Social support at work:
the relationship between enacted social support behaviours and psychological capital.

by

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iii. Abstract

Organisations value employees who can positively assess their circumstances and chances of success, are motivated to put in the necessary effort to achieve such, and persevere should obstacles arise. This capacity is called psychological capital (PsyCap) and has been associated with several desirable outcomes for the organisation. This state-like resource — comprising hope, efficacy, resilience, and optimism — is malleable and open to development, making it particularly interesting to the workplace. An antecedent that has been shown to drive and develop PsyCap is social support – and, more specifically, *perceptions* of social support.

However, not all social support is created equal. Therefore, this study aimed to determine how social support behaviours (enacted support) and PsyCap relate – and consider how perceived support fits into that dynamic.

The literature suggests that different mechanisms are at play that could influence how enacted support relates to PsyCap. Through a Conservation of Resources theory lens, the study investigated the enacted support constellations under which a resource-building or resource-depleting mechanism is observed.

A between-person interval-based experience sampling methodology was used to gather data from 253 participants across South Africa over two weeks to investigate this relationship. Covariance-based structural equation modelling tested how the constructs relate, and three key findings were observed.

Firstly, the type of enacted support (informational and instrumental, in particular) and its provider (whether supervisor or co-worker) influence PsyCap differently and whether the support recipient performs a management or non-management role. Thus, evidence for both resource-building and resource-depleting mechanisms was observed under different conditions and constellations. *Secondly*, a cyclical relationship between enacted support and PsyCap was noted, where the level of PsyCap influences how the enacted support is valued or interpreted – suggesting a measure of 'support readiness', or receptivity to receive enacted support. *Finally*, mediation analysis investigated how perceived support, enacted support, and PsyCap relate, and evidence suggests that PsyCap partially mediates that relationship.

Implications for academics and practitioners are discussed, as well as suggestions for future research.

iv. Table of contents

v. List of figures

vi. List of tables

vii. List of acronyms and abbreviations

A number of acronyms and abbreviations are used in this study and set out in Table 1.

Table 1: Acronyms and abbreviations

Acronym	Definition
ANOVA	Analysis of variance
CB-SEM / SEM	Covariance-based structural equation modelling
CFA	Confirmatory factor analysis
COR	Conservation of Resources theory
ECS	Enacted social support from a co-worker
ECS (Total)	The composite of emotional, informational ,and instrumental enacted social support from a co-worker
EFA	Exploratory factor analysis
Emo	Emotional
ES	Enacted support
ESM	Experience sampling methodology
ESS	Enacted social support from supervisor
ESS (Total)	The composite of emotional, informational, and instrumental enacted social support from a supervisor
H1, H2, H3 …	The hypotheses of the study, referring to said one in question
HTMT	Heterotrait-monotrait ratio of correlations
Info	Informational
Instru	Instrumental
ML / MLE	Maximum likelihood / Maximum likelihood estimation
Mngr	Manager
OST	Organisational Support Theory
PCQ	Psychological Capital Questionnaire
PCS	Perceived co-worker support
PLS-SEM	Partial least squares-structural equation modelling
POB	Positive Organisational Behaviour
POS	Perceived organisational support
PS	Perceived support / The composite of POS, PSS, and PCS.
PSS	Perceived supervisor support
PsyCap	Psychological capital
Satisf	Satisfaction
t1	First data gathering point in time
t2	Final data gathering point in time
UNIANOVA	Factorial analysis of variance

1 Introduction

1.1 Background

The organisation's pursuit of competitive advantage has grown more complex as the pace of technological advancement, access to new and global markets, and improved access to information eroded prior barriers to entry. This hypercompetitive environment is further intensified by a battle for talented human resources in a diverse labour market (F. Luthans, Luthans, et al., 2004; F. Luthans, Youssef, et al., 2007). That is, a labour market that values an increasingly active role from participants to differentiate themselves, proactively add value, and can deal with the sharpened pace, complexity and intensity of work (Harvey et al., 2018; Kossek et al., 2011). Therefore, employees who can positively assess their circumstances and their chances of success, are motivated to put in the necessary effort to achieve such, and persevere should obstacles arise, are increasingly sought after. This capacity is described as psychological capital (PsyCap) (F. Luthans, Avolio, et al., 2007).

PsyCap is associated with several desirable outcomes for the organisation. Therefore, any initiatives that can leverage its development would be favourable. Several antecedents have been identified as drivers of PsyCap (Avey, 2014; F. Luthans et al., 2015; Newman et al., 2014). These include the influence of social support – and, more specifically, *perceptions* of social support (Brunetto et al., 2017, 2021; F. Luthans, Norman, et al., 2008; Newman et al., 2018; Pitichat et al., 2018). However, social support as a meta-construct consists of multiple other dimensions – among them, enacted social support behaviours (French et al., 2018; Lakey et al., 2010). As support behaviours – like help, assistance, guidance, encouragement, advice or care – form part of everyday workplace interactions (Colbert et al., 2016; Collins et al., 2016; Ryan & Deci, 2000), it is essential to examine its influence on and relationship to PsyCap. That is the aim of this study.

As will become evident, both social support and PsyCap are multidimensional constructs. As such, through the lens of Conservation of Resources (COR) theory, this study will look at several support constellations (as informed by the nature, source and type of social support, and the satisfaction with such support) as well as the dimensions of PsyCap (hope, efficacy, resilience, and optimism) to gain insight into how these relate. Three mechanisms will be proposed. This is illustrated by the conceptual framework in Figure 1.

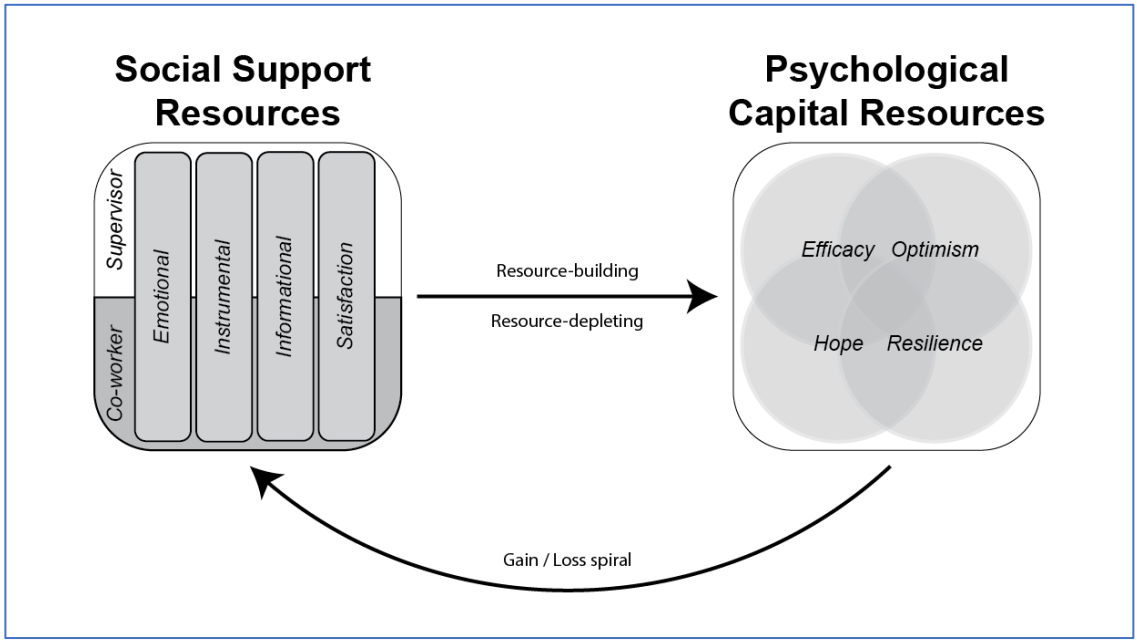

Figure 1: Conceptual framework of the study

1.1.1 The South African context and workplace

Investigating the influence of enacted social support behaviours on desirable psychological resources, like PsyCap – in a context like South Africa – can offer valuable insights for organisations operating in environments with ingrained inequality, strained cross-cultural labour relations, legally sanctioned affirmative action, or a lack of organisational skills and competencies (Du Plessis & Barkhuizen, 2012; F. Luthans, Van Wyk, et al., 2004).

South Africa is in dire need of positive psychological resources. A large portion of the South African labour force does not possess adequate financial resources to support their families (**financial capital**), has strained networks that offer little aspirational connections (**social capital),** and educational development is substandard (**human capital**). Furthermore, its labour market is overwhelmed with "fear of job loss, hopelessness, general pessimism and unemployment" (Munyaka et al., 2017, p. 2). While there is a growing need for highly skilled labour, due to capital deepening and technological advancements, local legislation – such as the South African Labour Relations Act – complicates letting under- or non-performers go (Du Plessis & Barkhuizen, 2012; Khuluvhe & Ganyaupfu, 2021; F. Luthans, Van Wyk, et al., 2004; Yu, 2013).

Added to this, South Africa has been identified as being the most pessimistic in the world when it comes to outlooks on global poverty, child mortality, and perceptions of future living conditions (Ipsos & Gates Foundation, 2017). Therefore, the capacity to overcome adversity (*hope*), *resilience* to deal with disappointments, remaining *optimistic*

in a pessimistic context, as well as an agentic pursuit to develop one's self (*efficacy*) and create a better life (in other words, **psychological capital**), would be valuable not only for the organisation's labour force, but for the South African society as a whole.

1.1.2 Psychological capital (PsyCap) – a valuable psychological resource

PsyCap refers to "an individual's positive psychological state of development and is characterised by: (1) having confidence (**self-efficacy**) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (**optimism**) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (**hope**) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (**resiliency**) to attain success" (F. Luthans, Youssef, et al., 2007).

Combining these four underlying resources (optimism, hope, resilience, and self-efficacy) has a synergistic effect (Dawkins et al., 2013; Görgens-Ekermans & Herbert, 2013). Someone with high levels of PsyCap has more psychological resources to draw upon to overcome hardship, pursue goals, solve problems, improve performance and the like, than someone with low levels of PsyCap. This is particularly useful as a shift from the organisational career to the protean career – the individual shaping their own career path, instead of the organisation bearing the sole developmental responsibility – has been observed (Linderbaum & Levy, 2010).

Enhancing PsyCap, therefore, results in numerous attitudinal, behavioural, well-being, and performance-related benefits for the organisation (Avey, Reichard, et al., 2011; F. Luthans & Youssef-Morgan, 2017; Newman et al., 2014). Higher levels of PsyCap have been associated with a number of positive organisational outcomes, like performance, job satisfaction, organisational citizenship behaviours and many others (Avey et al., 2010; F. Luthans, Avolio, et al., 2007; Peterson et al., 2011; Walumbwa et al., 2011).

PsyCap can be improved and selectively activated. Therefore, its **state-like nature** – being **malleable** and **open to development –** makes it particularly valuable and interesting to the workplace (F. Luthans, Youssef, et al., 2007; F. Luthans et al., 2015; Youssef & Luthans, 2007)**.** The characteristics which explain this are set out below.

1.1.2.1 Domain-specificity

PsyCap is a domain-specific construct, meaning it will differ depending on the context it operates in (F. Luthans & Youssef-Morgan, 2017). For example, a person may be high in work PsyCap, while being low in family PsyCap (Avey, 2014; Newman et al.,

2014). This is to be expected, as the resources of the individual must "fit the ecological demands inherent in the circumstances" (Hobfoll, 2002, p. 318). Apart from the workplace, PsyCap has been extended to relationship PsyCap, health PsyCap and well-being PsyCap (F. Luthans et al., 2013; Youssef-Morgan & Luthans, 2015), cross-cultural PsyCap (Reichard et al., 2014) academic PsyCap (B. C. Luthans et al., 2014), and, more recently, leader development PsyCap (Pitichat et al., 2018).

Despite the domain-specific nature of PsyCap, positive contagion, spillover and crossover effects might influence other life domains as well, as an increase of PsyCap in one domain, might lead to improvements in others (F. Luthans et al., 2013). In other words, domains with high PsyCap levels will drive and catalyse other domains and provide the necessary resources to buffer demands in that domain too (Youssef-Morgan & Luthans, 2013b). This study investigates PsyCap in the workplace.

1.1.2.2 State-like nature

To explain PsyCap's state-like nature, Luthans and Youssef (2007) propose a trait-state continuum (Figure 2). On its one side are pure positive traits, which are genetically determined, stable over time and situations, and almost unalterable – like intelligence and talents. They are considered to be internally caused. Trait-like constructs are relatively stable psychological characteristics but are relatively difficult to change – like extraversion, positive affectivity and core self-evaluations. State-like psychological resources are malleable and open to development – like hope, efficacy, resilience, and optimism. Finally, pure positive states are volatile and easily influenced – like moods and emotions, and are considered to be evoked by external circumstances (B. C. Luthans et al., 2014; Youssef-Morgan, 2014; Youssef-Morgan & Luthans, 2013b).

PsyCap's underlying capacities can exhibit as both a trait and a state (Youssef-Morgan, 2014). In other words, PsyCap capacities can be viewed as both dispositions that are difficult to change, as well as more malleable states.

Apart from PsyCap eroding across time (Peterson et al., 2011), state or state-like characteristics have a baseline or set point, similar to traits, which arguably accounts for 50% of the variance. A further 10% is determined by contextual factors over which there is no or limited control. Therefore, it is suggested that 40% of PsyCap can be developed or managed intentionally (F. Luthans & Youssef-Morgan, 2017; Lyubomirsky et al., 2005; Youssef-Morgan, 2014). In other words, intentional measures (such as organisational initiatives) can likely have a 40% impact on the PsyCap that an employee brings to the workplace.

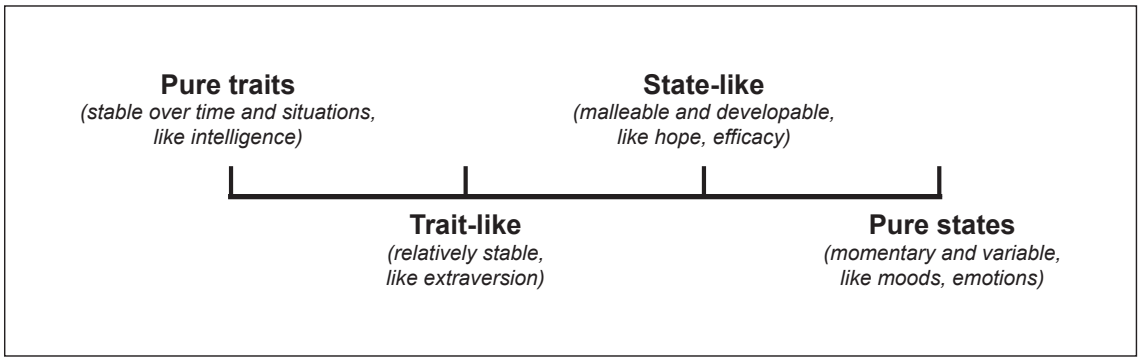

Figure 2: The state-trait continuum (illustrated by the author)

1.1.2.3 Malleability and openness to development

Because it is not trait-like, PsyCap can change and remain relatively stable after any change – making it particularly suitable for the organisation to get a return on investment (F. Luthans et al., 2006; F. Luthans, Youssef, et al., 2007). Wright (1997) proposes that six months is the temporal difference between state-like and trait-like constructs, whereas the test-retest reliability of state-like resources is less than that.

Each of the constituent capacities of PsyCap has been conceptualised and measured as a malleable (state-like) construct, with targeted interventions resulting in a developmental response (Dello Russo & Stoykova, 2015; B. C. Luthans et al., 2014; F. Luthans et al., 2006; F. Luthans, Avey, et al., 2008; F. Luthans & Youssef, 2004; Peterson et al., 2011). For example, hope can be developed through goal-setting and contingency planning; efficacy can be developed through mastery experiences, modelling and vicarious learning; resilience using risk-mitigating strategies; and optimism through appreciation and opportunity-seeking self-talk (F. Luthans & Youssef-Morgan, 2017).

PsyCap can also be influenced by means of its antecedents. For example, antecedents suggested by Avey (2014) include individual differences (proactive personality, self-esteem, core self-evaluations and a collectivistic culture), supervision (authentic leadership, ethical leadership, empowering leadership), job characteristics (task complexity) and demographics (age). Others include positive affect (Avey, Wernsing, et al., 2008; Siu et al., 2015; Wijewardena et al., 2017), positive team dynamics (Dawkins et al., 2015), employee engagement (De Waal & Pienaar, 2013), leadership (Howard, 2017; Rego et al., 2012), improved quality-of-life (Firestone & Anngela-Cole, 2016), and need satisfaction (Verleysen et al., 2015).

However, there is still much to be learnt about this latent construct, particularly as it relates to the social mechanisms that shape it (F. Luthans & Youssef-Morgan, 2017; Nielsen et al., 2017). An antecedent that has shown a positive relationship to PsyCap in

empirical studies is the influence of social support (Avey, 2014; Y. Liu, 2013; F. Luthans, Norman, et al., 2008; F. Luthans et al., 2015; Newman et al., 2014; Pitichat et al., 2018). However, these studies only tapped into the perceptional dimension of social support, and other components of the complex construct have been neglected. As will become evident, not all social support is created equal.

1.1.3 Social support – a contextual job resource

The seminal work of Edith Penrose's 'the theory of the growth of the firm' emphasises that the firm is more than just an administrative unit or production function. It comprises the unique deployment, building and development of resources to provide services that offer a competitive advantage. In other words, it is in the unique bundling of resources that the firm is created (Blundel, 2015; S. Thompson & Wright, 2005). Additionally, "firms are institutions that are created by people, to serve the purposes of people" (Kor et al., 2016, p. 1728). Hence human motivation and conscious decision-making drive an organisation's dynamic capabilities through its distinctive resource combinations. This would become foundational to the resource-based view of the firm (Lockett, 2005; Rugman & Verbeke, 2002) – and, as pertaining to this study, the Conservation of Resources (COR) theory of motivation and stress (Halbesleben et al., 2014; Hobfoll, 1989; Hobfoll et al., 2018).

In other words, the unique combination, interactions and interdependence of people and their respective resources and capabilities, are what constitutes the organisation. Within its confines, the organisation's social fabric works towards creating something novel and worthwhile, in order to grow the firm. Furthermore, people spend a large proportion of their lives within the workplace, and its social interaction shapes and informs their identity (Frazier & Tupper, 2018; Kira & Balkin, 2014; T. W. H. Ng & Sorensen, 2008).

The workplace offers opportunities to interact with supervisors, co-workers, peers, customers, and the like – relationships that can satisfy the employee's needs for relatedness, connectedness and belonging and provide learning and support to grow and develop (Ryan & Deci, 2000). These relationships shape an individual's work experience and add necessary meaning to a person's job (Collins et al., 2016). Said differently, workplace relationships are considered to be "a source of enrichment, vitality, and learning that helps individuals, groups, and organisations grow, thrive and flourish; and can provide an affirming and heady mix of supports and supplies" (Colbert et al., 2016, p. 1200).

The importance and value of behaviours like cooperation, collaboration and help within the workplace have been well-documented (Harvey et al., 2018; P.M. Podsakoff

et al., 1997, 2000; Smith et al., 1983). Considering that work has become more interdependent, there are higher stakes involved in the provision or acceptance of support, as such can take a toll on personal resources to complete one's own work (Frazier & Tupper, 2018). However, employees who help their co-workers are perceived as more favourable and improve team efficiency (Grant & Mayer, 2009; Grant & Patil, 2012; P.M. Podsakoff et al., 2000). Social support remains a highly effective way to help people cope, respond to stressful events as well as achieve goals (Aknin et al., 2019; Feeney & Collins, 2015; Kim et al., 2008). Employees are more likely to help co-workers when they like their jobs, feel supported by their organisation, have good relationships with their peers and supervisor, and have a genuine concern for others" (P. S. Thompson & Bolino, 2018, p. 842).

Furthermore, if employees receive support from others (enacted support, support behaviours), they care more about the organisation and endeavour to meet its objectives (Zhan et al., 2021). Thus, social support strengthens the bond not only amongst employees but to the organisation as well (Peng et al., 2021). Providing and receiving support is part of conscientious relating within the workplace. It includes being attentive to fellow employees, looking out for one another and pursuing the organisation's objectives together (Uy et al., 2017). As such, social support is considered to be a valuable contextual job resource (Bakker & Demerouti, 2007; Hobfoll et al., 2018; Ten Brummelhuis & Bakker, 2012).

Social support in the workplace refers to an employee's **perception or experience** that their contribution is valued, their well-being cared for, and that help, or assistance is provided, available or accessible when needed or wanted. Support can take the form of caring, approval or respect, help fulfil socioemotional needs, accomplish tasks, and solve problems. It further aids in incorporating organisational membership and role status into the employee's identity, as they trust the organisation to be there for them when they need them (Eisenberger et al., 2002; Kammrath et al., 2019; Kurtessis et al., 2017; Rhoades & Eisenberger, 2002). Benefits of social support include the creation of a positive work environment (Carlson & Perrewé, 1999; Z. Yang et al., 2018), improved organisation-based self-esteem (Bowling et al., 2010), greater risk-taking (Neves & Eisenberger, 2014), positive mental health outcomes (Viswesvaran et al., 1999), improved performance (Rhoades & Eisenberger, 2002), and overall well-being (Beehr et al., 2003). Additionally, social support is negatively related to withdrawal behaviours such as absenteeism, tardiness and employee turnover (Eder & Eisenberger, 2008; Eisenberger et al., 2002; Rhoades & Eisenberger, 2002).

However, **mixed results** were obtained when the impact of social support was investigated with job stress (Beehr et al., 2000, 2003; Kaufmann & Beehr, 1986; Nahum-

Shani & Bamberger, 2011), burnout (Deelstra et al., 2003; Gibson et al., 2009; Hämmig, 2017), proactive work behaviours (Burnett et al., 2015) and satisfaction (Ducharme & Martin, 2000; Riggle et al., 2009). Notably, social support does not always mitigate (buffer) the negative impact of job stressors, but rather exacerbates (reverse buffers) the stressor's harmful consequences (Beehr et al., 2000; Kaufmann & Beehr, 1986; McIntosh, 1991; Nahum-Shani & Bamberger, 2011; Seidman et al., 2006; Wills & Cohen, 1985).

Social support has a **negative effect** when the support draws attention to the stressor or makes the receiver feel incompetent (Beehr et al., 2010; Marigold et al., 2014) or when the source of support and the source of the stress is the same (Beehr et al., 2003; McKimmie et al., 2009). This negative effect is also observed when the support is intrusive, imposed, unsought for, interfering or controlling (Beehr et al., 2010; Deelstra et al., 2003; Lewis & Rook, 1999; Shumaker & Hill, 1991), or where reciprocity and support exchange is unclear (Nahum-Shani & Bamberger, 2011). A need for support can also be esteem-diminishing for the receiver (Bolger et al., 2000). Furthermore, excessive social support can also backfire and decrease proactive behaviours such as taking charge (Burnett et al., 2015).

As such, Fisher, Nadler and Whitcher-Alagna (1982) categorised negative reactions to support according to four theories: 1) Where reciprocity or indebtedness is evoked (equity theories), 2) Where freedom of choice is threatened by, for example, controlling or prescriptive support (reactance theories), 3) Where the motives or observations of the provider of support are questioned (attribution theories), and 4) Where feelings of incompetency or inferiority are evoked (threat to self-esteem theories) (P. S. Thompson & Bolino, 2018).

With such contradictory responses on the effect of social support, it becomes clear that not all support is created equal. Hence, this meta-construct requires further scrutiny to understand its dimensions and underlying framework.

1.1.3.1 Support perceptions and support behaviours

Nascent research indicates that it is important to distinguish between social support that is appraisal-based (perceptions) or whether it is anchored in lived experience (observed behaviours) (French et al., 2018; Jolly et al., 2021; Mathieu et al., 2019). ***Perceived support*** entails the individual's cognitive appraisal of being connected to others and considers – that in a hypothetical scenario of future need – they will be valued, cared for, and assisted. It, therefore, relates to an individual's evaluation around the availability and access to support (Asgari, 2016; French et al., 2018; Mathieu et al., 2019; Wills & Cohen, 1985). ***Enacted support*** (actual explicit support or support

behaviours), on the other hand, is past-directed and refers to “specific behaviours or actions performed by others as they exhibit expressions of support and assistance …. *and include* listening, expressing concern, lending money, helping with a task, offering suggestions, giving advice, and showing affection” (Streeter & Franklin, 1992, p. 82, italics added). Improving understanding around how perceived and enacted support relates, has been the pursuit of several theorists and past papers with the hope of gaining insight into this complicated relationship (Birditt et al., 2012; Y. Chen & Feeley, 2012; Cutrona & Russell, 1990; Kaul & Lakey, 2003; Lakey et al., 2010; Maisel & Gable, 2009; Uchino, 2009a).

Although there is a slight correlation between perceived and enacted support (Barrera, 1986; Eagle et al., 2018; Haber et al., 2007), they influence outcomes differently (Nahum-Shani & Bamberger, 2011; Poortvliet et al., 2015; Singer, 2000). Also, the state-like qualities of perceived support (I. G. Sarason et al., 1986) impact outcome variables greater and more consistently than the ambiguous observations that arise from enacted support studies (Cassidy et al., 2014; Deelstra et al., 2003; Gottlieb & Bergen, 2010; Hämmig, 2017; Kaufmann & Beehr, 1986; Sloan, 2012).

Different attempts have been made to explain how perceived and enacted support relate, which could explain the ambiguous effects observed. Lakey and Cassady (1990) suggested that perceived support creates a schema by which enacted support is evaluated. They argue that low perceived support individuals interpret supportive behaviours (enacted support) more negatively than those with high perceived support. In other words, individuals with low perceived support would consider enacted support unhelpful (Lakey & Cassady, 1990; Uchino, 2009a).

As such, people who feel they can rely on others for support (high perceived support) would be more proactive in seeking support when in need, and interpret enacted support behaviours in a positive way, as aligned with their expectations (Eagle et al., 2018; Feeney & Collins, 2015). Whereas enacted support is effective when it matches support needs, perceived support is an indicator of receiving effective enacted support over time (Lakey et al., 2010). Therefore, perceived support does not occur in the absence of at least a history of enacted support (Hobfoll, 2009).

A number of theories have attempted to explain the nature of the relationship between perceived and enacted support. Amongst others, dominant theories include the *stress-and-coping perspective* and the *social-cognitive perspective* (Section 2.3.3). However, these two perspectives hold opposing views as to how these two constructs should relate. The first would hold that they should be highly correlated, and the latter argues that the recall of recent support behaviours would not be closely linked to support perceptions (Lakey & Drew, 1997).

In an attempt to gain more clarity around the relationship between enacted and perceived support, some authors have suggested that it might be explained by the influence of some other 'third variable'. Various constructs have been proposed – amongst others self-esteem – with only partial support observed in a subset of the data (Bolger et al., 2000; Gleason et al., 2008). However, self-esteem has stronger links to perceived support than to enacted support (Lakey & Cohen, 2007). Albeit, both self-esteem and self-efficacy are antecedents to support-seeking, which is oftentimes associated with enacted support (Bamberger, 2009). Additionally, although it is deemed trait-like, self-esteem has been considered to be related to PsyCap, albeit distinct (Howard, 2017). Taken together, it seems worth investigating in which way PsyCap relates to both these constructs.

This study will show that some cyclical interplay exists in how PsyCap and enacted support relate. As previous research has shown that perceived support drives PsyCap (Pitichat et al., 2018), this study further proposes and tests PsyCap as a mediating variable between these two social support constructs (perceived and enacted social support). Favourable results have been observed and discussed in Section 5.9 and Section 6.6.2.

1.1.3.2 Categorisation of social support

To obtain an enhanced view of social support, proponents of the *stress-and-coping/buffering model* of social support suggest including dimensions like the nature of support (perceptions or behaviours), the source/provider of support (like supervisors and co-workers), and the type of support (whether instrumental, informational or emotional) when examining its effect (Barrera, 1986; Chiu et al., 2015; S. Cohen, 1992; French et al., 2018; Jolly et al., 2021; Lakey & Cohen, 2000; Scott et al., 2014; Streeter & Franklin, 1992; Vaux et al., 1987; Wills & Cohen, 1985).

The relationship between support perceptions and support behaviours is influenced by the relationships they are anchored in (Cutrona & Russell, 1990; Haber et al., 2007). Studying the respective influence of various **sources or providers of support** on the individual was found to be non-redundant (Chiu et al., 2015; Kottke & Sharafinski, 1988; Lincoln, 2000; Rhoades & Eisenberger, 2002; Simosi, 2012; Stinglhamber & Vandenberghe, 2003), as "different people provide different kinds of support with different degrees of effectiveness" (Lincoln, 2000, p. 233).

As such, workplace relationships are a valuable source of support resources (Colbert et al., 2016), and include the organisation (Eisenberger et al., 1986; Kurtessis et al., 2017; Rhoades & Eisenberger, 2002), supervisor (Nahum-Shani et al., 2014; Shoss et al., 2013) and co-workers (Beehr & Drexler, 1986; McDonald & Westphal, 2011;

Van Yperen & Hagedoorn, 2003). Notably, the perceived positional status of the source can impact the influence ascribed to its support. Thereby, in the workplace, the supervisor's support would be deemed more effective than that of a co-worker (Monnot & Beehr, 2014). As such, the power differential between sources would mean that their behaviours (enacted support) would be interpreted differently (Mathieu et al., 2019). This means supervisors (with high organisational power to enforce policies or evaluate performance) would have a different influence than co-workers with less power.

The **type of support** uniquely influences the outcome considered (Nahum-Shani & Bamberger, 2011; Poortvliet et al., 2015; Singer, 2000). One definition of social support describes it as "an interpersonal transaction that may include emotional expression of concern, instrumental assistance, or information" (Hammer et al., 2009, p. 838). Emotional and instrumental support is considered the most prominent types and represents 'global support measures'. However, they are not necessarily equally important due to contextual factors (Klyver et al., 2018; Wills & Cohen, 1985). Shakespeare-Finch and Obst (2011) explain that because informational support can also be considered a form of instrumental support in its goal of problem-solving or task accomplishment, they are frequently grouped together. Nonetheless, informational support uniquely influences outcomes like learning, development, and performance (Lindorff, 2005; Monnot & Beehr, 2014; Shah et al., 2018).

Finally, enacted support behaviours are more effective when factors such as appropriateness or other **'satisfaction with support'** measures are considered (Deelstra et al., 2003; Melrose et al., 2015). As such, Krause and Hayward (2014) suggested that satisfaction with enacted support is a better indicator of positive outcomes than considering enacted support alone. Additionally, Lakey and Cassady (1990) proposed that the support perceptions of the recipient influence satisfaction with enacted support. They argue that individuals with high support perception would interpret support behaviours more positively than low support perception individuals.

These dimensions of social support that inform the social support constellations of the study are expanded upon in Section 2.2. The theoretical lens through which the relationship between social support and PsyCap is examined is Conservation of Resources (COR) theory. The following section will introduce COR and outline why it is a suitable theoretical foundation for the study of the constructs and the relationship between them.

1.1.4 Conservation of resources (COR) theory

Proposed as an integrated motivation theory that explains responses under stress, or towards growth and development, Conservation of Resources (COR) theory

holds that individuals are driven by the need to foster or gain desirable resources, and conserve against the loss, or threat of loss, of such resources (Halbesleben et al., 2014; Hobfoll, 1989, 2002; Hobfoll et al., 2018). Both social support and PsyCap are considered resources within the organisational domain (e.g., Grover et al., 2018; Hobfoll, 2009; Ten Brummelhuis & Bakker, 2012), and the interplay between this contextual and psychological resource merits further investigation. Several principles undergird this theory and are expanded upon later (see Section 2.2.1.2). Amongst others, the concept of **resource caravans** (where certain resources tend to 'travel together' and a high correlation amongst them exists) is relevant to both PsyCap's resources (hope, efficacy, resilience, and optimism) as well as the types of social support (emotional, instrumental, and informational). Furthermore, certain contextual and environmental conditions are more conducive for some resources to develop (such as a supportive organisational climate) or deplete (such as teams with an abusive supervisor). These conditions are known as **resource caravan passageways**.

COR theory proposes several mechanisms that could offer insight into how social support and PsyCap relate. As such, by means of a **resource-building mechanism** (resonant with the buffering effect mentioned before), some forms of enacted support can contribute to improved PsyCap. For example, providing enacted informational support resources (like guidance or advice), resources like improved confidence (efficacy), the ability to see alternate solutions (hope), or learning (resilience) – core constituents of PsyCap – can be developed.

Alternatively, through a **resource-depleting mechanism** (related to the reverse buffering effect), some forms of enacted support can decrease PsyCap. In this scenario, the nature of the enacted support (for example, instrumental support resources that are imposed), will threaten the competence of the recipient, which is indicated by, amongst others, a decrease in efficacy and, thus, PsyCap. Thus, increased support resources would lead to a decrease in PsyCap resources.

COR theory also proposes mechanisms of **gain spirals** (where resource gains lead to more future resource gains) and **loss spirals** (where resource losses lead to more resource loss) (Halbesleben et al., 2014). In this case, increases in contextual resources like social support, can lead to gains in psychological resources like PsyCap, which in turn can develop resources like social support (for example, through a heightened confidence to seek out support). Conversely, the spiral can take a downward turn, where receiving less contextual resources (like enacted support) depletes psychological resources, which can lead to a depletion of contextual resources. These mechanisms are expanded on during hypotheses development in Section 3.3.

1.1.5 The relationship between social support and PsyCap

To investigate and explain the relationship between the contextual resources of social support (and enacted support in particular), and the personal resource, PsyCap, COR theory offers several explanatory mechanisms.

As mentioned, when observed that social support in the workplace is an antecedent of PsyCap (F. Luthans, Norman, et al., 2008; Pitichat et al., 2018), only perceived support was considered. As discussed above, *perceived social support* is but one dimension of the meta-construct of social support (Hobfoll, 2002; B. R. Sarason et al., 1987; Uchino et al., 1996). Furthermore, as perceived support is only modestly related to the actual explicit enacted support the person receives, its influence on PsyCap would arguably not be the same (Barrera, 1986; Haber et al., 2007).

Furthermore, the level of PsyCap resources could inform the quantity of enacted support received as well as the way in which it is interpreted. Studies that investigated some of the underlying dimensions of PsyCap found supporting results. For example, it is difficult for providers to offer support to pessimists in stressful times, whereas *optimists* are both more proactive in seeking support should they be in need of it, and be receptive to it should it be provided. In other words, those with more *optimism* and *positivity* are more prone to receive enacted support (Asgari, 2016; Marigold et al., 2014; Scheier et al., 1986). Additionally, *self-efficacy* mitigates the need for enacted emotional support (Klyver et al., 2018).

This understanding informs the *social-cognitive perspective* of social support (Lakey & Cassady, 1990), where perceived support – and in this case, PsyCap – creates a schema by which enacted support is interpreted, or primes their receptivity for support. Additionally, as perceived support drives PsyCap, and PsyCap influences the value ascribed to enacted support, it is worth investigating whether PsyCap mediates this relationship as a third variable.

It is also worth noting that social support plays a role in developing each of the constituent resources of PsyCap. *For example,* ***efficacy*** is developed through feedback (informational support), support from others, encouragement and social persuasion – where a person is assured to believe in themselves and inspired to persevere during challenging times (Bandura, 2008, 2012; F. Luthans & Youssef, 2007). However, when such feedback (informational support) is imposed, it can evoke feelings of incompetence, which could negatively influence self-efficacy, and thereby PsyCap (Beehr et al., 2010; Marigold et al., 2014).

Masten (2001) suggests drawing on strong support networks during challenging times to build and develop ***resilience.*** Additionally, supportive work environments with cultures of respect and trust are beneficial, particularly support from someone the

recipient deems important (F. Luthans & Lester, 2006). Therefore, respect would wane when support is intrusive or prescriptive (Deelstra et al., 2003). Additionally, if the motives of the support provider are considered to 'have strings attached', trust would suffer (P. S. Thompson & Bolino, 2018). Any of these latter instances would thereby negatively impact PsyCap through resilience.

Managerial support provides resources to develop the ***hope*** of employees (F. Luthans et al., 2015; F. Luthans, Youssef, et al., 2007); and an empowering organisational climate nurtures the willpower (agency) dimension of hope, enabling employees to develop themselves to the benefit of the organisation (F. Luthans & Youssef, 2004; Verleysen et al., 2015). On the flip side, if the manager is the source of stress as well as the support provider, it is unlikely that such support will influence hope positively (Beehr et al., 2003; McKimmie et al., 2009). Additionally, while instead of creating an empowering climate, controlling and prescriptive support is provided, personal freedom and agency would diminish (Lewis & Rook, 1999; P. S. Thompson & Bolino, 2018) – thereby depleting PsyCap through hope.

Finally, apart from the positive expectancies of ***optimism*** – mainly due to its explanatory attribution style – being formed by others and forces outside the self (F. Luthans, 2002b), certain types of enacted instrumental social support are positively related to optimism (Harber et al., 2005). However, such enacted instrumental support (tangible help) can shape the recipients' beliefs around their own competency, lead to negative self-evaluations of their work performance, and cause them to resist stepping up to management needs (Burnett et al., 2015; Marigold et al., 2014). This could eventually affect their capacity for optimism and thereby diminish PsyCap.

Therefore, because only perceived support has been documented in its impact on PsyCap, investigating the impact of other dimensions of social support – and enacted support, in particular – on PsyCap, is lacking.

The *stress-and-coping perspective* of social support, suggests two mechanisms that are at play when it comes to the influence of functional support on stress, and such is expanded upon in Section 2.3.3. These mechanisms align with the ones proposed within COR theory. The *buffering effect* (resource-building mechanism) mitigates and reduces the impact of the stressor on the strain, and offers protection from the negative effects of strain. For example, help to complete work (like instrumental support) reduces the impact of the stressor (workload) on the strain (anxiety and tension). On the other hand, the *reverse buffering effect* (resource-depleting mechanism) exacerbates the impact of the stressor on the strain. For example, low-quality help to complete work (instrumental support) increases the workload (stressor) and thereby intensifies the

tension and anxiety (strain). Therefore, where buffering has a positive outcome, reverse buffering leads to negative outcomes.

In other words, support can either have a positive resource-building effect or a negative resource-depleting effect on outcomes. As it pertains to PsyCap, it could either be developmental (building) or debilitating (depleting) in its effect.

Taking these mechanisms into consideration, and investigating this phenomenon, this study uses **competing hypotheses**. This approach has been proposed in situations where more than one plausible explanation for a phenomenon can be presented, based on observations from previous research, and thereby tests both simultaneously. It is argued to be more objective than the dominant single hypothesis approach because no *a priori* expectation exists as to which hypothesis would be supported (Anseel & Lievens, 2007; Armstrong et al., 2001; K. Choi & Cho, 2010).

This seems particularly relevant and appropriate when considering the contradictory findings of previous research in the field of social support. Such a strategy could aid in integrating observations and contribute to a better understanding of this meta-construct – as has been the approach in prior studies (Peteraf et al., 2013; Wohlgemuth & Wenzel, 2016). Furthermore, as resource-generating and resource-deterioration mechanisms have been observed in processes associated with COR theory, the call to test both mechanisms simultaneously and more comprehensively has been recommended by several previous authors (Halbesleben et al., 2014; Koopman et al., 2014). These hypotheses are discussed in greater detail in Chapter 3.

1.1.6 Summary

PsyCap is a valuable resource for organisations and is associated with multiple benefits – especially for the South African workplace. Additionally, PsyCap is a malleable, state-like construct that organisational interventions or initiatives can develop. Although social support has been identified as an antecedent of PsyCap, not all social support is created equal, as numerous studies report ambiguous results. Particularly lacking is an investigation of the influence of social support *behaviours* in the workplace and its effect on and relationship to PsyCap. Because perceived support and enacted support are only modestly related, it cannot be assumed that their influence would be the same – as this study attests. Therefore, making use of COR theory as a theoretical framework, the manner in which social support resources and PsyCap relate, are investigated.

1.2 Problem statement

The influence of social support on desirable outcomes has shown mixed results. Therefore, the literature suggests taking the nature, source, and type of social support into account when investigating this construct. Whereas perceived support considers the potential recipient's beliefs around the future availability of or access to support, enacted support reflects on observed and received support behaviours in which the recipient was the beneficiary of actual support. However, the relationship between perceived support and enacted support is modest, and their respective influence on outcomes are different (Barrera, 1986; Haber et al., 2007; Nahum-Shani & Bamberger, 2011; Uchino, 2009b).

Therefore, this study agrees that social support constructs are not interchangeable and need to be tailored to be effective (French et al., 2018; Jolly et al., 2021; Marigold et al., 2014). Thus, this study examines ***how enacted support behaviours relate to PsyCap****,* and how perceived support fits into that picture. Gaining insight into the relationship between these important constructs could enable the organisation to apply social support behaviours, measures, and resources to sustain or develop the PsyCap of its employees optimally.

1.3 Purpose statement

To better enable the organisation to leverage resources at its disposal towards developing desirable psychological resources, ***this study aimed to determine the relationship between perceived and enacted social support and PsyCap***. To gain clarity around the role that social support plays when it comes to PsyCap, a quantitative study employing a between-person experience sampling methodology (ESM) was conducted over a two-week period to track daily received support and changes in PsyCap over the timespan. In addition, the survey responses were analysed using quantitative methods such as covariance-based structural equation modelling (CB-SEM) to offer insights into the conditions and constellations of social support which influence PsyCap, and gain insight into their relationship.

1.4 Research question

Therefore, informed by the preceding, the research question of this study is: *What is the relationship between enacted social support and PsyCap within the workplace?*

However, as perceived social support has been shown to drive PsyCap, as well as providing conflicting results in the manner it relates to and affects enacted support,

its influence was also considered. Therefore, this study also asks: *How does perceived support relate to enacted support and PsyCap in the organisation?*

1.5 Contributions of the study

It is in the organisation's interest for its employees to have high levels of PsyCap (Avey, Reichard, et al., 2011; Newman et al., 2014). Building on prior research that perceived support has a developmental effect on the PsyCap of an employee (F. Luthans, Norman, et al., 2008; Pitichat et al., 2018), this study aimed to extend this knowledge by investigating the role of enacted support behaviours.

Social support is a meta-construct. Therefore, this study took into consideration several support constellations that include the nature of social support (behaviours and perceptions), the source of support (supervisors and co-workers), the type of support (informational, instrumental, or emotional support) and satisfaction with enacted support. This study examines how enacted social support should be constituted to benefit PsyCap, arguing that it would only have such an effect under certain conditions. Furthermore, it investigates how these social and psychological constructs relate.

1.5.1 Theoretical contribution

This study contributes to the social support, PsyCap and COR literature by identifying boundary conditions and improving understanding of social support, PsyCap and the interrelationship between them within the workplace. Although both COR theory is oftentimes called upon to explain the relationship between such contextual and personal resources within the organisation and criticised for being too broad (Halbesleben et al., 2014; Uy et al., 2017), this study contributes clarity to the conditions under which these resources relate and the likely building or depleting effect it has. Hence, it contributes to the theory in the following ways:

Firstly, the relationship between enacted support behaviours and PsyCap has not been investigated previously. This study extends the knowledge by taking cognisance of the nature, source and type of social support and its influence on PsyCap, thereby enabling an improved understanding of the conditions under which they relate. The study finds that the job role (management or non-management) of the support beneficiary is instrumental in how enacted support is interpreted, and offers insights into the effect of different constellations of the type and source of support. Extending this first contribution, the study found that the PsyCap of managers is significantly higher than that of their non-managerial colleagues. Additionally, it also offers findings around the differential effect of enacted support satisfaction on PsyCap as informed by the support

provider. These findings are explained by means of resource-building or resource-depleting mechanisms from COR theory.

Secondly, the relationship between enacted support and perceived support is investigated, along with the partially mediating effect of PsyCap that has been observed. Interestingly, PsyCap completely explains the relationship between perceived support and enacted support, apart from some direct effects observed between perceived support and enacted informational support. This offers observations around the complicated nature in which these support constructs relate.

Thirdly, continuing the conversation of previous authors who explored the social mechanisms by which PsyCap is developed (F. Luthans & Youssef-Morgan, 2017; Nielsen et al., 2017) as well as a nuanced study of social support within the workplace (Bolino & Grant, 2016; Zhan et al., 2021), this research investigates the relationships between social support and PsyCap within the real-life setting of the organisation.

Fourthly, contradictory findings are frequently observed in studies around enacted support (e.g., Beehr et al., 2000; Nahum-Shani et al., 2011). By using competing hypotheses, the study was able to investigate both resource-building and resource-depleting mechanisms simultaneously, as encouraged by previous authors (Halbesleben et al., 2014; Koopman et al., 2014). As such, observations could be drawn around the boundary conditions (support constellations) and beneficiary conditions (job role) that either activates a resource-building or resource-depleting mechanism.

Finally, this study investigates Positive Organisational Behaviour (PsyCap) within a research context (South Africa) deemed to be the most pessimistic in the world (Ipsos & Gates Foundation, 2017). It provides insights into the development or maintenance of this desirable positive outcome, in a highly complex and challenging environment (Du Plessis & Barkhuizen, 2012; F. Luthans, Van Wyk, et al., 2004).

