laugh.
25. How did that make you feel?

APPENDIX V: QUESTIONS – POST INTERVENTION

1. Can you describe what happened in the laughter sessions?
2. What do you think about the laughter sessions?
3. How do you feel about participating in this type of therapy?
4. How do you feel before the session?
5. How do you feel during the session?
6. How do you feel after each session?
7. What were you thinking during the sessions?
8. What was strange for you in the sessions?
9. Did you at any time in the session fake the laughter?
10. If yes, why did you feel you had to do this?
11. When did the fake laughter turn into real laughter?
12. In what way did you experience laughter physically?
13. Where in your body did you experience the laughter?
14. What other emotions did you experience during the session?
15. What other emotions did you experience after the sessions?
16. If you had to describe what laughter therapy means to you, what would you say?
17. Has participating in laughter therapy made you see yourself differently and in what way?
Give an example.
18. How does Laughter Therapy affect your everyday life?
19. Have others seen a change in you and in what way?
20. What changes have you experienced in your life since participating in Laughter therapy?
21. How has your behaviour changed since participating in Laughter Therapy?
22. How has Laughter Therapy impacted your relationships?
23. What does that mean to you?
24. What have you learned about yourself after participating in Laughter Therapy?
25. How can you implement the laughter in your family and friends?
26. How do you think that laughter will reduce your stress levels?
27. How easy was it for you to laugh?
28. What stopped you from fully participating in the sessions?
29. How did you feel laughing with others in a group?
30. How easy/difficult was it for you to laugh every day early in the morning?
31. How is it that laughter can make you feel better?
32. What will motivate you to continue with laughter therapy after the training is finished?
33. How will you know if Laughter Therapy has helped you? And in what ways has it helped you?

APPENDIX VI: PERMISSION LETTER FROM INTERNATIONAL HAPPINESS INSTITUTE



Wednesday, December 07, 2011

TO WHOM IT MAY CONCERN

I am writing to confirm the following:

1. Our non-profit organization has agreed to Ms. Hatzipapas conducting this study on caregivers participating in the Healing with Happiness™ Psychosocial Support program (HWH) provided by our organization under license to InHappiness™ (International Happiness Institute).
2. The HWH program that she will study will be financed by JOYGYM under our community grants program. We are currently adjudicating 12 applications from NPO's engaged in HIV and AIDS palliative care and home based care. The decision on which organization will be funded will be taken in January 2012 and the one-year program will start in February 2012.
3. The HWH program is evidence based. Organizations that apply for this community grant program agree to our monitoring and evaluation program that includes extensive qualitative and quantitative assessment of participants that voluntarily agree to participate in the program. The research proposed by Ms. Hatzipapas in her research proposal fall within the scope of our agreement with the organization chosen for funding.
4. All participants in the HWH program who volunteer to participate in our monitoring and evaluation program are made familiar with the attached consent form. The conditions on the form are explained to them verbally and they are encouraged to ask questions that are answered comprehensively. They are further provided with a copy of these conditions to keep, with contact details should they at any time have questions about the program.
5. Participation in Ms. Hatzipapas' research study will be voluntary.
6. JOYGYM™ and InHappiness™ are not providing financial support for Ms. Hatzipapas' research.

Should you wish to discuss details of this arrangement or request further information you are welcome to contact the writer.

In happiness



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