1.5.2 Practical contribution

Because PsyCap is malleable and open to development, it is within the organisation's control to leverage interventions or antecedents to develop this desirable outcome. Furthermore, PsyCap's state-like nature means that any improvement will remain relatively stable for around six months, thus providing a favourable return on resources invested in its development (F. Luthans et al., 2006; F. Luthans, Youssef, et al., 2007). Because, if left unchecked, PsyCap erodes over time (Dawkins et al., 2013).

The finding that the PsyCap of managers is significantly higher than that of non-managers, emphasises the importance of exploring opportunities within leadership development programmes to develop the PsyCap of their employees.

Furthermore, practical implications are two-fold. Firstly, around the effect of enacted support on PsyCap. As social support needs to be tailored to be effective (Marigold et al., 2014), insights from this study provide further evidence towards customising workplace support behaviours to influence PsyCap for optimum effect. For example, educating the managerial cohort as to the type of enacted support most valuable to the building of their cohort's PsyCap (e.g., instrumental support), and the differing support needs of the non-managerial employees, in which case informational support from their peers applies.

Secondly, the study offers insights which indicate that the level of PsyCap also affects how enacted support is interpreted. This means that employees with higher PsyCap respond differently to enacted support behaviours than their lower PsyCap counterparts. As such, developing the PsyCap of employees (by means of, for example, PsyCap interventions), would also develop the receptivity of these employees towards enacted support directed to them. It would also enhance their ability to seek out support should they need it.

By allocating its resources towards honing social support skills from the right sources and of the suitable type, the latent confidence of its employees can be developed to the benefit of the whole. On the other hand, additional benefits such as 'support readiness' might be developed and become available to the organisation, resulting from PsyCap improvements.

1.5.3 Methodological contribution

This study expands the PsyCap body of knowledge by using a longitudinal study, as called for by previous authors (F. Luthans & Frey, 2018; F. Luthans & Youssef-Morgan, 2017; Parker et al., 2013). Furthermore, as social support behaviours – as opposed to social support perceptions – were targeted, they had to be measured near their occurrence. Interval-based between-person experience sampling methodology (ESM) offered a novel way to investigate this.

ESM involves the "repeated longitudinal measurement of constructs in context and over short periods of time" (McCormick et al., 2020, p. 322). Such data gathered is qualitatively different from those gathered without considering time as an ongoing context, like in cross-sectional studies. Thus, this approach provided greater insight into these workplace constructs by considering the role of both repeated measures as well as time (McCormick et al., 2020).

Although *within-person* and *cross-level* studies making use of ESM are prevalent, *between-person* studies making use of this richer form of data than its cross-sectional counterparts, are scarcer (Cortina & Landis, 2013). However, this approach was

necessitated by the nature of the variables under consideration, especially the manner in which enacted support was observed (Level 1), as well as the dependent variable being situated on Level 2. Said differently, a within-subjects design considers Level 1 data taking into consideration shifts within the person in response to the predictor phenomenon – usually also on Level 1. However, a between-subjects approach aggregates the Level 1-data to Level 2, thereby investigating the impact of the predictor phenomena between various persons. Therefore, Level 2-data enables the analysis to take place by means of CB-SEM allowing the ability to offer some level of controlling for the covariance between the multidimensional constructs or resource caravans (Hooper et al., 2008; Janadari et al., 2018).

Finally, this study operationalised enacted support measures in a contemporary manner by working from the premise that these measures are reflective (past-directed) in nature and recalling behaviours in the immediate past – as opposed to the forward-looking approach of perceived support (Asgari, 2016; Mathieu et al., 2019). As such, favourable results were obtained, loading on markedly different factors than its perceptional counterparts (see Section 5.5.1.1).

1.6 Conclusion

This chapter justified the merits of investigating the relationship between enacted social support behaviours and PsyCap by providing background to the problem and highlighting its relevance to the South African context. Additionally, COR theory was introduced as theoretical framework through which hypotheses can be developed about how the constructs of interest relate. It also sets out the purpose and research question of the study, before emphasising its contributions.

The remainder of the document is set out as follows:

- The literature review is split across two chapters – Chapters 2 and 3.
    - Chapter 2 comprises the literature review that underpins the constructs and theoretical lens of this study and forms the foundation of the research. This chapter is descriptive in nature with the aim of clarifying the different types of constructs that undergird this study.
    - Building on this groundwork, Chapter 3 articulates and develops the competing hypotheses of the study. This chapter builds on the previous chapter to expand on the mechanisms and relationships between the hypotheses presented.
- Chapter 4 describes the research design and methodology embarked upon to answer the research question.

- Chapter 5 reports on the data analysis employed to test the hypotheses and presents the results.
- Chapter 6 discusses the research findings of the study.
- Chapter 7 concludes the thesis by highlighting the contributions made by this study, emphasises the limitations of the research, and offers suggestions for future research.

The document concludes with a list of references, before the supporting appendices of the study are presented.

2 Literature review (Part A): Understanding the constructs

2.1 Introduction

In this chapter, the literature anchoring this research is discussed and presented in a descriptive manner to lay the groundwork for the subsequent chapter, where the relationships between the constructs are hypothesised.

Before the two key constructs of this study – social support and PsyCap – are reviewed, Conservation of Resources (COR) theory is offered as a theoretical lens to explain the dynamics between the constructs. This is followed by a brief overview of the relationships between them. Thereafter – in the following chapter – the relationships that inform the basis of the study are hypothesised.

2.2 Conservation of Resources theory (COR)

Conservation of Resources theory (COR) offers a likely explanation for how contextual resources (such as, social support) can relate to psychological resources (such as PsyCap). It was considered particularly useful as it not only views PsyCap and social support as organisational resources, but has also been used extensively in explaining phenomena investigating these constructs (e.g., Grover et al., 2018; Hobfoll, 2009; F. Luthans et al., 2015; Ten Brummelhuis & Bakker, 2012; Teo et al., 2021). In this section, the theory is briefly described, its principles and corollaries are set out, and the mechanisms that explain the phenomena observed, are presented.

2.2.1.1 Description

Conservation of resources (COR) theory proposes that people are motivated to protect or conserve their existing resources and attempt to acquire new resources. As an integrated resource theory, it aims to explain this greater dynamic process in pursuit of well-being – or healthy and desirable outcomes (Halbesleben et al., 2014; Hobfoll, 1989, 2002; Hobfoll & Schumm, 2002). Originally aimed at incorporating both the objective and perceived environment in dealing with psychological stress, the domain has since expanded to also explain phenomena in the workplace (Hobfoll et al., 2018). As such, COR postulates that “people seek to obtain, retain, and protect resources, and stress occurs when resources are threatened with loss or lost, or when individuals fail to gain resources after substantive resource investment” (Hobfoll, 2002, p. 312). Thus, this proactive stress and motivation theory implies that people do not passively await the occurrence of stress, but intentionally aim to develop and gain resources to position themselves more favourably when confronted with resource expenditure.

2.2.1.1.1 Resources

Hobfoll (1989, p. 516, italics added) defines resources as "those objects *(like a car)*, personal characteristics *(like optimism or self-efficacy),* conditions *(like employment or tenure)*, or energies *(like knowledge or money)* that are valued by the individual or that serve as a means for the attainment of these objects, personal characteristics, conditions or energies". However, this definition is criticised for assuming that a resource must always lead to a favourable outcome – which is not always the case. For example, high work engagement resources can lead to work-family conflict.

Halbesleben et al. (2014) proposed that resources are anything that the individual perceives as helping them to attain their goals. Thus, from an organisational perspective, "a resource is functional in achieving work goals, reducing job demands and associated strain, or stimulating personal growth, learning, and development" (Mathieu et al., 2019, p. 387). This explains situations where individuals protect resources, that others might consider hinders goal attainment. It clarifies where multiple resources are deployed to achieve a goal, compete towards the same end, or are substituted to reach its objective.

Said differently, resources are those things that are valued for what they are (like health, self-esteem and confidence) or act as a means of obtaining such (like money and social support) (Hobfoll, 2002). Hence, the value of resources is subjective and determined by an individual's personal experiences or contexts. Said differently, some resources that might be generally considered valuable, may be counterproductive for an individual in some contexts (Halbesleben et al., 2014). Hence, in and of itself, resources are neutral in nature.

The need for resources depends on the context in which the employee finds themselves. Ten Brummelhuis and Bakker (2012), categorised resources by source or origin (personal or contextual), transient nature (volatile or structural), key, and macro resources, as illustrated in Figure 3.

Contextual resources are distal to the self and offered to the individual. They are extrinsic and found in the social contexts of the individual (like social support offered at work), whereas *personal resources* are intrinsic and proximate to the self and include traits and energies or states (like optimism or resilience) (Newman et al., 2018). *Volatile resources* are fleeting and inherent to a person. Once expended, they cannot be reused (like time or energy), or are temporal (like mood or attention). *Structural resources* are durable, stable, can be used more than once and found in social contexts (like a social network or a home). *Key resources* refer to resources that manage, facilitate, alter, implement, or mobilise other resources, thereby making their usage more effective (for example, social power and efficacy). *Macro resources* are found in the larger economic,

social, or cultural system within which the individual finds themselves and are, therefore, culturally shared as well as context-specific (like social equality and public policy).

Based on this typology, PsyCap's underlying resources (hope, efficacy, optimism, and resilience) are classified as personal and structural key resources. These psychological resources are indicative of a core confidence higher-order construct (Stajkovic, 2006). On the other hand, social support is classified as a contextual and volatile resource.

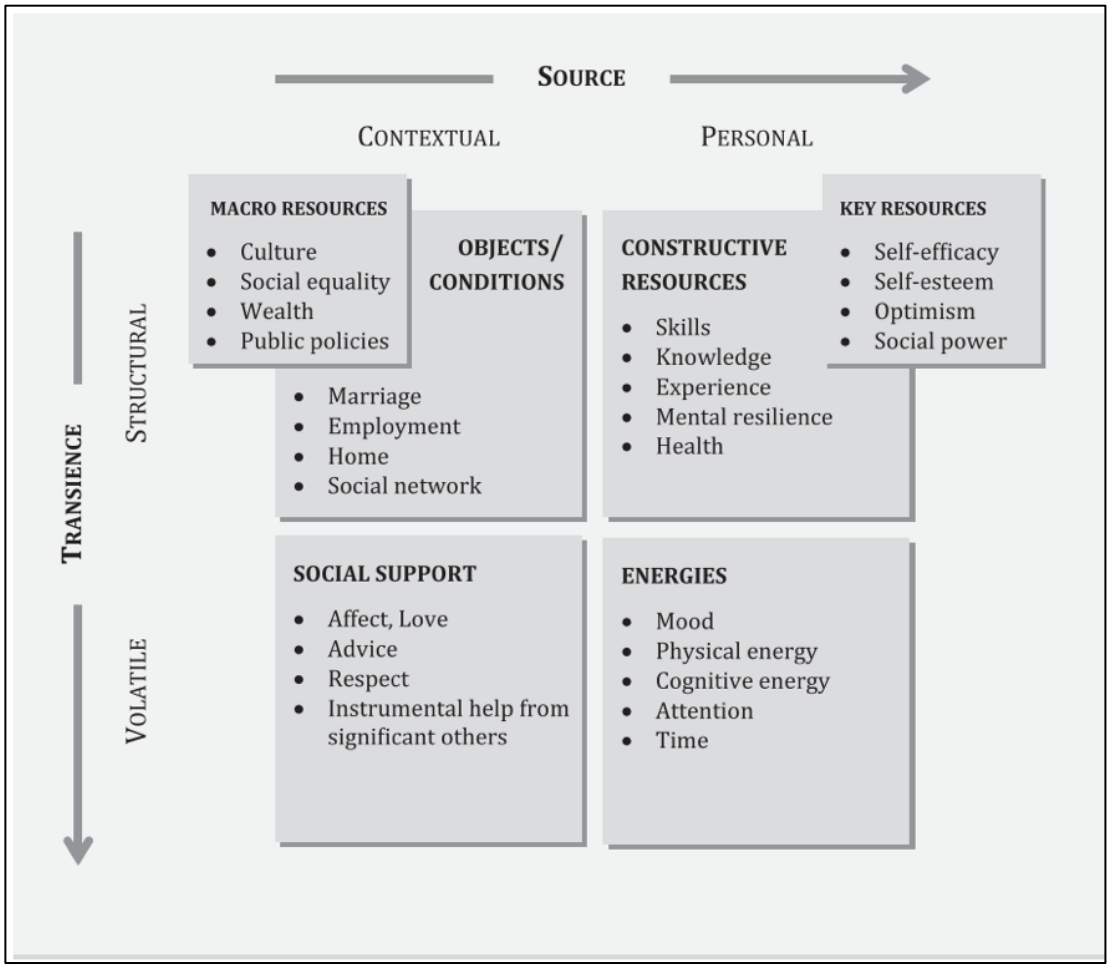

Figure 3: Categorisation of resources *(Ten Brummelhuis & Bakker, 2012, p. 549)*

2.2.1.1.2 Psychological stress

Psychological stress is a response to the environment when (1) there is a threat of loss to key or central resources; (2) there is an actual net loss of these resources; or (3) a lack of resource gain after significant effort or resources have been invested (Hobfoll, 1989; Hobfoll et al., 2018).

As such, stress can be produced whether loss is perceived, lack of gain is anticipated, or actual loss of resources takes place. The loss, or threat of loss, of

resources leaves the individual with diminished coping capacities for dealing with future challenges, thereby increasing stress. Similarly, if resources fail to increase after an investment of resources, the lack of gain is similar to a loss of resources (Hobfoll & Schumm, 2002).

The role of the environment and social context is significant because the individual is motivated to protect and preserve themselves within the context, they find themselves in. This is emphasised, because the “individual appraisal is secondary to what is centrally valued and universal among people” (Hobfoll et al., 2018, p. 104).

COR theory further explains positive stress (eustress), arguing that despite resources being lost in the short term, in the long term resources would be gained, as each successful completion of a challenge would equip the individual with additional resources (for example, skills) to engage with the next challenge (Gandhe, 2014).

Finally, COR does not view stressful events as the unit of analysis – but instead the stressful conditions that refer to complicated situations occurring over time. This enables COR to be used to investigate the implications on the motivation of the individual (to protect, conserve or acquire resources), instead of the impact of stress alone (loss or threat of loss of resources) (Hobfoll et al., 2018).

This makes the workplace and organisational domain a valuable field of study for this theory. Especially when social support is viewed as a form of extrinsic motivation (George et al., 2013; Schaufeli & Bakker, 2004), and PsyCap as an indicator of intrinsic motivation (Avey et al., 2011; B. C. Luthans et al., 2014; Meyers et al., 2015; Pitichat et al., 2018; Sesen & Ertan, 2019; Youssef-Morgan & Luthans, 2013b).

Informed by the above, the relationship between PsyCap (psychological resources) and social support (contextual resources) can be illustrated by an example. When an employee faces challenges at work, their PsyCap might deplete due to setbacks, struggling to find solutions to problems, doubting their own abilities or a negative stressful work environment. Co-workers or supervisors who offer advice or guidance (informational support) can give ideas on approaching the challenges (hope), offer encouragement (emotional support) to bounce back and try again (resilience) and remind them of their abilities (efficacy), or offering tangible help (instrumental support) to build a positive outlook of the workplace (optimism). Thereby, during a challenging time (threat or loss of resources), the employee can draw from contextual resources (social support) to rebuild or replenish their psychological resources (PsyCap).

2.2.1.2 The basic principles of COR

Informed by the above, four principles and three expounding corollaries undergird COR theory (Halbesleben et al., 2014; Hobfoll, 1989, 2002; Hobfoll & Schumm, 2002; Ten Brummelhuis & Bakker, 2012).

Firstly, COR theory assumes that humans are hard-wired to ascribe greater primacy to resource loss and less to resource gain [Principle 1]. As such, a disproportionate impact is attributed to loss as informed by its effect, the speed of the impact event, and the duration that the impact persists (Hobfoll et al., 2018). Hence, resource loss at work has a greater impact than a similar gain in resources and resource conservation is pursued. For example, in contexts of abusive supervision (which relates to higher stress and reduced resources for coping), employees are more likely to avoid informational support (feedback) by limiting interaction with said supervisor – suggesting the salience attributed to the risk of losing further resources (Whitman et al., 2014).

Secondly, people spend and invest resources in order to obtain resources – or protect against, or recover from, resource loss ('resource investment') [Principle 2]. These can take place through the direct replacement of resources (like tangible help to aid with workload and capacity constraints), or indirect replacement of resources (like on-the-job training to offset the loss for future potential increased workload) (Hobfoll et al., 2018). It might involve using resources to assist others (instrumental support), in the hope of receiving reciprocal assistance when it might be needed (Halbesleben & Bowler, 2007). In the context of PsyCap, that can mean skills development or knowledge building (resource) that can lead to an increase in psychological resources like efficacy (Bandura, 2008, 2012) or resilience (Masten, 2001). Thus, resources can generate new resources and create buffers for challenging times.

Gaining or replenishing resources builds the employee's **resource reservoir**, a pool of valuable and reliable resources that can aid with sustaining some measure of resource loss before experiencing threat or requiring defensive strategies (Hobfoll, 2002). Hence, those with these resource reservoirs have substitute resources when they face drain or depletion (Ten Brummelhuis & Bakker, 2012). As such, excess resources are pursued or invested in to grow resource reservoirs (Hobfoll, 2011).

Thirdly, resource gain becomes more important in situations of resource loss, or when resources are threatened – suggesting a gain paradox principle [Principle 3]. As such, obtaining resources becomes more valuable. For example, during challenging times with strict deadlines, time (as a resource) becomes more valuable and sought after. Where support could be provided that enables more to be achieved during the set time, a higher value would be placed on such time, than during more leisurely periods. Said

differently, support becomes more important and valuable when lack of support is more prevalent – like in stressful times.

The final principle explains that defensive, aggressive, or irrational and desperate attempts would be made to conserve outstretched or exhausted resources [Principle 4]. For example, those with low social support resources can become defensive or aggressive, initiating a loss spiral as such behaviour is detrimental to the building of social relations. This is also evident in situations where pessimists (low psychological resources) tend to receive less social support (contextual resources) due to the behaviours they exhibit (Marigold et al., 2014).

Further to the preceding four principles, the first corollary holds that those who have more resources are in a better position to gain more resources or invest those resources. Juxtaposed, those with fewer resources are more vulnerable to experience resource loss. Hence, those with higher PsyCap resources (more optimism, resilience, efficacy or hope), are more likely to ask for help (support resources) or help others (resource investment) (Bamberger, 2009). Additionally, those who consistently receive more enacted support (like guidance, advice, training) would also have more resilience and efficacy as a result of such (Bandura, 2008, 2012; Masten, 2001).

Further to this, corollary two holds that "initial resource losses lead to future resource losses" making investment more challenging (**loss spiral**); and corollary three states that "initial resource gains lead to future resource gains" improving their position to invest resources (**gain spiral**) (Halbesleben et al., 2014, p. 1338). Resource loss spirals mean that ever-increasing losses will grow in impact and momentum. Taken that resource loss is more salient than resource gain, gain spirals are weaker and more sluggish in nature. Said differently, those who possess more resources tend to avoid problematic situations or stressful circumstances, enabling them to invest in gaining additional resources instead of expending such to avert loss. Conversely, those who possess less resources will find it more challenging to acquire resources. This highlights the additive nature of resources (Mathieu et al., 2019)

For example, those with higher confidence and self-efficacy (psychological resources) are more likely to ask for help (contextual resources) should they need it, in order to alleviate stress (Bamberger, 2009). As such, an employee can draw on one type of resource to protect or increase another (Newman et al., 2018; Ten Brummelhuis & Bakker, 2012). This has been tested in the context of refugees to Australia, where Newman et al. (2018) observed that a contextual resource (perceived work domain support – supervisor and organisation) can bolster a personal resource (PsyCap) to enhance a resource reservoir (well-being) (Avey et al., 2010). Additionally, these gain spirals can be observed in an employee's receipt of informational guidance leading to

improvements in their performance, and hence receiving acknowledgement (emotional support) for such (Mathieu et al., 2019).

2.2.1.2.1 Resource caravans

A further notable observation from COR theory, particularly of relevance to the nature of the PsyCap construct is the concept of **'resource caravans'.** This holds that certain resources tend to cluster together (co-travel) to create synergies and interactive mechanisms between the various resources. These resource caravans could explain overlapping definitions of what could be similar constructs. This seems evident with the resource capacities of PsyCap (Hobfoll, 2002, 2014; Youssef-Morgan, 2014), as all its constituent resources (hope, optimism, resilience and efficacy) share "a common sense of control, intentionality and agentic goal pursuit" (F. Luthans & Youssef-Morgan, 2017, p. 343) or 'core confidence' (Stajkovic, 2006). As such, the different types or functions of support (whether instrumental, informational or emotional) are potentially also such a resource caravan (Fenlason & Beehr, 1994; Kickul et al., 2001; Mathieu et al., 2019; Nahum-Shani & Bamberger, 2011; Wills & Cohen, 1985).

2.2.1.2.2 Resource caravan passageways

Resources are sensitive to their environment in that "resources are valued because they fit the demands and values of a given culture ... and are held in esteem in that they are a by-product of culture" (Hobfoll, 2002, p. 319). '**Resource caravan passageways**' describe the ecological conditions that are either conducive or deteriorating to resource development (Hobfoll et al., 2018). These could refer to working conditions, organisational culture and even home-work situations (Hobfoll, 2011).

For example, despite social support being considered to be a universal resource that is valued for combatting stress, cultural differences have been observed in its helpfulness, as well as its behaviours and activities (Gottlieb & Bergen, 2010). Also, diverse observations regarding directive and nondirective instrumental support have been observed between Russian and Western European populations (Dutton, 2012).

Furthermore, the environment created by the supervisor can either be conducive or damaging to the resources of their subordinates (Hobfoll et al., 2018). For example, a supervisor that invests in their subordinates creates a supportive climate where improved individual performance leads to greater results for the entire functional area. However, in instances of abusive supervision where resources are withheld from subordinates, decreased performance on the individual level, will also impact the results of the

department or team. This highlights the importance of context and how resource losses in one person, can lead to resource losses in those surrounding them as well.

In summary, those who possess more resources are better equipped to respond to stressors and solve the problems inherent in such situations. They are not affected as negatively by resource drain or loss (as opposed to those with less) due to the availability of substitute resources, or they draw from resource reserves (Hobfoll & Schumm, 2002; Ten Brummelhuis & Bakker, 2012). Resultantly, those who possess resources are viewed more favourably by both themselves and others due to the perceived value of such resources.

2.2.1.3 Conclusion

As mentioned earlier, despite a resource's positive characteristics, it is neutral in nature and can be leveraged for whatever means intended. Similarly, for both social support and PsyCap resources, it is within the auspices of the individual to leverage it for whichever purposes or requirements they deem fit (Milosevic et al., 2017). COR theory posits that those with strong personal resources (like PsyCap) would draw on such first (if they are adequate) and only draw on external resources (like social support) when needed (Hobfoll et al., 1991). This could provide insight into the ambivalent response observed towards enacted social support as it might underestimate or misjudge the level of personal resources the recipient has available to cope.

As COR theory takes cognisance of both perceptions and objective behaviours in the environment in dealing with stress and stressors, drawing on both support perceptions and support behaviours as resources to combat such is of relevance (Hobfoll & Schumm, 2002). Therefore, the contextual resource of social support and the personal psychological resource of PsyCap, as well as the hypothesised relationships between them, can be explained by looking through the lens of COR theory. These core constructs are reviewed next.

2.3 Social support

Supportive relationships within the workplace play a defining role in making it a meaningful or miserable experience (Halbesleben et al., 2014). These interpersonal relationships are essential for the optimal functioning and effectiveness of the organisation (Nahum-Shani et al., 2014). The rising salience of the relational and social aspects of work reflects the increasingly complex and highly interdependent systems

that business globally is heading towards (Bolino & Grant, 2016; Grant, 2007; Parker et al., 2013).

Considering such increasing complexity, Bakker and Schaufeli (2008) view social support as an essential contextual job resource for employees to deal with work demands (like work overload, work-home balance, emotional and physical demands). It is deemed a contextual resource as it is located outside the individual and within their social surroundings (Hobfoll, 2002; Newman et al., 2018). However, social support degrades over time if not maintained (Halbesleben et al., 2014).

This section discusses the social support resource as a multidimensional construct (Uchino et al., 1996). It can be conceptualised in several ways, assume different forms or types, and encompass many relationships, behaviours and consequences – several of which dimensions are present in the organisation simultaneously (Streeter & Franklin, 1992). It is, therefore, essential to get a grasp of the complexity of this construct before proceeding.

2.3.1 Defining social support

Several definitions attempt to describe workplace social support. An early definition explains it as information that leads the recipient to believe that they are loved, esteemed and valued; and that their well-being is tended to as a form of belonging and mutual obligation within a social network (Cobb, 1976). Another definition holds that it is the extent to which an individual's needs for affection, approval, belonging and security are met (Kaplan et al., 1977). However, these descriptions focus on one type of support (**emotional support**) and exclude others.

Social support is also described as the belief that a person can access helping relationships, that those relationships are of an esteemed quality, can offer resources like information, empathy or tangible assistance (Viswesvaran et al., 1999), and may entail "actions of others that are either helpful or intended to be helpful" (Deelstra et al., 2003, p. 324). These definitions incorporate dimensions like **instrumental support** (tangible aid) and **informational support** (LaRocco et al., 1980; Wills & Cohen, 1985).

Hobfoll (1989) further emphasised the system, **context** or environment the support beneficiary finds themselves in by describing social support as the interactions or relationships that provide such, but also embeds them in a social environment that provides love, care and belonging. However, Nurullah (2012) stipulates that despite social support stemming from the social network the beneficiary belongs to, the presence of such a network (social capital) does not necessarily entail that social support is provided or available when needed.

As such, **social support in the workplace** can be described as the "overall levels of helpful social interaction available on the job from co-workers and supervisors" (Karasek & Theorell, 1990, p. 69). It entails an employee's perception or experience that their contribution is being valued (by support sources), their well-being cared for (emotional support) and that help would be available and accessible, should it be required (instrumental or informational support) (Cobb, 1976; Eisenberger et al., 2002; Kurtessis et al., 2017; Rhoades & Eisenberger, 2002).

French et al. (2018, p. 288) highlight that commonalities through most social support definitions emphasise that "social support is derived from social relationships …. [and] protects an individual's well-being under adverse circumstances". The ideas of help, affirmation, being cared for and being valued undergird the understanding of the construct (Hammer et al., 2009; Kossek et al., 2011; Smollan, 2017). Hence, this study concurs with Cohen's (2004) thinking that social support is the "psychological or material resources provided through social relationships that can mitigate strains" (French et al., 2018, p. 288) and aid personal growth and development (Feeney & Collins, 2015).

2.3.2 The multidimensionality of support

Explaining the complexity of this multidimensional construct has been attempted by many theories. Thoits (1982) framed support in terms of the amount, the type, the source of support, and the structure of the social network, and warned against studies neglecting the multidimensionality of the construct. She differentiated between structural and functional support: where *structural support* indicates the direct or indirect social ties or network of an individual, measured in size, density, accessibility and the like; and, *functional support* entails intangible and subjective resources as provided by significant others in the network.

House (1987) emphasised the *structural* side of social support, arguing that social relationships (existence, quantity and type) and social network (size, density, reciprocity, frequency and the like) were influential in the ability of social support (type, source, quantity and quality) to mitigate stress' impact on health.

On the other hand, *functional* social support is further distinguished by: the type of support (emotional, instrumental, informational, belonging or appraisal (McDonald & Westphal, 2011; Scott et al., 2014; Wills & Cohen, 1985)) and source of support (like supervisors, co-workers or colleagues, organisation, family). Functional support is considered a stronger predictor of outcomes, such as well-being, than structural support (Gottlieb & Bergen, 2010; Shakespeare-Finch & Obst, 2011; Thoits, 1982).

Barrera (1986) differentiates between perceived support (appraisals), enacted support (behaviours) and social embeddedness. *Social embeddedness* refers to the

number of social ties or an analysis of the individual's social network. It can also indicate the availability of support and is an indicator of structural support. *Perceived support* infers the cognitive appraisal of the availability of support should it be needed. *Enacted support* refers to actual behaviours that provide support. Others also hold this latter understanding (S. Cohen, 1992; Streeter & Franklin, 1992; Vaux et al., 1987). This framework is illustrated in Figure 4, as consolidated from Thoits (1982), Barrera (1986) and Cohen (1992).

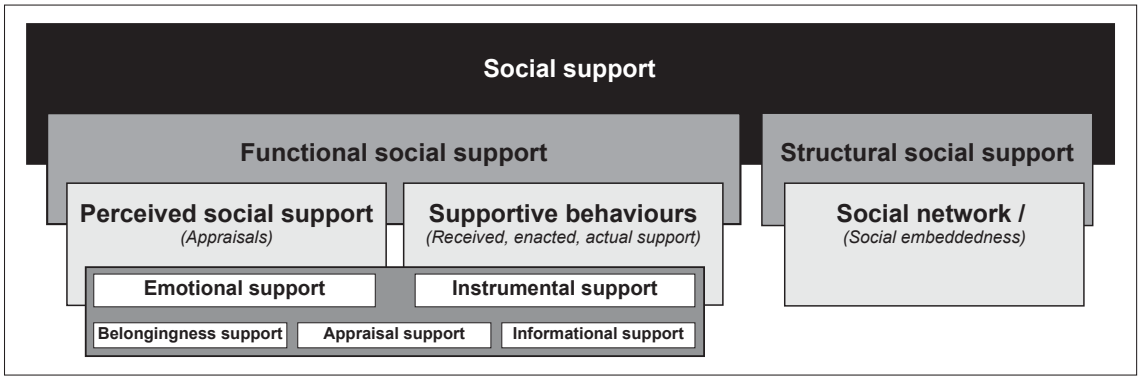

Figure 4: Social support framework (illustrated by the author)

Therefore, some measure of agreement exists that social support should be considered in terms of its nature (perceived support, enacted support or social embeddedness/support providers) (Barrera, 1986; S. Cohen, 1992; Streeter & Franklin, 1992; Vaux et al., 1987) and type (McDonald & Westphal, 2011; Scott et al., 2014; Wills & Cohen, 1985).

In a recent comprehensive meta-analysis drawing on most of the above authors, French et al. (2018) proposed a framework that social support should take cognisance of the **nature** (perceived or enacted), **source** and **type of support**, as well as its *cultural context* when conducting studies in this domain. Therefore, this study will adopt a functional approach to social support and draw on the consolidated framework of French et al. (2018) due to its comprehensive nature. (For this study, the cultural context mentioned will be excluded, as this study was limited to South Africa.)

2.3.3 Perspectives on the functioning of social support

Within the functional social support literature, several perspectives come to the fore to explain how social support works. Amongst others, two prominent theories are the *stress-and-coping* perspective and the *social cognitive* perspective. However, these two perspectives conflict, for example, in how they assume perceived and enacted support would relate. COR theory offers a potential reconcilable explanation for such.

2.3.3.1 The stress-and-coping perspective

The stress-and-coping perspective considers how well the recipient's needs align with the type of support provided, enabling them to handle their challenges. This is also known as the *matching hypothesis* (Lakey & Cohen, 2000; Thoits, 1986; Uchino et al., 1996). Essentially it means that support reduces the impact of stress. This support can be in the form of supportive behaviours that the beneficiary receives (enacted support), or the beneficiary's belief that support will be available and accessible if needed (perceived support) (Lakey & Cohen, 2000).

This perspective explains social support's influence on outcomes through one of three hypothesised mechanisms, and is illustrated in Figure 5.

- The *main effects* hypothesis holds that support has a direct and beneficial influence on the stressor or the strain. For example, support can alleviate the tension (strain) experienced regardless of the workload (stressor) that has caused such. This effect is usually observed in structural support measures, like the number of social relationships and frequency of interaction and, therefore, falls beyond the scope of this study.
- The *buffering hypothesis* (mitigating effects) argues that support will reduce the impact of the stressor on the strain, thereby protecting the person from the negative impact of stress events. In other words, support is only beneficial in the presence of stress or adversity. For example, support will reduce the impact of workload (stressor) on tension (strain). As such, buffering occurs when the quality of support (valuable source and type) and support needs match. It has been shown that both perceived and enacted support decrease the impact of stress (Wills & Cohen, 1985).
- Finally, the *reverse buffering hypothesis* (exacerbating effects) can occur on any hypothesised buffering effect relationships, set out in Figure 5. This hypothesis proposes that in some instances, support would intensify – rather than weaken – the impact of the stressor on the strain. Here, support will increase the influence of workload on tension (Kaufmann & Beehr, 1986; LaRocco et al., 1980; Mathieu et al., 2019; Mayo et al., 2012; McIntosh, 1991; Singer, 2000; Wills & Cohen, 1985).

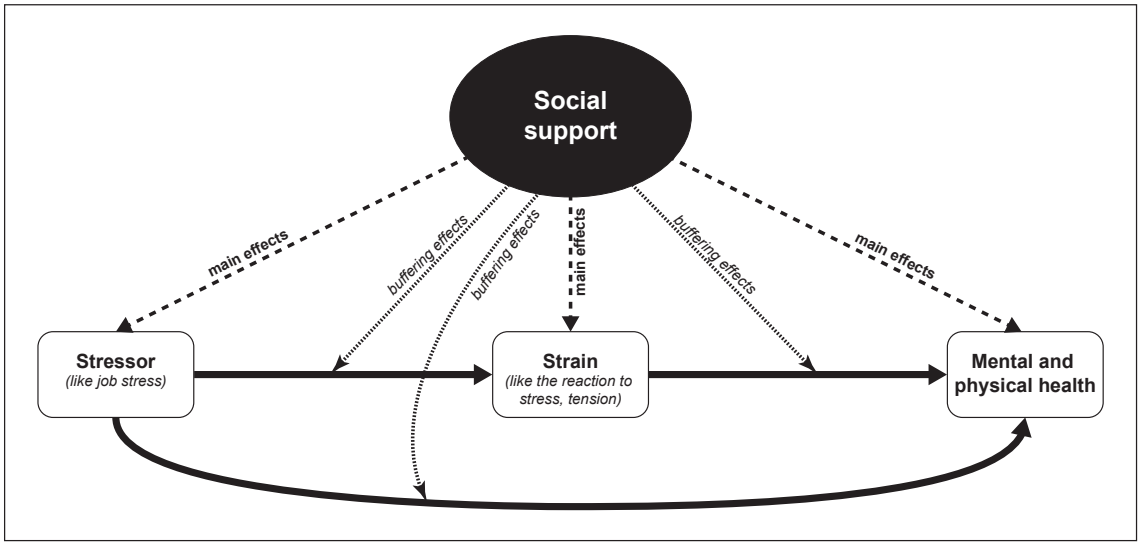

Figure 5: The main and buffering effects of social support (adapted from LaRocco et al., 1980, p. 203)

Favourable organisational outcomes of social support are usually explained by either the *main effects* or *buffering hypothesis*. Benefits include the creation of a positive work environment (Carlson & Perrewé, 1999; Yang et al., 2018), improved organisation-based self-esteem (Bowling et al., 2010), greater risk-taking (Neves & Eisenberger, 2014), positive mental health outcomes (Viswesvaran et al., 1999), improved performance (Rhoades & Eisenberger, 2002), and overall well-being (Beehr et al., 2003). Additionally, social support is negatively related to withdrawal behaviours such as absenteeism, tardiness and employee turnover (Eder & Eisenberger, 2008; Eisenberger et al., 2002; Rhoades & Eisenberger, 2002).

However, when the outcomes of providing enacted social support within the organisation have garnered mixed results in studies on – amongst others – job stress (Beehr et al., 2000, 2003; Kaufmann & Beehr, 1986; Nahum-Shani & Bamberger, 2011), proactive work behaviour (Burnett et al., 2015) and satisfaction (Deelstra et al., 2003; Riggle et al., 2009), these ambiguous results are explained through the *reverse buffering hypothesis* (Mayo et al., 2012; McIntosh, 1991; Monnot & Beehr, 2014; Nahum-Shani & Bamberger, 2011). Thus, instead of reducing the impact of stress, it increases it.

2.3.3.2 The social-cognitive perspective

Another attempt at explaining the relationship between perceived and enacted support, is the *social-cognitive perspective,* also known as the social constructionist perspective (Lakey & Cohen, 2000). Lakey and Cassady (1990) argued that a schema is created by support perceptions that evaluate enacted support. Originally aimed

towards explaining the relationship between perceived support and mental health, this perspective integrates evaluations, important role-players and emotions into cognitive networks which influence one another. In other words, these cognitive networks make perceptions and evaluations more accessible.

For example, an individual with high support perceptions (perceived support), will also interpret support behaviours (enacted support) positively, whereas those with low support perceptions would interpret such behaviours more negatively. However, the way in which these perceptions of support are accessed differs from the stress-and-coping perspective. In this instance, it is argued that a global judgment of support is drawn on from memory, instead of specific past actions where support was provided. As such, more value would be ascribed to the recipient's impression of the supportiveness of the provider, than by the actual enacted support received. Therefore, perceived support and enacted support (based on the memory of recent support receipt) would not be closely linked (Lakey & Cohen, 2000; Lakey & Drew, 1997).

2.3.3.3 The perspectives and COR theory

COR theory integrates the views held by both these perspectives. As it pertains to the matching hypothesis of the *stress-and-coping perspective*, the extent to which the recipient's needs and the support provided align determines how much such support is valued. This aligns with COR theory's view that resources are valued to the extent that they improve the fit between an individual and their environment. Hence, when support resources are provided that aid the recipient to align with the needs of their situation, such resources fulfil the criteria of the matching hypothesis and stress alleviated (Halbesleben et al., 2014; Lakey & Cohen, 2000).

Furthermore, social support resources have a main effect on stressors and strains. For example, providing guidance (informational support resources) to navigate a challenging project (time resources) or manage the workload (energy resources). However, because resource gain is more salient when it occurs along with resource loss, recipients will draw greater benefits from support resources provided under such conditions. This explains the buffering effect observed where recipients limit the negative consequences or achieve greater outcomes as a result of the support. Arguably, the opposite effect will be observed where reverse buffering occurs. In such cases, the support resources are negatively interpreted and exacerbate the negative consequences instead of alleviating them (Hobfoll, 2002; Mathieu et al., 2019).

The mechanism observed within the *social-cognitive approach*, on the other hand, approximates the gain spiral or loss spirals mentioned earlier (Section 2.3.3.2). As such, where initial resource gains (in the form of higher perceptions around the

availability of social support) lead to improved future resource gains (in the form of being the recipient of enacted support behaviours). Hence the schema is created by the increased perceived support resource gains, and subsequent supporting behaviours are interpreted positively. Conversely, lower support perception resources would make it less likely to interpret support behaviours as positive.

Nonetheless, the benefits of social support are not only relevant in the context of stress and stress buffering, but close relationships are advantageous even in the absence of stressors or strain. As such, support resources promote well-being and do not only serve as a buffer during adversity. In this regard, social support contributes to personal growth and development (Feeney & Collins, 2015).

Informed by the aforementioned, social support is observed to have a *resource-building mechanism* (main effect or buffering effect) under certain conditions, and a *resource-depleting mechanism* (reverse buffering effect) under others. These will be expounded upon in a later section (Section 3.3).

2.3.4 Nature of support: perceptions or behaviours

For resources to yield a return on investment, they must have some shared value within their context (Halbesleben et al., 2014). Both perceptions of support availability when needed, as well as the enacted support behaviours directed to the recipient, are social support resources that are valued within the workplace.

2.3.4.1 Perceived support

Perceived support entails the cognitive appraisal of being connected to others – and is deemed a broad support measure (French et al., 2018). It relates to an individual's perception of the availability and access to support (Wills & Cohen, 1985) as well as their overall satisfaction with such (Barrera, 1986; Gottlieb & Bergen, 2010; Haber et al., 2007; I. G. Sarason et al., 1983, 1986).

Streeter and Franklin (1992) explain that not all interactions between an individual and the environment result in a relationship that generates support; however, the potential for such exists. It considers the likelihood that support is available or adequate when needed, and that it would be provided in a manner believed to be beneficial and satisfactory. Perceived support has 'trait-like' characteristics, with beliefs around the availability of support estimated not to exceed the five-month period (I. G. Sarason et al., 1986; I. G. Sarason & Sarason, 1986). As such, Wright (1997) would label this time frame "state-like".

The buffering hypothesis would explain why perceived support has a more significant moderating effect on stress and anxiety than enacted support, arguably because "potential support does not carry another kind of anxiety that may be associated with actual [enacted] support" (Pahl, 2003, p. 359), such as asking for or receiving imposed support (Weiner & Hannum, 2013).

2.3.4.2 Enacted support

Enacted support refers to "specific behaviours or actions performed by others as they exhibit expressions of support and assistance" and can include "listening, expressing concern, lending money, helping with a task, offering suggestions, giving advice, and showing affection" (Streeter & Franklin, 1992, p. 82). Thus, support behaviours (enacted support) are a specific support measure, as opposed to perceived support being considered a general and broad support measure (French et al., 2018). Hence, more socially integrated persons (those with a greater number of social ties) would have greater access to enacted support than those who are less socially integrated (Karademas, 2006; Uchino et al., 1996).

Higher levels of enacted support have been associated with increased positive affect and extraversion (Lakey & Cohen, 2007). However, adverse effects have been observed on stressors like underutilisation of skills, job future ambiguity and quantitative workload (Kaufmann & Beehr, 1986), preventing stress-related negative emotions (Bolger & Amarel, 2007), job/role demand and employee exhaustion (Kickul et al., 2001), role-conflict (Mayo et al., 2012) and age discrimination (Redman & Snape, 2006).

Enacted support is usually sought or provided in response to stress (Uchino, 2009a). As such, support-seeking can be a significant factor in this type of support. Thus, enacted support can be classified as either being anterogatory (before support-seeking takes place) or postrogatory (after a decision has been made to seek support) (Bolger & Amarel, 2007). Many of the negative results associated with enacted support behaviours occur when support is provided before the recipient is aware of or decides to open themselves up to be provided with support. For example, suppose enacted support was not sought. In that case, it can draw attention to the stressor of the individual, which can result in costs to self-esteem or efficacy, and would mitigate its expected positive effect (Weiner & Hannum, 2013).

Other structural features of the support effort have also been shown to have a negative effect. These include "mistiming of support delivery, the degree to which it is poorly tailored to recipients' specific needs, or the extent to which support is given in an amount that exceeds what the recipients require (i.e., 'overprovided' support), or is able to reciprocate" (Zee et al., 2018, p. 735). Furthermore, support is ineffective if it makes

the recipient feel vulnerable, needy, or insufficient; causes shame or obligation; makes the recipient feel like a burden; diminishes or dismisses the recipient's problem, objective, or success; blames the recipient for their misfortunes or failures; inhibits independence or self-determination; or transmits a feeling of conditional acceptance (that one must succeed to be accepted) (Feeney & Collins, 2015).

Therefore, Marigold et al. (2014) argued that the effectiveness of support is influenced by its visibility and interpretation thereof by recipients. They state that support attempts frequently elicit negative emotions by implying a sense of inefficacy.

2.3.4.3 The relationship between enacted and perceived support

The *stress-and-coping perspective* of social support assumes that the correlation between perceived and enacted support should be relatively high (Haber et al., 2007), particularly when the support needs align with the support provided (Cutrona & Russell, 1990). However, when a weak relationship is observed (Barrera, 1986; Eagle et al., 2018; Haber et al., 2007), a suggested explanation is that perceived support infers a hypothetical future need scenario which is not susceptible to contextual factors, such as enacted support is (Asgari, 2016; Mathieu et al., 2019).

The *social-cognitive perspective* argues that the relationship between perceived support and enacted support would not be high, as support perceptions are not influenced by the memory of receiving support (Lakey & Drew, 1997), and might be grounded in relational constructs instead (Kaul & Lakey, 2003).

Uchino (2009a), on the other hand, held a different position stating that those with high support perceptions would deem support behaviours as unnecessary and might, therefore, make negative attributions towards them. However, the weak correlation between perceived and enacted support suggests that perceived support reflects how someone appraises the availability and adequacy of support, rather than the quality and quantity of support that has actually been received (Eagle et al., 2018).

Regardless, numerous attempts have been made to explain and make sense of this relationship (J. L. Cohen et al., 2005; Kaul & Lakey, 2003; Lakey et al., 2010). The strength of the relationship between these constructs is estimated to be in the region of r=0,35 (Haber et al., 2007). To understand why their relationship is weak or ambivalent and better explain their relationship, the influence of a ‘third variable’ has been considered. Contenders like ‘self-esteem’ and ‘awareness of support provided’ received limited support (Bolger et al., 2000; Gleason et al., 2008).

It has, however, been shown that these are distinct constructs, with only a modest correlation between them (Barrera, 1986; Eagle et al., 2018; Haber et al., 2007). That being said, perceived support’s impact seems to be more consistent than that of enacted

support (Gottlieb & Bergen, 2010; Hämmig, 2017; Sloan, 2012). This could be because perceived support develops over time, whereas enacted support's development depends on the situation (Uchino, 2009b). However, Lakey (2010) cautions that such does not suggest that perceived support is devoid of contextual influences nor that enacted support lacks developmental influences.

To clarify, perceived support relates to the individual's belief that support would be available should a future need for it arise. On the other hand, enacted support refers to the actual received support that the recipient is the beneficiary of. Insights from different domains such as marketing, psychology, philosophy, politics, ethics and economics argue that the relationship between perceptions and the actual observed reality that might inform those perceptions are complex – and might be contradictory (for example, Clarkson et al., 2010; Frieder et al., 2016; Kidwell et al., 2013). For example, the perception of reality and reality of itself are not necessarily the one and the same. It can be informed by a plethora of factors. As such, the relationship between enacted support behaviours and the perception around those behaviours are also not necessarily aligned. This is expanded upon in the development of hypotheses 9 in Section 3.7.

2.3.4.4 Conclusion

Enacted support is embedded in the context it takes place in, making it more vulnerable to other influences. On the other hand, perceived support removes such contextual influences as it considers a hypothetical scenario of future need (Asgari, 2016; Mathieu et al., 2019). However, as social support is greatly influenced by the source that provides it (Bozo & Guarnaccia, 2010; Dakof & Taylor, 1990), its importance is discussed next.

2.3.5 Source of support: supervisors or co-workers

The relationship between support perceptions and support behaviours is influenced by the relationships they are anchored in (Cutrona & Russell, 1990; Dakof & Taylor, 1990; Haber et al., 2007). For example, Lakey (2010) argued that the match between the support provider and support recipient determines the effectiveness of the supportive relationship, thereby drawing attention to the salience of the support source.

Previous authors have encouraged the study of the respective influence of various support providers on the individual and found them non-redundant (Chiu et al., 2015; Rhoades & Eisenberger, 2002; Stinglhamber & Vandenberghe, 2003). They argue that "different people provide different kinds of support with different degrees of effectiveness" (Lincoln, 2000, p. 233). Extant research has observed that having fewer

sources of support is associated with adverse outcomes (Hämmig, 2017). In contrast, a more significant number of sources (a more extensive network) are associated with improved performance, faster promotion, higher compensation and improved job mobility (Shah et al., 2018).

Furthermore, not only does the relationship that the recipient has with the support provider influences how support is received, but also the domain in which the stress takes place has an effect (Cutrona & Russell, 1990). For example, workplace relationships are a valuable source of support resources (Colbert et al., 2016). Prominent sources of support in this domain include organisational support (Eisenberger et al., 1986; Kurtessis et al., 2017; Rhoades & Eisenberger, 2002), organisational climate (F. Luthans et al., 2008), supervisor support (Nahum-Shani et al., 2014; Shoss et al., 2013), colleague, co-worker or peer support (Beehr & Drexler, 1986; McDonald & Westphal, 2011; Van Yperen & Hagedoorn, 2003), subordinate support (Monnot & Beehr, 2014), and team or group support (Parker et al., 2013). Cognisance has also been given to the influence of the support of family and friends (Cassidy et al., 2014; Newman et al., 2018; Scott et al., 2014), and even that of the broader community (Singh et al., 2018). Therefore, if there is a lack of support from one source of support, it can be compensated for by the support provided by other sources (Streeter & Franklin, 1992).

However, the perceived positional status of the source can impact the influence ascribed to its support. Thereby, the supervisor's support could be deemed more effective in the workplace than a co-worker's (Monnot & Beehr, 2014). As such, the power differential between sources would mean their support behaviours (enacted support) would be interpreted differently (Mathieu et al., 2019). This means supervisors (with high organisational power to enforce policies or evaluate performance) would have a different influence than co-workers with less power. On the other hand, a lack of status difference between the support provider and beneficiary can also play a role. For example, support from those considered similar to the recipient could be viewed as ego-threatening and hence have a negative impact (Bamberger, 2009).

Whereas French et al. (2018) differentiated between work sources of support (organisational, supervisor and co-worker) and family sources of support (general family and spouse), this study will only consider those sources of support that fall within the domain and control of the firm: the organisation, supervisors and co-workers.

2.3.5.1.1 Organisational support

Smollan (2017) explains that the organisation is a source of support through its policies, programmes, culture, practices and systems offered to the employee. Perceived organisational support (POS) develops when employees "personify their organisation by

ascribing human-like characteristics to it" (Stinglhamber & Vandenberghe, 2003, p. 252). Drawing on Organisational Support Theory (OST), POS refers to an employee's beliefs of how much an organisation values their contributions, is concerned about their well-being, and supports their socio-emotional needs. This is observed in its provision of resources to aid in managing a demand, performing a role or solving a problem (Eisenberger et al., 1986; Kossek et al., 2011; Rhoades & Eisenberger, 2002). POS creates the expectation that help is available (Scott et al., 2014).

In their meta-analysis, Kurtessis et al. (2017) observe that POS is influenced by how the employee is treated, the quality of the relationship with the organisation, the job conditions and human resource practices. Thus, employees are more likely to engage with an organisation that they feel is treating them in a positive manner (Fuchs & Prouska, 2014).

When employees perceive their organisations as supportive, it triggers a social reciprocity response that can exhibit high dedication and commitment to the organisation (Rhoades & Eisenberger, 2002). For example, an employee with high POS levels that undergo a training intervention might reciprocate by improving work performance because of such training. Even the organisational support climate influences the extent to which co-workers would turn to each other for emotional support (Bamberger, 2009), suggesting a ripple effect.

POS has a positive relationship with affective organisational commitment, job involvement, enhanced self-efficacy, job satisfaction, job self-efficacy, organisation-based self-esteem, work-family balance; and is negatively related to job stress, burnout, withdrawal behaviours and work-family conflict (Kurtessis et al., 2017).

2.3.5.1.2 Supervisor support

Support from a more proximal entity, such as the supervisor or co-worker, has a different influence on the employee than support provided by the organisation (Kottke & Sharafinski, 1988). Shoss et al. (2013) state that a supervisor's role includes direction, evaluation and coaching, which can occur in a manner that is either supportive and empowering, or humiliating, belittling and abusive.

Perceived supervisor support (PSS) refers to the extent to which the employee considers their supervisor to value their contributions and care about their well-being (Eisenberger et al., 2002). It is indicative of the quality of the relationship between the employee and their supervisor (Simosi, 2012), as supervisors are entrusted to manage the performance of employees and maintain such (Rousseau & Aubé, 2010). Considered to be "the degree to which employees perceive that supervisors offer [them] support, encouragement and concern" (Babin, 1996, p. 60), PSS informs the employee's

perception of the organisation's support. This is because the supervisor is regarded as an agent of the organisation (Eisenberger et al., 1986) and is considered to reflect the organisation's views (Simosi, 2012). Notably, POS and PSS were found to be non-redundant constructs (Stinglhamber & Vandenberghe, 2003).

On the other hand, supervisor support behaviours (*enacted supervisor support*, ESS) include "caring about subordinates, valuing their contributions, helping them on work-related issues, and facilitating their skill development" (Rousseau & Aubé, 2010, p. 323).

Despite supervisor support being positively related to several outcomes, such as affective commitment (Rousseau & Aubé, 2010), lower work-family conflict, decreased turnover intentions, and improved job satisfaction (Hammer et al., 2009), anxiety and psychological strain (Beehr et al., 2003), mixed results were observed with learning motivation, self-esteem and freedom (Deelstra et al., 2003; K. H. Ng & Ahmad, 2018). Mayo et al. (2012) summarised that main effects, buffering effects and reverse buffering effects are observed in supervisor support studies.

2.3.5.1.3 Co-worker support

Sloan (2012) claims that those similar to us can support us most effectively in stressful situations. She suggests that the support offered by co-workers can be highly beneficial and have a positive impact on employee well-being and job satisfaction. However, a positive influence on job performance, and a negative effect on job dissatisfaction and psychological strain have also been observed (Beehr et al., 2003; Hämmig, 2017).

This beneficial influence could be due to the greater frequency of contact and status similarity between the employee and their peers (Mathieu et al., 2019). Rousseau and Aubé (2010, p. 324) highlight that "co-workers are employees' colleagues who are at the same level of hierarchy and interact with them on work-related issues". They add that because there is no authority relationship between the employee and their co-worker, the relationship is informal as they engage in similar or complementary tasks, making them particularly valuable in situation-related support. Therefore, support from peers is an effective means of providing support (Smollan, 2017).

Extending the definition of social support to colleagues and co-workers from Eisenberger et al. (2002), *perceived* co-worker support (PCS) is described as the measure to which employees perceive that their colleagues respect their contributions and care about their well-being (Fuchs & Prouska, 2014; Simosi, 2012). Singh et al. (2018, p. 342) state that it occurs when "individuals feel that co-workers are supportive, encouraging, and concerned for fellow employees' well-being". On the other hand,

enacted co-worker support (ECS) refers to the level of assistance, caring, aid and information actually provided by colleagues (Rousseau & Aubé, 2010), and desirable resources like task-directed helping and mentoring received by them (Chiaburu & Harrison, 2008).

The unique influence of co-worker support was noted, where negative communication from co-workers had a greater influence on well-being than that of supervisors or subordinates (Monnot & Beehr, 2014). In addition, co-worker support is valuable in high role-overload situations (Chiu et al., 2015) and shows a more significant buffering effect than supervisor support or family support for depression-related issues (Henderson & Argyle, 1985).

2.3.5.1.4 Conclusion

In this section, workplace sources of support – the organisation, supervisor, and co-worker – were reviewed and defined. These support sources are interrelated, influence each other, and are non-redundant (Kottke & Sharafinski, 1988; Self et al., 2005; Stinglhamber & Vandenberghe, 2003). Employees forge independent but interrelated attachments with each support provider, and each source might influence outcomes separately (Chiu et al., 2015). Furthermore, work sources and nonwork sources of support can act as substitutes (Nielsen et al., 2017).

However, the behaviours of support providers can have a negative or unintended consequence, especially if they are "neglectful or disengaged, over-involved, controlling, or otherwise out of sync with the recipient's needs" (Feeney & Collins, 2015, p. 126).

Effective social support is "often a function of a single source rather than the cumulative effect of a number of sources" (Henderson & Argyle, 1985, p. 237). However, the value ascribed to support resources is different, depending on the support source that provides it. For example, a supervisor who exhibits abusive behaviour by withholding support will have a greater effect on the resources available within their team, as opposed to a co-worker who limits the provision of their support resources. As such, the co-worker will likely bear the brunt of their decisions by not receiving support when they need it, due to the reciprocity principle. The subordinate would not have such recourse available as it could hamper their career prospects and growth opportunities (Hobfoll et al., 2018).

In conclusion, the closer the relationship, the more types of support provided by that source (like emotional, informational, and instrumental support) are available. In other words, close relationships would provide more types of support than casual acquaintances (Gottlieb & Bergen, 2010). This leads to a discussion of the types of support.

2.3.6 Type of support: informational, instrumental, or emotional

The type of support has a unique influence on the outcome considered (Nahum-Shani & Bamberger, 2011; Poortvliet et al., 2015; Singer, 2000). Social support theory (McDonald & Westphal, 2011; Scott et al., 2014; Wills & Cohen, 1985) suggests a typology of:

- *Emotional support* – for example, listening to work concerns, allowing the venting of emotions, expressing confidence that a problem can be resolved or articulating appreciation or encouragement.
- *Instrumental support* – for example, task assistance, flexibility in work schedule, providing financial or material resources, or services to aid in solving a problem.
- *Informational support* – for example, task instruction, specific advice or guidance on effectively addressing a problem or demand.
- *Appraisal support* refers to information about the self – for example, the belief that one has "the ability, means or aptitude to overcome the perceived difficulty" (Scott et al., 2014, p. 1238).
- *Belonging support* – for example, spending time in contact with others to facilitate a positive affective mood, or to distract from a problem as it fulfils needs for affiliation and contact with others (Shakespeare-Finch & Obst, 2011; Wills & Cohen, 1985).

As mentioned earlier, the most prominent types are emotional and instrumental support, representing 'global support measures' (Wills & Cohen, 1985). Their organisational validation in terms of construct definition, operationalisation and nomological network is well-established (King et al., 1995). Appraisal and belonging support are forms of emotional support; and, informational support is considered a form of instrumental support (Shakespeare-Finch & Obst, 2011). In many instances, informational and instrumental support are combined as one construct (for example, Ferri et al., 2018; Searle et al., 2001; Shakespeare-Finch & Obst, 2011). This is likely because both are considered to provide 'problem-solving assistance' (Shah et al., 2018).

However, a strong association between informational and emotional support has been observed (Schöllgen et al., 2011; Wills & Cohen, 1985). Emotional and instrumental support are considered moderately-to-strongly related, as this study finds as well. However, they impact outcomes differently (French et al., 2018; Nahum-Shani & Bamberger, 2011). While instrumental support looks to the context, emotional support is influenced by individual preference (Beehr et al., 2010).

In addition to emotional and informational support, this study would also consider informational support due to its unique influence within and relevance to the organisation, especially on outcomes like learning, development, performance and problem-solving (Lindorff, 2005; Monnot & Beehr, 2014; Shah et al., 2018).

2.3.6.1.1 Emotional support

Emotional support lets people know they are valued, accepted, and cared for. It entails providing sympathy, comfort, listening to problems, motivation or encouragement, and conveying that one's feelings are being considered (Klyver et al., 2018; McDonald & Westphal, 2011; Olsen et al., 2012; Wills & Cohen, 1985).

This type of support can foster positive emotions and coping strategies to alleviate the source of distress and provide psychological resources to lessen strain (S. Cohen & McKay, 1984; French et al., 2018). In the form of venting assistance (where a source of support listens to personal and emotional problems at work), this type of support has been linked to both positive and negative consequences (Shah et al., 2018). For example, Beehr et al. (2010) warn that talking about a problem, can make the stress in a situation be perceived greater than before, and would, therefore, have a detrimental effect. Thus, it has been argued that positive, negative or neutral conversation is a factor of emotional support rather than instrumental or informational support (Beehr et al., 2000). Interestingly, it has also been found that task accuracy is influenced by the recipient's preferences for emotional support. For example, people with low emotional support needs perform better and more accurately when receiving less emotional support and *vice versa* (Searle et al., 2001).

2.3.6.1.2 Instrumental support

Instrumental or tangible support is helping behaviours and direct assistance like providing financial or material (tangible) resources or services to aid in solving a problem or provide tangible resources to lessen strain (Beehr et al., 2000; S. Cohen & McKay, 1984; French et al., 2018; Klyver et al., 2018; Wills & Cohen, 1985). Instrumental support's tangible nature differentiates it from informational support (Olsen et al., 2012).

2.3.6.1.3 Informational support

Informational support is specific advice, guidance or referrals on how to effectively comprehend and address a problem or demand (McDonald & Westphal, 2011; Scott et al., 2014) and can entail "help in defining, understanding, and coping with problematic events" (Wills & Cohen, 1985, p. 313). In other words, it provides the

necessary helpful information to address a problem or make a decision. As stated by Shah, Cross and Levin (2018, p. 413), “people who obtain information and resources from others extend their own ability to execute in organisations”, once again emphasising the critical importance of workplace relationships.

2.3.6.1.4 Conclusion

Whereas emotional support helps the individual cope and affects well-being and health, instrumental support is more beneficial to work-related stressors and strains (Henderson & Argyle, 1985). As mentioned, emotional and instrumental support are independently assessed because they influence outcomes differently (Nahum-Shani & Bamberger, 2011). For example, in a study on work-family conflict, it was found that workplace instrumental support rendered mixed effects, whereas workplace emotional support reduced conflict (Ferri et al., 2018). In the context of training transfer, Ng and Ahmad (2018) argued that practical support (instrumental support) might be more valuable than encouragement (emotional support). Also, work-related information and feedback (informational support) from work sources are beneficial for new employees of an organisation, whereas emotional support could facilitate attachment to the said organisation (T. W. H. Ng & Sorensen, 2008). It was also found that enacted instrumental (tangible) and informational support are often considered less nurturing and more controlling than emotional support (Trobst, 2000).

Instrumental, informational, and emotional support should also be classified by perceptions or behaviours (Jolly et al., 2021). For example, support can be differentiated according to enacted instrumental and enacted emotional support (Chen & Feeley, 2012), or perceived instrumental and perceived emotional support (Weiner & Hannum, 2013).

Whereas emotional support offers resources such as compassion, sympathy, care, understanding, attention, acceptance, and esteem, instrumental support offers knowledge, skills, competency, and expertise. Additionally, it is suggested that emotional support could have a more buffering or mitigating effect (*resource-building).* In contrast, instrumental support can have a more reverse buffering or exacerbating effect *(resource-depleting)* on outcome variables (Mathieu et al., 2019). However, informational support will most likely show resource-building (buffering) effects (Wills & Cohen, 1985) as this form of support is most strongly related to coping strategies (Dunkel-Schetter et al., 1987).

Nonetheless, this study follows the recommendation to not only look at the type of support in isolation, without considering the other constellations (nature and source) that has an effect on the support provided (French et al., 2018; Mathieu et al., 2019).

2.3.7 The relationship between the nature, source and type of support

Not all types and sources of support are equally successful in reducing distress (Thoits, 1982). For example, Henderson and Argyle (1985) hold that different constellations of sources and types of support have different effects on outcomes such as stress and job satisfaction. Also, the meta-analysis of Kossek et al. (2011) highlighted the varying strength of different types of support based on support sources.

Additionally, there is an overlap between the types of support and the response to such (Bamberger, 2009). For example, feedback (informational support) can trigger an affective response, and not only a cognitive one, by – for example – a defensiveness response, which is highly correlated with self-efficacy (Linderbaum & Levy, 2010). Gottlieb and Bergen (2010, p. 512) emphasise that despite sources and types of support being interrelated, the more proximal the relationship, "the greater the correlation among the several types of support, reflecting sentiment override." In other words, great sources of instrumental support might also be great providers of emotional support and *vice versa*. Klyver et al. (2018, p. 715) state that each source "provides uniqueness and diversity to their instrumental support with limited overlap", contributing a broader range of perspectives and information to a problem. They add that this applies to emotional support as well.

Furthermore, when considering the impact of the type of social support, the source plays an important role (Beehr et al., 2003). For example, supervisors are likely more adept at providing emotional and instrumental support than co-workers, and thus support from them is of a higher value to the employee (T. W. H. Ng & Sorensen, 2008). In a study with cancer patients, it was found that emotional support from family members was most beneficial. In contrast, informational support was most valued from sources such as other cancer patients and physicians (Dakof & Taylor, 1990). As such, Thoits (1982) affirms that not all types and sources of support are equally successful in reducing distress.

Lindorff (2005) held that emotional support from nonwork providers is more beneficial to both work and nonwork problems, than work providers of emotional support. However, informational and instrumental support are domain-specific. In other words, such support from work providers is beneficial to work-related stressors, and similarly for nonwork providers and nonwork stressors. She adds that if the stressor is social in nature, emotional support is of greater value. Furthermore, she proposed that support has the most beneficial effect if instrumental support comes from subordinates and informational support (and emotional support for work problems) from supervisors, with the caveat of emotional support from supervisors for work problems as well.

Lincoln (2000) observed that supportive relations could be viewed as positive or negative, illustrating such employing two enacted support situations which cause stress: 1) when the desired type of support comes from the wrong source; or 2) when the desired source of support provides the wrong type of support. In both these instances of source and type incongruence, the support is unhelpful and detrimental to well-being.

As such, whether the recipient is satisfied with the enacted support provided will likely inform its effectiveness and value. This is discussed next.

2.3.8 Satisfaction with social support

As this study focuses on functional measures of social support, satisfaction with social support will be explored in the context of enacted support (support behaviours), because satisfaction is implied in the definition and measurement of perceived support (Barrera, 1986; Gottlieb & Bergen, 2010; I. G. Sarason et al., 1983, 1986).

Some forms of enacted support are usually helpful (like care, concern, interest or affection), whereas others are less effective (like criticising and blaming). Therefore, satisfaction with the enacted support will also be influenced by whether the recipient considers the support to come with strings attached, places some reciprocity burden upon them, hampers their freedom, threatens their self-esteem or triggers other negative feelings (Bolger et al., 2000; Lewis & Rook, 1999; Nadler et al., 1983; Nahum-Shani & Bamberger, 2011; Shumaker & Hill, 1991; P. S. Thompson & Bolino, 2018).

Hence, enacted support is more effective when factors such as appropriateness or other 'satisfaction with support' measures are considered, offering a better indicator of outcomes than enacted support alone (Krause & Hayward, 2014; Melrose et al., 2015). For example, in a study on feedback (informational support), the reaction to, and satisfaction with, the feedback was a greater predictor of work performance than the feedback itself (Keeping & Levy, 2000; Kluger & Denisi, 1996; Mishra & Farooqi, 2013; Rasheed et al., 2015). Interestingly, satisfaction with social support and enacted instrumental support are only slightly related, with enacted emotional support somewhat more so (Barrera, 1986; Hobfoll et al., 1991).

The extent to which the recipient is satisfied with how the enacted support has met their support need, determines whether such support is effective. Melrose et al. (2015) remarked that the strength of the relationship between enacted and perceived support doubled when the need for support was considered. Whether the recipient considers themselves supported depends on both contextual factors and their personal support needs.

As such, the support needs of the recipient are influenced by contextual factors ranging from timing, the recipient's age, gender, personality, the nature of the stressor

or the degree of distress. It is also vulnerable to the provider's view of helpful behaviours. Thus, the effectiveness of enacted social support is a function of trait influences of the recipient (like extraversion) and social influences – informed by traits of the provider and the relationship between the provider and recipient (Lakey et al., 2010; Williamson & O'Hara, 2017). Lakey et al. (2010) ascribe 42% to 46% of the variance in enacted support to trait influences, and 47% to 53% to social influences.

Satisfaction with enacted support considers whether the receiver's support needs have been met (Krause et al., 1989). This highlights the difference between enacted support and the subjective evaluation of enacted support (satisfaction), as the first does not consider the need for support (Barrera, 1986). In addition, as per the matching hypothesis of social support, effective and satisfactory enacted support occur when the type of support matches the support needs of the situation (Cutrona & Russell, 1990; Marigold et al., 2014; Streeter & Franklin, 1992; Uchino, 2009a).

2.3.9 Conclusion

In this section, the social support construct was defined, and the mechanisms by which it influences strains, stressors and other variables were discussed. The dimensions of social support were considered and viewed in terms of its nature (perceptions or behaviours), source (organisation, supervisors, and co-workers) and type (emotional, instrumental, and informational). Finally, satisfaction with enacted social support was highlighted, and its likely influence was noted.

For support to be beneficial or satisfactory, it depends on multiple factors such as alignment between the need and the source of support (Bozo & Guarnaccia, 2010), the type of support (Cutrona & Russell, 1990), and the number of support sources (McIntosh, 1991). However, tailoring social support to the support needs of each situation in order for it to be effective, is essential (Marigold et al., 2014). As Feeney and Collins (2015, p. 126) explain, "the degree to which support behaviour is responsive depends on the type and amount of support given, and the degree to which it is sensitive depends on the manner in which the support is provided". As such, how support is provided is just as important, if not moreso, as whether support is provided.

Thus, these support constellations are viewed as the independent construct of the study. Next, the dependent construct of the study, PsyCap, will be discussed.

2.4 Psychological capital

Over the past two decades, psychological capital (PsyCap) has been explored as a valuable psychological resource for the organisation (Youssef & Luthans, 2007) that

can affect competitive advantage (F. Luthans, Youssef, et al., 2007), like self-rated, supervisor-rated and objectively-rated performance (F. Luthans, Avolio, et al., 2007; Walumbwa et al., 2010), improving citizenship behaviours and decreasing deviant behaviours (Norman et al., 2010), attitudinal benefits like improving job satisfaction and organisational commitment, and decreasing turnover intentions and work stress (Avey et al., 2009, 2010; Larson & Luthans, 2006) as well as well-being (Youssef-Morgan & Luthans, 2015). As a resource, PsyCap operates through mediating mechanisms to aid in converting its benefits into desirable outcomes (Cenciotti et al., 2017; Lockett & Wild, 2014; S. Thompson & Wright, 2005).

PsyCap, the derivative construct of Positive Organisational Behaviour (POB), finds its roots in positive psychology – which aims to make lives more productive, worthwhile and aid people in actualising their potential as well as "unlocking capacities for meaning creation, relationship transformation, positive emotion cultivation and high-quality connections" (Fineman, 2006; Seligman & Csikszentmihalyi, 2000). POB emphasises "positively-oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement" (Avey et al., 2010, p. 431). It focuses on state-like (versus trait-like) variables that are malleable and open to development through workplace interventions or management practices (F. Luthans & Youssef, 2004).

2.4.1 The nature of PsyCap

As set out earlier, PsyCap is defined as "an individual's positive psychological state of development and is characterised by: (1) having confidence (**self-efficacy**) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (**optimism**) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (**hope**) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (**resiliency**) to attain success" (F. Luthans, Youssef, et al., 2007). Howard (2017, p. 108) explains that PsyCap reflects "appraisals of the self in regards to circumstances and the perceived likelihood of success" as influenced by its underlying resources (dimensions, capacities, constituents, lower-order constructs). Said differently, PsyCap encapsulates the core of future motivation and perceptions of ability that determine how individual workers engage with their professions' limits and possibilities (Grover et al., 2018).

As such, PsyCap is considered a higher-order, latent construct represented by the shared variance of its closely related lower-order constructs of hope, efficacy, resilience, and optimism. Each of these capacities uniquely contributes to PsyCap due

to differences in their responses to environmental influences, adaptational mechanisms and goal achievement processes (Avey et al., 2010). Causality flows from higher-order constructs to lower-order constructs. Resultantly, PsyCap's prediction of performance outcomes is better than that of the individual constituents that underlie it (F. Luthans, Avolio, et al., 2007).

Howard (2017, p. 109) explains that for a higher-order or core (multidimensional) construct to be formed, "distinct but related constructs must have a common theoretically supported effect that links them together". Therefore, such lower-order constructs must be strongly related (Dawkins et al., 2015). Stajkovic (2006) refers to such as the underlying core construct of confidence that undergirds the four resources or capacities.

This core confidence boosts efforts and improves performance by enabling motivation potential birthed from an individual's skills, goals, and desires. It inspires the setting of ambitious goals and developing the required skills to achieve them (Rego et al., 2017). PsyCap is characterised by an internalised sense of agency, control, motivation, intentionality, and perseverance. Agency refers to self-directed behaviour and the ability to "influence intentionally one's functioning and the course of environmental events" (Bandura, 2008, p. 167). It continuously evaluates the chances of success and perceives them to be within reach. Thereby, a positive outlook is promoted, informing the selection of challenging goals and investing energy and resources in pursuing such goals, despite obstacles and setbacks (Avey et al., 2010; Youssef-Morgan, 2014; Youssef-Morgan & Luthans, 2015).

Hobfoll (2011, 2014) explains PsyCap as a 'resource caravan' referring to psychological resources that "travel together and interact synergistically to produce differentiated manifestations over time and across contexts" (F. Luthans & Youssef-Morgan, 2017, p. 343). Therefore, a person high in PsyCap has more resources to draw upon to overcome hardship, pursue goals, solve problems, and perform better – than someone low in PsyCap (Newman et al., 2014). How PsyCap differs from other 'capital constructs' like human capital, social capital, and financial capital are discussed next.

2.4.2 Differentiating capitals and understanding resources

Human resources viewed as capital investment for competitive advantage have informed the development of several 'capital' constructs. Whereas human capital refers to 'what you know' (like knowledge, skills, abilities or experience) and social capital entails 'who you know' (like your network of relationships), PsyCap is enamoured with 'who you are' and 'who you are becoming' or developing into (Avey et al., 2009; F. Luthans et al., 2006, 2008; F. Luthans & Youssef, 2007).

Said differently, PsyCap refers to “who you are (the psychological self) and who you can become (the potential self)” (F. Luthans, 2012, p. 2) and is, therefore, fascinated with “ongoing psychological growth” (Verleysen et al., 2015, p. 10) in the process of “developing one’s actual self to become the possible self” (F. Luthans et al., 2006). This juxtaposes economic capital, which focuses on ‘what you have’ (like money or assets). How these four types of capital (resources) relate is illustrated in Figure 6.

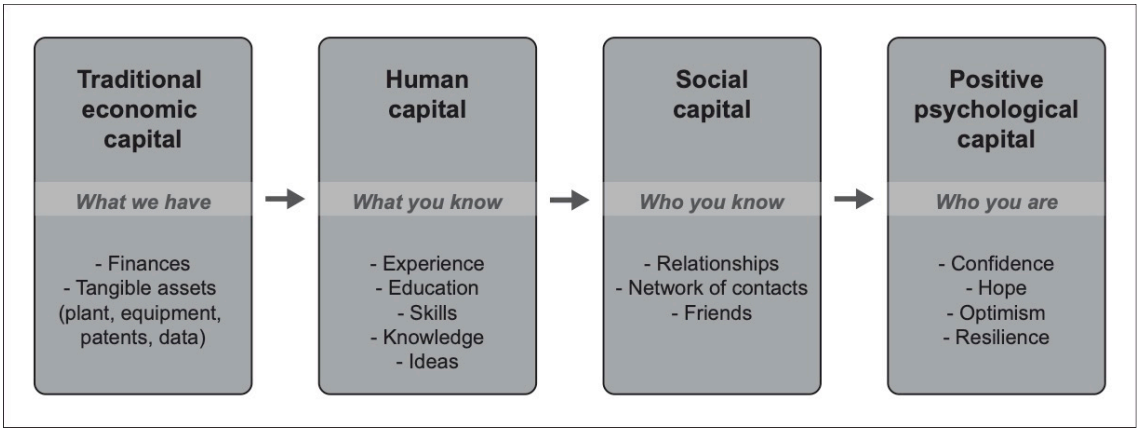

Figure 6: Expanding capital for competitive advantage (F. Luthans et al., 2004, p. 46)

For a resource to become a competitive advantage, it has to be difficult for competitors to duplicate, thus becoming a barrier to entry. It also needs a long-term orientation, be cumulative in nature (countering inertia), interconnected (for synergistic effect), and renewable (replenishable for sustainability) (F. Luthans & Youssef, 2004). PsyCap meets all these criteria, which further highlights its benefit to the organisation.

In the next section, the four resources that undergird PsyCap are reviewed. These resources met the aforementioned qualifying criteria of POB theory discussed earlier (Section 1.1.2) – by being measurable, open to development, state-like in nature and being predictive of performance (F. Luthans, 2002a; F. Luthans et al., 2015; F. Luthans, Youssef, et al., 2007; Youssef & Luthans, 2007).

2.4.2.1 Hope

Building on the work of Snyder et al. (1996), Luthans and Youssef (2004) describe hope as being driven to achieve one’s goals through a sense of agency and offering determination and willpower to invest energy to achieve them. Hope is founded on (1) identifying realistic goals; (2) motivational energy and willpower (agency); and the (3) pathways (waypower) to achieve such (F. Luthans et al., 2006; F. Luthans, Avolio, et al., 2007; Verleysen et al., 2015). It has been shown that those with higher levels of hope

exhibit greater goal-directed energy and, therefore, can develop alternate plans (pathways), strategies and contingencies to achieve goals, should obstructions arise or barriers be encountered (Avey et al., 2008; B. C. Luthans et al., 2014). Frederickson (2013, p. 4) says, “hope creates the urge to draw on one’s own capabilities and inventiveness and turn things around”.

Benefits of heightened levels of hope include positive relationships to achievement, organisational success, financial performance, job satisfaction (F. Luthans, Avolio, et al., 2007; Norman et al., 2010), autonomy, resourcefulness, independent thinking (F. Luthans, Youssef, et al., 2007), and an internalised locus of control (attributing success to internal factors) (F. Luthans et al., 2015).

Hope can be developed by strategies such as goal-setting and stretch goals, bottom-up decision-making, reward systems and strategic alignment. The waypower dimension of hope can be stimulated by future-oriented thinking like scenario-planning and visualisation (Avey et al., 2009; Dello Russo & Stoykova, 2015; F. Luthans et al., 2004)

Of particular interest to this study is the earlier finding that managerial (supervisor) support can develop the hope capacity of the employee (F. Luthans et al., 2015; F. Luthans, Youssef, et al., 2007). More specifically, the agency (willpower) dimension of hope is nurtured when supportive organisational climates and initiatives to relax managerial control (hence, increased autonomy) offer employees the opportunity to develop both themselves and their organisation (F. Luthans & Youssef, 2004; Verleysen et al., 2015).

2.4.2.2 Efficacy

Rooted in the social cognitive theory of Bandura (2012), self-efficacy refers to an “individual’s conviction (or confidence) about his or her abilities to mobilise the motivation, cognitive resources and courses of action needed to successfully execute a specific task within a given context” (Stajkovic & Luthans, 1998, p. 66). Despite Bandura’s sparse use of “confidence”, positive psychologists – as well as the business domain – use ‘efficacy’ and ‘confidence’ interchangeably (F. Luthans et al., 2015).

Higher self-efficacy is exhibited by a stronger belief in one’s ability to control outcomes and address complex challenges. It has been shown to have a significantly positive relationship with work-related performance like creativity, learning, decision-making, entrepreneurship, and leadership (F. Luthans & Youssef, 2007; Stajkovic & Luthans, 1998). Conversely, people low in self-efficacy view efforts to overcome challenges as futile, and as such, it is related to negative stress symptoms (Avey et al., 2009; Heled et al., 2016).

State-like self-efficacy is domain-specific and malleable, whereas general efficacy is trait-like and less open to change (F. Luthans, 2002a; Reichard et al., 2014; Saks & Gruman, 2011; Youssef-Morgan & Luthans, 2013b). Thus, following the trend in PsyCap literature, efficacy or confidence would refer to self-efficacy, unless specified as general or trait-efficacy.

To develop efficacy, four significant sources identified include: 1) incremental task mastery or successful experiences; 2) learning by observing others who exemplify efficacy (vicarious learning or modelling); 3) emotional or physiological arousal (increasing positive emotions) in the task performance context; and 4) support from others and social persuasion, like feedback (informational support) or encouragement (emotional support) (Bandura, 2008, 2012; B. C. Luthans et al., 2014; F. Luthans et al., 2015; F. Luthans & Frey, 2018; F. Luthans & Youssef, 2007; Reichard et al., 2014). This latter source of development is of particular relevance to this study. Furthermore, perceptions that social support is available increase confidence (Gottlieb & Bergen, 2010); and perceived instrumental support, which aids in task mastery, is positively related to efficacy and confidence (Dierdorff & Ellington, 2012; Poortvliet et al., 2015).

2.4.2.3 Resilience

Informed by the work of Masten (2001), Luthans (2002b, p. 702) describes resilience as "the positive psychological capacity to rebound, to 'bounce back' from adversity, uncertainty, conflict, failure or even positive change, progress and increased responsibility". Other authors explain resilience as "an individual's adaptive response to adverse events and stems from the interaction with the environment and the processes that either promote well-being or protect against risk factors" (Dello Russo & Stoykova, 2015, p. 331), and relates it to "post-traumatic growth" (Firestone & Anngela-Cole, 2016). Thus, resilience has been theoretically positioned as an outcome of the other three PsyCap resources: hope, efficacy, and optimism (Harms et al., 2018).

Said differently, resilience is an adaptive response to overcome adversities by deploying psychological resources (F. Luthans & Youssef-Morgan, 2017). Luthans and Youssef (2004, p. 154) describe the components of resilience as "(1) a staunch acceptance of reality; (2) a deep belief, often reinforced by strongly held values, that life is meaningful; and, (3) an uncanny ability to improvise and adapt to significant change". As such, its reactive nature is activated once challenges or obstacles are encountered (Youssef-Morgan & Luthans, 2015). Furthermore, a positive relationship between resilience and job satisfaction, commitment, and happiness has been observed (Larson & Luthans, 2006; Norman et al., 2010; Youssef & Luthans, 2007).

Masten (2001) suggests three approaches to developing resilience: 1) Risk-focussed approaches are aimed at reducing risk that can lead to undesired outcomes during challenges (like destructive experiences and stress); 2) Process-focussed strategies (like planning, creativity or learning) emphasise the systemic conditions to respond either reactively or proactively to challenges in order to pursue a favourable outcome; and 3) Asset-focussed strategies which highlight actions that build resources and strengths (like competencies, initiative, social capital and social support, expertise, interpersonal relationships, positive emotions and the like) to improve the chances of success in response to adversity. (Harms et al., 2018; F. Luthans et al., 2010; F. Luthans & Frey, 2018; F. Luthans & Youssef, 2004; Reichard et al., 2014; Saks & Gruman, 2011; Verleysen et al., 2015).

In other words, social support as an aid to develop resilience is considered an asset-focused strategy. Furthermore, greater perceived support has been related to an individual's capacity to deal with adversity and setbacks (Klyver et al., 2018). Also, significant relationships between perceived instrumental support and resilience have been observed (Karademas, 2006).

2.4.2.4 Optimism

Drawing on positive psychology (Seligman & Csikszentmihalyi, 2000), optimism refers to "an individual's expectancy of positive outcomes" (Newman et al., 2014, p. 122). It entails a "positive explanatory style that attributes positive events to internal, permanent, and pervasive causes, and negative events to external, temporary, and situation-specific ones" (F. Luthans & Youssef, 2004, p. 153). It expects that good things will happen, believes that an active role must be played to achieve such outcomes, and that obstacles and challenges can be overcome (Dello Russo & Stoykova, 2015). The positive expectations and explanatory or attributionary style that optimism requires, is interpreted along dimensions of permanence (negative events are temporary), and pervasiveness (limited to a specific situation). For example, pessimists tend to interpret negative events as their fault, permanent, enduring and generalised to all situations, whereas optimists will attribute failures to temporary and unique external factors (Cascio & Luthans, 2014; Heled et al., 2016).

Optimism is related to positive performance evaluations, job satisfaction and work happiness (Youssef & Luthans, 2007), and higher work-related performance (Avey et al., 2011). It has also been linked to improved stress resistance, well-being, goal-directed action (Hobfoll, 2002), an improved ability to handle ambiguity, risk-taking behaviours, learning (Reichard et al., 2014), employee retention (Seligman & Schulman, 1986), and sales performance (Corr & Gray, 1996).

To develop optimism, Schneider (2001) suggests a process that includes reframing past events leniently, gratitude for the present and the seeking of opportunities as they relate to the future. In addition, nondirective enacted instrumental social support is positively related to optimism (Harber et al., 2005). However, due to its ability to change perceptions around the external world, enacted and perceived emotional support have also developed optimism (Karademas, 2006; Klyver et al., 2018).

2.4.3 Conclusion

Dawkins et al. (2013, p. 350) explain that "PsyCap arguably has a synergistic effect, whereby the whole may be greater than the sum of its parts". In other words, its constituent resources synergise to develop favourable goal striving and achievement (Wernsing, 2014), by "working in concert and compensating for one another to increase the chances of future success" (Youssef-Morgan & Luthans, 2013a, p. 754). Thereby, concerns around too high levels of these resources – such as false hope, overconfidence, excessive hardiness and unrealistic optimism – are kept in check by the undergirding mechanisms associated with PsyCap (Youssef-Morgan & Luthans, 2013a).

In other words, personal psychological resources such as efficacy, hope, optimism, and resilience that interact synergistically can constitute a higher-order resource caravan (PsyCap), which manifests differently depending on the time or context. As such, these resources could arguably also be acquired, maintained, or fostered to achieve successful performance outcomes (Hobfoll, 2002, 2014; F. Luthans & Youssef-Morgan, 2017; Peterson et al., 2011; Walumbwa et al., 2010; Youssef-Morgan, 2014).

2.5 The relationship between social support and PsyCap

Social support plays a role in the development of each of the constituent resources of PsyCap. *Efficacy* can be built through feedback, support from others, encouragement and social persuasion – where a person is assured to believe in themselves and inspired to persevere during challenging times (Bandura, 2008, 2012; F. Luthans & Youssef, 2007). Considering her asset-focused strategies, Masten (2001) highlights that interpersonal relationships and social support are valuable resources for maintaining and developing *resilience*. Moreover, managerial support has been suggested as providing the resources to develop *hope* in employees (F. Luthans et al., 2015; F. Luthans, Youssef, et al., 2007); and an empowering organisational climate nurtures the willpower (agency) dimension of *hope*, enabling employees to develop themselves to the benefit of the organisation (F. Luthans & Youssef, 2004; Verleysen et

al., 2015). Finally, apart from the positive expectancies of *optimism* – mainly due to its explanatory attribution style – being formed by others and forces outside the self (F. Luthans, 2002b), certain types of enacted instrumental social support are positively related to optimism (Harber et al., 2005). As such, it makes sense that the encouragement, guidance or help received from the organisation and, in particular, workplace relationships through social support, should influence the employee's PsyCap (F. Luthans, Avolio, et al., 2007; Pitichat et al., 2018). In Chapter 3, the relationships between the constructs introduced are expanded upon and hypothesised in detail.

2.6 The scope of the research

To direct the focus in investigating the relationship between these multidimensional constructs, some important boundary decisions had to be made. This study draws on the framework proposed by nascent literature (French et al., 2018; Jolly et al., 2021) by taking into account the nature, source and type of support. However, it extends this framework by including satisfaction with support, particularly as it considers the effectiveness of enacted support (Krause & Hayward, 2014; Melrose et al., 2015).

This means that the following extended beyond the scope of this study:

- The study does not consider characteristics of the support event, apart from the enacted support provided. Thus, contextual influences, the nature of the problem or need, the nature of the relationship between the provider and recipient and the like are not considered (Asgari, 2016; Cutrona & Russell, 1990; Lakey et al., 2010; Marigold et al., 2014; Williamson & O'Hara, 2017). Furthermore, it also did not take into consideration the credibility of the source of support, and whether such is considered as expertise or even trustworthy (Zingoni, 2017). Additionally, it did not control for the qualitative attributes of the support – albeit positive or negative. For example, with regards to informational support, previous literature has indicated that feedback (a form of informational support) can be deemed constructive or destructive and can, therefore, have beneficial or detrimental effects (Sommer & Kulkarni, 2012).
- The recipient's support preferences were not taken into account – whether they have high or low support needs, the personality characteristics influential upon that or affinity towards some types of support (Lakey & Cohen, 2007; Searle et al., 2001; Veenstra et al., 2011).
- Additionally, the study also did not take into consideration whether the support received was reactive (help in response to a beneficiary's support

request), or proactive (help provided without a support request). It was found that proactive and reactive support, trigger different processes (cognitive or affective) but could still elicit favourable results (Bamberger, 2009; Bolger & Amarel, 2007; Uchino, 2009a; Zhan et al., 2021).

- The sources of support were limited to those found within the workplace, namely supervisors and co-workers. However, other workplace relationships that fell outside the scope of the study include friends at work (Henderson & Argyle, 1985), subordinates (Monnot & Beehr, 2014) or teams (Becker et al., 2018; Bishop et al., 2000; Pearce & Herbik, 2004).
- Finally, the study took the viewpoint of the support recipient or the beneficiary of social support – and not that of the actor, source, or provider of social support. As such, the employee's experience of receiving enacted social support or being the beneficiary of social support behaviours are of interest, and not the processes associated with providing such support. In other words, the unit of analysis will be the support recipient or beneficiary.

In summary, the study does not investigate the support situation or the relationship between these support situations or the dyadic relationships such occurs in – as would have been expected from a within-subjects or within-person study (Level 1-analysis). Instead, this study takes a between-person approach to observe how recipients evaluate enacted support behaviours from different constellations and how such relates to PsyCap (Level 2-analysis).

2.7 Conclusion of chapter

In and of itself, resources are neutral. They are neither positive nor negative and are influenced by the value ascribed to them based on the context they occur in. This value is influenced by how much it helps or deters from goal achievement – whether the goal relates to alleviating stress (resource conservation), or growing and developing (resource investment). For example, enacted informational support (like advice, guidance, or coaching) can be either positive (skills development, problem-solving or competency improvement) or negative (challenging autonomy, suggesting incompetence, depleting resilience, or decreasing confidence).

Because social support is a complex and multidimensional resource, this study aims to better understand how it relates to PsyCap – and whether addressing salient relationships between these constructs can be honed to the benefit of the organisation. As only perceived social support measures have thus far been investigated with PsyCap

and indicated a positive influence, this study investigates how enacted support relates to this desirable resource within the organisation.

Social support in the workplace helps employees feel as if their contributions are valued, that they are cared for, and that they have access to help should they need it. It is a valuable contextual resource that the organisation can deploy to build up other valuable psychological resources (like PsyCap) within their employees, or to buffer during trying and challenging times. Higher PsyCap could influence social dynamics in the organisation as employees approach work – and the work environment – with greater positive expectancies and hunger for opportunities (optimism), having the willpower and waypower to pursue such opportunities (hope), with increased and realistic self-confidence that it is achievable (efficacy), as well as bouncing-back should disappointments, setbacks or challenges arise (resilience).

Therefore, this study takes a broader view of social support by investigating the influence of different social support constellations on PsyCap, previously not yet examined. This would aid the organisation in channelling its valuable resources to such, which would most benefit PsyCap development.

In the following chapter, the literature review extends to hypothesise the relationship between enacted social support and PsyCap by means of mechanisms informed by COR theory (resource-building, resource-depletion, and gain/loss cycles). Finally, how perceived support can fit into that dynamic is also proposed.

3 Literature review (Part B): Hypotheses development

3.1 Introduction

The effect of enacted social support on the PsyCap of employees could be either developmental (resource-building) or deteriorating (resource-depleting) in nature. Previous contradictory findings on the influence of social support on outcomes, necessitate an approach that would integrate mixed observations and provide an improved understanding of this meta-construct (Anseel & Lievens, 2007; Armstrong et al., 2001; K. Choi & Cho, 2010).

As such, a '**competing hypotheses'**-approach was undertaken. As mentioned earlier (Section 1.1.5), this approach is recommended where – based on previous knowledge – more than one viable explanation (in this case, whether resource-building or resource-depleting mechanisms) can be given for how constructs relate. Competing hypotheses test both potential explanations at the same time. Hence, this approach increases the researcher's objectivity because no presupposed expectation exists regarding which hypothesis will be supported (Anseel & Lievens, 2007; Armstrong et al., 2001; K. Choi & Cho, 2010). Furthermore, this approach has been recommended where the resource-building and -depleting processes associated with COR theory are investigated (Halbesleben et al., 2014; Koopman et al., 2014). Hence, it offers the opportunity to improve understanding around which mechanisms (resource-building or resource-depleting) are at play between the various dimensions of the constructs and resources.

3.2 Developing the model

Informed by the research gaps highlighted, and the aims of the study in the first chapter, some characteristics of the key construct – as discussed in the preceding descriptive chapter of the literature review – were taken into account concerning the research gaps identified and the resultant hypotheses development that is to follow.

- **PsyCap** is considered a higher-order, latent construct represented by the shared variance of its closely related lower-order constructs (hope, efficacy, resilience, and optimism). Causality flows from higher-order constructs to lower-order constructs. Resultantly, PsyCap's prediction of performance outcomes is better than that of the individual constituents that underlie it (Avey et al., 2010; F. Luthans, Avolio, et al., 2007). Therefore, only the higher-order construct (*PsyCap*), not its underlying resources of hope, optimism, resilience, and efficacy, is considered for the hypotheses.

- Social support is influenced by the relationship it is nested in (Cutrona & Russell, 1990; Haber et al., 2007). Lakey (2010) confirms that the effectiveness of a supportive relationship depends on the match between support provider and recipient. Therefore, the **source of support** frames the enacted support behaviours hypothesised. In other words, *enacted supervisor support* or *enacted co-worker support* is considered.
- There are concerns around combining all types of support into a single measure (for example, one measure to include emotional and instrumental support), because frequently such only reflects the buffering effect (resource-building) of social support, and reverse buffering (resource-depleting) observations are missed (Fenlason & Beehr, 1994; Kickul et al., 2001; Wills & Cohen, 1985). For this reason, the **type of support**, as framed by the source of support, is considered. This means that *enacted instrumental support*, *enacted informational support* and *enacted emotional support* are considered in the hypotheses, as nested within the support source.
- Krause and Hayward (2014) argued that **satisfaction with enacted support** is a better indicator of positive outcomes than considering enacted support alone. However, although satisfaction might be considered a better predictor, it is not a replacement. There are distinct movements at play that cannot be observed by looking at satisfaction alone. In other words, it is a related but distinct aspect. Furthermore, this construct has not been tested expansively in the literature, and is therefore treated separately to investigate its impact. Therefore, framed within the source of support, this has also been considered. Therefore, *satisfaction with enacted supervisor support* and *satisfaction with enacted co-worker support* are considered.
- The relationship between **perceived support** and **enacted support** is complicated and different perspectives hold opposing views as to how they should relate. This study aims to investigate how PsyCap relates to both of these constructs. Therefore*, perceived support is* also taken into account for this study, and comprises a composite of the measurements of perceived organisational support (POS), perceived supervisor support (PSS) and perceived co-worker support (PCS).

3.3 Theoretical mechanisms

As articulated earlier, COR theory is used to hypothesise the relationships between the various resources in this study (see Section 2.2). This view holds that

individuals are motivated to either protect and conserve their resources during times of stress, or to build and invest their resources for future times of need, or towards their own growth and development (Feeney & Collins, 2015).

Bono and colleagues (2013) observed a cumulative effect on resources when investigated across time, highlighting that certain events could be deemed resource-building or resource-depleting in nature. As such, environmental conditions (like social support) can build resources leading to positive outcomes, or deplete or threaten resources, increasing stress and leading to negative outcomes. Their research observed that negative events (like criticism or negative feedback/informational support) and positive events (like praise, helpful information, or socialization) have independent effects on perceived stress and mental health in the workplace. These resource-building and resource-depleting mechanisms were also used in another study to explain the impact of organisational citizenship behaviours on well-being within the workplace (Koopman et al., 2014).

Taking both the resource-building and resource-depletion mechanisms into consideration – as making use of competing hypotheses allows for, the study comprehensively tests COR theory by not only focusing on one side of these two-pronged effects – as encouraged by previous studies (Bono et al., 2013; Halbesleben et al., 2014; Koopman et al., 2014)

Resources (like social support or PsyCap), in and of themselves, are neutral. It is only once the value ascribed to such resources is taken into account, incorporating the extent to which it aids goal achievement, that the resource is deemed either positive or negative. As such, events like receiving enacted social support can both generate (build) or consume (deplete) resources. When generating resources, Hobfoll (1989) suggests that stress would decrease by providing comfort and serenity; and consuming resources would exacerbate stressful situations and hence reduce well-being.

As such, social support has been associated with both resource-building and resource-depleting mechanisms (Koopman et al., 2014). Therefore, this study would argue that in conditions or constellations where social support generates resources, PsyCap would improve; whereas in situations where social support depletes resources, PsyCap would decrease. To that end, how the contextual resource of social support relates to the psychological resource caravan, PsyCap (comprised of hope, efficacy, resilience and optimism resources), are hypothesised within the frame of three mechanisms: resource-building, resource-depleting and gain/loss spirals.

Thereby, this study aims to advance COR theory by identifying boundary conditions under which resource generation and depleting effects can be observed in the relationship between social support and PsyCap.

Working from the premise that resources are neutral by nature, and only gains value (whether positive or negative) when it aids or deters from goal attainment, conditions under which social support can be complementary or contradictory are framed within a resource-building or resource-depleting mechanism.

Related to COR's primacy of loss principle, poor allocation of finite resources can have detrimental effects. For example, an individual working hard towards a stressful deadline, will have limited resources. If such is deployed to request support and resources are provided to aid goal accomplishment, resources might be replenished. On the other hand, if support resources are provided by someone unfamiliar with the work, resources would need to be spent to bring such a person up to date, and hence more resources might be spent than are replenished.

As such, not only is the amount of resources important, but also how it is used to best fit the environment. As resources are valued to the extent that it enables goal achievement, and goal achievement improves well-being – any resources that are related to goal attainment and well-being will also expand. To the extent that it hinders or threatens goal achievement, such resources would deplete.

3.3.1 Resource-building mechanism

Social support can generate resources in instances where the recipient experiences positive affect (Bono et al., 2013; Lakey & Cohen, 2007; Sommer & Kulkarni, 2012; Tadić et al., 2015), contribute to efficiency (Grant & Mayer, 2009; Grant & Patil, 2012; P.M. Podsakoff et al., 2000) and intrinsic motivation (Van Yperen & Hagedoorn, 2003), improved engagement (Peng et al., 2021; Uy et al., 2017; Zhan et al., 2021), an improvement in confidence or skills (Feeney & Collins, 2015), a decrease in stress (Kim et al., 2008), the fulfilment of relatedness needs (Bono et al., 2013; Van Yperen & Hagedoorn, 2003) and, thriving and well-being (Feeney & Collins, 2015).

Regarding **PsyCap**, several antecedents have been identified that would build this desirable psychological resource. These include positive affect (Avey, Wernsing, et al., 2008; Siu et al., 2015), self-esteem, empowering leadership or supervisory style (Avey, 2014), positive team dynamics (Dawkins et al., 2015), job feedback, skill variety and job autonomy (Sameer et al., 2019), employee engagement (De Waal & Pienaar, 2013), improved well-being (Firestone & Anngela-Cole, 2016), and competence needs satisfaction (Verleysen et al., 2015). Additionally, PsyCap training interventions (informational support) are also a means of developing this psychological resource (Dello Russo & Stoykova, 2015; Lupșa et al., 2020)

Furthermore, because PsyCap is a latent or higher-order construct, any driver of its underlying resources (hope, optimism, resilience, and efficacy) will also have a

developmental effect. Goal-setting and stretch goals, empowered decision-making, scenario-planning (Avey et al., 2009; Dello Russo & Stoykova, 2015; F. Luthans, Luthans, et al., 2004), supportive organisational climates and initiatives to relax managerial control (hence, increased autonomy) (F. Luthans & Youssef, 2004) all aid in the development of **hope**. **Efficacy** is developed through task mastery, past success, role models, positive affect related to successful task performance, feedback and encouragement from others (Bandura, 2008, 2012; B. C. Luthans et al., 2014; F. Luthans et al., 2015; F. Luthans & Frey, 2018; F. Luthans & Youssef, 2007; Reichard et al., 2014). Stress management, risk-reduction strategies, learning initiatives, developing competencies and skills, developing expertise, positive emotions and interpersonal relationships all aid in building **resilience** (Harms et al., 2018; F. Luthans et al., 2010; F. Luthans & Frey, 2018; F. Luthans & Youssef, 2004; Reichard et al., 2014; Saks & Gruman, 2011; Verleysen et al., 2015). Finally, **optimism** resources are developed by positive performance evaluations, job satisfaction and work happiness (Youssef & Luthans, 2007), and higher work-related performance (Avey, Reichard, et al., 2011). Specifically, optimism is also developed by nondirective enacted instrumental social support (Harber et al., 2005) and enacted emotional support (Klyver et al., 2018).

Taken together, certain themes emerge. Arguably, social support that activates a resource-building mechanism will grow PsyCap. They include social support that:

3.3.1.1 Inspires motivation and developmental capacity.

Social support can trigger intrinsic motivation (Van Yperen & Hagedoorn, 2003). Notably, a key characteristic of PsyCap is the motivational propensity embedded in several of its underlying resources. As such, the intentional, agentic behaviour towards successful goal achievement and improved performance is indicative of PsyCap (Avey, Reichard, et al., 2011). As such, PsyCap has been used to indicate positivity, developmental mindset and motivation within organisational literature (Avey, Avolio, et al., 2011; Pitichat et al., 2018; Vogelgesang et al., 2014). Therefore, social support that motivates and stimulates development will develop PsyCap. Also, social support that is empowering, as opposed to being abusive and bullying, will develop PsyCap (Avey, 2014; Bolger et al., 2000; Bolger & Amarel, 2007).

3.3.1.2 Improves competence and performance

Social support, particularly through instrumental support (tangible help or task modelling) or informational support (empowerment, coaching, training or feedback), will lead to an improvement in confidence or skills (Feeney & Collins, 2015). Such

improvement will also contribute to heightened efficiency and resultant better performance (Grant & Mayer, 2009; Grant & Patil, 2012; P.M. Podsakoff et al., 2000). An increase in confidence (efficacy) – a core constituent resource of PsyCap – will develop PsyCap. As such, any support provided that is empowering, develops competence, training, promotes learning or improves the chances of success will grow PsyCap.

3.3.1.3 Develops positive affect

Social support can create positive affect (Bono et al., 2013; Lakey & Cohen, 2007; Sommer & Kulkarni, 2012; Tadić et al., 2015). Positive affect drives PsyCap (Avey, Wernsing, et al., 2008; Siu et al., 2015). Furthermore, it develops efficacy, builds resilience and promotes optimism (Bandura, 2012; Harms et al., 2018; F. Luthans & Frey, 2018; Reichard et al., 2014; Youssef & Luthans, 2007).

3.3.1.4 Decreases stress and promotes well-being

Social support that decreases stress (Kim et al., 2008) and promotes well-being (Feeney & Collins, 2015), will also develop PsyCap (Firestone & Anngela-Cole, 2016; Rabenu et al., 2017; Siu et al., 2015). Additionally, PsyCap is also developed through supportive organisational climates (F. Luthans & Youssef, 2004). Stress management and risk-reduction strategies also aid in building resilience (Masten, 2001).

3.3.1.5 Builds engagement, communication, and trust

Resource-building social support can improve employee engagement (Peng et al., 2021; Uy et al., 2017; Zhan et al., 2021) and fulfil relatedness needs, like communication and trust (Bono et al., 2013; Van Yperen & Hagedoorn, 2003). As such, employee engagement is a driver of PsyCap (De Waal & Pienaar, 2013), as well as positive team dynamics like communication (Dawkins et al., 2015).

Additionally, if the support preferences and needs of the recipient are honoured, enacted support would be considered favourable – the above processes can also be activated. Hence, social support behaviours that perform any of these functions, would trigger the resource-building mechanism that will develop PsyCap. However, the objective nature and content of the support transaction fall outside the scope of this study. Nonetheless, these themes inform what emotional, instrumental, or informational support can look like for it to have a developmental effect on PsyCap. Despite resources being neutral, these five categories illustrate when the resource-building mechanism can

be activated. Said differently, whenever the social support resources provided promote goal achievement, the PsyCap resources will develop.

3.3.2 Resource-depleting

Social support depletes resources when it contributes stress (Beehr et al., 2000, 2003; Kaufmann & Beehr, 1986; Nahum-Shani & Bamberger, 2011) and burnout (Deelstra et al., 2003; Gibson et al., 2009; Hämmig, 2017), decreases proactive work behaviours like taking initiative (Burnett et al., 2015) and satisfaction (Ducharme & Martin, 2000; Riggle et al., 2009), increases quantitative workload or underutilises skills (Kaufmann & Beehr, 1986), creates role-conflict (Mayo et al., 2012), is imposed, controlling, intrusive, unsought for, or creates interference (Beehr et al., 2010; Deelstra et al., 2003; Lewis & Rook, 1999; Shumaker & Hill, 1991; Weiner & Hannum, 2013), implies inefficacy (Marigold et al., 2014), ego-threatening or esteem-diminishing (Bamberger, 2009; Bolger et al., 2000), develops feelings of insecurity, threatens autonomy, makes the recipient feel incompetent (Beehr et al., 2010; Marigold et al., 2014), creates a reciprocity burden (Nahum-Shani & Bamberger, 2011), and is mistimed or exceeds what is required (Zee et al., 2018). Finally, support is unsuccessful if it induces feelings of shame, guilt, or obligation, makes the recipient feel burdened, minimizes the recipient's issue, assigns blame, prevents independence, or conveys a sense of conditional acceptance (Feeney & Collins, 2015). A previous attempt to categorise negative reactions to enacted support along themes like reciprocity burden, autonomy threats, motives of the provider, and incompetence has also been attempted (J. Fisher et al., 1982).

Several conditions can lead to a depletion in **PsyCap**. These include an increase in task complexity, threats to task complexity and leadership style (Avey, 2014), negative emotions (Wijewardena et al., 2017), negative performance feedback, monotony and threats to autonomy (F. Luthans & Youssef, 2004; Sameer et al., 2019), threats to competence (Verleysen et al., 2015), and negative team dynamics (Dawkins et al., 2015).

As it pertains to the constituent resources, **efficacy** can be depleted through failures, lack of task mastery, and poor performance (Bandura, 2012; F. Luthans & Frey, 2018; Reichard et al., 2014); **resilience** can be depleted through stress, increased risk, negative emotions and challenging interpersonal relationships (Harms et al., 2018; F. Luthans et al., 2010; Saks & Gruman, 2011); **optimism** can deteriorate through lack of performance, negative performance appraisals and a lack of job satisfaction (Avey, Reichard, et al., 2011; Youssef & Luthans, 2007); and **hope** through a lack of

empowerment, lack of autonomy and micro-management (Avey et al., 2009; Dello Russo & Stoykova, 2015; F. Luthans, Luthans, et al., 2004).

From these, themes that emerge that can trigger a likely resource-depleting mechanism from social support on PsyCap, are social support that:

3.3.2.1 Lowers competence, confidence, and performance

Social support that underutilises skills, implies inefficacy, develops feelings of insecurity, is ego threatening and esteem diminishing, and makes the recipient feel incompetent activates a resource-depleting mechanism (Bamberger, 2009; Beehr et al., 2010; Bolger et al., 2000; Kaufmann & Beehr, 1986; Marigold et al., 2014). A decrease in efficacy will directly deplete PsyCap – as constituent resource. Furthermore, if such support increases task complexity, enhances role conflict, or decreases skill variety PsyCap will be depleted (Sameer et al., 2019). Any challenge to competence, esteem or decrease in performance also diminishes PsyCap (Avey, 2014; Bandura, 2008; Verleysen et al., 2015).

3.3.2.2 Decreases positive affect

Social support that decreases satisfaction (Ducharme & Martin, 2000; Riggle et al., 2009) induces feelings of shame, guilt, or obligation (Feeney & Collins, 2015) and will decrease positive affect. As such, less positive affect – and even negative effect – has a depleting influence on PsyCap (Wijewardena et al., 2017).

3.3.2.3 Threatens autonomy, engagement, and independence

Social support that can have a resource-depleting effect creates role-conflict (Mayo et al., 2012), decreases proactive work behaviours like taking initiative (Burnett et al., 2015), is controlling and intrusive, threatens autonomy and prevents independence (Beehr et al., 2010; Deelstra et al., 2003; Feeney & Collins, 2015; Marigold et al., 2014; Weiner & Hannum, 2013). A decrease in autonomy directly leads to decreased PsyCap (Sameer et al., 2019). Furthermore, PsyCap will also deplete if the support is disempowering and controlling (Avey et al., 2009; Dello Russo & Stoykova, 2015; F. Luthans, Luthans, et al., 2004; F. Luthans & Youssef, 2004).

Additionally, social support can decrease proactive work behaviours like taking initiative (Burnett et al., 2015), especially when it is mistimed or exceeds the extent of support required (Zee et al., 2018) or creates a reciprocity burden (Nahum-Shani & Bamberger, 2011). Hence, decreased engagement and social relations at work will also lower PsyCap (Dawkins et al., 2015; De Waal & Pienaar, 2013).

3.3.2.4 Increases stress and decreases well-being

Some forms of social support can increase stress (Beehr et al., 2000, 2003; Kaufmann & Beehr, 1986; Nahum-Shani & Bamberger, 2011). When it increases quantitative workload (Kaufmann & Beehr, 1986), chances of burnout (Deelstra et al., 2003; Gibson et al., 2009; Hämmig, 2017) and decreases satisfaction (Ducharme & Martin, 2000; Riggle et al., 2009) a resource-depleting mechanism is activated. Heightened stress is a resilience reduction strategy (Masten, 2001) and would hence decrease PsyCap as well. A decrease in well-being will also deplete PsyCap (Firestone & Anngela-Cole, 2016; Rabenu et al., 2017; Siu et al., 2015).

3.3.2.5 Influenced by negative provider factors

Whether social support is beneficial, or diminishing also depends on factors surrounding the support provider. Social support that is imposing, controlling, intrusive, unsought for or interfering triggers a resource-depleting mechanism (Beehr et al., 2010; Deelstra et al., 2003; Lewis & Rook, 1999; Shumaker & Hill, 1991; Weiner & Hannum, 2013). If the provider is abusive (Ahmad et al., 2019; Zee et al., 2020), is the source of stress as well (Lincoln, 2000; Mayo et al., 2012) is not trustworthy or has questionable motives (Bolger et al., 2000; J. Fisher et al., 1982; Marigold et al., 2014), the support will have a depleting effect. As such, PsyCap also is negatively impacted by abusive supervision, leadership style (Avey, 2014) and challenging social relationships (like with support providers) (Dawkins et al., 2015).

A depletion of resources increases stress and anxiety and decreases one's developmental capacity. With fewer resources, it takes more time and effort to engage with their work environment – and, hence, employees' sense of control diminishes (Zee et al., 2018). Emotional, informational or instrumental social support that exhibits any of the above categories can activate a resource-depleting mechanism that will deteriorate PsyCap. In short, whenever the social support resources provided hinder goal achievement, the PsyCap resources will deteriorate.

3.3.3 Gain and loss spirals

COR theory holds that self-regulatory process drives how effort (resources) are deployed or invested. Hence, work situations can create obstacles to resource conservation activities or opportunities for investment and growth. These can hence hinder or promote the inherent achievement of goals with these resources. As such, this

process of self-regulation is crucial in deciding whether a resource track becomes a loss or gain cycle (Barrick et al., 2013; Halbesleben et al., 2014).

As mentioned, gain spirals are the process through which someone with a lot of resources can garner more. On the other hand, those with fewer resources find acquiring more resources difficult. Because resources are additive in nature, current resources are leveraged to gain more or defended when threatened. Furthermore, those with more resources are less negatively affected when their resources deplete because additional substitute resources are available (Halbesleben & Wheeler, 2015; Hobfoll et al., 2018; Ten Brummelhuis & Bakker, 2012).

For example, those with more perceived support resources will also gain PsyCap resources (Pitichat et al., 2018). Those with high Psycap – and thus higher efficacy – will be more confident to ask for support when needed (Bamberger, 2009). Support-seeking is a driver of the provision of enacted support (Bolger & Amarel, 2007; Uchino, 2009a). Improved enacted support can improve perceptions of support around the provider (Hobfoll, 2009) as well as develop competence, expertise and, thus, the self-efficacy of the recipient (Grant & Mayer, 2009; Grant & Patil, 2012; P.M. Podsakoff et al., 2000). Through this development of efficacy, PsyCap continues to develop. Thus, the gain spiral can continue – as the employee uses the resources they already have to gain more. The converse will be true for loss spirals.

3.3.4 Conclusion

Informed by the three mechanisms above, the relationship between enacted social support and PsyCap will be hypothesised. These will be framed according to support source (supervisor or co-worker) and support type (emotional, instrumental, or informational). Finally, these relationships will be expanded in the final set of hypotheses that would also consider perceived support.

3.4 Enacted supervisor support and PsyCap

Monnot and Beehr (2014) argued that the positional status of a support source impacts the influence ascribed to such support. As such, prominence is often given to the influence of supervisor support instead of co-worker support, as they are viewed as the organisation's agent (Eisenberger et al., 1986; Simosi, 2012).

Hence, it is argued that supervisor support would be interpreted differently and carry more weight than those holding a lower positional status, like a co-worker (Mathieu et al., 2019). Additionally, Avey (2014) has established that supervision is an antecedent and driver of PsyCap. Vicarious learning and modelling are also drivers of PsyCap,

through developing hope – and, as such, the role of supervisors as such representatives are also likely to play a role (F. Luthans & Youssef-Morgan, 2017).

Therefore, enacted support from a supervisor is likely to be influential in its role to PsyCap and compared to co-workers. Therefore, this section investigates hypotheses relating to the supervisor as the source of enacted support.

3.4.1 Enacted emotional support from a supervisor and PsyCap

As mentioned, people who get emotional support feel appreciated, welcomed, and cared for. It comprises expressing compassion, comfort, listening to issues, inspiration, or encouragement, and conveying that one's sentiments are considered (Klyver et al., 2018; McDonald & Westphal, 2011; Olsen et al., 2012; Wills & Cohen, 1985). How this type of support, if provided by a supervisor, relates to PsyCap is hypothesised next.

3.4.1.1 Resource-building mechanism

Enacted emotional support from a supervisor has shown favourable results in several studies. For example, it decreased conflict (Ferri et al., 2018), improved general well-being (Y. Chen & Feeley, 2012), and decreased work-related stressors (Lindorff, 2005). Enacted emotional support from a supervisor informs the extent to which the employee feels valued and cared for by the organisation (Eisenberger et al., 2002). It can foster positive emotions that ease distress and provide psychological resources to decrease strain (S. Cohen & McKay, 1984; French et al., 2018). Therefore, because a decrease in role conflict (Kickul et al., 2001), improved well-being (Firestone & Anngela-Cole, 2016), stress management (Masten, 2001) and increased positive emotions (Avey, Wernsing, et al., 2008; Siu et al., 2015) all develop PsyCap resources, a positive relationship to enacted emotional support from a supervisor is expected. Thus, it is hypothesised that:

- **H1a) Enacted emotional support from a supervisor will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**

3.4.1.2 Resource-depleting mechanism

Although evaluation, direction, encouragement or coaching from a supervisor can occur in a manner that supports and empowers, it can also be humiliating, belittling, abusing or patronising (Shoss et al., 2013). Then enacted emotional support decreases competence (Beehr et al., 2010), diminishes performance due to a decrease in task

accuracy (Searle et al., 2001), and negatively impacts efficacy (Bandura, 2012). This will reduce PsyCap resources (Avey, Reichard, et al., 2011; Verleysen et al., 2015; Youssef & Luthans, 2007). The role of an abusive leadership style has also been shown to deplete PsyCap (Avey, 2014). Hence, it is also hypothesised that:

- **H1b) Enacted emotional support from a supervisor will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**

3.4.2 Enacted instrumental support from a supervisor and PsyCap

Instrumental or tangible support refers to helpful behaviours and direct assistance, such as offering financial or material (tangible) resources or services to assist in the resolution of an issue or to provide tangible resources to relieve stress (Beehr et al., 2000; S. Cohen & McKay, 1984; French et al., 2018; Klyver et al., 2018; Wills & Cohen, 1985). Differentiated from informational support by its tangible nature, hypotheses related to such support provided by a supervisor are set out next.

3.4.2.1 Resource-building mechanism

Mathieu et al. (2019) highlighted that supervisors are a better source of enacted instrumental support than co-workers. Colbert et al. (2016) investigated the effect of two types of enacted instrumental support (task assistance and career advancement) and observed a significant positive relationship to measures of personal growth and development and the learning strategy to develop resilience.

These latter outcomes (personal growth and development, and resilience-building) are salient to the nature of PsyCap (Avey, Wernsing, et al., 2008; Masten, 2001). Also, the highly cognitive nature of hope seems to be more susceptible to having a developmental impact when instrumental (or informational support) is provided (F. Luthans et al., 2015; F. Luthans, Youssef, et al., 2007). Finally, tangible help or enacted instrumental support has been shown to affect the constituents of PsyCap directly. It improved optimism and hope (Harber et al., 2005), efficacy, and resilience (Klyver et al., 2018). Hence, it is hypothesised that:

- **H2a) Enacted instrumental support from a supervisor will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**

3.4.2.2 Resource-depleting mechanism

On the other hand, several studies attest to the negative influence of enacted instrumental support. For example, it negatively affects self-esteem (Deelstra et al., 2003) and well-being (Y. Chen & Feeley, 2012). When provided by a supervisor, it contributes to role ambiguity (Bandura, 2012) and decreases role overload – but at the expense of efficacy (Beehr et al., 2010; Brown et al., 2005). Thus instrumental aid from a supervisor can be perceived as interfering, eliciting feelings of incompetence or hampering initiative-taking (Beehr et al., 2010; Burnett et al., 2015; Lewis & Rook, 1999; Shumaker & Hill, 1991). It has also been argued to decrease intrinsic motivation as it lowers feelings of autonomy and competence (Van Yperen & Hagedoorn, 2003). These negative outcomes all have a depleting effect on PsyCap, as it relates to self-esteem (Avey, 2014), well-being (Firestone & Anngela-Cole, 2016) and increased role ambiguity (Avey et al., 2009). PsyCap will also be depleted by greater feelings of incompetence (Verleysen et al., 2015), a decrease in motivation (Avey, Reichard, et al., 2011), and, of course, efficacy itself – as a core constituent resource of PsyCap. Therefore, the alternate hypothesis proposes that:

- **H2b) Enacted instrumental support from a supervisor will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**

3.4.3 Enacted informational support from a supervisor and PsyCap

As mentioned earlier, specific counsel or direction on how to properly perceive and manage a situation is referred to as informative support (McDonald & Westphal, 2011; Scott et al., 2014). Hypotheses linked to such supervisory assistance are presented next.

3.4.3.1 Resource-building mechanism

Lindorff (2005) suggested that informational support from supervisors is the most valuable form of enacted support. Other studies somewhat support this view of the developmental ability that it can have on both the provider and recipient of such support (Shah et al., 2018).

Employees who received supervisor feedback – a form of informational support – feel more respected and valued by their organisation, resulting in improved positive affect (Sommer & Kulkarni, 2012; Tadić et al., 2015). Additionally, feedback develops skills, performance and self-efficacy (Lee et al., 1991; Sommer & Kulkarni, 2012), and is

instrumental in goal-setting – a developmental strategy of hope (F. Luthans et al., 2006; F. Luthans, Avolio, et al., 2007).

As indicated before, PsyCap is developed by positive effect (Siu et al., 2015), competence building through skills development (Verleysen et al., 2015) (Sameer et al., 2019), improved performance (Avey, Reichard, et al., 2011) – and growth in constituent resources such as hope and efficacy. Notably, it is through a form of informational support (PsyCap training interventions) that this valuable psychological resource can also be developed (Dello Russo & Stoykova, 2015; Lupșa et al., 2020). Therefore, it is proposed that:

- **H3a) Enacted informational support from a supervisor will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**

3.4.3.2 Resource-depleting mechanism

Although feedback or informational support is associated with favourable outcomes, mixed results were observed when studies also took into account employees' "beliefs that change is possible, their receptivity to feedback, and their desire to take action to improve performance" (Braddy et al., 2013, p. 691). In addition, feedback can trigger an affective response (and not only cognitive, like for learning insights) by evoking defensiveness – which is negatively correlated to self-efficacy and self-esteem (Linderbaum & Levy, 2010). Thus negative feedback can reflect negative results (Monnot & Beehr, 2014).

Hence, when enacted informational support from a supervisor makes the receiver feel incompetent or adds emphasis to a stressor (Beehr et al., 2010; Marigold et al., 2014), it is unsought for and feels controlling (Beehr et al., 2010; Deelstra et al., 2003; Lewis & Rook, 1999; Shumaker & Hill, 1991), or the supervisor's motives are questioned (J. Fisher et al., 1982), a resource-depleting mechanism is triggered. Hence, PsyCap will be depleted as a result of these decreases in feelings of competence (Sameer et al., 2019), increases in managerial control (F. Luthans & Youssef, 2004), challenges to autonomy (Avey et al., 2009; F. Luthans, Luthans, et al., 2004). and self-esteem (Avey, 2014); in addition to the lowering of efficacy resources. Therefore, the alternate hypothesis proposes that:

- **H3b) Enacted informational support from a supervisor will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**

3.5 Enacted co-worker support and PsyCap

Co-workers benefit from a greater frequency of contact and status similarity to support recipients (Mathieu et al., 2019). They provide a larger store of emotional and behavioural support resources that are easier to access than such provided by supervisors (Chiaburu & Harrison, 2008). Due to their similar or complementary function, the lack of an authority relationship and its frequently informal nature differentiate this form of support from that provided by a supervisor (Smollan, 2017).

However, this could add complexity and negatively impact reciprocity, and social support exchange standards are less clear (Nahum-Shani & Bamberger, 2011). A greater frequency of co-worker interaction could also exacerbate its negative effect if the co-worker is the source of stress and support (Beehr et al., 2003; McKimmie et al., 2009). This greater complexity could deteriorate PsyCap as they are negatively related (Avey, Avolio, et al., 2011). The influence of positive team dynamics and relationships with co-workers is a driver of PsyCap (Dawkins et al., 2015). Additionally, it has been observed that support from colleagues is a resilience-building strategy (Saks & Gruman, 2011) and hence would develop PsyCap too.

3.5.1 Enacted emotional support from a co-worker and PsyCap

3.5.1.1 Resource-building mechanism

Enacted emotional support from peers is valuable to its recipient (Klyver et al., 2018), particularly as it positively affects resilience, a constituent resource of PsyCap (Kwok et al., 2015; Saks & Gruman, 2011). Receiving emotional support from colleagues can protect against the damaging effects caused by unfair treatment in the workplace (Sloan, 2012) and plays an influential role in developing job satisfaction (Uy et al., 2017). In studying role conflict, support from co-workers reduced strain better than such received from supervisors (Mayo et al., 2012). Furthermore, a decrease in uncertainty due to reduced role conflict will also increase efficacy (Bandura, 2012). Hence PsyCap will be developed through the improvement in job satisfaction and work happiness (through optimism increases (Youssef & Luthans, 2007)), a reduction in role conflict (Avey et al., 2009) and increases in efficacy – as a constituent resource. Because emotional support from co-workers exhibits a resource gain dynamic (Chiaburu & Harrison, 2008), it is proposed that:

- **H4a) Enacted emotional support from a co-worker will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**

3.5.1.2 Resource-depleting mechanism

In a study with managers and senior associates at a consulting firm, emotional support from co-workers that was provided in situations that exhibited uncertainty added complexity to such situations (Shah et al., 2018). Complexity harms PsyCap (Avey, Avolio, et al., 2011).

Furthermore, employees are sensitive about how they appear to peers and supervisors (Bolino et al., 2008). They might resist receiving emotional support to preserve their image because of concerns about how they will be viewed (P. S. Thompson & Bolino, 2018). Furthermore, whether the employee trusts the co-worker support can dampen their experience. When the receiver suspects the co-worker intends to make them look bad or take advantage of them, the support will also have a negative effect (J. Fisher et al., 1982; P. S. Thompson & Bolino, 2018). Emotional support can sometimes increase anxiety, negatively influencing PsyCap (Bolger et al., 2000).

Therefore, PsyCap will be depleted through the resultant decrease in well-being due to increased anxiety (Firestone & Anngela-Cole, 2016), the mistrust created by these negative team dynamics (Dawkins et al., 2015), the threats to self-esteem (Avey, 2014) and increased complexity (Avey, Avolio, et al., 2011). As such, the alternate hypothesis proposes that:

- **H4b) Enacted emotional support from a co-worker will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**

3.5.2 Enacted instrumental support from a co-worker and PsyCap

3.5.2.1 Resource-building mechanism

In addition to arguments made for the resource-building mechanism of instrumental support from supervisors (Section 3.4.2.1), receiving help (instrumental support) from co-workers has a resource-gain effect (Chiaburu & Harrison, 2008) and improves job satisfaction (Uy et al., 2017). Receiving help without requesting such can have a positive affective response, like happy surprise. This type of unexpected help can make employees feel valued, cared for, respected, and fulfil relatedness needs (Grant & Dutton, 2012; Ryan & Deci, 2000; Zhan et al., 2021). Therefore, PsyCap will be developed by these improvements in positive affect (Siu et al., 2015) and optimism through increased job satisfaction (Youssef & Luthans, 2007). Additionally, task assistance can lead to growth and development, which would improve PsyCap (Avey, Wernsing, et al., 2008; Colbert et al., 2016).

Finally, high amounts of instrumental support result in high levels of intrinsic motivation, akin to the developmental drive undergirding PsyCap (Van Yperen & Hagedoorn, 2003). As such, it has been observed that positive enacted instrumental support directly affects PsyCap components by increasing hope and optimism (Harber et al., 2005), efficacy, and resilience (Klyver et al., 2018). Therefore, it is proposed that:

- **H5a) Enacted instrumental support from a co-worker will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**

3.5.2.2 Resource-depleting mechanism

On the other hand, tangible help (instrumental support) from co-workers harms autonomy and agency. In addition, it can threaten self-esteem and suggest a lack of competence. (Deelstra et al., 2003; J. Fisher et al., 1982; Van Yperen & Hagedoorn, 2003). All these were shown to negatively affect PsyCap, particularly as it depletes efficacy resources (Hughes et al., 2011; Ryan & Deci, 2000; Verleysen et al., 2015).

Accepting instrumental support from peers can also have a negative effect when it brings into question the burden of reciprocity – and the obligation to return the support in future, threatening autonomy (J. Fisher et al., 1982; Nahum-Shani et al., 2011), it would make them less competent or dependent on others (Beehr et al., 2010; Marigold et al., 2014), or it dampens self-esteem and decrease efficacy (J. Fisher et al., 1982; Uy et al., 2017). These would affect PsyCap negatively due to the decrease in autonomy (Sameer et al., 2019), decrease in feelings of competence (Verleysen et al., 2015), and self-esteem (Avey, 2014). Therefore the alternate hypothesis proposes that:

- **H5b) Enacted instrumental support from a co-worker will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**

3.5.3 Enacted informational support from a co-worker and PsyCap

3.5.3.1 Resource-building mechanism

As was observed in an earlier chapter, informational support is considered a form of instrumental support (Shakespeare-Finch & Obst, 2011), mainly due to its aid in problem-solving and task accomplishment. Therefore, it is likely that the same influences and conditions of relevance to instrumental support could also be applied to informational support. However, informational support uniquely impacts learning, development, and performance (Lindorff, 2005; Monnot & Beehr, 2014; Shah et al., 2018). Informational support is particularly beneficial when it decreases uncertainty and unpredictability

(Chiaburu & Harrison, 2008), which would improve PsyCap (Avey, Avolio, et al., 2011). A similar influence would be observed when informational support clarifies ambiguity, like in role conflict. Role conflict has been argued to decrease PsyCap through efficacy (Avey et al., 2009; Bandura, 2012). Additionally, positive feedback has been shown to predict future PsyCap development (F. Luthans et al., 2011). Taken together, it is therefore proposed that:

- **H6a) Enacted informational support from a co-worker will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**

3.5.3.2 Resource-depleting mechanism

Enacted informational support can exhibit the same deteriorating effects on PsyCap, as argued for instrumental support. Additionally, it has been shown that communication, in particular negative communication from co-workers, has a more substantial influence on individuals than the same from supervisors (Monnot & Beehr, 2014). This is likely because co-workers hold equal stature, and such support can elicit feelings of lack of ability or incompetence (T. W. H. Ng & Sorensen, 2008). Additionally, visible informational support can cause more significant anxiety than if no support has been given (Bolger & Amarel, 2007). Negative performance feedback (instrumental support) can deplete efficacy and self-esteem (Linderbaum & Levy, 2010), and lead to poor performance (Monnot & Beehr, 2014).

Thus, PsyCap will be depleted by threats to competence (Verleysen et al., 2015), increased anxiety or stress (Firestone & Anngela-Cole, 2016; Masten, 2001), threats to self-esteem (Avey, 2014), lower performance (Avey, Reichard, et al., 2011), and decrease in efficacy. This suggests that recipients would be highly susceptible to negative enacted informational support from co-workers that comes their way, leading to a reduction in PsyCap. Hence, the alternate hypothesis proposed is:

- **H6b) Enacted informational support from a co-worker will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**

3.6 Satisfaction with enacted support and PsyCap

3.6.1.1 Resource-building mechanism

The recipient has to consider their support needs to be met to achieve satisfaction with support (the matching hypothesis) (Uchino, 2009a). As mentioned, the satisfaction with enacted support provided offers a better indicator of the impact of enacted support

than that measure by itself (Krause & Hayward, 2014; Melrose et al., 2015). For example, a support recipient's satisfaction with feedback (informational support) is a more robust indicator of performance than the feedback itself (Keeping & Levy, 2000; Kluger & Denisi, 1996; Mishra & Farooqi, 2013). In other words, for feedback to make a difference, the beneficiary needs to be satisfied with such. Furthermore, satisfaction with feedback and self-efficacy (a core constituent of PsyCap) shows a strong positive relationship (Rasheed et al., 2015). Therefore, being satisfied with the enacted support received improves confidence (efficacy). Additionally, support satisfaction is positively related to positive affect (Green et al., 2012). Positive emotions and affective states are not only positively related to PsyCap (Avey, Wernsing, et al., 2008; Newman et al., 2014) but are argued to be an antecedent thereof (Siu et al., 2015). Therefore, support satisfaction would plausibly have a positive relationship with PsyCap. Therefore, it is proposed that:

- **H7a) Satisfaction with enacted support from a supervisor will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**
- **H8a) Satisfaction with enacted support from a co-worker will have a positive relationship to the PsyCap of an employee (Resource-building mechanism).**

3.6.1.2 Resource-depleting mechanism

It might be surprising to consider that satisfaction with support might harm desirable outcomes. However, instances of such have been observed. For example, in a study on the control of diabetes, satisfaction with support was positively related for women but negatively related for men (R. M. Kaplan & Hartwell, 1987). It also reverses the influence of feedback (informational support), as "dissatisfaction with feedback can make the feedback ineffective in the improvement of performance" (Rasheed et al., 2015, p. 35).

Additionally, satisfaction with support measures brings to light unequal support exchange and reciprocity uncertainty, leading to adverse effects (Krause et al., 1989; Nahum-Shani et al., 2011). For example, women are more sensitive to balanced support exchange than men, particularly when evaluating their satisfaction with support (R. M. Kaplan & Hartwell, 1987).

Another contributing factor that informs satisfaction with support is whether the support is considered useful. Support that is not deemed useful does not evoke satisfaction with such support provided (Boswell & Boudreau, 2000; Hameed, Abdul, 2011; Rasheed et al., 2015). Satisfaction with support is independent of relational

interaction – particularly if support providers evoke anger or conflict. Therefore, it considers a comprehensive evaluation of the enacted support measure, as it acknowledges that support needs differ (Krause et al., 1989).

If the support recipient is not satisfied with the support received as their support needs are not being met (Uchino, 2009a), it can inspire the employee to solve the problem or address the need in another way or through another avenue. In addition, the sense of satisfaction and confidence gained from knowing a task has been completed through their efforts (P. S. Thompson & Bolino, 2018) instils confidence (efficacy) and improves resilience, thereby developing their PsyCap.

The counter to this scenario holds as well. If the employee is satisfied with the support received because their support needs have been met, no further problem-solving or strategy that demands resourcefulness would be required. The unbalanced support exchange will be accepted. Confidence would deteriorate, and alternative seeking (hope) would decrease, thereby deteriorating PsyCap.

Alternatively, the employee's support needs might be low, and they would have little need for support. This support satisfaction could isolate the employee as they miss out on the social interaction that adds meaning to their work and shapes who they are (Collins et al., 2016; Kira & Balkin, 2014; T. W. H. Ng & Sorensen, 2008). This deteriorates their capacity to draw on support networks in challenging times, which decreases their resilience (Masten, 2001). This would also deteriorate access to social persuasion benefits that could build efficacy. As such, PsyCap would diminish. Alternatively, it is proposed that:

- **H7b) Satisfaction with enacted support from a supervisor will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**
- **H8b) Satisfaction with enacted support from a co-worker will have a negative relationship to the PsyCap of an employee (Resource-depleting mechanism).**

3.7 Perceived and enacted support

3.7.1 A positive relationship between perceived and enacted support

Of the studies that have investigated the influence of social support on PsyCap, an emphasis was placed on perceived support's impact (Brunetto et al., 2017; Cassidy et al., 2014; Khan & Husain, 2010; F. Luthans, Norman, et al., 2008; Mazzetti et al., 2016; Newman et al., 2018; Nielsen et al., 2017; Pitichat et al., 2018), and the role of enacted support's influence is underexplored. As mentioned before (Sections 1.1.3.1

and 2.3.4), there is only a slight correlation between perceived and enacted support, which is estimated at r=0,35 (Barrera, 1986; Eagle et al., 2018; Haber et al., 2007) and arguably *stress-and-coping theory* by itself should suggest a stronger link (Lakey et al., 2010). Furthermore, enacted support behaviours influence support perceptions (Hobfoll, 2009; Kaul & Lakey, 2003). Said differently, whereas enacted support is effective when it matches support needs, perceived support indicates receiving effective enacted support over time (Lakey et al., 2010).

However, perceived and enacted social support influence outcomes differently (Nahum-Shani & Bamberger, 2011; Poortvliet et al., 2015; Singer, 2000). The state-like qualities of perceived support (I. G. Sarason et al., 1986) impact outcome variables greater and more consistently than the ambiguous observations that arise from enacted support studies (Cassidy et al., 2014; Deelstra et al., 2003; Gottlieb & Bergen, 2010; Hämmig, 2017; Kaufmann & Beehr, 1986; Sloan, 2012).

Lakey and Cassady (1990) suggested that perceived support creates a schema by which enacted support is evaluated. They argue that low perceived support individuals interpret supportive behaviours more negatively than those with high perceived support. In other words, individuals with low perceived support would consider enacted support unhelpful (Lakey & Cassady, 1990; Uchino, 2009a). As such, people who feel they can rely on others for support (high perceived support) would be more proactive in seeking support when in need, and interpret enacted support behaviours in a positive way, as aligned with their expectations (Eagle et al., 2018; Feeney & Collins, 2015). Thus, in line with the *stress-and-coping perspective* of social support, a strong positive relationship between perceived and enacted support is expected (Haber et al., 2007). Taken together, it is proposed that:

- **H9a) Perceived support is positively related to enacted support behaviours.**

3.7.2 A negative relationship between perceived and enacted support

Counter to the previous discussion, a negative relationship between perceived and enacted support can also be argued. When bearing in mind that the study investigates the relationship between the perceptions of a recipient, and the behaviours of a provider – and how that is interpreted by the recipient, the potential for this direction of the relationship should be more evident. Marketing, psychology, philosophy, politics, ethics, and economics all contend that the link between perceptions and the actual observable reality that informs those perceptions is complicated — and sometimes conflicting (for example, Clarkson, Hirt, Jia, & Alexander, 2010; Frieder, Ma, & Hochwarter, 2016; Kidwell, Stevens, & Bethke, 2013). For example, the perception of

reality and the reality of itself are not always the same. A variety of variables can influence it. As a result, the link between executed support behaviours and perceptions of such behaviours is not always consistent.

As the purpose of this study is to investigate how enacted social support's influence differs from that of perceived support, the assumption is that the correlations between these types of support would not be positive under all conditions, as suggested by the *social cognitive perspective* of social support (Kaul & Lakey, 2003; Lakey & Drew, 1997). For example, where perceived support has been shown to have a positive impact on confidence measures like self-efficacy (Bowling et al., 2010; Karademas, 2006), enacted support has been shown to harm the same outcome variable due to triggering an incompetence or negative self-esteem response (Beehr et al., 2010; J. Fisher et al., 1982; Marigold et al., 2014). Therefore, the relationship between enacted and perceived support would be negative in this instance.

When a negative or neutral relationship between enacted support and perceived support was observed, one explanation is the influence of trait or social characteristics. The relationship with support providers (social influence) is the greatest contributor to support perceptions. In contrast, social influences and traits or personality characteristics of the support recipient play an equal part in interpreting and evaluating enacted social support. Hence, support perceptions and behaviours are likely strongly related when considering social dimensions, but less so or negatively when trait (or arguably state-like) dimensions are considered (Gleason et al., 2008; Lakey et al., 2010). It is also likely that measures of perceived support tap into generic relationship evaluations, rather than the social support construct itself, which would also explain an inverse relationship between these support measures (Kaul & Lakey, 2003).

A further argument, countering the earlier position (Section 3.7.1) (Eagle et al., 2018; Feeney & Collins, 2015), suggests that someone with more perceived support resources would have fewer support needs – or seek out support less. The belief that an employee can get support, if needed, might be adequate to activate self-reliant strategies (Birditt et al., 2012; Wethington & Kessler, 1986). In other words, if positive perceptions of support, the need for and value of enacted support is low. If perceptions of support are negative, the need for and value of enacted support is high. Therefore, the alternate hypothesis proposed is:

- **H9b) Perceived support is negatively related to enacted support.**

3.8 Perceived support, enacted support, and PsyCap

Previous literature suggests the presence of a mediating variable in light of the inconclusive findings about the relationship between perceived and enacted support

(Bolger et al., 2000; Gleason et al., 2008). Therefore, this final hypothesis proposes PsyCap as such a potential mediator.

The positive relationship between PsyCap and perceived social support has been established in multiple studies (Cassidy et al., 2014; Khan & Husain, 2010; L. Liu et al., 2013; F. Luthans, Norman, et al., 2008; Roemer & Harris, 2018) going so far as to state that perceived support is an antecedent of PsyCap (Pitichat et al., 2018).

However, does PsyCap influence enacted support? As enacted support can take the form of being emotional (encouraging, caring), instrumental (help, tangible aid) or informational (guidance, advice, learning) in nature, PsyCap can likely influence some support-seeking, support readiness or openness to support mechanism that would make it particularly receptive to support.

For example, consider the impact of personal development through instrumental support provided by a training initiative. Developmental readiness, a person's motivation and developmental ability, has been argued to be essential for such learning, transformation and growth to occur and is informed by an individual's learning goal orientation, developmental efficacy and self-awareness (Hannah & Avolio, 2010). Then, considering that leader development PsyCap has been identified as a domain-specific, developmental extension of PsyCap, in particular, "an individual's motivational propensity to develop as a leader" (Pitichat et al., 2018, p. 47). As such, it could be argued that developmental readiness – as a function of motivation and ability – has some conceptual relationship with PsyCap. To explain, PsyCap's mechanism of proactive goal-setting and motivation to achieve them (hope), the confidence to harness such motivation, resources and courses of action within the context, like tapping into the skills of colleagues or supervisors (efficacy), the drive to surpass previous levels of performance (resilience) and to persevere towards success (optimism) (Cascio & Luthans, 2014) seems to suggest some measure of developmental readiness as well. Therefore, PsyCap could positively relate to the developmental readiness for enacted instrumental support.

Another example: PsyCap, together with positive feedback (informational support), is an antecedent of problem-solving and innovation, particularly through mastery orientation – a propensity to seek out challenging goals and persistence when faced with obstacles (F. Luthans et al., 2011). They suggested a synergistic interaction between the psychological resource and informational support.

When considering feedback as a form of informational support, feedback orientation refers to a person's openness to receive feedback. It is informed by, amongst others, the person's self-efficacy, self-esteem and learning goal orientation (Linderbaum & Levy, 2010). Furthermore, innate to the development of the resilience dimension of

PsyCap is the encouragement of a growth mindset – that people can change (Harms et al., 2018; Meyers et al., 2015). This mindset predicts their response to setbacks as failure or mastery and influences how the individual responds to feedback (F. Luthans et al., 2011; Zingoni, 2017). Furthermore, PsyCap significantly influences feedback-seeking behaviour (Wang et al., 2017). Hence, PsyCap could positively relate to both seeking and receptivity to enacted informational support.

Several observations are relevant. Positive people are more likely to receive help and support from others (P. S. Thompson & Bolino, 2018). Optimists tend to be more proactive in seeking social support, and support providers find it difficult to offer support to pessimistic individuals in times of stress. Hence, those with higher PsyCap (more optimism and positivity) are more likely to receive enacted support (Asgari, 2016; Marigold et al., 2014; Scheier et al., 1986). Finally, efficacy could mitigate the need for emotional support (Klyver et al., 2018).

This concurs with the gain spiral mechanism proposed by COR theory and is discussed at the start of this chapter (Section 3.3.3). As such, increased PsyCap resources enable the seeking out of enacted support resources when needed, which activates the resource-building mechanism to develop PsyCap. Thus, the spiral can continue to build PsyCap and Enacted Support resources.

This cyclical relationship can extend to incorporate perceived support resources as well. As Hobfoll (2009) argues, perceptions of support can be rooted in previous experiences of receiving enacted support. Therefore, improvements in enacted support will lead to a development in perceived support resources, which also develops PsyCap (Cassidy et al., 2014; Khan & Husain, 2010; L. Liu et al., 2013; F. Luthans, Norman, et al., 2008; Roemer & Harris, 2018), and hence the gain spiral continues.

As a mediator, PsyCap can explain the relationship between perceived support and enacted support. Thereby, someone with higher PsyCap resources – particularly higher in efficacy and optimism – will view the workplace as a favourable and supportive environment (hence higher in perceived support resources). When they need help, they will then be confident to ask for such (increase in enacted support resources). However, in the same organisation, someone with lower PsyCap (less optimistic, lower in confidence, resilience, and hope) might not believe they are valued and cared for by the organisation or that help would be available should they need it (lower perceived support). As such, they would not necessarily pursue enacted support (advice, guidance, help) as they might not believe that they have the confidence to seek it, or the hope that it will be provided (indicators of lower PsyCap). PsyCap seems to be a key trigger in activating a gain or loss spiral in these two examples.

As will be discussed later (see Section 4.4.3), the employee's PsyCap was measured at the onset (t1) and conclusion (t2) of this study. In all prior hypotheses, PsyCap (t2) is the outcome under consideration, with PsyCap (t1) covariation controlled for. However, to test the below hypotheses, PsyCap (t1) was used for analysis. Therefore, it is argued that:

- **H10a) The employee's PsyCap relates positively to the enacted support they receive.**
- **H10b) The employee's PsyCap mediates the relationship between their perceptions of workplace support and the enacted support they receive.**

3.9 Conclusion

In this chapter, the study's hypotheses were developed and substantiated by the literature. They are summarised in Table 2 and illustrated in Figure 7.

The following chapter discusses the proposed research methodology to address the above hypotheses. As such, a longitudinal diary study — by making use of daily quantitative surveys and an experience sampling methodology — was conducted.

Table 2: Hypotheses of the study

H	Hypotheses
	Supervisor
1a	Enacted emotional support from a supervisor will have a *positive* relationship to the PsyCap of an employee.
1b	Enacted emotional support from a supervisor will have a *negative* relationship to the PsyCap of an employee.
2a	Enacted instrumental support from a supervisor will have a *positive* relationship to the PsyCap of an employee.
2b	Enacted instrumental support from a supervisor will have a *negative* relationship to the PsyCap of an employee.
3a	Enacted informational support from a supervisor will have a *positive* relationship to the PsyCap of an employee.
3b	Enacted informational support from a supervisor will have a *negative* relationship to the PsyCap of an employee.
	Co-workers
4a	Enacted emotional support from a co-worker will have a *positive* relationship to the PsyCap of an employee.
4b	Enacted emotional support from a co-worker will have a *negative* relationship to the PsyCap of an employee.
5a	Enacted instrumental support from a co-worker will have a *positive* relationship to the PsyCap of an employee.
5b	Enacted instrumental support from a co-worker will have a *negative* relationship to the PsyCap of an employee.
6a	Enacted informational support from a co-worker will have a *positive* relationship to the PsyCap of an employee.
6b	Enacted informational support from a co-worker will have a *negative* relationship to the PsyCap of an employee.

H	Hypotheses
	Satisfaction with support
7a	Satisfaction with enacted support from a supervisor will have a *positive* relationship to the PsyCap of an employee.
7b	Satisfaction with enacted support from a supervisor will have a *negative* relationship to the PsyCap of an employee.
8a	Satisfaction with enacted support from a co-worker will have a *positive* relationship to the PsyCap of an employee.
8b	Satisfaction with enacted support from a co-worker will have a *negative* relationship to the PsyCap of an employee.
	Perceived support
9a	Perceived support is *positively* related to enacted support
9b	Perceived support is *negatively* related to enacted support.
10a	The employee's PsyCap relates positively to the enacted support they receive.
10b	The employee's PsyCap mediates the relationship between their perceptions of workplace support and the enacted support they receive.

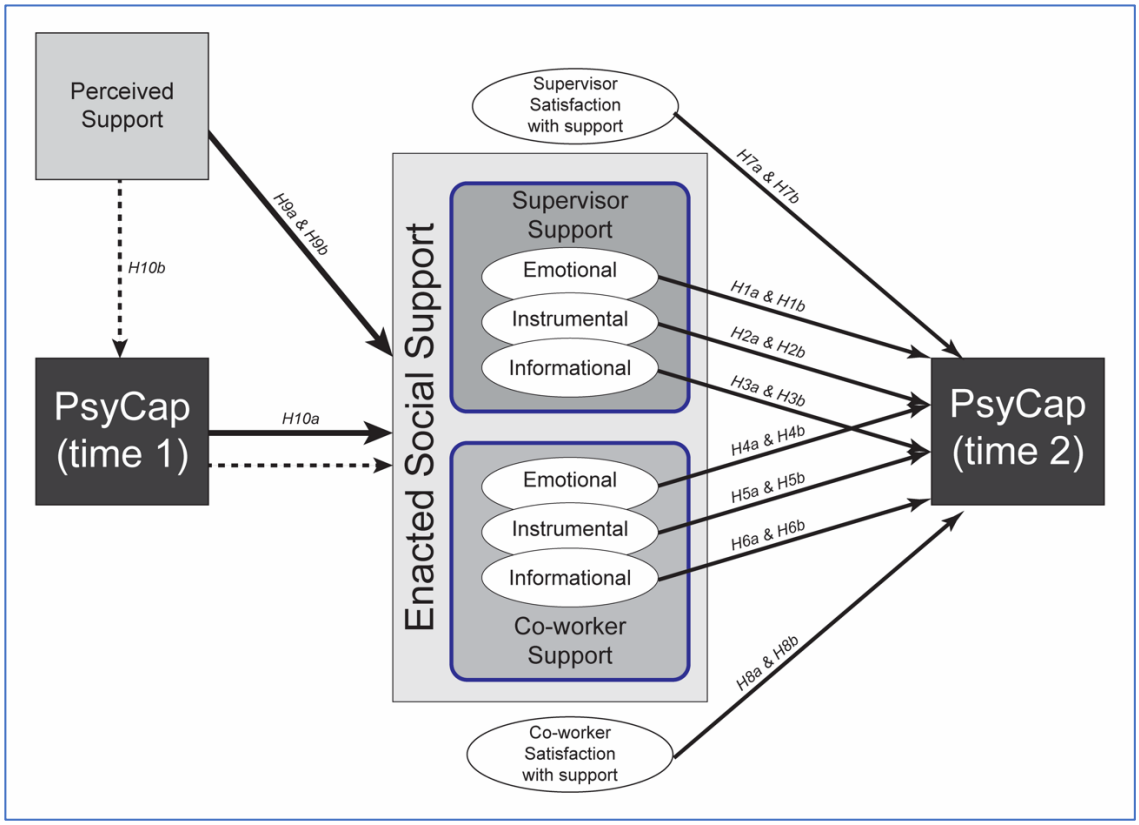

Figure 7: Illustration of hypotheses

4 Methodology

4.1 Introduction

To investigate the relationship between two multidimensional constructs (social support and PsyCap), a longitudinal research design using interval-based between-persons experience sampling methodology (ESM) was conducted. This type of research question (investigating the relationship between constructs for which operationalised measures exist) emphasises objectivity and replicability and thus deems this a positivist quantitative study (Bryman, 1984). This chapter expands on this.

4.2 Research design

To investigate the relationship between enacted support and PsyCap, the research design had to consider the nature of the constructs. The measurement of enacted social support behaviours needed to be near to the occurrence of such behaviours to decrease the likelihood of tapping into support perceptions (Asgari, 2016; Mathieu et al., 2019). Because phenomena can change over time, measuring enacted support over a period, aids in capturing its complex and dynamic nature. Data gathered across a period are qualitatively different from data that do not take time as ongoing context into consideration (like cross-sectional studies) (McCormick et al., 2020). On the other hand, PsyCap is more state-like in nature and not likely to fluctuate across the period (B. C. Luthans et al., 2014; Youssef-Morgan, 2014; Youssef-Morgan & Luthans, 2013b). Taking cognisance of these characteristics, a longitudinal approach was embarked upon, making use of a between-subjects experience sampling methodology (ESM).

ESM "employs in situ self-reports for systematic in-context data collection, as well as close to the onset or completion of the investigated phenomena" (Van Berkel et al., 2017, p. 2). In other words, it involves the "repeated longitudinal measurement of constructs in context and over short periods of time" (McCormick et al., 2020, p. 322).

A mobile application (ExpiWell), developed explicitly for ESM studies, prompted participants to complete several surveys within two weeks. PsyCap was measured at both the study's onset (t1) and conclusion (t2), and enacted social support measures towards the end of each workday.

The study was pilot tested in October 2019 and embarked upon shortly after. However, due to COVID-19-related factors, the initial research was stopped in March 2020. Nevertheless, methodology insights from that initial study have informed the current study and were treated as an extended pilot. The data reported in this study were

collected between January 2021 and March 2021. A summary of the research design is set out in Table 3.

Table 3: Summary of research design

Dimension	Application in this study
Period:	January to March 2021
Philosophy:	Positivist (Empiricist)
Theory development:	Deductive (Theory testing of proposed relationships)
Methodology:	Quantitative
Strategy:	Interval-based experiential sampling methodology [between-subjects design]
Research instrument:	Diary study with a daily questionnaire/survey (pilot-tested)
Time horizon:	Longitudinal (two weeks)
Unit of analysis:	Employee (Individual)
Sampling method:	Multi-phase: One: Purposive sampling and snowball sampling: *Organisations and individuals* Two: Cluster sampling (as understood for ESM) *1) Employees; 2) Diary entries*
Population / Universe:	Employees in South Africa
Sample size:	253
Data collection technique:	ExpiWell is an iOS and Android mobile device application developed for ESM and could aid diary studies. Daily surveys over a two-week period (ten consecutive working days) were gathered.
Data variables:	Control variables: Categorical Independent and dependent variables: Ordinal *(Likert-scale)*
Data analysis:	Descriptive statistics Validity and reliability measures, including correlations Confirmatory and exploratory factor analyses Covariance-based structural equation modelling (CB-SEM) Mediation analysis

4.2.1 Research type

This study takes the form of **explanatory research**. Malhotra (2010) states that this type of research is appropriate when testing for specific hypotheses or examining relationships. However, he adds that this strategy requires a more formal and structured approach, drawing from a larger representative sample and analysing data quantitatively. Findings from such research have the aim of informing decision-making. The longitudinal nature of this study holds that a fixed sample will provide information over an extended period to indicate potential changes and fluctuations. However,

Malhotra warns that representative sampling and response bias are challenges of this extended format. This study also uses a **'before-and-after' design**, using a pre-test and post-test, with the participants themselves serving as their own control group. That is because all participants are exposed to the 'intervention' of enacted support (Chamlis & Schutt, 2006).

4.2.2 Experience sampling methodology

As mentioned, ESM refers to the study and measurement of behaviour in the participant's natural environment and offers the opportunity to collect data within the context in which it occurs. It is described as "the in-depth study of everyday experiences and ongoing behaviour in their [the employee's] natural environment" (Alliger & Williams, 1993, p. 526). ESM is particularly useful where fluctuations are anticipated over a day or week, and is context-dependent (for example, at work). It can not only investigate the person (employee), but the (support) situations as well (Hektner et al., 2007a). Data can be gathered in close time proximity to the onset or completion of the phenomenon under investigation. Notably, ESM studies are very similar to diary studies (Alliger & Williams, 1993; Van Berkel et al., 2017). This methodology's value to this study is its ability to collect a representative sample of recent enacted support experiences (N. P. Podsakoff et al., 2019).

ESM studies are frequently used in COR literature, particularly because they improve observation of experiences at work (Halbesleben et al., 2014). In contrast to cross-sectional designs, ESM can gather better indicators of the frequency, distribution or intensity of variables, as potential memory and recency effects, and cognitive bias are minimised. In addition, retrospective bias is reduced because data are collected closer to the event investigated. Notably, the within-person effects can be separated from the between-person effects as well. However, its intrusive nature, the participant burden, participant retention and respondent fatigue count against it. Further concerns are that its self-report nature inflates observed correlations between variables (common-method variance), and primes increased awareness by repeatedly measuring psychological variables (Alliger & Williams, 1993; Bolger et al., 2002; C. D. Fisher & To, 2012; Ohly et al., 2010; Van Berkel et al., 2017). However, others have argued that because some control variables lie within-person, the temporal difference between the measurement of criterion and predictor variables and the anonymity associated with the study decreases the likelihood of common-method variance (P.M. Podsakoff et al., 2003; Wijewardena et al., 2017).

4.2.2.1 Interval-based

There are several types of ESM studies, including a signal-contingent design (where the measurement is triggered by a specific notification) and an event-contingent design (where the measurement is triggered by the occurrence of a specific event). However, this study followed an interval-contingent ESM design, where a fixed period ascertained when the response would be triggered (Bolger et al., 2002). Fisher and To (2012) make a few observations about this type of ESM. They state that the predictable timing of reports is less intrusive for participants but warn that it might disproportionately capture recent events immediately before the trigger. The longer the interval between reports, the greater likelihood of memory decay or retrospective bias entering the study. They suggest that existing scales be shortened for use in ESM studies. Due to their predictable nature, McCormick et al. (2020) acknowledge that interval-based studies would have less within-person variance than their signal- or event-contingent ESM counterparts. They affirm that shorter periods, like 24 hours, decrease retrospective bias and warn that the strength of observation decreases with time.

In this study, participants were requested to evaluate (once per day) their daily receipt of enacted support. It seemed the least invasive while still offering a reasonable opportunity to measure the behaviours in question, especially those that required access to or interaction with a supervisor.

4.2.2.2 Between-person

ESM can investigate differences between people, interactions between situations and persons (within-person) as well as the influence of time as well (Csikszentmihalyi, 2014; Daniels et al., 2013, 2014; Musa et al., 2017; N. P. Podsakoff et al., 2019).

Apart from its ability to enable within-person and cross-level designs, ESM studies can be used to answer between-person research questions rigorously as well. For within-person studies, the dependent and independent variables lie on Level 1 of analysis (for example, repeated daily over the study period). Cross-level studies are similar to within-person studies; however, moderating variables are introduced, which lies on Level 2 of analysis (for example, on the individual or participant level). Between-person studies aggregate Level 1 variables, enabling their treatment as Level 2 variables. Because this study's independent variables (enacted support measures) were measured on Level 1, and the dependent variable (PsyCap) was measured at Level 2, aggregation of the enacted support measures was used to enable a between-person study (Cortina & Landis, 2013).

As mentioned, the selection of ESM was informed by the nature of the independent variable (enacted support) and to get a more complete and representative understanding of employees' enacted support exposure and experience. As such, the aim of this study was not to investigate within-person fluctuations of enacted social support, but rather a comparison between persons to identify relationships. In other words, the participant's level of enacted support is *not* compared to its previous level of enacted support and its relative impact on PsyCap investigated (within-person). Instead, this study compares the levels of enacted support between individuals and the respective relationship to their levels of PsyCap – making it a between-person study.

Thus, this study investigates the relationship between social support behaviours and PsyCap of the employee – and, as such, how these compare between individual employees. Therefore, the level of analysis is on the employee-level (Level 2), and not on the support situation-level (Level 1) (see Section 4.2.3.3).

To prepare the data for analysis, the variables measured on a daily basis (enacted support measures) are aggregated and mean-centred across the period to represent the variation on the between-person level. This is suitable as interindividual differences are investigated, and not intraindividual differences (Cortina & Landis, 2013; Daniels et al., 2011, 2013; Koopman et al., 2014). This was done because 1) this is a between-person study, and 2) the study's predictor and criterion variables are not measured on the same level or at the same time (see Section 4.5.2). As such, **covariance-based SEM (CB-SEM)** was used for analysis, as was observed in other ESM studies of this nature, or hierarchical multiple regression methods (e.g., Daniels et al., 2014; Manwaring et al., 2017; Oosterwegel et al., 2001; Udachina et al., 2009).

To further test the influence of aggregating the scores, the lower half of signal response participants (with five or fewer signal responses) was compared to the higher half of signal responses (those with six or more responses). No significant differences were observed in any of the constructs from the study. This also provides evidence that the influence of common-source variance was less influential (P.M. Podsakoff et al., 2003).

It should be noted that if this study aimed to draw insights on within-person changes or predictor and criterion variables were on the same level (Level 1), a multilevel analysis technique would be applicable. This is because fluctuations in these criterion and predictor variables that are nested within the individual would need to be analysed on multiple levels, like through multilevel modelling or multilevel SEM (e.g., C. D. Fisher & To, 2012; Rodríguez-Sánchez et al., 2011). As such, a multilevel modelling approach was not undertaken for the above reasons.

4.2.3 Context, population and level of analysis

4.2.3.1 Context

This study investigated the relationship between enacted support and PsyCap in a highly pessimistic context such as South Africa (Ipsos & Gates Foundation, 2017). Additionally, South Africa is the most unequal country in the world based on its wealth distribution, with a Gini coefficient of 0.63, reflecting that the poorest 60% only hold 7% of the wealth (Kalina, 2021; World Bank, 2021).

The South African workplace is rife with "problems such as fear of job loss, hopelessness, general pessimism and unemployment" (Munyaka et al., 2017, p. 2). This is further complicated by challenging cross-cultural labour relations, government-sanctioned affirmative action, and a general lack of organisational skills (Du Plessis & Barkhuizen, 2012; F. Luthans, Van Wyk, et al., 2004). Moreover, a lack of highly skilled labour intensifies an already complex labour market, especially as local legislation hampers the dismissal of underperformers (Du Plessis & Barkhuizen, 2012; Khuluvhe & Ganyaupfu, 2021; F. Luthans, Van Wyk, et al., 2004; Yu, 2013).

This context was put under even more strain since COVID-19 lockdown restrictions came into effect on 15 March 2020 (South African Government, 2020b, 2020a; *Disaster Management Act, 2002 (Act no 57 of 2002) - Classification of a national disaster*, 2020) – ravaging the economy and livelihoods of large proportions of the population. Lockdown restrictions involved portions of industry needing to close, curfews, work-from-home advisories, social distancing, mandatory mask use and limits on travel. Frustrations culminated in widespread riots, looting and infrastructure damage in July 2021, attributed to a complicated political climate, unemployment, economic conditions, and strict lockdown conditions still in effect (Kalina, 2021; Makoni, 2021; Tatsvarei et al., 2021).

The above offers some insight into not only the climate within which organisations are operating but also the disruption within as the way people work and interact had to adjust. The data for this study were gathered between January and March 2021. During this period, South Africa operated on 'Adjusted Alert Level 3' (until 28 February 2021) and 'Adjusted Alert Level 1' (until 30 May 2021) (South African Government, 2021). As such, the context informs how social support is provided during highly disruptive and challenging times and how it relates to employees' latent confidence (PsyCap).

4.2.3.2 Population

The study population was limited to employees of organisations in South Africa. Another entry requirement to participate in this study was that potential participants must

report to a supervisor and have at least one co-worker. This excluded the unemployed, self-employed, entrepreneurs, managing directors or CEOs, or those in the organisation without peers.

4.2.3.3 Unit of analysis

This study inspected the influence of support behaviours on employees within the workplace. As a between-subject, between-individual or between-person study, the unit of analysis is at the individual-level: the employee. As such, interindividual differences are investigated.

Therefore, it excludes other units of analysis, such as the support situation or support transaction (which would be more appropriate for within-person or intraindividual analysis), or nested relationships (like supervisor or co-worker dyads). The latter information was not gathered, and hence there are no means to analyse such.

Hence, the study investigates how enacted support constellations or conditions build or deplete PsyCap between employees.

4.2.4 Duration of study and data-gathering instruments

The duration of an ESM study is influenced by the frequency that the phenomena investigated take place, the response rate of participants, the intended data analyses, and the burden on respondents. Hektner et al. (2007a) propose a duration of one week, cautioning that more extended periods should consider how long it takes to complete the questionnaire, the number of times such is required per day, and to bear in mind that data deteriorate if the study extends beyond three weeks. Additionally, Van Berkel et al. (2017) recommend a two-week study with multiple short surveys during the day to achieve an optimal response rate. Alternatively, Ohly et al. (2010) stipulate that the minimum duration should be five days.

As estimated by the online survey platform, Qualtrics, the duration to complete the questionnaires were nine minutes for the Initial Survey (t1), four minutes for the Daily Survey, and two minutes for the Concluding Survey (t2). The Daily Survey was conducted once daily.

Based on the advice of Van Berkel et al. (2017) and others (Cortina & Landis, 2013) and cognisant of the factors mentioned, the duration of this longitudinal study was set to **two weeks.** This was further informed by the nature of the enacted support construct to be measured. Firstly to measure support behaviours, and not tap into perceptions, data needed to be gathered as close as possible to the behaviour in question (Asgari, 2016; Mathieu et al., 2019). Secondly, as enacted social support from

a supervisor is likely to occur less frequently than such support from co-workers, a daily survey had to cover a period that would make interactions with a supervisor likely. There was also a notable consideration given to a previous study that also used ESM data to investigate PsyCap over a two-week period (Wijewardena et al., 2017). These decisions were tested by piloting the research instrument.

4.2.5 Piloting the research instrument

The research instrument was tested to ensure understanding, the ease of using the mobile application for data gathering, and whether adequate variability in the constructs measured could be observed across the period in question. No risk in participation or deception was required to conduct this study. However, ethical approval from the Gordon Institute of Business Science (GIBS, University of Pretoria) was pursued before its commencement and obtained on 25 September 2019 for the pilot study, and 18 November 2019 for the extended pilot study to incorporate changes.

An organisation was approached in September 2019 and asked to participate in piloting the study. Out of a team of almost 60 staff members, around 30 expressed interest and 21 joined the study. Of the 21 who joined, 15 completed the study, and 135 workday responses were obtained. This suggested a low response rate, a completion rate of 71,4% and an attrition rate of 28,6%. The pilot study took place between 22 October 2019 and 13 November 2019. After that, an extended pilot study took place and concluded on 31 March 2020.

A test for reliability is Cronbach's alpha coefficient, which is discussed in Section 5.7.3.1. The Cronbach score reflects the quality of the instrument and is a coefficient for generalisability (Babin & Svensson, 2012). A value greater than 0,70 indicates internal consistency (Hinkin, 1995). Items were combined to form their representative latent constructs, as informed by the literature. All scores for the pilot study (P) ranged between 0,83 and 0,98, deeming them acceptable. The larger sample of the extended pilot (EP) reflected improved Cronbach's scores ranging between 0,882 and 0,981. This is presented in Table 4.

Table 4: Cronbach's Alpha (Pilot [P] and Extended Pilot [EP])

Construct	Valid		Excluded		Number of items	Cronbach's Alpha	
	P	EP	P	EP	Both	P	EP
Perceived supervisor support (PSS)	21	71	0	3	7	0,913	0,942
Perceived co-worker support (PCS)	21	71	0	3	7	0,904	0,910

Construct	Valid		Excluded		Number of items	Cronbach's Alpha	
PsyCap (t1)	21	71	0	3	12	0,920	0,882
PsyCap (t2)	15	54	6	20	12	0,928	0,908
Enacted supervisor support (ESS)	8^	65	13	9	10	0,980^	0,981
Enacted co-worker support (ECS)	20	65	1	9	10	0,947	0,963

^ An error in the research instrument meant that an item for enacted supervisor support was excluded for a portion of the pilot-sample. It was rectified for the extended pilot.

PsyCap scores were tested to verify whether significant changes occurred in the dependent variable over this period. Due to the small sample size of the pilot (P, n=21), the non-parametric related-samples Wilcoxon Signed Rank Test was conducted to compare PsyCap at the start (t1) and conclusion (t2) of the study. This test indicated no statistically significant median change in PsyCap over the period for this small sample (z=0,491, p=0,623). However, when the group was split between those whose PsyCap improved (n=7, z= -2,384, p=0,017) and those whose deteriorated (n=8, z=2,214, p=0,027), statistically significant changes were observed.

In the extended pilot (n=71), a paired samples t-test showed that there was a statistically significant improvement in PsyCap over the two weeks (M=1,885, SE=0,652, t(51), p=0.006). Therefore, the remainder of the study continued as the instrument and duration were tested and yielded acceptable results.

4.2.6 Data gathering strategy

Data were gathered from individuals through a survey conducted through a mobile application (ExpiWell) over two weeks. Screenshots from the platform are presented in Appendix B. Potential participants were approached individually and through their organisations.

4.2.6.1 Participants from organisations

Several organisations were approached to investigate their willingness to have their employees participate in the study. Amongst others — and drawing from several industries — these included financial services institutions, insurance brokerages, manufacturing plants, information technology companies, public benefit organisations, NGOs, as well as industrial and other professional services (see Section 4.4.1.4).

Upon approval, an introductory letter was distributed via email to all employees (or via an organisation on the researcher's behalf), extending an invitation to participate in the study. If they agreed to participate, a link to the ExpiWell application (previously

ExpiMetrics) and the enrolment code was sent to them. After the respondent's registration, the study commenced. Correspondence to organisations is set out in Appendix F.

4.2.6.2 Individual participants

Some participants were identified and contacted independently. An explanatory message containing an illustrated guide (Appendix E) invited potential participants to join the study, explaining its purpose, and showing how the mobile phone application worked. This aimed to establish a 'viable research alliance' with the respondent, described in greater detail in a later section (see Section 4.3.3.4). A further strategy to obtain individual participants was through snowball sampling (see Section 4.3.1).

4.3 Data collection methods

This research used surveys or questionnaires to obtain data. Using a survey offers the benefits of: operationalising variables through questionnaire items; supporting the value of objectivity due to the distance between the researcher and the participant; allowing for checks and balances (control variables); and, enabling scalability and path analysis (Bryman, 1984). These surveys were administered employing a paid platform developed for ESM studies by Purdue University, called ExpiWell (https://www.expiwell.com). A six-month subscription was obtained for the pilot, and extended pilot (expired in March 2020), and an additional subscription was obtained for the remainder of the study (expired in April 2021).

4.3.1 Sampling methodology

Obtaining participants was approached in a multi-phased manner. One targeted organisations to obtain employee access, and the other was aimed at individuals (purposive and snowball sampling). Participants were also invited to recommend other potential participants (snowball sampling).

It is worth mentioning that the sampling methodology inherent to ESM studies is also a type of "two-stage cluster sampling, with individuals sampled in the first, and daily responses sampled in the second step, leading to daily responses being clustered within persons" (Ohly et al., 2010, p. 87). In other words, whereas the researcher decides who the participant pool for the study might be, the participants themselves sample the experiences they are evaluating.

In the **first phase** of reaching participants, a non-probability sampling methodology was used to identify organisations that would invite their employees to

participate in this study. Thus, purposive sampling and snowball sampling were used to achieve the required sample size. Samples for ESM studies are usually purposive in nature and not intended to be broadly representative (Hektner et al., 2007a).

Purposive sampling is a method where the researcher uses their judgment to identify cases to answer the research question and attain the objectives. Such samples are not necessarily representative of the target population, however broad or narrow that might be. For this study, a typical case scenario was pursued, and understood that such could not be considered definitive (Saunders et al., 2009).

Snowball sampling is a sampling method where "participants are volunteered to be part of the research rather than being chosen" (Saunders et al., 2009, p. 303). This study asked existing participants to recommend others (individuals or organisations) willing to participate. Because people tend to recommend persons like themselves, the possibility of bias is, however, greater. Notwithstanding, the criteria for participation in the study (employees from South Africa, reporting to a supervisor and with co-workers) remained.

Participating organisations were requested to sign an informed consent form (Appendix F), whereafter employees from the organisation were invited to participate. An attempt was made to gain diverse participants from various industries and types of organisations. The demographic profile is presented in Section 5.4 and Table 10.

In conclusion, the proposed sampling methodology of the study is summarised in Table 5. As mentioned, inclusion criteria to participate in the study were persons residing in South Africa, 18 years and older, employed, reporting to a supervisor and working with at least one person they would consider a co-worker, peer or colleague.

Table 5: Sampling methodology and sampling units

Phase	Sampling methodology	Sampling unit
Phase 1	Purposive and snowball sampling	Organisation or Individuals
Phase 2	Multi-stage cluster sampling - Stage 1: All employees approached by the researcher and organisation and invited to participate	Employee
	- Stage 2: Respondents select the support events they report upon	Support events

4.3.2 Sample size

Larger samples with a greater variety of participants enable better statistical tests and improve confidence in the results obtained, thereby improving statistical significance and generalisability (Hinkin, 1995). The required sample size is influenced by the size of

the population, desired confidence level and margin of error, and the statistical tests the data must undergo.

When considering precedents set by ESM studies, sample sizes differ substantially. Van Berkel et al. (2017) argued for relatively small samples, in the range of between 12 and 53, as each person in the sample offers multiple data points due to the within-person variations covered throughout the period, and recommended a study duration of 14 days. Ohly et al. (2010) caution that sample sizes of less than 30 lead to biased results. They recommend a sample size of at least 100 persons and at least five days as a suitable guideline.

A few examples illustrate no coherent agreement on a suitable sample size to investigate phenomena through ESM. From a sample frame of 2498 employees obtained from an agency commercial panel provider, Wijewardena et al. (2017) got responses from 962 participants for their 10-day ESM study. A five-day diary study with a sample of 158 teachers yielded insights into the relationship between job demands, well-being, and the resources to buffer such (Tadić et al., 2015). Out of 438 participants, a sample of 142 nurses completed a 12-week weekly diary study on the impact of the cost of providing social support on support providers' work engagement (L. Q. Yang et al., 2018). A five-day ESM study prompted data collection four times per day and had a sample of 39 managers (Daniels et al., 2014). Finally, out of 89 respondents, a sample size of 72 supervisors participated in a ten consecutive workday, twice-per-day diary study measuring six variables (Qin et al., 2018). It should be noted, increasing sample size on the person-level has more power than increasing power on the daily measurement level (Snijders, 2005).

When determining sample size by considering the data analysis technique intended, multiple viewpoints exist. For example, for *factor analysis*: 150 cases are deemed adequate (Hinkin, 1995). However, others argue that at least 300 cases or ten cases for every variable are needed (Nunnally, 1978; Pallant, 2016). For *standard multiple regression,* 15 cases for every independent variable is recommended (Pallant, 2016; Stevens, 1996) or eight times the number of independent variables plus 50 (Tabachnick & Fidell, 2013). For CB-SEM, at least 100 people are suggested if variance estimates are the aim instead of regression coefficients (Hox, 2013). Although Tabacknick and Fidell (2013) suggest that 300 is the minimum for CB-SEM, others argue against such a rule of thumb (Wolf et al., 2013).

Westland (2010) consolidated arguments around the lower bounds of sample sizes for CB-SEM, informed by the ratio of indicators to latent variables. Based on their calculation, and assuming 58 indicators and between 11 and 19 latent variables (first-

order versus second-order constructs), the lower bound sample size for this study is between 117 and 192.

Mindful of the low completion rate and high attrition rate of ESM studies, as well as the likely fall-out during the data cleaning process, a sample size of 250 was pursued for this study. A participant's responses were deemed valid if both the Initial and Concluding Survey were completed, along with at least one Daily Survey for a working day. Thus, out of 316 participants, 253 valid participants were identified after data cleaning and validation of responses. This is discussed in Section 5.2.

4.3.3 Research instrument

Bryman (1984) highlights that the social survey is the preferred quantitative research instrument within social sciences. Previous studies investigating the constructs of this study affirmed its suitability (for example, Deelstra et al., 2003; Eisenberger et al., 1986; Goldsmith et al., 2000; Krause et al., 1989; F. Luthans, Avey, et al., 2008; Nahum-Shani et al., 2014; Wijewardena et al., 2017). Questionnaire items measure sociological variables by soliciting "observed manifestations of unobserved actions and processes" (Babones, 2016, p.459). Hinkin (1995) suggests that a shorter instrument minimises response biases but warns that scales with too few items have implications for content and construct validity, as well as internal consistency. It should be noted, however, that longer questionnaires can lead to respondent fatigue.

4.3.3.1 Using the research instrument

This study used ExpiWell (https://app.expiwell.com/), a mobile application, to administer the surveys. ExpiWell offers free applications (apps) for iOS and Android platforms for participants. The application sends notifications and reminders to participants, nests all surveys and responses with an individual participant identifier, and expires surveys when the response window passes – thereby ensuring participants adhere to study protocols. The added convenience of not needing to input identification codes and take the surveys on their mobile device also counts in its favour.

An email explained the survey participation requirements and invited potential respondents to join the project. This involved downloading the application to their mobile devices and registering on the platform using an email address of their choosing. To enrol in the study, an access code had to be entered (extended pilot: "socialpsy", and main study: "ss2021" and "9ba49") (see Appendix E).

As participants registered on the platform, they had to consent to participate and were reminded of the confidentiality of how data will be treated (see Appendix C). It

explained the protocols of the study and the functionality of the application. Participation in the study involved three questionnaires.

First, an **Initial Survey** gathered information about demographics, control variables, perceived social support measures and the PsyCap (t1) questionnaire. This took about nine minutes to complete, and they were advised when the subsequent questionnaire would become available, and their participation was encouraged. Participants had to complete this questionnaire immediately upon registration, as it expired by the end of that day.

For 14 days (of which ten should be working days), a **Daily Survey** – taking around four minutes to complete – was distributed between 15:00 and 16:00, and an in-app notification advised them of such. A second reminder notification was sent if no response was received within one hour. At midnight the questionnaire expired. As the application offered 'rolling scheduling', participants could enrol and commence the study at their convenience. However, the application could not differentiate between weekdays and weekends. Therefore, the first question, **"Today was a working day for me: Yes / No",** used skip logic to ascertain whether the remainder of that survey had to be administered. An unexpected advantage of this was that participants could include people who worked on weekends.

After the final Daily Survey was completed, the **Concluding Survey** measuring PsyCap (t2) became available and took around two minutes to complete. To pursue a greater completion rate, this survey was available for several days and only expired after six days of non-response.

Within each section of the survey, questions were randomised to improve cognitive engagement from participants and improve the quality of data received. Upon completion of the project, data were downloaded in CSV (comma-separated values) format to be imported into SPSS (version 27) and AMOS (version 27) for analysis.

4.3.3.2 Mobile device studies

As per the guidelines of Van Berkel et al. (2017) regarding data gathering for ESM studies on mobile devices, the following can be reported:

- **The number of participants:** This is set out in Table 9 in Section 5.2. It indicates which responses were not deemed valid after the data-cleaning process.
- **Study duration**: The study took between 15 and 21 days to complete. On day one, the *Initial Survey* took place. Then, from day two to 15, 14 *Daily Surveys*

were conducted. Finally, on day 15, the *Concluding Survey* became available and remained open for six days to improve completion rates.

- **Notifications:** In-app notifications were triggered when surveys became available, followed by a reminder if no responses were received. The *Initial Survey* became available upon registration (notifications at 12:00 and 14:00). *Daily Surveys* became available at 15:25 with a reminder 90 minutes later at 16:55). The *Concluding Survey* became available at 16:40 on Day 15, followed by a reminder 45 minutes later, at 17:25). From day 16 onwards, the reminders occurred at 12:30 and 13:15 (45 minutes later). All surveys expired at 23:59 of the day in question.
- **Inquiry limit:** The number of notifications for each survey was set to two: when the survey window opened, the questionnaire became available, and another 30 to 90 minutes later. When non-response was detected for a few days, an email reminder and a mobile notification were sent to encourage participation.
- **Device ownership:** The participant's own device was used to join and participate in the study. ExpiWell offers applications for respondents' own iOS or Android devices. Thus, concerns about the cost of equipment, platform heterogeneity, software compatibility and device characteristics were alleviated.
- **Response rate** (see Section 4.3.3.4)
- **Participant compensation** (see Sections 4.3.3.4 and 4.5.5)
- **ESM question type** (see Section 4.3.3)
- **Context:** Only the start date and time, end date and time, and test duration were logged. No location data were gathered.
- **Abnormalities**: Several abnormalities occurred during the study, and these are discussed in detail in Appendix G. Most remarkable was an update to the mobile application that caused it to crash until an update was made available by the developer. This disrupted the study for about 24 hours.
- **Daily assessment duration:** This study's *Daily Survey* took around four minutes to complete, and the *Concluding Survey* was less than that – as per Qualtrics estimations. The assessment duration should not exceed five to seven minutes per day (Ohly et al., 2010).
- **Study compliance:** This study considered a valid response (participant) to include the *Initial Survey* response, the *Concluding Survey* response and at

least one *Daily Survey* response on a working day. Valid responses are discussed and presented in Section 5.2.

- **Temporal indicators** relate to when a data entry has been captured and the period reflected upon – to demonstrate compliance with the study protocol (Nezlek, 2013). For this project, the period reflected upon was '*In the past day*'. *Daily Surveys* became available at 15:25 and expired at midnight. The first *Concluding Survey* became available around 16:30 on the date of the last *Daily Survey*. If it was not completed, two reminders were sent the following day between noon and 13:30 for six days before non-compliance was assumed.

4.3.3.3 Distribution of the research instrument

Before commencing, participants were informed of the time commitment required to complete the study, how the application worked, whom to contact should issues arise, and what to do if a trigger or response questionnaire was missed (C. D. Fisher & To, 2012). If they agreed to participate, they needed to download the ExpiWell application from their relevant mobile device's store (iOS or Android) and enter the access code, which would enrol them into the study. After supplying consent to participate in the study and being informed that participation was voluntary and confidentiality ensured, the *Initial Survey* became available and expired at midnight. To emphasise, consent to participate in the study was obtained before gaining access to the online survey (see Appendix E).

4.3.3.4 Response rates

Response rates for ESM studies have been reportedly low. Some authors have set it at 69% (Van Berkel et al., 2017), between 70% and 90% (C. D. Fisher & To, 2012), or highlighted that at least 20% would be lost (Ohly et al., 2010). As mentioned, ESM and diary studies are very similar. Hence, Tadić et al. (2015, p. 708) emphasised that "relatively low response rates are typical for web-based diary studies without personal contact with participants."

A low response rate does not cause bias in diary studies. For example, results from a diary study of stress and negative mood, and a response rate of 34%, did not differ significantly from findings drawn from a larger sample of a previous study (Bolger et al., 1989).

Notwithstanding, increased interruptions lead to a decreased response rate, and therefore such was limited to twice per day: when the questionnaire became available

and a reminder a while later. However, notifications on mobile devices have been associated with improved response rates (Van Berkel et al., 2017).

The importance of the participant's contribution should be emphasised through a 'viable research alliance' between the researcher and the participant to increase participation. The 'research alliance' refers to a respondent's understanding of the objectives of a study, as well as its utility and importance in order to motivate participation (Alliger & Williams, 1993; Csikszentmihalyi, 2014). Such alliance is improved by ensuring confidentiality and a sense of collaboration with the researcher (Hektner et al., 2007a, 2007c). However, Van Berkel et al. (2017) argue for making participation intrinsically rewarding, stating that a research alliance alone is inadequate.

Incentives have been recommended to motivate participants to remain part of the study for its duration (Ohly et al., 2010; Qin et al., 2018; Van Berkel et al., 2017; Wijewardena et al., 2017; L. Q. Yang et al., 2018). However, based on the ethics protocol of the University of Pretoria, no inducement to participate is allowed and was hence not pursued.

To aid in offering such intrinsic reward and develop a sense of collaboration, upon completion of the study, participants were asked whether they would like to be informed how their results compared with the mean of the study. If they agreed, their personal email addresses were obtained to provide them with such a report.

It is difficult to ascertain the exact response rates for this study, as snowball sampling was used to gain participants. However, it is likely to be very low. For example, during the extended pilot, an organisation with over 500 employees invited all employees to participate. However, only 25 joined the study, of which 14 completed it. In another organisation, the exco of the company (15 people) was invited, of which seven enrolled only six completed it. During the main study, the response rates were similar. A company inviting its 500 employees yielded four persons who joined, of which three completed. Another department head invited her team of around 70 staff members to participate, of which 13 enrolled, and only ten completed it.

For this project, respondents completed 258 valid Concluding Surveys, as opposed to 304 Initial Surveys, suggesting an 84,8% retention rate. Therefore, the attrition rate was 15,2% (participants who started but did not complete the study).

The signal response rate – the percentage of signals or intervals for which responses were gathered – also merits discussion (Hektner et al., 2007b; Nezlek, 2014). Out of a potential 2530 responses (assuming ten workdays per participant), 1457 valid workday responses were obtained. Thus, the median signal response rate per participant is six, and the mean is 5,76. These are presented in Table 6 and illustrated in Figure 8.

Resultantly, missing values had to be addressed, which are expanded upon in Section 5.3.

Table 6: Valid signal responses by participant

Valid responses by participant	Frequency	Percentage
1	11	4,3%
2	25	9,9%
3	26	10,3%
4	18	7,1%
5	30	11,9%
6	38	15,0%
7	32	12,6%
8	32	12,6%
9	23	9,1%
10	17	6,7%
11^	1	0,4%
	253	**100,0%**

^ The study aimed to gather data across the number of workdays in a 14-day period. The expected maximum was, thus, ten responses. However, it is understood that some participants have longer work weeks. As such, a single participant indicated 11 responses across the period

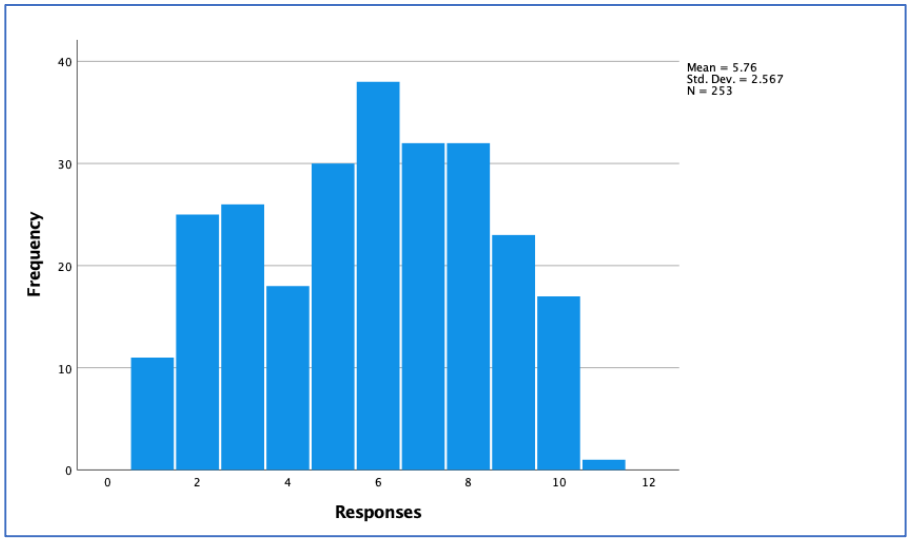

Figure 8: Number of valid signal responses by participant

4.4 Measures

Items that operationalised the constructs were drawn from scales tested in existing literature. Operationalisation entails allocating numbers to unobservable constructs to represent the quantities of their attributes (Churchil Jr., 1979; Hinkin, 1995). The selection of such operationalised measurement scales is informed by: (1) its focus on a single dimension (discriminant validity); (2) its adaptability to a common format (like

a Likert scale); and (3) it being individual experience directed (versus environmental) (Spreitzer, 1995). This study's measurement scales are set out in the questionnaire presented and summarised in Appendix A.

Participants were asked to answer demographic questions (and other control variables), followed by statements answered on Likert scales. A Likert scale is readily understood and easy to use, but it can take longer to complete because each statement needs to be read carefully. All the scales used were balanced (equal number of negative and positive categories) and forced (no neutral category), unless otherwise indicated. Feedback from the extended pilot suggested that participants were unclear on how to respond should supportive behaviour not occur. Being cautious about tapping into support behaviours and not perceptions, an additional rating point was added to the Likert scales that measured enacted support behaviours and satisfaction. In addition to the six-point scale (ranging from 'Strongly disagree' to 'Strongly agree'), an additional point was added ("Such behaviour was NOT observed or experienced in the past day").

The control variables of the study (like gender, language, and ethnicity) are categorical. The construct variables (like perceived and enacted social support, and PsyCap) are ordinal and were collected using Likert-scales as specified. This aligns with how prior studies applied the measurement scales in question. Despite the data being ordinal, when combined or summated, they obtain the characteristics of interval data with the benefits of description characteristics, order and distance; thus enabling "parametric statistics [that] can be used with Likert data, with small sample sizes, with unequal variances, and with non-normal distributions, with no fear of 'coming to the wrong conclusion'" (G. Norman, 2010, p. 231).

4.4.1 Control variables and demographics

Control variables formed part of the Initial Survey. These include information on the participant (gender, age, tenure with organisation, industry, management role, language and English proficiency, education, and ethnicity), on their supervisor (gender, tenure with supervisor, frequency of interaction), and their organisation and team (size). The motivation for their inclusion or exclusion is discussed next. Then, in Section 5.6, their influence on the constructs of the study was tested to determine their value in the remainder of the study. Notably, the managerial role of the support beneficiary was shown to be significant in its effect on the study variables.

4.4.1.1 Gender (of participant and supervisor)

Mixed results have been observed when considering the influence of gender on PsyCap. Some studies observed no effect (Avey, 2014; Avey et al., 2010; Leon-Perez et al., 2016; Rego et al., 2012; Roberts et al., 2011; Verleysen et al., 2015), whereas others did observe a small effect (Y. Choi & Lee, 2014; Nielsen et al., 2017; S. M. Norman et al., 2010).

Regarding studies on social support, the association between support perceptions and support behaviours is likely more substantial in instances where the support recipient is female (Haber et al., 2007; Williamson & O'Hara, 2017). Another study emphasised that women received more support than their male counterparts (Zimet et al., 1990). A further study argued that perceived support from co-workers and supervisors is more valued by women than men, as it pertains to job satisfaction. However, this was not supported by the data (T. W. H. Ng & Sorensen, 2008). Gender has been associated with greater perceptions of organisational social support in some studies (for example, Gyekye & Salminen, 2009; Kurtessis et al., 2017), but not in others (for example, Burnett et al., 2015). Marigold et al. (2014) argued that one of the factors that influence the appropriateness of social support is the gender of the recipient.

Furthermore, Shah et al. (2018, p. 422) argued that "men and women may differ in their access to resources through social networks" and other relationships that may provide friendship and social support (Ibarra, 2011). Ibarra added that such differences apply to peers and superior-subordinate relationships and, hence, their support networks (providers of support) will differ. For this reason, the **gender of the support recipient,** as well as the **gender of the supervisor,** served as control variables.

Through item-level analysis by means of an independent t-test taken together with the study constructs of PsyCap (t2), Enacted Supervisor Support and Satisfaction, and Enacted Co-worker Support and Satisfaction, neither the gender of the support recipient nor the gender of the supervisor indicated a statistically significant relationship. Therefore, these control variables were not subsequently included in the analysis. This is explained in Section 5.6.1.

4.4.1.2 Age

Age has been shown to not only be associated with the level of PsyCap (Avey, 2014; Y. Choi & Lee, 2014; Leon-Perez et al., 2016; S. M. Norman et al., 2010; Roberts et al., 2011; Sweet & Swayze, 2017), but a predictor of it as well (Avey, 2014). Thus, it is argued that there is some measure of confidence and resilience that is likely to develop

with age. However, other studies found no association between PsyCap and age (Avey, Hughes, et al., 2008; Rego et al., 2012; Verleysen et al., 2015).

Marigold et al. (2014) argued that the recipient's age is one of the factors that influence whether enacted support would be deemed appropriate. Furthermore, age has been associated with greater perceptions of organisational social support in some studies (for example, Gyekye & Salminen, 2009), but not in others (Burnett et al., 2015; Conway & Coyle-Shapiro, 2012; Shoss et al., 2013). A recent meta-analysis even suggested that perceived organisational support would be greater with older employees than with younger ones (Kurtessis et al., 2017). Additionally, both enacted and perceived support have been positively associated with younger recipients (Williamson & O'Hara, 2017).

The observations on both PsyCap and social support concur with Conservation of Resources Theory's view that resource reservoirs change with age (Hobfoll, 2002) and, hence, **age** was controlled for.

Through item-level analysis by means of ANOVA between age and the study constructs of PsyCap (t2), Enacted Supervisor Support and Satisfaction, and Enacted Co-worker Support and Satisfaction, no statistically significant relationship was observed, and was subsequently excluded from analysis. This is explained in Section 5.6.1.

4.4.1.3 Tenure

Most studies do not observe a relationship between PsyCap and tenure (Avey et al., 2010; for example, Avey, Hughes, et al., 2008; Rego et al., 2012; Verleysen et al., 2015); however, it is still considered common practice to investigate such (for example, Newman et al., 2018; Wijewardena et al., 2017).

Tenure has been associated with greater perceptions of organisational social support in some studies (for example, Gyekye & Salminen, 2009), not in others (Burnett et al., 2015; Conway & Coyle-Shapiro, 2012), and mixed results in others (for example, Shoss et al., 2013). Nonetheless, Shah et al. (2018) argued that employees who have been with organisations for more extended periods, have had more opportunities to develop relationships with potential sources of social support. Furthermore, tenure is likely to influence supervisors' expectations of employees, and might, therefore, influence the type and nature of support provided to them (Erdogan & Enders, 2007). Furthermore, it could be argued that being with an organisation for an extended period, would also cement relationships with co-workers. As such, **organisational tenure** was controlled for.

Item-level analysis by means of ANOVA investigated the relationship between organisational tenure and the study constructs of PsyCap (t2), Enacted Supervisor Support and Satisfaction, and Enacted Co-worker Support and Satisfaction. Homogeneity of variances was violated when differences between tenure and ESS (Satisfaction) were investigated. However, no statistically significant differences were observed between the group means and this construct. No other statistically significant relationship was observed, and was subsequently excluded from analysis. This is explained in Section 5.6.1.

4.4.1.4 Industry

PsyCap has been investigated in multiple industries, and it has been shown that its impact in the service industry seems to be slightly larger, as opposed to the manufacturing industry – presumably due to the social interactions favouring the positivity required in the former (Avey, Reichard, et al., 2011). Youssef and Luthans (2007) suggested classification by sectors such as services, manufacturing, public sector, non-governmental organisations (like Firestone & Anngela-Cole, 2016) and state-owned enterprises. Therefore, it seemed that the **industry** in which the respondent finds themselves should be considered. As an additional control to verify this question, the **name of the organisation** was also gathered.

Ambivalent responses were obtained for this measure. For example, participants from the same organisation would indicate different industries. Therefore, these controls were eliminated from the analysis due to confusion in the responses.

4.4.1.5 Job role and management position.

Some argue that there is no association between PsyCap and job level in the organisation (Avey et al., 2010). However, it has been considered in positions that are more client-facing (services) (like Walumbwa et al., 2010), sales directed (like Friend et al., 2016) or studied in companies with various staff categories (like Y. Choi & Lee, 2014).

As it pertains to social support, Matthieu et al. (2019) observed that the relationship between emotional and instrumental support seemed to be stronger in jobs that require greater emotional labour. Another study found that support from co-workers and supervisors is considered to be more valued by employees working in customer-facing positions instead of those working in non-customer-facing positions (T. W. H. Ng & Sorensen, 2008).

As per the argument of Shah et al. (2018), individuals with greater seniority and at a higher hierarchical level are more likely to have opportunities to develop relationships with support providers and thus have access to more social support. As such, job role has been associated with greater perceptions of organisational social support (Gyekye & Salminen, 2009).

For these reasons, it was argued to look at **management role** as well as **job role**. Based on the aforementioned, the response categories selected were 'administrative', 'customer-facing', 'non-customer-facing', 'sales', 'leadership or management', 'follower or supporter', and 'other', where categories not listed could be stipulated or selected.

However, when responses for the "management role" and the "job role" were examined, several discrepancies were found when the "Job role: Management or Leadership" alternatives were also considered. These were expected to align and did not. Since the overlap in management job roles was interpreted to imply managerial status, only "job role" responses were included for analysis. This is expanded upon in Section 5.6.4.

Factorial analysis of variance indicated a significant relationship between 'job role' and PsyCap (t2) (Section 5.6.2). Therefore, multigroup analyses were conducted by means of a nested-model comparison to test the equivalence of the factor loadings and ascertain metric invariance or not. The analysis found that 'job role' was not metric invariant (Section 5.6.4) and was subsequently included in analysis (Section 5.8 and onwards).

4.4.1.6 Language

The questionnaire and study were conducted in English. However, this might not be the respondent's first language. As South Africa has eleven official languages, some consideration was given to whether comprehension and understanding of the questions and statements will influence responses, and thus the results. Therefore, the **first language** was controlled for, as well as **proficiency in English.**

First language and PsyCap (t2) were shown to be significantly correlated by factor analysis of variance (Section 5.6.2). In order to determine whether or not metric invariance existed, multigroup analyses were carried out using a nested-model comparison to evaluate the equality of the factor loadings. As a result of the analysis's discovery that 'first language' was metric invariant (Section 5.6.4), it was subsequently not included.

4.4.1.7 Level of education

Mixed results have been observed when considering the association between years of education and PsyCap. Some studies have observed no effect (for example, Avey et al., 2010; Rego et al., 2012), whereas others have (for example, Y. Choi & Lee, 2014). However, Larson and Luthans (2006) stated that years of education inform human capital (along with work experience). Therefore, it could be argued that such would likely influence confidence indicators, and thus PsyCap.

Education has been associated with greater perceptions of organisational social support in some studies (for example, Gyekye & Salminen, 2009), but not in others (for example, Burnett et al., 2015). It could be argued that education might influence the need for instrumental or informational support, as education might have negated the need for such. Therefore, the **level of education** was considered.

No statistically significant association was found between 'level of education' and the study variables of PsyCap (t2), Enacted Supervisor Support and Satisfaction, and Enacted Co-worker Support and Satisfaction, and was thus excluded from further analysis. Section 5.6.1 explains this.

4.4.1.8 Ethnicity

Early studies have observed no association between ethnicity and PsyCap (Avey, Hughes, et al., 2008). However, as it pertains to social support, Ibarra (2011) observed that such is influenced by not only the recipient of support, but also the ethnicity of providers of such support, albeit peers or supervisors. She emphasises that the relationships of individuals from a previously disadvantaged community (such as the United States minority referent), are weaker and, hence, they are likely provided with less instrumental and emotional resources. As such, providers of support might differ accordingly.

In their meta-analysis, French et al. (2018) emphasised how social support differs across cultures, amongst others, highlighting the collectivism dimensions of some. It has been argued that African-language speakers are more collectivist than their English/western counterparts (Eaton & Louw, 2000). Following the Broad-Based Black Economic Empowerment Act (Republic of South Africa, 2014) ethnic classification was '**African, Coloured, Indian, White and Foreign National**'. Additionally, other studies (Taylor et al., 2004, 2007) observed a marked difference in response to social support between Asian Americans and European Americans. Such differences might exist between South Africans as well. As such, it was also important to add another control

for the **country of residence** to ensure that the South African population was tested in the sample.

By means of factorial analysis of variance, it was established that no statistically significant F-value was observed for the relationship between 'language' and any of the study variables. Thus, this control variable was excluded from further analysis (Section 5.6.2).

4.4.1.9 Relationship with supervisor

As the supervisor plays a vital role in this study, two control variables were suggested. It is worth mentioning that followers emulate the behaviour of leaders, and such has been observed in studies around PsyCap (Story et al., 2013). It is argued that the years that an individual and their supervisor work together would positively affect the quality of their relationship (Mayo et al., 2012). Additionally, such experience of working together might also influence the familiarity with the expected standards and might decrease the need for instrumental or informational support and improve the appropriateness of emotional support.

Furthermore, the frequency of interaction with the supervisor is also likely to influence enacted support behaviours. The latter was controlled in a PsyCap study around the role of humour and positive affect (Wijewardena et al., 2017). Therefore, '**years working with supervisor**' and '**frequency of interaction with supervisor**' were included.

To test the influence of these control variables, moderator analysis was conducted. No significant interaction effects were observed for any of the relationships between the study variables and 'supervisor tenure' and 'supervisor interaction' (Section 5.6.3

4.4.1.10 Organisation size

As data were collected from a number of organisations, some studies on social support have argued for the statistical control of such in those instances, to enable comparison (Eisenberger et al., 2002). This likely influences the access to social support or organisational support perceptions. As an additional control, the size of the team might also have an influence as it pertains to the number of co-workers that would likely provide social support. Therefore, both **organisation size,** as well as **team size,** were requested.

'Organization size' and 'team size' were removed from further analysis after an ANOVA test indicated that there was no statistically significant correlation between them

and the study variables PsyCap (t2), Enacted Supervisor Support and Satisfaction, and Enacted Co-worker Support and Satisfaction. This is explained in Section 5.6.1.

4.4.2 Social support measures: Behaviours or perceptions

Operationalising enacted and perceived support measures follow different premises. Enacted social support measures are more reflective (past-directed), recalling behaviours in the immediate past instead of the forward-looking approach of perceived support (Asgari, 2016; Mathieu et al., 2019).

In many instances, the wording of the same measuring instrument can be slightly amended to tap into the two different constructs. For example, enacted support is measured by "Gave you information on how to do something.", whereas perceived support is measured by "If you needed it, would they give you information on how to do something?" (Weiner & Hannum, 2013, p. 666). In addition, Mathieu et al. (2019, p. 6) differentiate between enacted support measures as containing "past tense phrases, such as 'provided', 'gave', 'talked' or 'received'". In contrast, perceived support measures contained "hypothetical or future tense phrases, such as 'if needed', 'I can rely on', 'I would' or 'I could'". For this study, they were operationalised as follows.

4.4.2.1 Enacted social support measures

Enacted support behaviours are more specific than perceived support beliefs (French et al., 2018). Hence measures that aim to operationalise supportive behaviours are more situational in nature, and a short period (single day) of evaluation is considered. As per the suggestion of Haber et al. (2007), specific behavioural examples are recollected instead of general beliefs when looking at enacted support.

Respondents were asked to indicate their agreement with each item on Likert scales, ranging from (2) 'Strongly disagree' to (7) 'Strongly agree'. An additional point on the scale – (1) "Such behaviour was NOT observed or experienced in the past day" – was added to encourage the measurement of behaviour and not perceptions.

4.4.2.1.1 Enacted supervisor support (ESS)

Enacted support measurement formed part of the *Daily Survey*. Building on perceived supervisor and co-worker support measures, language was adjusted as per the guidelines of Mathieu et al. (2019). Seven items were used to measure enacted support from supervisors. These included "In the past day, my supervisor acted in a way that showed appreciation for what I do" (Abbey et al., 1985) to measure enacted emotional support; "In the past day, my supervisor provided me with work-related

information" (Vinokur et al., 1987) for enacted informational support; and "In the past day, my supervisor helped me to get things done" (Abbey et al., 1985), enacted instrumental support. The complete list of items, and their sources, are set out in Appendix A.

4.4.2.1.2 Enacted co-worker support (ECS)

As measurement items for this construct were drawn from the literature that does not clearly emphasise whether such support is perceived or enacted in nature, the guidelines of Matthieu et al. (2019) were adopted. Adding a specified referent, as opposed to a generalised hypothetical group, made a further attempt to investigate behaviours instead of perceptions. For example, Beehr et al. (2010, p. 49) proposed using the 'closest colleague' as a referent as they were deemed to be "most likely to provide social support and whose support is most likely to have an impact". However, in a diary study, that could be problematic, like when the closest colleague is on leave or ill during the research period, as it would influence their responses.

Abbey et al. (1985) proposed three hypotheses to consider. The 'closest colleague' arguably follows 'the critical supporter hypothesis', arguing for social support from the person closest to them, as social support from any others is discounted should the critical supporter not provide it. The 'total network hypothesis', on the other hand, would entail social support received from all the important people in their lives (Abbey et al., 1985). Such generalisation would likely also tap into support perceptions. Finally, 'the one person is enough hypothesis' argues that "it does not matter how many people respect or listen to [support] an individual, as long as at least one person does" (Abbey et al., 1985, p. 113). This latter approach was adopted for this study, and the items were adjusted to refer to 'at least one of my co-workers'.

Seven items were selected to measure enacted support from co-workers. These include "In the past day, at least one of my co-workers helped me get my work done" (Colbert et al., 2016) to investigate instrumental support; "In the past day, at least one of my co-workers communicated work-related information or advice to me" (Rousseau & Aubé, 2010) for informational support; and, "In the past day, at least one of my co-workers allowed me to vent my frustrations" (Colbert et al., 2016), emotional support. The rest of the items and their sources are set out in Appendix A.

4.4.2.2 Perceived social support measures

Because perceived support refers to the beliefs around the likelihood of the availability and access to social support when needed (Wills & Cohen, 1985), the

measurement of such perceptions are broad in nature and reflective of beliefs that have developed over time (French et al., 2018; Uchino et al., 1996). As such, it is forward-looking because it infers a hypothetical future need scenario (Asgari, 2016; Mathieu et al., 2019).

Perceived social support is deemed to remain constant for two to five months (I. G. Sarason et al., 1986) and was unlikely to change during the study. Therefore, measurements were taken at the start of the data-gathering process as part of the *Initial Survey*. Respondents were asked to indicate their agreement with each item on six-point Likert scales, ranging from (1) 'Strongly disagree' to (6) 'Strongly agree'.

4.4.2.2.1 Perceived supervisor support (PSS)

Participants were asked to indicate the extent to which they agreed or disagreed with statements regarding their supervisor. Following the strategy of Nahum-Shani et al.(2014), items aimed at measuring supervisor support needed to tap emotional, informational and instrumental support, and were drawn from previous studies (Abbey et al., 1985; Caplan et al., 1975; Vinokur et al., 1987). Following the guidelines mentioned before, these scales were adjusted to measure perceived support instead of enacted support. Seven items were identified to investigate perceived supervisor support and include "My supervisor acts in ways that show they appreciate what I do" (Abbey et al., 1985), "My supervisor gives me useful information when I need it" (Vinokur et al., 1987), and "My supervisor goes out of his way to do things to make life easier for me at work" (Caplan et al., 1975). They are set out more broadly in Appendix A.

4.4.2.2.2 Perceived co-worker support (PCS)

Perceived support from co-workers was measured by seven items drawn from the literature. These included "My co-workers help me get my work done", "My co-workers allow me to vent my frustrations when I need to" (Colbert et al., 2016), and "My co-workers communicate work-related information to me" (Rousseau & Aubé, 2010). The remainder of the items are presented in Appendix A.

4.4.2.3 Satisfaction with enacted social support measures

Direct and deductive single items measured satisfaction with enacted social support. As mentioned before, this is an acceptable practice (Burisch, 1984; C. D. Fisher & To, 2012; Grant & Campbell, 2007) and draws from previous studies (Hobfoll et al., 1991; Krause et al., 1989). The Likert scale for these items was similar to those used for enacted support behaviours, ranging from (2) 'Strongly disagree' to (7) 'Strongly agree',

their agreement with each item. An additional point on the scale – (1) “Such behaviour was NOT observed or experienced in the past day” – was included to affirm behaviour and not perception measurement.

Three items for supervisors and three items for co-workers were asked daily. These items were “I feel satisfied with the emotional support (like encouragement, care and listening) I have received from my supervisor/co-workers in the past day” (Hobfoll et al., 1991; Krause et al., 1989), “I feel satisfied with the informational support (like guidance and advice) I have received from my supervisor/co-workers in the past day”, and “I feel satisfied with the tangible aid, help or instrumental support I have received from my supervisor/co-workers in the past day” (Krause et al., 1989).

4.4.3 Psychological capital (PsyCap)

PsyCap and its underlying constituencies of hope, efficacy, resilience, and optimism are the study’s dependent variables and were measured at both the start (t1) and conclusion (t2) of the study.

A vital inclusion criterion for positive organisational behaviour (of which PsyCap is the flagship construct) requires that the constituent capacity be measurable. Dawkins et al. (2013) scrutinised the measurement, reliability, convergent and discriminant validity of the PsyCap construct. Additionally, extensive meta-analyses have looked at the construct and its underlying capacities in different contexts and with multiple constructs (Avey, Reichard, et al., 2011; F. Luthans & Youssef-Morgan, 2017; Newman et al., 2014), amongst others South Africa (Cascio & Luthans, 2014; De Waal & Pienaar, 2013; Demerouti et al., 2001; Görgens-Ekermans & Herbert, 2013; Reichard et al., 2014) adding robustness to validity and reliability arguments. Furthermore, to investigate the culturally shaped perceptions, Wernsing (2014) confirmed the higher-order construct, PsyCap, within 12 national cultures.

PsyCap refers to a person’s “positive appraisal of circumstances and probability for success based on motivated effort and perseverance” (F. Luthans, Avolio, et al., 2007, p. 550) and was operationalised by using the shortened and copyrighted 12-item Psychological Capital Questionnaire (PCQ-12) (Avey, Avolio, et al., 2011). This shortened version of the 24-item PCQ has been validated and used in prior research (Luthans et al., 2007; Norman et al., 2010). It contains four hope items, three efficacy items, two optimism items, and three resilience items. Its primary operationalisation occurs from the self, in that a person evaluates their individual state of development (Avey, Reichard, et al., 2011). It is selected for brevity and using scales (Likert-type) like the rest of the study, making it familiar to the respondents.

Permission to use this instrument as well as place it on an online platform (like ExpiWell) was obtained from the authors (www.mindgarden.com) and can be seen in Appendix D. Respondents were asked to reflect their agreement on a six-point Likert-type scale, where (1) 'strongly disagree'; (2) 'disagree'; (3) 'somewhat disagree'; (4) 'somewhat agree'; (5) 'agree'; and (6) 'strongly agree', as suggested in previous studies (F. Luthans, Avolio, et al., 2007). The PCQ-12 contains no reverse-scored items, as they are likely to confuse respondents and harm internal consistency (Singh et al., 2018). As such, items include "I feel confident in representing my work area in meetings with management" (Parker, 1998) measuring efficacy, "If I should find myself in a jam at work, I could think of many ways to get out of it" (Snyder et al., 1996) for hope, and "I can get through difficult times at work because I've experienced difficulty before" (Wagnild & Young, 1993), for resilience, to name a few. Another recommendation was to instruct participants to respond to this questionnaire by considering their sentiments **"at the present moment"** (Howard, 2017).

4.4.4 Validity and reliability

A measure is valid when "the differences in the observed scores reflect true differences on the characteristic one is attempting to measure and nothing else" (Churchil Jr., 1979, p. 65). A measure is reliable "to the extent that independent but comparative measures of the same trait or construct of a given object agree" (Churchil Jr., 1979, p. 65); that is, the degree to which the findings can be generalised to a larger population (Babin & Svensson, 2012). Reliability is considered a necessary condition for a measure to be deemed valid (Hinkin, 1995).

Content, discriminant, and convergent validity were pursued in this study. C*ontent validity* is the appropriateness of the items that measure a construct and how adequately the measure assesses it. *Convergent validity* refers to how the measure selected compares with other measures that are also investigating the same construct. *Discriminant validity* refers to how unique the measure is, and that it is not a reflection of a different variable (Churchil Jr., 1979; Hinkin, 1995).

The operationalisation of constructs was conducted by drawing from scales and instruments established in the literature, and used in previous research, hence suggesting content validity. However, of particular importance was convergent and discriminant validity due to the highly-related nature of multidimensional latent constructs. This was extensively investigated and reported in Section 5.7.3, and how multicollinearity was addressed in the study.

Arguably, the internal validity of ESM studies is more robust than for cross-sectional questionnaires. Presumably, this is due to a greater representation of actual

experience over time without being clouded by memory recall or social desirability. Additionally, the volume of signals tends to decrease reactivity because participants are likely to become less sensitive to being monitored (*Psychometrics of ESM data*, 2007).

Regarding the research instrument and the operationalisation of the constructs, Fisher and To (2012) emphasise that although three items are suggested per ESM construct, mixed results have been obtained with single-item measures. However, they emphasise that it should be acceptable if the items reflect validity. This is an argument supported by Burisch (1984) and applied by Grant and Campbell (2007) around the effectiveness of direct and deductive scales. Therefore, although multiple items are required to calculate the reliability of a measure, Fisher and To (2012, p. 871) highlight that "reliability matters only in the service of validity".

Reliability indicators are the composite reliability (CR) score and Cronbach's coefficient alpha, which reflect the extent to which the items in a research instrument reflect the construct it aims to measure (Churchil Jr., 1979), also shown in Section 5.7.3.

4.5 Data preparation and analysis

The data gathered were interrogated to identify valid responses and the treatment of missing data. In addition, descriptive analysis was undertaken to assess the validity and reliability of the data, the distribution of responses and the correlation between the constructs.

After that, confirmatory and exploratory factor analysis (CFA and EFA), and covariance-based structural equation modelling (CB-SEM) and mediation analysis were conducted to develop a model to investigate the hypotheses. Data were analysed using Statistical Package for the Social Sciences (SPSS, version 27), and CB-SEM was conducted using Analysis of Moment Structures (AMOS, version 27).

Several ESM studies use SPSS and AMOS to investigate ESM data when such analyses are aggregated to single level / Level 2, or by considering nested mixed models (e.g., Blanke et al., 2020; Droit-Volet & Wearden, 2016; Jones et al., 2003; Lattimore et al., 2010; Romanzini et al., 2019; Turnbull et al., 2020; Udachina et al., 2009).

4.5.1 Data cleaning

Participants needed to complete an *Initial Survey*, *Concluding Survey*, and at least one *Daily Survey* (working day) to be considered valid. Participants who missed any of these surveys or only completed non-working day surveys were not incorporated. Where multiple *Concluding Surveys* were submitted, only the first one was incorporated.

In the evaluation of enacted support, the respondent had the seventh option to answer, “Such behaviour was NOT observed or experienced in the past day”. Between 4,6% and 12,5% of responses selected this option. To investigate the impact of treating the seventh option as missing, the distribution per item and exploratory factor analysis on the seven-point and the six-point scale (without the seventh option) were conducted. As a third test, the seventh option was replaced with the mean. Results were very close in all three scenarios, but the six-point scale appeared to be the best option, particularly as factor analysis on the six-point scale indicated an improvement in the percentage of variance explained, over the seven-point scale

Although these responses were coded as missing data, it is not assumed to be missing at random, as the respondent intentionally selected that option. However, this explains some variance in the sample size for the enacted support measures and the number of observations and results obtained, as reported later (see Section 5.4).

4.5.2 Levels of collection of ESM data

Data gathered through ESM studies are nested within the individual and are, by nature, gathered simultaneously on multiple levels. In this study, it was gathered on two levels: the interval-based data (daily level / Level 1) and person-level data (Level 2). These are set out in Table 7.

Table 7: Variables on levels of collection

Level 1 [Daily-level]	Level 2 [Person-level]
Independent variables	**Independent variables**
Enacted Support	***Perceived Support***
Enacted supervisor support (ESS)	• Perceived organisational support (POS)
• Instrumental	• Perceived supervisor support (PSS)
• Informational	• Perceived co-worker support (PCS)
• Emotional	**Dependent variables**
• Satisfaction with ~	**PsyCap (t1 & t2)**
Enacted co-worker support (ECS)	• Hope
• Instrumental (ECS Instr)	• Efficacy
• Informational (ECS Info)	• Resilience
• Emotional (ECS Emo)	• Optimism
• Satisfaction with ~	**Control variables**

As this is a between-person study, and because the main independent and dependent variables of the study were collected at different levels, the Level 1-variables were person-mean centred. Ohly et al. (2010) describe Level 1 centring as person-mean centring, referring to the mean across days for each participant. This is particularly useful if interindividual differences are investigated. This has been observed in other studies where the between-person differences in ESM studies were of interest (e.g., Ceja & Navarro, 2012; Debusscher et al., 2016; Lattimore et al., 2010). It is especially valuable since it effectively controls for between-person confounds like response patterns and stable features (Koopman et al., 2014).

In other words, the average of responses on a measure is indicated over the period instead of at a single point in time. It is emphasised that an aggregated person-level variable does not measure the same construct as would be measured by a cross-sectional survey. Furthermore, this offers insights into a pattern of responses that is likely more consistent with their future and past patterns, and reflective of the variations in their daily lives. In other words, the responses were aggregated to the person-level, and the mean score was calculated (Daniels et al., 2011, 2013; Hektner et al., 2007b; *Psychometrics of ESM data*, 2007). Said differently, "participants' average levels of variables across an ESM period represent between-person variation" (Daniels et al., 2011, p. 588).

This was particularly useful to accommodate the resources under consideration. As data of enacted support behaviours needed to be collected as close to the observed support experience as possible, these had to be gathered on the daily level (Level 1, also see Section 4.4.2.1). However, PsyCap, as a state-like and more stable construct, would not meaningfully fluctuate on a daily basis – and, therefore, were measured at the start and conclusion of the study (Level 2, also see Sections 2.4.1 and 4.4.3). Therefore, investigating the relationship between the person-centred aggregated enacted support measures and the PsyCap measures enabled the between-person analysis of the data.

Finally, it merits observing that because of the temporal difference between the measurements of the enacted support variables and the PsyCap variables (not being measured at the same time), the likelihood of common-method bias is decreased (P.M. Podsakoff et al., 2003; Philip M. Podsakoff et al., 2012).

4.5.3 Factor analysis

Factor analysis refers to the process where the number of dimensions that underlies a construct is investigated or determined (Churchil Jr., 1979). The aim of exploratory factor analysis is to reduce the number of variables into the factors that explain the most variance (Field, 2013). A factor is "the underlying dimension that

explains the correlations among a set of variables" (Malhotra, 2010, p. 636). As such, it tests all relationships for interdependence.

This study conducted both exploratory and confirmatory factor analysis (EFA and CFA). CFA is used to determine whether the variables relate to the appropriate latent construct, as suggested by theory (Hair et al., 2010; Malhotra, 2010). In contrast, EFA does not consider the theory-based relationships between the variables and the latent construct. Instead, it considers the underlying correlations and covariances to determine which factor it loads upon (Field, 2013). In other words, where CFA tests for relationships and dimensions as informed by theory, EFA tests for relationships and factors based on the data gathered.

The suitability of the data for factor analysis is affirmed by a Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0,6 or above, and a significant Bartlett's Test of Sphericity statistic (0,05 or smaller) to indicate that data is factorizable. Furthermore, correlation coefficients (r) of 0,3 and above are desirable between variables (Pallant, 2016). Thereafter, factors or components with Eigenvalues higher than 1, as well as the percentage of variance explained by each, are reported (Malhotra, 2010).

4.5.4 Covariance-Based Structural equation modelling (CB-SEM)

Covariance-based structural equation modelling (CB-SEM) was used to examine the relationships between the constructs in question. CB-SEM is a set of multivariate techniques (like regression analysis, path analysis and CFA), where linear or causal relationships between multiple independent (exogenous) and dependent (endogenous) constructs are simultaneously considered, estimated, and explained. Using a covariance matrix, the fit between the real-world phenomenon (data obtained, like social support measures and PsyCap) and a theoretically proposed model were investigated (Svensson, 2015; Zhang et al., 2021).

Favourable characteristics of SEM are: 1) Latent factors can be represented in dependence relationships, 2) Multiple and interrelated relationships are simultaneously incorporated in an integrated model, 3) Measurement error is explicitly accounted for, taking into account that all variables do not fully describe its latent construct, and 4) It aims to explain the covariance between observed variables (Malhotra, 2010; Zhang et al., 2021). In other words, "it can be used to study the relationships among latent constructs that are indicated by multiple measures" (Lei & Wu, 2007, p. 33)

CB-SEM is considered suitable for testing a proposed theory to ascertain goodness-of-fit (how accurately it aligns with a real-world phenomenon as represented by the data) – and is not a tool for discovery, exploration or prediction (Babin & Svensson, 2012; Hair et al., 2011; Svensson, 2015). In other words, CB-SEM evaluates the extent

to which the covariance matrix for a sample is estimated by the proposed theoretical model (Janadari et al., 2018). CB-SEM further assumes a normal (parametric) distribution of data, which is discussed in Section 5.7.1. Further assumptions include adequate sample size, substantial theoretical undergirding, limited complexity of the model and using reflective item indicators only (Hair et al., 2011, 2014).

SEM comprises several phases (Babin & Svensson, 2012; Lei & Wu, 2007; Malhotra, 2010; Zhang et al., 2021), amongst others:

- *Model formulation, specification and estimation* involve hypothesising a model where the relationships between constructs are informed by theory. As such, hypothesised causal directions, endogenous (dependent) variables, exogenous (independent) variables, and potential unexplained covariances are graphically illustrated and tested. As such, the model must be adequately identified (containing more uniquely estimated parameters than unknown estimated parameters). After specification, the model needs to be estimated. For this study, Maximum Likelihood was used as the estimation technique to yield "consistent parameter estimates that are 'most likely' to have produced the observed data" (Hair Jr. et al., 2019, p. 605). In this stage, the measurement model is developed, and the validity of the item loadings on the constructs is affirmed.
- *Model evaluation* refers to the retention or rejection of the hypothesised model based on its validity or accuracy. To ascertain the extent to which the data fits the hypothesised model, several goodness-of-fit indices are proposed. Their respective thresholds are presented in Table 8. Essentially, this stage involves the evaluation of the structural model, thereby testing the relationships between the constructs as hypothesised.
- *Model modification* refers to adjustments to the model to better reflect theory, accommodate the data or test the hypotheses.

Table 8: Model fit indices

Type	Measure	Description	Threshold
Absolute fit	Chi-square		p≥0.5 (n<200)
	RMSEA	Root mean square error of approximation	≤ 0.05 – Close fit 0.05 to 0.08 – Fair fit 0.08 to 0.1 – Mediocre fit > 0.1 – Poor fit
Incremental fit	CFI	Comparative fit index	> 0.95 (Preferred) > 0.9 (Acceptable)
	TLI	Tucker-Lewis index	

Type	Measure	Description	Threshold
			> 0.8 (Sometimes acceptable)
Parsimonious fit	Chi-square/df (CMin/df)		≤3.0
	AIC	Akaike's Information Criteria	When compared to other models' scores, lower values are more favourable; sensitive to the number of parameters estimated
	BIC	Bayesian Information Criteria	

Note: Author's consolidation from various sources (Browne & Cudeck, 1992; F. Chen et al., 2008; Hair Jr. et al., 2019; Hooper et al., 2008; Hu & Bentler, 1999; Kline, 2016; Lai & Green, 2016; Lei & Wu, 2007; MacCallum et al., 1996; Martínez-López et al., 2013; Nadal, 2011)

CB-SEM was considered particularly applicable to analyse the data from this study, as presented in Section 5.8, due to several reasons. These include:

- CB-SEM is a theory-testing approach. As this study hypothesises how two multidimensional constructs relate – as informed by mechanism from COR theory, this modelling technique considers all relationships between both latent and observed variables simultaneously. Through Maximum Likelihood Estimation, the most plausible way in which the theorised model and data fit each other is tested and indicated.
- As the constructs of the study are highly integrated, and multicollinearity exists (Section 5.7.3.3), CB-SEM allows for the control of relationships between the error terms of variables and constructs, to account for covariance complex relationships (Hooper et al., 2008; Janadari et al., 2018, p. 188).
- Other potential means of statistical analysis were deemed unsuitable. These included: multiple linear regression due to his large number of endogenous variables; PLS-SEM (partial least squares-structural equation modelling) for being criticised for inconsistency in estimation, not being suitable for theory-testing and being more suitable to formative indicator studies (Rönkkö et al., 2016); path analysis implied over-simplification of the model and were considered unsuitable; cross-lagged SEM – because of the temporal nature in which the independent versus dependent variables were measured; and multilevel modelling, because of the between-person nature of the study, as well as the dependent variable being a Level 2 construct. Therefore, all these analysis techniques were not pursued.

- Finally, ESM studies are oftentimes used to investigate within-person phenomena and make use of multilevel modelling techniques to analyse data (Daniels et al., 2013; e.g., Rodríguez-Sánchez et al., 2011). However, this was complicated as this is a between-person study. Furthermore, the independent variable, enacted support construct (whether supervisor or co-worker in nature), was measured on level 1, with the dependent variable, PsyCap, being measured on Level 2 at the start and end of the study. As such, within-person analysis would not have been as insightful. Furthermore, the resource-like nature of social support suggests that it is additive, as per COR theory. Therefore, Level 1 measures were aggregated and person mean-centred, which enabled the interindividual analysis on Level 2 of all constructs. Resultantly, multilevel modelling techniques were not further explored.

4.5.5 Mediation analysis

To investigate whether enacted support mediates the relationship between perceived support and PsyCap, analysis was conducted to ascertain whether mediation occurs. As discussed in Section 3.8, the presence of a third variable to explain this relationship has been proposed in the past. This study proposes PsyCap as such a variable.

Four conditions need to be met in order for mediation to be established: 1) The independent and dependent variables need to be related, 2) The independent variable and mediating variable need to be related, 3) The mediating variable and dependent variable need to be related, and 4) The effect of the independent variable on the dependent variable diminishes when controlling for the mediating variable (Baron & Kenny, 1986).

Thus, mediation was investigated using CB-SEM, specifically studying the indirect effects and its associated confidence interval, using the bias-corrected method (Fritz et al., 2012). If the confidence interval contains zero, the hypothesis of a mediation effect is supported. This is tested and reported in Section 5.9.

4.6 Data security and ethical considerations

The aim was for this research to be conducted ethically, and, as such, the intent was that no harm should come to any participants in this study, and their well-being not affected. Furthermore, the nature of the study, and the PsyCap construct, in particular,

was founded in positive psychology and, as such, the objective was to remain true to its roots.

A further concern relates to measures of privacy, confidentiality, and data security. Due to the nature of the research project (being longitudinal in nature), complete anonymity is not possible, as responses from individuals needed to be nested in them for the project's duration. This meant that up to 16 or more surveys had to be connected to a single respondent to make the data useful. For this purpose, an email address was used as a unique identifier upon registration.

The consent form used for this study is included in Appendix E. As such, all personal information collected was thus far kept secure. Additionally, the ExpiWell platform has extensive data security and privacy measures in place. This is highlighted in Appendix C.

The information regarding the study, consent form, and other participation materials were free from deception, pressures, or incentives to participate. Furthermore, the study was conducted in English and controlled for proficiency in the language.

Clearance for the pilot and study was obtained from GIBS (University of Pretoria) in September 2019 and November 2019, respectively.

4.7 Limitations and challenges

There are several limitations associated with this study, based on the methodology used and the constructs under consideration. A lower response rate is associated with ESM studies, which place limitations on the generalisability of the data, as well as the conclusions that may be drawn (see Section 4.3.3.4) as well as the impact of missing values (see Section 5.3). This was further affected by the length of the *Initial Survey*, the time commitment involved in completing *Daily Surveys* for two weeks, and not dropping out before the submission of the *Concluding Survey*. Based on the observed attrition rate, an attempt was made to alleviate responder fatigue by adhering to the time frames and durations suggested in previous ESM studies.

Additionally, the response and participation rates were potentially influenced by the nature of the research instrument. For example, participants without compatible mobile devices (like Huawei), or access to personal mobile devices, or the willingness to incur data costs for the study hindered at least two potential participants from joining the study – as communicated to the researcher. This likely also influenced the diversity of employees who could participate in the study, further deteriorating its generalisability.

The possibility for the participant to misrepresent due to a need to impress (social desirability bias) was mitigated by the relative anonymity with which they were able to participate, as well as reminding participants to '**answer as truthfully as possible'**. As

highlighted earlier, the sheer volume of signals in ESM studies decreases the reactivity effect it is likely to have as participants get more used to the instrument.

The purposive and snowball sampling methodology of identifying the organisations and participating individuals (the first phase of the sampling methodology) also hampered the generalisability of the findings.

Due to the self-report nature of the study and a pre-test and post-test manner of examining the PsyCap construct, response shift bias could have occurred where respondents' internal frame of reference or evaluation standard for the constructs might have shifted due to the surveys in between.

This is juxtaposed with another important consideration: common-method bias – where the same instrument measures several constructs. However, the time between the measurement of the predictor and criterion variables, the random shuffling of items within surveys, and the anonymity offered to respondents decreased such (P.M. Podsakoff et al., 2003; Philip M. Podsakoff et al., 2012). More specifically, whereas enacted support responses were part of the daily surveys over a period of ten days, PsyCap and perceived support were measured either at the start or end of the survey (or both), and did not in any manner form part of the daily survey – thereby indicating the suggested temporal difference between the predictor and criterion variables suggested. Furthermore, within each support source, the items were randomised on a daily basis for each repeated measurement. Finally, at no point is the participant's personal identifying information disclosed apart from an email address that serves as a nesting identifier.

This was further supported by testing whether there was a significant difference between the constructs for those who participated in fewer daily surveys (five or fewer signals) or more (six or more signals). No significant difference was observed, suggesting that common-method bias influence was not likely as influential.

Other threats warned against in ESM studies (Chamlis & Schutt, 2006) that place limitations on the generalisability of the data include: self-selection (where participants who are likely to volunteer for intense studies such as longitudinal research are not representative of the population), mortality (participants dropping out before the completion of the study), instrument decay (where participants lose interest in repeated daily questions), contamination (where likely competition between participants might develop when they observe others taking part in the research) and, finally, the Hawthorne effect (where the observation of behaviour changes the behaviour itself. For example, changing support behaviours because such are being studied). Arguably, most of these have occurred during the data gathering process – despite strategies such as randomisation of survey items to decrease instrument decay, and confidentiality and scattered starts decreasing contamination. However, in quantitative diary studies, Bolger

et al. (2002) emphasised that the phenomena of interest are not likely to change when it undergoes repeated sampling.

It also merits consideration that a longitudinal study does include time as a potential boundary condition – whether it is influenced by the organisational setting, the economic or societal context (like COVID-19 and a recession) or the temporal context of the individual (Sonnentag, 2012). As such, it is likely that the two-week period of this study might not indicate significant changes in both the growth and deterioration of PsyCap – or might only draw conclusions from changes in one direction (like deterioration) as observed by Wijewardena et al. (2017).

Therefore, as this study was undertaken during a pandemic and employees (unit of analysis) are likely still finding their feet in the new normal, their support needs and means of support towards one another have also likely changed. As such, the understanding around these measures merits further testing to investigate whether such is an accurate reflection of the new 'status quo'.

4.8 Conclusion

The proposed research methodology for this study aimed to determine the relationships between the constructs. In this chapter, the research design, sample information and data collection methods were discussed. Special consideration was given to the measures used. Furthermore, the strategy for data analysis was set out, and some limitations to the data gathered have been expressed. In the following chapter, the data is analysed, and the results are reported.

Conducting a study robustly and rigorously contributes to findings that are valid and reliable. Despite the limitations mentioned, findings remain advantageous to a larger domain and encourage potential future research. If organisations were able to facilitate the right type of support to develop PsyCap, it would be beneficial not only to the organisation but also to the individual.

5 Analysis and Results

5.1 Introduction

In this chapter, the analysis conducted on the data is discussed, and the results are presented. Firstly, the descriptive statistics of the data are reported, followed by confirmatory and exploratory factor analyses. Then, the control variables and their influence on the study constructs are investigated. Thereafter, the validity and reliability measures related to the constructs and models are discussed. The remainder of the chapter focuses on CB-SEM and the mediation analysis conducted. This chapter concludes with a review of the results as it pertains to the hypotheses tested.

5.2 Valid responses

Out of a total of 316 unique participants, Table 9 sets out the valid participants and responses for each of the surveys. For a response to be considered valid, an *Initial Survey*, a *Concluding Survey,* and at least one *Daily Survey* for a working day had to be completed. In addition, as part of the consent that needed to be provided, the respondent had to confirm the other participation requirements: being of legal age, residing in South Africa, being employed and reporting to a supervisor with at least one co-worker. As such, the final sample of valid responses for this study is 253 respondents.

Table 9: Summary of responses

Description	All	Without Initial Survey	Without valid Daily Responses (working day)	Without Concluding Survey	Valid responses
Initial	304	–	17	34	253
Daily	2211^	2	688^^	103^^	1457
Concluding	479^^^ / 258	2	3	–	253
Valid participants	–	–	–	–	253

^ *All Daily Survey responses from the participants are included, for working days and non-working days.*
^^ *There is some overlap between these quantities.*
^^^ *Although only the first Concluding Survey response in the study is deemed valid, some participants completed it multiple times. The second number is the number of valid surveys (the first Concluding Survey submitted).*

5.3 Missing values and analysis decisions

Further to response rates reported in Section 4.3.3.4, many ESM studies contain missing data and approach them in different ways. Missing data can comprise between 10% and 30% (McLean et al., 2017), and they observed that missing data is usually underreported (Carter, 2016; Silvia et al., 2013). The current study has at least 42,4% missing data across the 20 enacted support variables measured daily. However, this percentage was considered too high (>40%) to replace with a method such as multiple imputation, which is a preferred method used in ESM studies (Grund et al., 2016; Jakobsen et al., 2017).

Although most studies do not report the pattern of missing data, whether MAR (missing at random), MCAR (missing completely at random), or NMAR (not missing at random), there is potential for substantial bias if the reason for the missing data is not taken into account for analysis. As such, Black, Harel and McCoach (2011) investigated changes to parameter estimates in multilevel models when imputing using normal (single level) and linear mixed models at varying levels of missing data. The authors found that while the fixed effects were 'generally unbiased' for both imputation models, multiple imputation using a normal model resulted in substantial bias at Level 1, thereby significantly overestimating the residual variance ($\sigma e2$) for all levels of missing data. They also reported that although the linear mixed model produced a less biased estimate, it slightly overestimated the residual variance ($\sigma e2$) for higher levels of missing data. When estimating the variance of the random intercept, the normal model underestimated the parameter for all levels of missing data. Thus the estimate is biased to zero as random intercepts cannot be included in the normal imputation model. Furthermore, maximum likelihood methods, used in multilevel modelling, assume that the data are missing completely at random or missing at random.

Silvia et al. (Silvia et al., 2013) specifically note that despite the growing use of ESM, the identification and treatment of missing data may limit its generalizability. Furthermore, Ibrahim and Molenberghs (2009, p. 35) conclude: "At the same time, all methods, no matter how sophisticated, rest to some extent on unverifiable assumptions, owing to the simple fact that the missing data are unobserved. Therefore, rather than placing belief in a single such model, it should be supplemented with appropriate forms of sensitivity analysis".

Informed by the above, the influence of missing values was investigated by dividing the dataset along the median (6 responses): those who completed five or fewer daily surveys (n=110), and those who completed six or more (n=143). No statistically significant differences were observed between the groups, and thus it was decided to

aggregate the data per item across the period, and use this mean score per participant in a CB-SEM.

To conclude, although the use of multilevel modelling, dynamic SEM, multilevel SEM or cross-lagged SEM are the correct approach to follow for within-person studies, given the data adheres to and displays the necessary properties and assumptions. In this case, the current between-person study did not comply.

Therefore, the use of CB-SEM, based on the aggregated data, was the most appropriate to test the conceptual model envisaged given the realised sample data of this research (also see Sections 4.2.2.2 and 4.5.2).

5.4 Descriptive statistics

The demographic profile of the respondents who participated in the study is set out in Table 10. As will become evident, the models developed showed that 'job role' (management, n=110 or non-management, n=143) plays a significant role (Section 5.6.4). Therefore, the responses for these two groups are reported in this table as well.

When reflecting on the full sample, the gender representation was 42,3% male (n=107) and 57,7% female (n=146). As it pertains to age, 88,2% were between 26 and 55. The vast majority of participants (99,6%) indicated their proficiency in English as above-average – regardless of whether they would consider it their first language. Additionally, most participants (98,4%) completed at least high school.

The largest portion of participants had worked for their organisation for longer than ten years (29,2%), followed by 25,3% between three and five years, and 19,4% between 6 and 10 years. Looking at the organisations represented by size, 7,1% were from micro-enterprises (less than ten employees), 41,1% were from companies with more than ten but less than 100 employees, and 50,6% were from those with more than 100 employees. Regarding the size of the teams, the respondents formed part of, 49,3% worked in teams with more than nine members, and 46,8% in teams with between four and eight members.

Considering the profile of respondents' supervisors, 64,4% reported to a male supervisor and 35,6% had a female supervisor. The majority (62%) has worked with the same supervisor for between one and five years. Regarding the frequency of interaction with supervisors, 45,9% engaged with their supervisor at least once per week, followed by 41,9% interacting daily.

Three controls that merited further investigation, based on the over-representation in some categories, were the respondents' first language (54,5% Afrikaans), ethnicity (80,6% white), and job role (47,4% leadership or management).

Therefore, additional testing was conducted on these variables and is discussed in Section 5.6.2.

Table 10: Overview of responses – Control Variables

Variable	Values	Sample		Managers		Non-managers	
		Quantity (Q)	%	Q	%	Q	%
Gender	Male	107	42,3	51	42,5	56	42,1
	Female	146	57,7	69	57,5	77	57,9
Age	18 to 25	11	4,3	3	2,5	8	6,0
	26 to 35	64	25,3	25	20,8	39	29,3
	36 to 45	106	41,9	51	42,5	55	41,4
	46 to 55	53	20,9	31	25,8	22	16,5
	56 to 65	18	7,1	10	8,3	8	6,0
	66 and older	1	0,4	–	–	1	0,8
First language	English	95	37,5	41	34,2	54	40,6
	Afrikaans	138	54,5	68	56,7	70	52,6
	Ndebele	–	–	–	–	–	–
	Northern Sotho	5	2,0	3	2,5	2	1,5
	Southern Sotho	4	1,6	2	1,7	2	1,5
	Swati	1	0,4	–	–	1	0,8
	Tsonga	3	1,2	2	1,7	1	0,8
	Venda	–	–	–	–	–	–
	Xhosa	2	0,8	1	0,8	1	0,8
	Zulu	2	0,8	1	0,8	1	0,8
	Other	3	1,2	2	1,7	1	0,8
Proficiency in English	Bad	–	–	–	–	–	–
	Poor	1	0,4	–	–	1	0,8
	Average	15	5,9	5	4,2	10	7,5
	Good	86	34,0	40	33,3	46	34,6
	Excellent	151	59,7	75	62,5	76	57,1
Education	Not finished high school	4	1,6	_	_	4	3,0
	Matric or Grade 12	34	13,4	9	7,5	25	18,8
	Certificate, diploma or similar	70	27,7	28	23,3	42	31,6
	Bachelor's degree or similar	87	34,4	41	34,2	46	34,6

Variable	Values	Sample		Managers		Non-managers	
		Quantity (Q)	%	Q	%	Q	%
	Master's degree or greater	58	22,9	42	35,0	16	12,0
Ethnicity	African	28	11,1	13	10,8	15	11,3
	Coloured	12	4,7	2	1,7	10	7,5
	Indian	9	3,6	7	5,8	2	1,5
	White	204	80,6	98	81,7	106	79,7
	Other	–	–	–	–	–	–
Organisation size	Less than 10 people	18	7,1	9	7,5	9	6,8
	11 to 30 people	36	14,2	13	10,8	23	17,3
	31 to 100 people	68	26,9	33	27,5	35	26,3
	101 to 1000 people	70	27,7	34	28,3	36	27,1
	More than 1001 people	58	22,9	30	25,0	28	21,1
	Unknown	3	1,2	1	0,8	2	1,5
Team size	Work alone	10	4,0	2	1,7	8	6,0
	Less than 3	25	9,9	12	10,0	13	9,8
	4 to 8	93	36,8	33	27,5	60	45,1
	9 to 12	35	13,8	23	19,2	12	9,0
	13 to 20	35	13,8	16	13,3	19	14,3
	More than 20	55	21,7	34	28,3	21	15,8
Tenure in organisation	Less than 1 year	17	6,7	5	4,2	12	9,0
	1 to 2 years	49	19,4	18	15,0	31	23,3
	3 to 5 years	64	25,3	28	23,3	36	27,1
	6 to 10 years	49	19,4	22	18,3	27	20,3
	More than 10 years	74	29,2	47	39,2	27	20,3
Job role	Administra-tive	33	13,0	–	–	33	24,8
	Customer-facing	29	11,5	–	–	29	21,8
	Non-customer-facing	10	4,0	–	–	10	7,5
	Sales	33	13,0	–	–	33	24,8
	Leadership or management	120	47,4	120	100,0	–	–
	Follower or supporter	3	1,2	–	–	3	2,3

Variable	Values	Sample		Managers		Non-managers	
		Quantity (Q)	%	Q	%	Q	%
	Other	25	9,9	–	–	25	18,8
Gender of supervisor	Male	163	64,4	86	71,7	77	57,9
	Female	90	35,6	34	28,3	56	42,1
Tenure of working with supervisor	Less than 1 year	35	13,8	15	12,5	20	15,0
	1 to 2 years	81	32,0	34	28,3	47	35,3
	3 to 5 years	76	30,0	34	28,3	42	31,6
	6 to 10 years	31	12,3	19	15,8	12	9,0
	More than 10 years	30	11,9	18	15,0	12	9,0
Frequency of interaction with supervisor	Daily	106	41,9	39	32,5	67	50,4
	Multiple times per week	89	35,2	49	40,8	40	30,1
	Once per week / Weekly	27	10,7	15	12,5	12	9,0
	Multiple times per month	24	9,5	14	11,7	10	7,05
	Once per month / Monthly	3	1,2	1	0,8	2	1,5
	Longer than a month between interactions	3	1,2	2	1,7	1	0,8
	Never	1	0,4	–	–	1	0,8

Note: Percentages might not add up to 100% in all cases, due to rounding.

An item-level overview of the independent, mediating and dependent variables is set out in Appendix G and Table 64, indicating the valid and missing responses, mean and standard deviation. A *construct-level* overview of the independent, mediating and dependent variables is presented in Appendix I and Table 65. The valid and missing responses, mean, and standard deviation statistics are presented. The skewness and kurtosis statistics are also shown in these tables, and the normality implications are discussed in Section 5.7.1.

5.5 Factor analyses

To investigate and identify the underlying factors of the constructs, factor analyses were undertaken to ascertain whether the data fit the theoretical constructs from the literature. An initial confirmatory factor analysis (CFA), as informed by the theory and the copyrighted PCQ questionnaire, provided the results summarised in Table 11.

Inadequate model fit was obtained for PsyCap (t1), in particular, RMSEA >0,1 and CMIN/df >3,0 were observed. No low factor loadings (<0,5) were observed; therefore, no items could be considered for removal to improve fit. Additionally, the high correlation between the four dimensions of PsyCap further contributed to the lack of fit. Exploratory factor analysis (EFA) was subsequently undertaken to gain improved insight into the factors underlying the PsyCap, ESS and ECS constructs, as informed by the data.

Table 11: Initial CFA

	Items	CMin	Df	p	CMin /df	IFI	CFI	RMSEA
PsyCap (t1) – four-factor	12	171,687	48	0,000	3,577	0,905	0,904	0,101
PsyCap (t2) – four-factor model	12	137,357	48	0,000	2,862	0,917	0,915	0,086
ESS (Total)	7	20,774	11	0,036	1,889	0,995	0,995	0,059
ECS (Total)	7	14,719	11	0,196	1,338	0,997	0,997	0,037

5.5.1 Exploratory factor analysis (EFA)

Exploratory factor analysis was conducted for the independent variables (enacted and perceived support) and the dependent variables (PsyCap (t1) and PsyCap (t2)). Principal Axis Factoring with Promax rotation was used to identify the factors. Factors were retained with Eigenvalues greater than 1,0 and factor loadings of 0,4 and above (Hinkin, 1995).

5.5.1.1 EFA: Independent variables – Enacted and perceived support

Due to the manner in which enacted support was operationalised, as informed by Matthieu and colleagues (2019), in particular, exploratory factor analysis was conducted on all support measures. As some enacted support measures were based on perceived support measures and reframed according to said guidelines, the aim was to ascertain whether different factors were identified amongst them.

The Kaiser-Meyer-Olkin measure of sample adequacy (0,948) was above the threshold of 0,6 and “marvellous” for factor analysis (Kaiser, 1974, p. 35). Additionally, Bartlett’s test of sphericity was significant (p=0,000). Five factors were identified with Eigenvalues greater than 1,0, and that explained 75,329% of the variance.

Factor one (Eigenvalue = 20,515) was comprised of 10 items related to enacted support from a supervisor (ESS), and explained 47,71% of the variance with factor loadings between 0,779 and 0,957). Factor two (Eigenvalue = 5,633) contained ten items related to enacted support from a co-worker (ECS), and explained 13,1% of the variance

with factor loadings between 0,673 and 0,955. Factor three (Eigenvalue = 3,271) reflected nine items related to perceived organisational support (POS), and explained 7,61% of the variance with factor loadings between 0,540 and 0,898. Factor four (Eigenvalue = 1,865) comprised seven items related to perceived co-worker support (PCS), and explained 4,34% of the variance with factor loadings between 0,683 and 0,843. Finally, factor five (Eigenvalue = 1,108) comprised seven items related to perceived supervisor support (PSS), which explained 2,58% of the variance with factor loadings between 0,502 and 0,770.

The rotated pattern matrix, with a coefficient threshold of 0,5, is presented in Table 12 and the correlations between the four factors are in Table 13. The higher the coefficient, the stronger the correlation of the item with the construct or factor represented. As such, high correlation also indicates convergent validity.

Table 12: EFA Pattern Matrix (Support measures)

	Communalities		Factors				
	Initial	Extraction	1	2	3	4	5
ESS_Instru1	0,861	0,809	0,957				
ESS_Emo1	0,910	0,881	0,936				
ESS_Instru2	0,873	0,833	0,884				
ESS_Info1	0,811	0,723	0,884				
ESS_Satisf_Info1	0,896	0,822	0,876				
ESS_Emo3	0,885	0,837	0,876				
ESS_Info2	0,849	0,761	0,870				
ESS_Satisf_Emo1	0,911	0,836	0,858				
ESS_Emo2	0,894	0,838	0,825				
ESS_Satisf_Instru1	0,914	0,814	0,779				
ECS_Emo3	0,904	0,807		0,955			
ECS_Instru2	0,876	0,800		0,919			
ECS_Emo1	0,847	0,762		0,892			
ECS_Emo2	0,821	0,682		0,878			
ECS_Instru1	0,885	0,789		0,853			
ECS_Satisf_Info1	0,924	0,811		0,836			
ECS_Satisf_Emo1	0,901	0,815		0,793			
ECS_Satisf_Instru1	0,904	0,807		0,773			
ECS_Info1	0,835	0,758		0,697			
ECS_Info2	0,741	0,549		0,673			
POS_Emo2	0,748	0,679			0,898		
POS_Emo1	0,819	0,787			0,820		
POS_General1	0,740	0,606			0,812		
POS_General3	0,761	0,679			0,757		
POS_Info1	0,669	0,596			0,726		
POS_Instru2	0,719	0,618			0,703		
POS_Emo3	0,649	0,525			0,693		
POS_Info2	0,665	0,566			0,578		
POS_Instru1	0,513	0,367			0,540		
PCS_Instru2	0,791	0,775				0,843	
PCS_Emo2	0,787	0,677				0,805	
PCS_Instru1	0,703	0,652				0,785	
PCS_Emo3	0,783	0,715				0,752	
PCS_Info1	0,640	0,585				0,726	

	Communalities		Factors				
	Initial	Extraction	1	2	3	4	5
PCS_Info2	0,709	0,612				0,691	
PCS_Emo1	0,737	0,656				0,683	
PSS_Emo3	0,801	0,780					0,770
PSS_Emo1	0,859	0,808					0,743
PSS_instru2	0,798	0,759					0,731
PSS_emos2	0,836	0,764					0,682
PSS_info2	0,787	0,735					0,654
PSS_instru1	0,745	0,680					0,629
PSS_info1	0,761	0,667					0,502

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization. (Rotation converged in nine iterations.)

Table 13: Factor correlation matrix (Support measures)

Factor	1	2	3	4	5
1	1,000	0,548	0,575	0,406	0,660
2	0,548	1,000	0,409	0,665	0,296
3	0,575	0,409	1,000	0,487	0,616
4	0,406	0,665	0,487	1,000	0,430
5	0,660	0,296	0,616	0,430	1,000

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

The communalities ranged between 0,367 (POS_Instru1) and 0,881 (ESS_Emo1); and all items were retained for further analysis. The above EFA indicates that the data differentiate between enacted support measures by source (supervisor and co-worker), as well as nature (perceived or enacted). The correlation between the factors ranges between 0,406 and 0,665. Hence, the five factors identified relate to enacted supervisor support (ESS), enacted co-worker support (ECS), perceived organisational support (POS), perceived co-worker support (PCS) and perceived supervisor support (PCS).

5.5.1.2 EFA: Dependent variables – PsyCap

When considering the dependent variables, different EFAs were conducted for the two times this particular data were gathered. For PsyCap (t1), the Kaiser-Meyer-Olkin measure of sample adequacy (0,880) was above the threshold of 0,6, making it "meritorious" for factor analysis (Kaiser, 1974, p. 35). Bartlett's test of sphericity was also significant (p=0,000) (Watkins, 2018). Three factors were identified with Eigenvalues greater than 1,0, and that explained 64,285% of the variance.

Factor one (Eigenvalue = 5,360) comprised three items related to efficacy and explained 44,67% of the variance with factor loadings between 0,682 and 0,991. Factor two (Eigenvalue = 1,260) showed four items related to hope and optimism, which

explained 10,5% of the variance with factor loadings between 0,404 and 0,831. Finally, factor three (Eigenvalue = 1,095) was made up of four items related to resilience and hope, and explained 9,12% of the variance with factor loadings between 0,486 and 0,825. A single item (Optimism_t1_1) did not meet the required Eigenvalue and coefficient threshold of 0,4 and was, therefore, excluded from the analysis. Results are presented in Table 14, and the correlations between the three factors in Table 15.

Table 14: EFA Pattern Matrix (PsyCap (t1))

	Communalities		Factors		
	Initial	Extraction	1	2	3
Efficacy_t1_3	0,602	0,785	0,991		
Efficacy_t1_1	0,560	0,614	0,758		
Efficacy_t1_2	0,468	0,525	0,682		
Hope_t1_3	0,592	0,681		0,831	
Hope_t1_4	0,489	0,513		0,830	
Hope_t1_2	0,591	0,662		0,733	
Optimism_t1_2	0,534	0,503		0,404	
Optimism_t1_1	0,412	0,401			
Resilience_t1_3	0,328	0,505			0,825
Resilience_t1_1	0,321	0,319			0,561
Hope_t1_1	0,470	0,521			0,512
Resilience_t1_2	0,324	0,319			0,486

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization. (Rotation converged in five iterations.)

Table 15: Factor correlation matrix (PsyCap (t1))

Factor	1	2	3
1	1,000	0,638	0,584
2	0,638	1,000	0,659
3	0,584	0,659	1,000

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

For PsyCap (t2), the Kaiser-Meyer-Olkin measure of sample adequacy (0,885) was above the threshold of 0,6, making it “meritorious” for factor (Kaiser, 1974, p. 35). In addition, Bartlett’s test of sphericity was significant (p=0,000). Thus, three factors were identified with Eigenvalues greater than 1,0, which explained 64,285% of the variance.

Factor one had three items related to hope and explained 42,684% of the variance, with factor loadings between 0,582 and 0,808. Factor two had four items related to efficacy and resilience, explaining 9,34% of the variance with factor loadings between 0,471 and 0,769. Factor three consisted of three items related to resilience and

optimism. It explained 8,79% of the variance with factor loadings between 0,473 and 0,705.

Two items (Efficacy_t2_2 and Hope_t2_1) did not meet the required Eigenvalue (1,0) and coefficient threshold of 0,4 and were excluded from further analysis. One item (Resilience_t2_2) loaded on both factor two (0,471) and factor three (0,449). It was retained on the factor with the higher score (Factor 2, Resilience & Efficacy). Results are presented in Table 16, and the correlations between the factors are shown in Table 17.

Table 16: EFA Pattern Matrix (PsyCap (t2))

	Communalities		Factors		
	Initial	Extraction	1	2	3
Hope_t2_4	0,479	0,569	0,808		
Hope_t2_2	0,475	0,529	0,719		
Hope_t2_3	0,480	0,532	0,582		
Efficacy_t2_2	0,453	0,436			
Efficacy_t2_1	0,530	0,671		0,769	
Efficacy_t2_3	0,468	0,538		0,686	
Resilience_t2_1	0,204	0,197		0,484	
Resiience_t2_3	0,362	0,451		0,471	0,449
Hope_t2_1	0,365	0,387			
Resilience_t2_2	0,332	0,440			0,705
Optimism_t2_1	0,452	0,581			0,685
Optimism_t2_2	0,393	0,437			0,473

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization. (Rotation converged in seven iterations.)

Table 17: Factor correlation matrix (PsyCap (t2)

Factor	1	2	3
1	1,000	0,678	0,626
2	0,678	1,000	0,588
3	0,626	0,588	1,000

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.

The three-factor model of PsyCap, provides the following composite reliabilities for PsyCap (t1) and PsyCap (t2), based on the composite factors (Table 18). All fall above the threshold of 0,7 and are, therefore, acceptable.

Table 18: Composite reliabilities of PsyCap (three-factor models)

PsyCap (t1)				PsyCap (t2)		
	n	CR			n	CR
Efficacy	3	0,84		**Hope**	3	0,783
Hope & Optimism	4	0,834		**Resilience & Efficacy**	4	0,734
Resilience & Hope	4	0,715		**Resilience & Optimism**	3	0,729

Additionally, HTMT analysis (heterotrait-monotrait ratio of correlations) investigated the discriminant validity amongst the constructs. Thresholds are 0,85 for strict and 0,9 for liberal discriminant validity (Fornell & Larcker, 1981; Henseler et al., 2015; Hinkin, 1995). As can be observed in Table 19, all ratios fall below the 0,85 threshold for strict discriminant validity. This is more extensively presented in Appendix J.

Table 19: HTMT-analysis (three-factor models))

PsyCap (t1)		i	ii	iii		PsyCap (t2)		iv	v	vi
i	Hope & Optimism					iv	Hope			
ii	Efficacy	0,687				v	Resilience & Efficacy	0,726		
iii	Resilience & Hope	0,732	0,622			vi	Resilience & Optimism	0,735	0,679	

5.5.2 Issues surrounding the PCQ-12

The initial CFA found that factors for all study constructs loaded as expected, apart from PsyCap. As such, EFA was conducted to investigate the factors suggested by the data. This indicated a three-factor structure that loads differently from the four dimensions suggested by PsyCap literature.

When looking at the relationship between the underlying resources, some overlap is evident, which could also confirm the lack of discriminant validity amongst its constituent resources, as well as the loading on factors not suggested in the literature. When comparing hope and optimism, Luthans (2002b, p. 11) explains that "the major conceptual difference … is that optimism expectancies are formed through others and forces outside the self (Seligman's explanatory attribution style), while Snyder's hope is initiated and determined through the self." Where efficacy believes the likelihood of success depends on an individual's own abilities (situation-specific view), optimism holds a more general positive view of the world and its influence (cross-situational view) (F. Luthans et al., 2010). Whereas hope, efficacy and optimism take a proactive stance, resilience responds reactively to challenges and adversities (Youssef-Morgan & Luthans, 2015). Resilience could be considered an outcome of the other three PsyCap resources (Harms et al., 2018). There are similarities between resilience and the waypower dimension of hope, but as compared to efficacy, resilience has a smaller domain (F. Luthans, 2002b). Finally, hope and efficacy are internally focused, whereas optimism and resilience are externally oriented (F. Luthans & Youssef-Morgan, 2017).

When it comes to the measurement of PsyCap, several studies noted challenges with using the original PCQ-12 instrument, particularly as it relates to the factor loadings of some items (Djourova et al., 2019; Rus et al., 2012; Santana-Cárdenas et al., 2018).

Despite PsyCap being studied in the South African context before with regards to ethnocentrism (Reichard et al., 2014), institutional work (Cascio & Luthans, 2014), work engagement (De Waal & Pienaar, 2013), authentic leadership (Munyaka et al., 2017), organisational commitment (Simons & Buitendach, 2013), and sex-role identity (Bernstein & Volpe, 2016), and its validity affirmed (Görgens-Ekermans & Herbert, 2013; Grobler & Joubert, 2018; Wernsing, 2014), some concerns have been noted about its factor structure in this context. For example, it was suggested that hope and efficacy be combined into one factor (Du Plessis & Barkhuizen, 2012) or an alternate three-factor model proposed (Grobler & Joubert, 2018).

In conclusion, the data from this study did not support a four-factor structure, but different three-factor structures for the two times of measurement.

5.5.3 PsyCap as a second-order factor model

Initial CFA's conducted on PsyCap t1 and t2 did not indicate fit, and subsequent EFA's showed that the same set of observed variables does not load on the same subconstructs at t1 and t2. Therefore, configural invariance could not be established, which is a prerequisite before testing for metric invariance.

Measurement invariance assesses the psychometric equivalence of a construct across groups or measurement occasions and demonstrates that a construct has the same meaning to those groups or across repeated measurements. Different levels of measurement invariance exist, namely (1) configural, equivalence of model form; (2) metric (weak factorial), equivalence of factor loadings; (3) scalar (strong factorial), the equivalence of item intercepts or thresholds; and (4) residual (strict or invariant uniqueness), equivalence of items'. The CFA and EFA analyses indicated that PsyCap (t1) and PsyCap (t2) were not measurement invariant as different model forms emerged.

Therefore, when considering the initial four-factor model and comparing it to the three factors as a measurement model observed in the EFA, improved fit statistics are noted, particularly RMSEA <0,8 and CMin/df <3,0. Furthermore, as PsyCap is considered to be a latent core confidence construct, it is likely to manifest as more than its underlying capacities would suggest. Thus, it could be assumed that there would be an overlap between the sub-components of the latent construct. It is, therefore, suggested to approach PsyCap not in terms of its four component resources, but as a multidimensional second-order latent construct (Dawkins et al., 2013). Additionally, higher-order factor models have fewer degrees of freedom, which consequently

improves parsimonious model-fit statistics (Hair Jr. et al., 2019). This reflects the resource caravans – resources that tend to travel together – mentioned in an earlier chapter (Section 2.2.1.2.1). As held by COR theory, these constructs tend to emerge from comparable environmental and developmental conditions and would hence be highly correlated (Hobfoll et al., 2018).

Using a second-order construct aids in examining the relative strength of the first-order constructs, as the respective factor loadings offer insight into the extent to which the higher-order construct is reflected, and its relative importance is indicated. By calculating the target coefficient (the ratio of the Chi-Square second-order model to the Chi-square first-order model), the higher-level model can be assessed. Ratios exceeding 0,90 indicate that the second-order factor model offers a good explanation of the relationships between the first-order factors (Cheung, 2008; Hong & Thong, 2013; Marsh & Hocevar, 1985).

As it relates to the three-factor model developed after the EFA, the fit statistics are observably the same because a first-order model containing only three first-order factors is just-identified. In both the first and second-order models, the number of parameters being estimated remains three. In other words, the "higher-order model is equivalent to the lower-order model, and a statistical test of difference is impossible" (Marsh & Hocevar, 1985, p. 572). The four-factor and three-factor models of PsyCap are presented in Table 20 to indicate the improvement in fit statistics.

Through both confirmatory and exploratory factor analysis, the various constructs of the study were investigated. The enacted support measures loaded on markedly different factors than the perceived support measures and were differentiated by support source. PsyCap loaded differently than suggested by the literature and was reconstituted into different three-factor models for both t1 and t2. As such, PsyCap was treated as a second-order latent construct, as its constituent factors changed at t1 and t2.

Hence, this second-order three-factor view of the PsyCap (t1) and PsyCap (t2) constructs was retained for further analysis, and not as suggested in the literature – unless otherwise indicated.

Table 20: CFA comparison: Four- and three-factor models

	Initial CFA				**After EFA**			
	(four-factor model) *(First-order)*		(four-factor model) *(Second-order)*		(three-factor model) *(First-order)*		-three-factor model) *(Second-order)*	
	PsyCap (t1)	**PsyCap (t2)**	**PsyCap (t1)**	**PsyCap (t2)**	**PsyCap (t1)**	**PsyCap (t2)**	**PsyCap (t1)**	**PsyCap (t2)**
Items	12	12	12	12	11	10	11	10
CMin	171,687	137,357	173,341	152,055	90,887	66,322	90,887	66,322
Df	48	48	50	50	39	32	39	32

	Initial CFA				After EFA			
	(four-factor model) *(First-order)*		(four-factor model) *(Second-order)*		(three-factor model) *(First-order)*		-three-factor model) *(Second-order)*	
	PsyCap (t1)	**PsyCap (t2)**	**PsyCap (t1)**	**PsyCap (t2)**	**PsyCap (t1)**	**PsyCap (t2)**	**PsyCap (t1)**	**PsyCap (t2)**
P	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
CMin/df	3,577	2,862	3,467	3,041	2,330	2,073	2,330	2,073
IFI	0,905	0,917	0,905	0,905	0,956	0,958	0,956	0,958
CFI	0,904	0,915	0,904	0,903	0,955	0,957	0,955	0,957
RMSEA	0,101	0,086	0,099	0,090	0,073	0,065	0,073	0,065
Target coefficient (2nd order)			0,991	0,90			1,0	1,0

5.6 Control variables

Control variables are tested for their potential effect on outcome (dependent, endogenous) variables. Data for several control variables were collected to investigate their potential influence on the study's constructs (Section 4.4.1). However, due to the large number of variables considered, the controls were not automatically included in the CB-SEM.

Inconsistencies in the responses obtained to questions around 'industry' as well as 'management role', led to the exclusion of these two variables from further analysis. For example, respondent error was noted in more than 20% of responses where participants from the same organisation (as indicated by organisation name) selected different industry categories representing their firm. However, as the 'organisation name' was an optional response question, all participants' industry selections could not be verified. Hence, no reliable data for this control variable was obtained, and it was not advisable to incorporate it into further analysis.

Additionally, when responses for 'management role' and 'job role' were compared, some inconsistencies were observed when taken together with the 'Job role: Management or leadership' options. These were expected to align and did not. As such, only 'job role' responses were taken into account for analysis, as the overlap in managerial job role was assumed to indicate managerial position. This is elaborated on in Section 5.6.4.

All other controls were tested to ascertain their impact on PsyCap (t2), enacted support and satisfaction measures in several ways: 1) An item-level analysis was conducted to test the influence of each control variable (apart from first language, ethnicity and job role) on these constructs. This found that only 'supervisor tenure' and 'supervisor interaction' had a significant effect (Section 5.6.1). 2) A UNIANOVA (factorial analysis of variance) was conducted to investigate the influence of the remaining control variables on the constructs under observation. 'Ethnicity' showed no statistically

meaningful differences amongst the groups, and was not investigated further (Section 5.6.2). 3) Due to the sample sizes within each of the option categories within the controls, 'supervisor tenure' and 'supervisor interaction' were investigated through moderator analysis. No moderation effect was observed between these two controls and the outcome variable of PsyCap (t2) (Section 5.6.3). 4) Finally, 'job role' and 'first language' could be combined in large enough categorical groups (manager and non-manager; Afrikaans and non-Afrikaans) to enable multigroup analysis and testing for metric invariance – that is, whether the factor loadings are equal across groups (Hair Jr. et al., 2019). As such, only 'job role' — that is, whether the participant's work could be described as management or leadership, or not — was shown not to be metric invariant and was, therefore, retained in all subsequent models of analysis (Section 5.6.4). These are expanded on in the remainder of this chapter.

5.6.1 Item-level analysis

To understand the effect of the control variables on the constructs under consideration, item analysis was conducted and presented in Table 21. First, an *independent-samples t-test* investigated whether there were differences in the study constructs (PsyCap, ESS (Total), ESS (Satisfaction), ECS (Total) and ECS (Satisfaction)) between the gender of participants, or the genders of the participant's supervisors. No statistically significant differences were observed.

Table 21: Item-level analysis of control variables

Control	Test	p-value				
		PsyCap (t2)	ESS (Total)	ESS (Satisf)	ECS (Total)	ECS (Satisf)
Gender	Independent t-test	0,061	0,441	0,540	0,857	0,618
Supervisor gender	Independent t-test	0,532	0,626	0,916	0,889	0,950
Age	ANOVA	0,582^	0,485	0,453	0,892	0,392
Education level	ANOVA	0,652	0,470	0,510	0,207	0,171
Org. size	ANOVA	0,058	0,689	0,696	0,101	0,055
Team size	ANOVA	0,088	0,449	0,092	0,418	0,211
Org. tenure	ANOVA	0,357	0,257	0,408^	0,574	0,574
Supervisor interaction	ANOVA	0,408	0,000 **	0,003 **	0,146	0,167
Supervisor tenure	ANOVA	0,160	0,026 **	0,221	0,026 ^**	0,332
English proficiency	ANOVA	0,401	0,984	0,997	0,923	0,708

^ Homogeneity of variances was violated, as assessed by Levene's test for equality of variances.
**. p<0.05

Additionally, a *between-subjects ANOVA* was conducted on each of the remaining control variables listed:

- **Age:** Homogeneity of variances was violated when differences between age groups and PsyCap (t2) were investigated, however, no statistically significant difference was observed between the group means, Welch's F(4, 49,148) = 0,721, p=0,582. Homogeneity of variances was met for the remaining constructs, and there were no statistically significant differences in their scores between the different age groups.
- **Education level, organisation size, team size and English proficiency:** Homogeneity of variances was observed when these controls and the constructs investigated were tested. However, no statistically significant difference was observed between the education level groups and the constructs of the study.
- **Organisation tenure:** Homogeneity of variances was violated when differences between organisational tenure and ESS (Satisfaction) were investigated. However, no statistically significant differences were observed between the group means and this construct, Welch's F(4, 71,726) = 1,011, p=0,408.
- **Supervisor interaction and supervisor tenure:** Homogeneity of variances was observed for both supervisor interaction and supervisor tenure. Additionally, statistically significant differences between the control categories and some constructs of the study were observed, namely ESS (Total), ESS (Satisfaction) and ECS (Total). These two controls were retained for further testing.

5.6.2 Factorial analysis of variance

Apart from the two controls mentioned above, three controls were identified earlier, which required further analysis because of their over-representation in a single-item category option. These were 'first language' (54,5% Afrikaans), 'ethnicity' (80,6% white), and 'job role' (47,4% leadership or management). The between-subjects main effects were independently investigated for each of the remaining control variables independently, using factorial analysis of variance (UNIANOVA). Type II Sum of Squares was used, as no interaction terms were tested, to identify whether it would be necessary to conduct multigroup CB-SEM to test for metric invariance. Results presented in Table

22 indicate that no statistically significant F-value was observed for 'ethnicity' in any of the constructs under consideration. However, 'first language', 'job role', 'supervisor tenure' and 'supervisor interaction' required further analysis.

Table 22: Factorial analysis of variance (Control variables)

Construct	Ethnicity (Sig.)	Language (Sig.	Supervisor Tenure (Sig.)	Supervisor Interaction (Sig.)	Job role (Sig.)
PsyCap (t2)	0,713	0,046**	0,161	0,41	0,007**
ESS (Total)	0,688	0,099	0,015**	0,000**	0,776
ESS (Satisfaction)	0,751	0,686	0,113	0,004**	0,400
ECS (Total)	0,606	0,011**	0,060	0,284	0,879
ECS (Satisfaction)	0,751	0,024**	0,386	0,538	0,727

***. p < 0,05*

5.6.3 Moderator analysis: 'supervisor tenure' and 'supervisor interaction'

Although 'supervisor interaction' and 'supervisor tenure' did not indicate a statistically significant influence on the outcome variable (PsyCap (t2), they did show an influence on some enacted supervisor support (ESS) subconstructs. Multigroup analysis could not be conducted on these two controls because of the small sample sizes of some item responses (n=31 and n=61, respectively). Therefore, further testing was conducted through moderator analysis to establish if either 'supervisor interaction' or 'supervisor tenure' influences the relationship between the three subconstructs of ESS and PsyCap (t2). It was shown that no moderation effect occurs. Table 23 shows that no significant interaction effects are observed in the relationships under consideration (Hayes, 2013).

Table 23: Moderator analysis ('supervisor interaction' and 'supervisor tenure')

Interaction	b-coeff.	R-change	F	Df	P
Supervisor interaction					
ESS (Emotional) x PsyCap (t2)	0,017	0,000	0,050	249	0,824
ESS (Instrumental) x PsyCap (t2)	-0,012	0,000	0,029	249	0,866
ESS (Informational) x PsyCap (t2)	-0,036	0,001	0,214	249	0,644
Supervisor tenure					
ESS (Informational) x PsyCap (t2)	0,088	0,008	2,017	249	0,157
ESS (Instrumental) x PsyCap (t2)	0,073	0,006	1,545	249	0,215
ESS (Emotional) x PsyCap (t2)	0,069	0,005	1,212	249	0,272

***. p < 0,05*

5.6.4 Multigroup analysis: 'language' and 'job role'

Because some categories of 'job role' and 'first language' were under-represented, and others were over-represented, multigroup analyses were conducted to determine potential bias in the modelling results. Through a multigroup analysis, a nested-model comparison was undertaken to test the equivalence of the factor loadings

to ascertain metric invariance. Non-statistical significant measurement weights for 'first language' indicated that there were no marked differences between the groups, and were therefore considered to be metric invariant, and their exclusion would not affect the model (Table 24) (Fischer & Karl, 2019; Newsom, 2020). Newsom (2020, p. 1) explains that "if subsequent analyses use the measure as a latent variable, differences in measurement residual variances will not impact inferences about group differences in prediction". As statistically significant measurement weights were observed for 'job role', it showed that it was not metric invariant. Therefore, model analyses were conducted on the manager and non-manager groups separately (Section 5.8 and onwards).

Table 24: Multigroup analysis ('First language' and 'job role')

Control	Model	DF	CMIN	P
First Language (Afrikaans versus non-Afrikaans)	Measurement weights	23	-57,331	1,000
	Structural weights	39	30,889	,820
	Structural residuals	52	51,617	,489
	Measurement residuals	87	160,705	,000 ***
Job role (Manager versus non-manager)	Measurement weights	23	54,225	,000 ***
	Structural weights	39	73,409	,001 ***
	Structural residuals	54	101,907	,000 ***
	Measurement residuals	89	237,722	,000 ***

****. p < 0,01*

5.6.5 Conclusion: The influence of the support beneficiary's job role

All control variables of the study were considered to investigate whether there are differences between their categories, and the constructs of the study. Metric invariance was tested for and observed for all control variables, and only 'job role' was shown to not be metric invariant.

Previous studies have considered the influence of the 'job role' of the participant on their PsyCap and have identified some significant but mixed relationships (Y. Choi & Lee, 2014; Friend et al., 2016; Walumbwa et al., 2010), whereas others have not observed such (Avey et al., 2010). However, when it comes to support, Shah et al. (2018) argued that individuals with greater seniority and at a higher hierarchical level are more likely to have opportunities to develop relationships with support providers and, thus, have access to more social support. Furthermore, 'job role' has been associated with greater POS (Gyekye & Salminen, 2009).

In this study, taking 'job role' (managers or non-managers) into account was identified as necessary for model development. The demographic profile for managers (n=120) and non-managers (n=133) was presented earlier in Table 10. These smaller groups' sample sizes were still above the lower bounds of sample sizes used in CB-SEM, as argued by Westland (2010).

Aggregated scores for all factors were compared between manager and non-manager groups by means of an independent t-test. None of the social support measures reported statistically significant differences. However, there was a marked difference between managers as compared to non-managers for the after EFA scores of PsyCap at both t1 (p=0,035) and t2 (p=0,031), as well as for its underlying factors: Efficacy_t1 (p<0,001), Hope_t2 (p=0.066) and Efficacy-Resilience_t2 (p<0,001). This would suggest that the PsyCap of managers is greater than that of non-managers, and that this difference is statistically significant. Also, that this is likely informed by a confidence component as the efficacy items seem particularly prevalent in these factors.

5.7 Data assumptions

5.7.1 Normality

For variables to be considered normally distributed, Gujarati and Porter (2009, p. 130) hold that "skewness (a measure of symmetry) should be zero and kurtosis (which measures how tall or squatty the normal distribution is) should be 3". However, George and Mallery (2018) suggest that skewness values between -2 and +2 can also be acceptable for a normal distribution. Additionally, a kurtosis value between -7 and +7 is also argued to be acceptable for maximum likelihood CB-SEM analysis (Byrne, 2001; Kline, 2016). Thus, within these parameters, the data – as set out in Table 64 presented in Appendix G (item-level), and Table 65 in Appendix I (construct-level) – were assumed to follow a normal distribution.

5.7.2 Correlations

With multidimensional constructs, it is expected that the subordinate dimensions would have considerable overlap. Therefore, correlations of the independent and dependent constructs of the study are presented in Table 25. As can be observed, all constructs are highly correlated, with Pearson's *r* coefficient ranging from 0,285 to 0,882.

As it pertains to the types of social support, they are likely nested within a latent support variable and share similar antecedents due to high correlations between the types of support (Bowling et al., 2004). Similar observations were made in previous studies. For example, where supervisor emotional support and supervisor instrumental support had a correlation coefficient of 0,78; and co-worker emotional support and co-worker instrumental support had a correlation coefficient of 0,65 (Fenlason & Beehr, 1994). Or where similar relationships have been observed between emotional support and informational support (Searle et al., 2001). Lindorff (2005) observed intercorrelations between informational and instrumental support, as well as informational and emotional

social support – but did not observe the same for emotional and instrumental support. This could be explained by the fact that a co-worker who is helpful at work, might also be the person the recipient turns to for emotional social support due to the trust in their relationship. A further example is where a supervisor offers informational support. However, the recipient experiences it as both informational and emotional due to the attention and care they perceive it to entail (Johnsen et al., 2018; Mathieu et al., 2019).

Table 25: Correlations between independent and dependent constructs

Construct	1	2	3	4	5	6	7	8	9	10
1. PsyCap (t2)	--									
2. PsyCap (t1)	0,686***	--								
3. ESS (Emotional)	0,435***	0,440***	--							
4. ESS (Informational)	0,412***	0,380***	0,835***	--						
5. ESS (Instrumental)	0,416***	0,449***	0,882***	0,858***	--					
6. ESS (Satisfaction)	0,447***	0,462***	0,856***	0,803***	0,846***	--				
7. ECS (Emotional)	0,285***	0,360***	0,490***	0,474***	0,521***	0,442***	--			
8. ECS (Informational)	0,322***	0,395***	0,539***	0,571***	0,530***	0,475***	0,736***	--		
9. ECS (Instrumental)	0,324***	0,410***	0,475***	0,477***	0,510***	0,418***	0,785***	0,843***	--	
10. ECS (Satisfaction)	0,325***	0,427***	0,495***	0,497***	0,505***	0,528***	0,803***	0,766***	0,803***	--
11. Perceived social support	0,359***	0,562***	0,555***	0,482***	0,549***	0,582***	0,322***	0,379***	0,415***	0,438***

****. Correlation is significant at the 0,01 level (2-tailed)*
(n's vary from 204 to 253 because of missing data)

Due to the high correlations between the constructs, CFA showed misfit, and subsequent EFA (Section 5.5.1) indicated the loading of items to identified factors.

Furthermore, covariance-based structural equation modelling (CB-SEM) enables the identification of theory-informed covariates and controlling for such during model development (Hooper et al., 2008). Covariates are "metric variables that are related to the outcome, but not to the treatment, and are used to control for external factors …. This independence from the treatment is an important feature of the covariate, otherwise, it will diminish the main effect" (Hair Jr. et al., 2019, p. 390). Furthermore, covariates can be used for both intra-individual and inter-individual differences (Lei & Wu, 2012).

For example, as PsyCap was measured at two times (t1 and t2), the items are expected to be highly correlated, and such relationships are taken into account in the

models. This means that the first item measuring hope at t1 (Hope_t1_1) has a covariate relationship to the same being measured at t2 (Hope_t2_1). Additionally, the sub-dimensions of the enacted support constructs are also highly correlated with one another, and this is also considered in the CB-SEM model analysis. For each of the models presented, the covariates that were taken into account are indicated.

This is also further investigated in Section 5.7.3.2 where discriminant validity is discussed.

5.7.3 Validity and reliability

Several tests and analyses were conducted to interrogate the data to ascertain its validity and reliability. However, Cronbach's alpha coefficient was first determined to ascertain the internal consistency of the scales used. Then the extent to which items measuring a construct compares to others investigating the same construct (convergent validity), as well as the uniqueness of each measure in that it is not an indicator of a different variable (discriminant validity) (Churchil Jr., 1979).

5.7.3.1 Cronbach's Alpha (item-level reliability)

After scale items were grouped into the constructs they intended to measure, based on the factors indicated by the EFA, a test for internal consistency (Cronbach's Alpha coefficient) was conducted to investigate the reliability of the scales used.

Cronbach's coefficient alpha is an indicator reflecting the quality of items in a research instrument, and how much it reflects the construct it intends to measure (Churchil Jr., 1979). A higher score indicates a better quality instrument and ascertains a coefficient for generalisability (Babin & Svensson, 2012). A coefficient alpha of 0,70 is the minimum to indicate internal consistency (Hinkin, 1995). Internal consistency reliabilities are achievable with three or more measurement items, as fewer are under-identified (Babin & Svensson, 2012; Hinkin, 1995).

Most constructs under consideration have at least three items, except for informational and instrumental support, consisting of two items each. However, due to the aggregating nature of ESM data, a single item measure's reliability risk decreases as it gets repeatedly measured – hence reflecting multiple items (*Psychometrics of ESM data*, 2007). Furthermore, Kline (2016) comments that a factor can consist of two items.

As shown in Table 26, the alpha coefficients for all scales were greater than 0,7 and considered to fall in the 'excellent' or 'good' categories (Hair et al., 2010).

Table 26: Cronbach's Alpha

Scale	Number of items	n		Cronbach's Alpha Coefficient	Composite reliability
		Valid	Missing		
Perceived social support					
Perceived support	21	253	0	0,948	0,893
Psychological Capital					
PsyCap (t1)	11	253	0	0,875	0,877
PsyCap (t2)	10	253	0	0,849	0,852
Enacted social support from supervisors and satisfaction					
Enacted supervisor support (ESS) [Total]	7	227	26	0,966	0,951
ESS (Emotional)	3	237	16	0,949	0,932
ESS (Informational)	2	238	15	0,875	0,847
ESS (Instrumental)	2	234	19	0,916	0,923
ESS (Satisfaction)	3	232	21	0,959	0,935
Enacted social support from co-workers and satisfaction					
Enacted co-worker support (ECS) [Total]	7	223	30	0,951	0,903
ECS (Emotional)	3	225	28	0,940	0,930
ECS (Informational)	2	244	9	0,824	0,780
ECS (Instrumental)	2	243	10	0,934	0,901
ECS (Satisfaction)	3	235	18	0,963	0,922

5.7.3.2 Construct-level reliability and validity

In Appendix J, convergent and discriminant validity tests are reported. Therein the composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), maximal reliability (MaxR(H)), as well as the correlations between the sub-components of the constructs, are indicated.

Greater reliability is reflected in scores higher than 0,7 for CR and Cronbach's Alpha. To achieve convergent validity (the extent to which a selected measure compares with others investigating the same construct), it is proposed that AVE needs to be greater than 0,5. Thus, to ascertain its discriminant validity, the square root of its AVE needs to be greater than its correlation with any other construct. Additionally, MSV must be less than AVE. However, Malhotra and Dash (2011) hold that AVE can be too strict and argue that reliability can be established by CR alone. Another way to investigate discriminant validity is through HTMT analysis (heterotrait-monotrait ratio of correlations), with thresholds of 0,85 for strict and 0,9 for liberal discriminant validity (Fornell & Larcker, 1981; Henseler et al., 2015; Hinkin, 1995).

Based on these criteria, and informed by the data in Appendix J, the summarised observations from these tests are presented in Table 27.

Table 27: Conclusions from convergent and discriminant validity tests

Construct	Convergent validity (AVE > 0.5)	Discriminant validity		
		Square root of AVE > correlation to any other?	MSV < AVE?	HTMT analysis
Perceived supervisor support				
POS (Emotional)	Yes	Mixed	No	No
POS (Informational)	Yes	Yes	No	No
POS (Instrumental)	Yes	Yes	No	No
Perceived supervisor support				
PSS (Emotional)	Yes	Mixed	No	Mixed
PSS (Informational)	Yes	Mixed	No	Mixed
PSS (Instrumental)	Yes	Mixed	No	Mixed
Perceived co-worker support				
PCS (Emotional)	Yes	Yes	Yes	Mixed
PCS (Informational)	Yes	No	No	Mixed
PCS (Instrumental)	Yes	No	No	Mixed
Enacted supervisor support				
ESS (Emotional)	Yes	No	No	Yes
ESS (Informational)	Yes	No	No	Mixed
ESS (Instrumental)	Yes	Mixed	No	Mixed
ESS (Satisfaction)	Yes	No (Total)	No	No
ESS (Total)	Yes	Yes (Satisfaction)	No	No
Enacted co-worker support				
ECS (Emotional)	Yes	Yes	Yes	Yes
ECS (Informational)	Yes	Mixed	No	Mixed
ECS (Instrumental)	Yes	Yes	Yes	Yes
ECS (Satisfaction)	Yes	Yes (ECS total)	Yes	No
ECS (Total)	Yes	No (Satisfaction)	No	No
PsyCap (t1) – three-factor model				
Hope-Optimism	Yes	Yes	Yes	Yes
Efficacy	Yes	Yes	Yes	Yes
Resilience-Hope	Yes	No	No	Yes
PsyCap (t2) – three-factor model				
Hope	Yes	Yes	Yes	Yes
Efficacy-Resilience	Yes	Mixed	No	Yes
Resilience-Optimism	Yes	Mixed	No	Yes

5.7.3.3 Multicollinearity and validity challenges

Convergent validity is evident for both enacted and perceived support measures. However, such is not observed for the component resources of PsyCap. As such, Exploratory Factor Analysis and related tests informed and supported the adoption of the latent second-order PsyCap construct in this study, as well as other composite measures (Section 5.5.1.2). As highlighted earlier, COR theory argues for resource caravans to explain why multidimensional constructs tend to be highly correlated, as well as travel together. Thereby, each resource caravan (like the various types of enacted support, perceived support and PsyCap resources) is developed by the same environmental conditions, or resource caravan passageways (Hobfoll, 2011; Hobfoll et al., 2018).

An additional Chi-square difference test was conducted between enacted supervisor support (ESS) and satisfaction with enacted supervisor support, as well as with its co-worker counterparts. Discriminant validity was confirmed for the supervisor measures (322 – 300,9 > 3,84), but not for the co-worker measures (629,6 – 629,1 < 3,84) (Shiu et al., 2011).

Three different subconstructs (emotional, instrumental, and informational) form the multidimensional construct, enacted support for both co-workers and supervisors. The subsequent CFA (Section 5.5.3 and Section 5.8.1.3) showed that these three constructs were highly correlated. For co-workers, two were above 0,8 and one above 0,9; and for supervisors, all three were above 0,9. This indicates multicollinearity, and is usually addressed by either merging the constructs to form a composite construct or deleting some of the subconstructs. Furthermore, EFA on the data indicated that it could be considered as one-dimensional constructs (Section 5.5.1.1).

Multicollinearity is a situation where two or more predictors (independent variables) are highly linearly related. In general, an absolute correlation coefficient of >0.7 among two or more predictors indicates the presence of multicollinearity. As such, multicollinearity increases the standard errors of the coefficients. Increased standard errors, in turn, mean that coefficients for some independent variables may be found not to be significantly different from zero. In other words, by overinflating the standard errors, multicollinearity makes some variables statistically insignificant when they should be significant. Without multicollinearity (and thus, with lower standard errors), those coefficients might be significant.

Previous authors have warned about combining all types of support into a single measure instead of differentiating between its types. They observed that only the buffering (resource-building) effects of social support are reflected in such instances, and the reverse buffering (resource-depleting) mechanisms are overlooked (Fenlason & Beehr, 1994; Kickul et al., 2001; Wills & Cohen, 1985). For example, it has been suggested that emotional and instrumental support be assessed independently because their influence on outcomes is not necessarily the same (Nahum-Shani & Bamberger, 2011).

Additionally, when looking at all measures within constructs, mixed observations regarding discriminant validity were observed. For example, only some components of ECS meet validity criteria, and others do not. The same applies to ESS.

Therefore, as suggested by previous authors, mixed observations in the tests conducted, and not wanting to change the validated scale – as well as the study's interest in the specific relationships between each type of support with PsyCap – the author

acknowledges the overlap between the constructs (Appendix J). Resultantly, the construct residuals were allowed to correlate.

Bearing this in mind, CB-SEM — as theory-testing modelling technique — provides some control for multicollinearity and covariance complex relationships (Hooper et al., 2008; Janadari et al., 2018, p. 188). Therefore, this was adopted for hypothesis testing (Section 5.8 onwards).

5.8 Covariance-Based Structural equation modelling (SEM)

5.8.1 Introduction

CB-SEM extends general linear modelling procedures by investigating the relationship between latent constructs indicated by several measurement items, including longitudinal survey data. It "takes a confirmatory (hypothesis testing) approach to the multivariate analysis of a structural theory, one that stipulates causal relations among multiple variables" (Lei & Wu, 2007, pp. 33–34). As such, a hypothesised model is tested against the data collected to determine model-data fit or not.

As mentioned earlier, SEM consists of 1) a measurement model and 2) a structural model. The measurement model affirms the discriminant validity and composite reliability of the construct, and reflects the item loadings on the constructs. The structural model represents and tests the hypothesised relationships between the constructs (Hair et al., 2014). The fit between this theoretical structural model and the data observed was assessed through several fit indices and thresholds, presented earlier in Table 8.

5.8.1.1 Model development

Before determining that CB-SEM was the suitable avenue to proceed with data analysis and testing the hypothesis, various other means of analysis, placement and combinations were explored – as informed by the literature. None of these was found suitable. Firstly, regression analysis was not suitable as there are multiple endogenous variables in the study. Secondly, PLS-SEM (Partial least squares-structural equation modelling) was also discounted as it is more suitable for formative indicators than the reflective indicators as was used in this study. PLS-SEM is not ideal for theory testing or estimating common factor models, as the problem of "approximating latent variables with composites is that the resulting estimator is both inconsistent and biased" (Rönkkö et al., 2016, p. 14). Finally, path analysis considering PsyCap and enacted support composite

constructs resulted in poor or unacceptable model fit statistics and was also decided against.

Various model scenarios were tested within CB-SEM to investigate how the constructs relate. The best results were observed when the different factors that underlie PsyCap in the model were considered and the types of enacted support differentiated. Finally, both satisfaction with enacted support and perceived support were tested for moderation effects with ESS, ECS, PsyCap (t1) and PsyCap (t2) constructs, but no statistically significant results were obtained.

To test the hypotheses, the model is presented systematically through six iterations, and reporting the influence of additional constructs on both the relationships and model-data fit. In this way, all things being equal, the influence of additional constructs can be observed and evaluated. Any covariance indices that are used for model improvement are also indicated in each of the six models.

5.8.1.2 Summary of CB-SEM Models to test hypothesised relationships

Six models were developed to better understand the nuances and sensitivities of the constructs in question. The aim was to better reflect and investigate the underlying structure of enacted support; to take into consideration what the unique or contributing influence of satisfaction with enacted support might be; and PsyCap's different factor structures at t1 and t2.

As such, SEM offers the benefit of allowing a "series of contrasting models to be tested, interpreted and compared quantitatively" (Zhang et al., 2021, p. 258). As will be seen, although some relationships remain stable, others are highly susceptible to other constructs entering the model. Model A presents the simplest model, investigating only enacted support and PsyCap; and Model F presents the most complex — taking into account perceived support and enacted support satisfaction measures. Furthermore, the models were also tested on both the managers-group and non-managers-group. A comparison of the model fit statistics between these various models is presented in Table 28 and graphically illustrated in Figure 9:

- **Model A:** Enacted support and PsyCap.
- **Model B:** Satisfaction with enacted support and PsyCap.
- **Model C:** Enacted support, satisfaction with enacted support and PsyCap.
- **Model D:** Perceived support, enacted support and PsyCap.
- **Model E:** Perceived support, satisfaction with enacted support and PsyCap.
- **Model F:** Perceived support, enacted support, satisfaction with enacted support and PsyCap.

Table 28: Summary of model fit statistics

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)	AIC	BIC
Model A: ES & PsyCap	Manager	807,715	532	0,000	1,518	0,902	0,900	0,066	1003,715	1276,889
	Non-manager	970,254	533	0,000	1,820	0,871	0,868	0,079	1164,254	1444,618
Model B: Satisfaction & PsyCap	Manager	578,383	315	0,000	1,836	0,819	0,838	0,084	704,383	879,995
	Non-manager	637,388	315	0,000	2,023	0,855	0,853	0,088	763,388	945,480
Model C: ES, satisfaction & PsyCap	Manager	1371,35	746	0,000	1,838	0,843	0,840	0,084	1601,352	1921,914
	Non-manager	1534,36	747	0,000	2,054	0,834	0,831	0,089	1762,359	2091,859
Model D: PS, ES & PsyCap	Manager	1109,391	631	0,000	1,758	0,845	0,841	0,080	1329,391	1636,015
	Non-manager	Non-positive definite matrices and negative variances were observed in the model. Although remedies exist, these were not found feasible and were hence not pursued.								
Model E: PS, ES satisfaction & PsyCap	Manager	610,067	388	0,000	1,572	0,882	0,879	0,069	764,067	978,704
	Non-manager	745,738	389	0,000	1,917	0,861	0,859	0,083	897,738	1117,405
Model F: PS, ES, satisfaction & PsyCap	Manager	1663,379	864	0,000	1,925	0,811	0,808	0,088	1915,379	2266,603
	Non-manager	1928,953	864	0,000	2,233	0,792	0,789	0,097	2180,953	2545,137

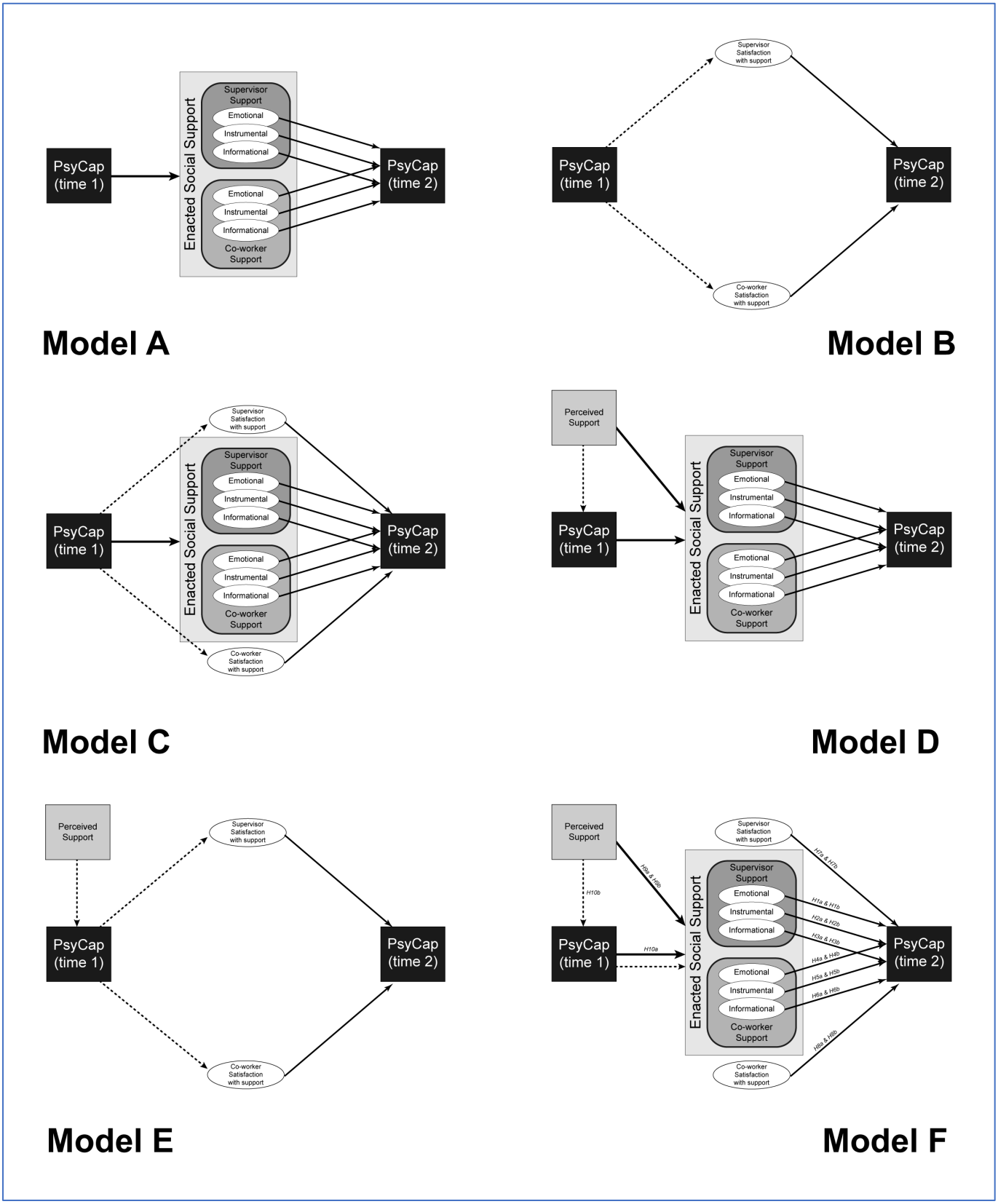

Figure 9: Graphical representation of CB-SEM models

5.8.1.3 Measurement model

To reflect an overall comprehensive insight into the various models proposed, the measurement models' fit statistics for both Model A and Model F are shown, representing the range of complexity suggested by the models. The measurement models meet the requirements for model-data fit with CMin/df <3,0, RMSEA <0,08 (0,066 and 0,077; Fair fit), and IFI and CFI >0,8 (0,901 and 0,858; 0,9 and 0,856; acceptable) as presented in Table 29.

Table 29: Model fit of measurement models A and F

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
								Score	Lo 90	Hi 90
Model A: ES & PsyCap	Entire sample	1126,98	535	0,000	2,107	0,901	0,900	0,066	0,061	0,072
Model F: PS, ES, satisfaction & PsyCap	Entire sample	2128,579	860	0.000	2,475	0,858	0,856	0,077	0,072	0,081

The maximum likelihood estimates and regression weights for the measurement models are presented in Table 30 and Table 31, indicating the items loading on the various constructs. Acceptable fit to the measurement models was established for both Model A (simplest model) and Model F (most complex model), based on the indices and thresholds discussed in Section 4.5.4. The structural models will be evaluated in the next section (Section 5.8.2 onwards).

Table 30: Maximum likelihood estimates (Measurement model A)

Item		Construct	P	St. Regr. Weight Est.
Hope_Optimism	<---	PsyCap (t1)		0,896
Resilience_Hope1	<---	PsyCap (t1)	***	0,765
Efficacy	<---	PsyCap (t1)	***	0,799
Hope	<---	PsyCap (t2)	***	0,854
Resilience_Optimism	<---	PsyCap (t2)	***	0,880
Resilience_Efficacy	<---	PsyCap (t2)		0,782
Efficacy_t1_3	<---	Efficacy		0,832
Efficacy_t1_2	<---	Efficacy	***	0,732
Efficacy_t1_1	<---	Efficacy	***	0,818
Hope_t1_2	<---	Hope_Optimism (t1)		0,793
Hope_t1_3	<---	Hope_Optimism (t1)	***	0,807
Hope_t1_4	<---	Hope_Optimism (t1)	***	0,664
Resilience_t1_1	<---	Resilience_Hope (t1)		0,595
Resilience_t1_2	<---	Resilience_Hope (t1)	***	0,529
Resilience_t1_3	<---	Resilience_Hope (t1)	***	0,603
Hope_t1_1	<---	Resilience_Hope (t1)	***	0,750

Item		Construct	P	St. Regr. Weight Est.
Optimism_t1_2	<---	Hope_Optimism (t1)	***	0,704
Efficacy_t2_3	<---	Resilience_Efficacy (t2)		0,758
Efficacy_t2_1	<---	Resilience_Efficacy (t2)	***	0,767
Hope_t2_2	<---	Hope (t2)		0,742
Hope_t2_3	<---	Hope (t2)	***	0,722
Hope_t2_4	<---	Hope (t2)	***	0,755
Resilience_t2_2	<---	Resilience_Optimism (t2)	***	0,633
Resilience_t2_1	<---	Resilience_Efficacy (t2)	***	0,407
Resilience_t2_3	<---	Resilience_Efficacy (t2)	***	0,595
ESS_Emo1	<---	ESS_Emo		0,908
ESS_Emo2	<---	ESS_Emo	***	0,870
ESS_Emo3	<---	ESS_Emo	***	0,936
ESS_Info1	<---	ESS_Info		0,821
ESS_Info2	<---	ESS_Info	***	0,894
ESS_Instru1	<---	ESS_Instru		0,936
ESS_Instru2	<---	ESS_Instru	***	0,915
ECS_Instru1	<---	ECS_Instru		0,859
ECS_Instru2	<---	ECS_Instru	***	0,932
ECS_Info1	<---	ECS_Info		0,832
ECS_Info2	<---	ECS_Info	***	0,769
ECS_Emo1	<---	ECS_Emo		0,910
ECS_Emo2	<---	ECS_Emo	***	0,851
ECS_Emo3	<---	ECS_Emo	***	0,945
Optimism_t2_1	<---	Resilience_Optimism (t2)		0,755
Optimism_t2_2	<---	Resilience_Optimism (t2)	***	0,677

Table 31: Maximum likelihood estimates (Measurement model F)

Item		Construct	P	St. Regr. Weight Est.
Hope_Optimism	<---	PsyCap (t1)		0,892
Resilience_Hope	<---	PsyCap (t1)	***	0,780
Efficacy	<---	PsyCap (t1)	***	0,795
Hope	<---	PsyCap (t2)		0,837
Resilience_Optimism	<---	PsyCap (t2)	***	0,910
Resilience_Efficacy	<---	PsyCap (t2)	***	0,915
Efficacy_t1_3	<---	Efficacy		0,836
Efficacy_t1_2	<---	Efficacy	***	0,738
Efficacy_t1_1	<---	Efficacy	***	0,810
Hope_t1_2	<---	Hope_Optimism		0,775
Hope_t1_3	<---	Hope_Optimism	***	0,814
Hope_t1_4	<---	Hope_Optimism	***	0,651
Resilience_t1_2	<---	Resilience_Hope		0,481
Resilience_t1_3	<---	Resilience_Hope	***	0,593
Optimism_t1_2	<---	Hope_Optimism	***	0,727
Hope_t2_2	<---	Hope		0,733
Hope_t2_3	<---	Hope	***	0,734
Hope_t2_4	<---	Hope	***	0,752
Resilience_t2_2	<---	Resilience_Optimism	***	0,636
ESS_Emo1	<---	ESS_Emo		0,904
ESS_Emo2	<---	ESS_Emo	***	0,880
ESS_Emo3	<---	ESS_Emo	***	0,932
ESS_Info1	<---	ESS_Info		0,837
ESS_Info2	<---	ESS_Info	***	0,877
ESS_Instru1	<---	ESS_Instru		0,933

Item		Construct	P	St. Regr. Weight Est.
ESS_Instru2	<---	ESS_Instru	***	0,919
ECS_Instru1	<---	ECS_Instru		0,801
ECS_Instru2	<---	ECS_Instru	***	1,000
ECS_Info1	<---	ECS_Info		0,806
ECS_Info2	<---	ECS_Info	***	0,794
ECS_Emo1	<---	ECS_Emo		0,910
ECS_Emo2	<---	ECS_Emo	***	0,853
ECS_Emo3	<---	ECS_Emo	***	0,944
Optimism_t2_2	<---	Resilience_Optimism	***	0,685
Optimism_t2_1	<---	Resilience_Optimism		0,745
PSS_Composite	<---	Perceived_Support		1,000
PCS_Composite	<---	Perceived_Support	***	0,480
ECS_Satisf_emos1	<---	ECS_Satisf		0,865
ECS_Satisf_instru1	<---	ECS_Satisf	***	0,879
ECS_Satisf_info1	<---	ECS_Satisf	***	0,933
ESS_Satisf_emos1	<---	ESS_Satisf		0,883
ESS_Satisf_info1	<---	ESS_Satisf	***	0,929
ESS_Satisf_instru1	<---	ESS_Satisf	***	0,918
Resilience_t1_1	<---	Resilience_Hope		0,619
Hope_t1_1	<---	Resilience_Hope	***	0,763
Efficacy_t2_2	<---	Resilience_Efficacy		0,650
Efficacy_t2_3	<---	Resilience_Efficacy	***	0,662
Resilience_t2_1	<---	R Resilience_Efficacy	***	0,333
Resilience_t2_3	<---	Resilience_Efficacy	***	0,606
POS_Composite	<---	Perceived_Support	***	0,714

5.8.2 Model A: Enacted support and PsyCap

The relationships between enacted support from supervisors and co-workers, and PsyCap are the focus of Model A. The model fit for both managers and non-managers is shown in Table 32 and considered acceptable; however, more for managers where all the statistics are within the acceptable threshold range.

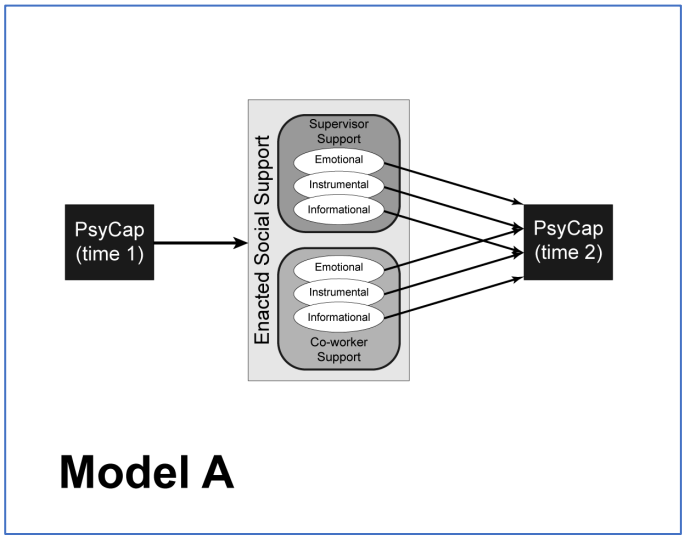

Figure 10: Graphical representation of Model A

Although the chi-square value is statistically significant, it is sensitive to sample size and rejects the null hypotheses for larger samples. In general, it is not considered a criterion for judging an acceptable fit. Non-managers have CFI and IFI values below 0,9 but above 0,8, and

RMSEA below 0,08, which is permissible (Lai & Green, 2016; Wisting et al., 2019). This model is represented in Figure 10.

Table 32: Model A – Fit statistics (Managers and Non-managers)

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
								Score	Lo 90	Hi 90
Model A: ES & PsyCap	Manager	807,715	532	0,000	1,518	0,902	0,900	0,066	0,057	0,075
	Non-manager	970,254	533	0,000	1,820	0,871	0,868	0,079	0,071	0,087

For *managers*, two statistically significant relationships, at the 10% level of significance (p<0,1) are identified in Model A. They are negative relationships between ESS (Informational) and PsyCap (t2) (p=0,06), and ECS (Informational) and PsyCap (t2) (p=0,08), as presented in Table 33.

The legitimacy of standardised regression weights exceeding 1,0 has been argued in literature (Deegan, 1978). It is mainly attributed to the effects of multicollinearity. Albeit standardised regression coefficients are similar to correlation coefficients, they differ in that they indicate rates of change and not correlation. Therefore, in such instances, the size of the standardised regression weight cannot serve as an indicator of the *magnitude of change*, but only the *direction of change*.

No statistically significant relationships were observed for *non-managers*, and further analysis for that demographic in Model A is excluded.

Table 33: Model A – Summary of significant relationships

Relationship			P	Estimates
Managers				
PsyCap (t2)	<---	ESS_Info	0,060*	-1,726
PsyCap (t2)	<---	ECS_Info	0,080*	-3,652
Non-managers				
No significant relationships were observed				

*. p<0.1

Multicollinearity is problematic as it influences the standard errors of items. In CB-SEM, these standard errors are used to calculate the relevant statistics and associated significance. This can, however, be remedied in the model by correlating these errors, as discussed in Section 5.7.2.

Thus, improvements to the model included the covariance relationships between the error terms of these items and the error terms of constructs, as presented in Table 34. Some relationships (i,ii and iii) were theoretically justified as they refer to the ECS construct's sub-components. Furthermore, the between-covariance of several items was

justified as they are before (t1) and after (t2) measurements of the same construct. Hence covariance between these items was expected (iv, vii, viii, x, xi and xii).

Additionally, the between-covariances of some constructs and items (v and ix) reflect the latent construct they are nested in, and the cross-loading of items in the research instrument. Finally, the negative relationship between the Hope-Optimism (t1) construct and ECS (informational) was also brought into consideration (v). The influence of these PsyCap (t1) resources on enacted support measures are discussed at length in Section 6.6.

Table 34: Model A – Covariances and correlations between error terms

#	Covariances	P	Corr.
		Managers	
i	**ECS_Info ↔ ECS_Emo**	***	0,750
ii	**ECS_Instru ↔ ECS_Emo**	***	0,766
iii	**ECS_Instru ↔ ECS_Info**	***	0,967
iv	**PsyCap (t1) ↔ PsyCap (t2)**	0,178	0,967
v	**Resilience_Hope(t1) ↔ Efficacy (t1)**	***	0,508
vi	**Hope_Optimism (t1) ↔ ECS_Info**	0,087 *	-0,136
vii	**Hope_Optimism (t1) ↔ Hope (t2)**	0,010 **	0,424
viii	**Efficacy (t1) ↔ Resilience_Efficacy (t2)**	***	0,811
ix	**Hope (t1)4 ↔ Optimism (t1)2**	0,005 ***	-0,390
x	**Resilience (t1)2 ↔ Resilience (t2)2**	***	0,505
xi	**Optimism (t1)2 ↔ Optimism (t2)2**	***	0,437
xii	**Resilience (t1)1 ↔ Resilience (t2)1**	***	0,423

***. p<0,01
**. p<0,05
*. p<0.1

5.8.3 Model B: Satisfaction with enacted support and PsyCap

The relationships between satisfaction with enacted support from both supervisors and co-workers, and PsyCap are the focus of Model B. The model fit for both managers and non-managers is permissible as they have CFI and IFI values below 0,9 but above 0,8, and RMSEA below 0,1 – as presented in Table 35. Model B is graphically represented in Figure 11.

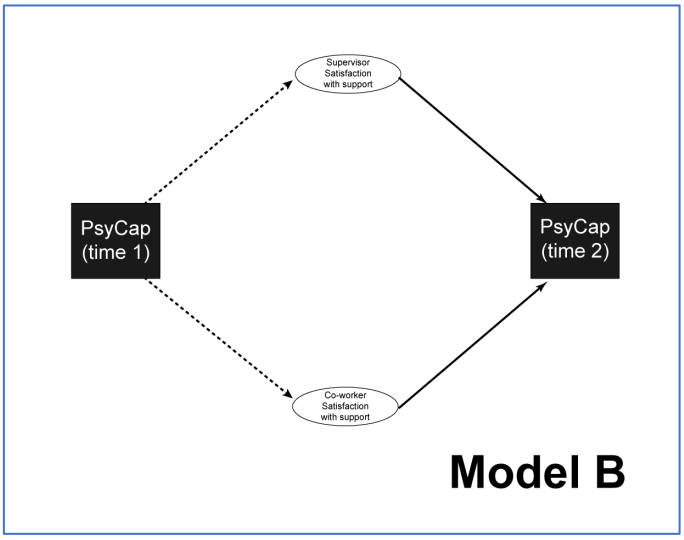

Figure 11: Graphical representation of Model B

Table 35: Model B – Fit statistics (Managers and Non-managers)

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
								Score	Lo 90	Hi 90
Model B: Satisfaction with ES & PsyCap	Manager	578,383	315	0,000	1,836	0,841	0,838	0,084	0,073	0,095
	Non-manager	637,388	315	0,000	2,023	0,855	0,853	0,088	0,078	0,098

For *managers*, four statistically significant relationships at the 10% level of significance (p<0,1), were identified in Model B. Positive relationships were observed between PsyCap (t1) and satisfaction with ECS (p=0,014), PsyCap (t1) and satisfaction with ESS (p=0,058), and between PsyCap (t1) and PsyCap (t2) (p=0,000). A negative relationship was observed between satisfaction with ECS and PsyCap (t2) (p=0,022).

When it comes to *non-managers*, three statistically significant relationships at the 10% level of significance (p<0,1) were noted. Positive relationships were observed between satisfaction with ESS and PsyCap (t2) (p=0,060) and between PsyCap (t1) and PsyCap (t2) (p=0,000). A negative relationship was indicated between satisfaction with ECS and PsyCap (t2) (p=0,022). These are presented in Table 36.

Table 36: Model B – Summary of significant relationships

Relationships			P	Estimates
Managers				
ECS_Satisf	<---	PsyCap (t1)	0,014 **	0,286
ESS_Satisf	<---	PsyCap (t1)	0,058 *	0,214
PsyCap (t2)	<---	ECS_Satisf	0,022 **	-0,272
PsyCap (t2)	<---	PsyCap (t1)	***	0,786
Non-managers				
PsyCap (t2)	<---	ECS_Satisf	0,037 **	-0,169
PsyCap (t2)	<---	ESS_Satisf	0,060 *	0,153
PsyCap (t2)	<---	PsyCap (t1)	***	0,914

***. p<0,01
**. p<0,05
*. p<0,1

A single covariance relationship between the error terms was created to improve Model B, as seen in Table 37. This was theoretically justified as relationships exist between satisfaction with ECS and satisfaction with ESS (i).

Table 37: Model B – Covariances and correlations between error terms

#	Covariances	P	Corr.	P	Corr.
		Managers		Non-managers	
i	**ECS_Satisf ↔ ESS_Satisf**	***	0,477	***	0,614

***. p<0,01

5.8.4 Model C: Enacted support, satisfaction with enacted support, and PsyCap

The relationships between enacted support from both co-workers and supervisors, satisfaction with enacted support from both supervisors and co-workers, and PsyCap are the focus of Model C. The model fit for both managers and non-managers is acceptable and is presented in Table 38. Both have CFI and IFI values below 0,9 but above 0,8, which are permissible (Lai & Green, 2016; Wisting et al., 2019) and RMSEA below 0,1 – as mentioned earlier. This model is graphically illustrated in Figure 12.

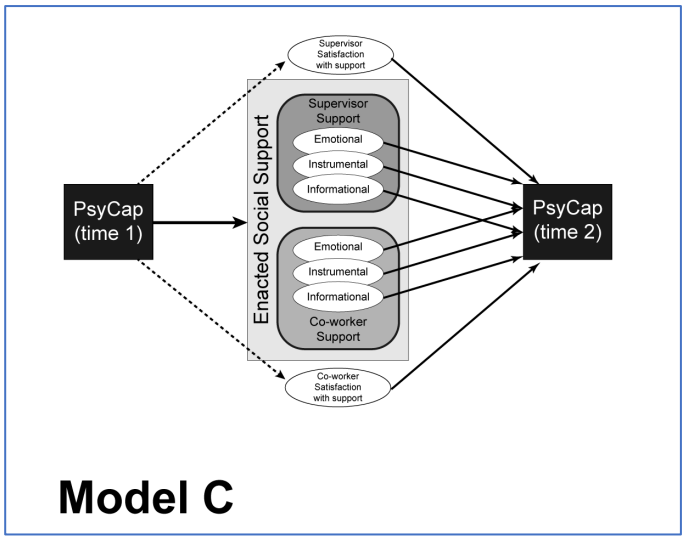

Figure 12: Graphical representation of Model C

Table 38: Model C – Fit statistics (Managers and Non-managers)

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
								Score	Lo 90	Hi 90
Model C: ES, satisfaction & PsyCap	Manager	1371,35	746	0,000	1,838	0,843	0,840	0,084	0,077	0,091
	Non-manager	1534,36	747	0,000	2,054	0,834	0,831	0,089	0,083	0,096

As it pertains to *managers*, five statistically significant relationships, at the 10% level of significance (p<0,1), were identified in Model C and presented in Table 39. These include a positive relationship between ESS (Informational) and PsyCap (t2) (p=0,008), ESS (Satisfaction) and PsyCap (t2) (p=0,083), and ECS (Instrumental) and PsyCap (t2) (p=0,084). Additionally, negative relationships between ECS (Informational) and PsyCap (t2) (p=0,078), and ECS (Satisfaction) and PsyCap (t2) (p=0,000) were observed.

For *non-managers*, only one significant relationship was indicated. ECS (Satisfaction) was negatively related to PsyCap (t2) for this demographic (p=0,013).

Table 39: Model C – Summary of significant relationships

Relationships			P	Estimates
Managers				
PsyCap (t2)	<---	ESS_Info	0,008 **	1,799
PsyCap (t2)	<---	ECS_Instru	0,084 *	3,258

Relationships			P	Estimates
PsyCap (t2)	<---	ECS_Info	0,078 *	-3,441
PsyCap (t2)	<---	ESS_Satisf	0,083 *	0,479
PsyCap (t2)	<---	ECS_Satisf	***	-0,390
Non-managers				
PsyCap (t2)	<---	ECS_Satisf	0,013 **	-0,222

***. p<0,01
**. p<0,05
*. p<0,1

The same covariances considered for Model A (Section 5.8.2) were considered in this model. In addition, however, an additional error covariance was added between the ESS (emotional) construct and the satisfaction with ESS (emotional) item (xiii). These are set out for both managers and non-managers below (Table 40).

Table 40: Model C – Covariances and correlations between error terms

#	Covariances	P	Corr.	P	Corr.
		Manager		**Non-manager**	
i	**ECS_Info ↔ ECS_Emo**	***	0,754	***	0,706
ii	**ECS_Instru ↔ ECS_Emo**	***	0,760	***	0,824
iii	**ECS_Instru ↔ ECS_Info**	***	0,978	***	0,983
iv	**PsyCap (t1) ↔ PsyCap (t2)**	0,230	-0,947	0,120	-0,958
v	**Resilience_Hope(t1) ↔ Efficacy (t1)**	***	0,508	***	0,611
vi	**Hope_Optimism (t1) ↔ ECS_Info**	0,073 *	-0,147	0,365	0,065
vii	**Efficacy (t1) ↔ Resilience_Efficacy (t2)**	***	0,807	***	0,529
viii	**Hope_Optimism (t1) ↔ Hope (t2)**	0,009 ***	0,434	0,754	-0,091
ix	**Hope (t1)4 ↔ Optimism (t1)2**	0,006 ***	-0,378	0,008 ***	-0,263
x	**Resilience (t1)2 ↔ Resilience (t2)2**	***	0,507	***	0,327
xi	**Optimism (t1)2 ↔ Optimism (t2)2**	***	0,447	0,009 ***	0,279
xii	**Resilience (t1)1 ↔ Resilience (t2)1**	***	0,422	0,145	0,137
xiii	**ESS_Emo ↔ ESS_Satisfaction (Emo)**	***	0,757	***	0,925

***. p<0,01
*. p<0.1

5.8.5 Model D: Perceived support, enacted support, and PsyCap

The relationships between perceived support, enacted support from both co-workers and supervisors, and PsyCap are the focus of Model D. Acceptable model fit for managers is presented in Table 41. Managers have CFI and IFI values below 0,9 but above 0,8, which are considered permissible (Lai & Green, 2016; Wisting et al., 2019) and RMSEA was equal to 0,08 for managers. However, the model for non-managers was not found feasible, and is therefore excluded from further analysis. Model D is graphically represented in Figure 13.

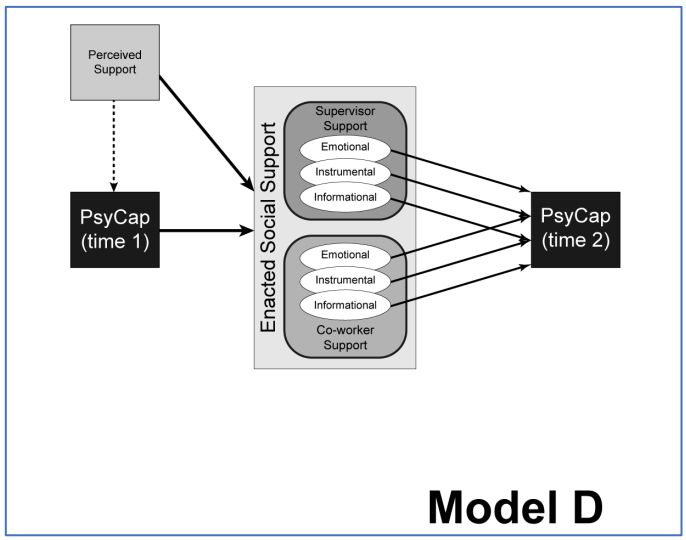

Figure 13: Graphical representation of Model D

Table 41: Model D – Fit statistics (Managers and Non-managers)

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
								Score	Lo 90	Hi 90
Model D: PS, ES & PsyCap	Manager	1109,391	631	0,000	1,758	0,845	0,841	0,080	0,072	0,088
	Non-manager	Non-positive definite matrices and negative variances were observed in the model. Although remedies exist, these were not found feasible and were hence not pursued.								

Model D indicates several statistically significant relationships, at the 10% level of significance (p<0,1) for *managers*, and are presented in Table 42. As it pertains to perceived support, a positive relationship was observed with PsyCap (t1) (p=0,000), and negative relationships were observed with ECS (Informational) (p=0,031) and ECS (Instrumental) (p=0,091). PsyCap (t1) was positively related to ESS (Emotional) (p<0,01), ESS (Informational) (p<0,01), ESS (Instrumental) (p<0,01), ECS (Emotional) (p<0,01), ECS (Informational) (p<0,01), and ECS (Instrumental) (p<0,01). A statistically significant positive relationship was observed between ECS (Instrumental) and PsyCap (t2) (p=0,035); and a negative relationship between ECS (Informational) and PsyCap (t2) (p=0,026).

Table 42: Model D – Summary of significant relationships

			P	Estimates
Managers				
PsyCap (t1)	<---	PS (Perceived Sup)	0,003 ***	0,347
ESS_Emo	<---	PsyCap (t1)	***	1,002
ESS_Info	<---	PsyCap (t1)	***	1,027
ESS_Instru	<---	PsyCap (t1)	***	0,994
ECS_Instru	<---	PsyCap (t1)	***	0,574
ECS_Info	<---	PsyCap (t1)	***	0,688
ECS_Emo	<---	PsyCap (t1)	***	0,633
ECS_Info	<---	PS (Perceived Sup)	0,031 **	-0,240
ECS_Instru	<---	PS (Perceived Sup)	0,091 *	-0,167
PsyCap (t2)	<---	ECS_Instru	0,035 **	4,721
PsyCap (t2)	<---	ECS_Info	0,026 **	-5,433
Non-managers				
No model could be identified.				

***. p<0,01
**. p<0,05
*. p<0,1

Improvements to the model include: theoretically justified relationships between ECS sub-components (i, ii and iii), or components nested within the same latent construct (iv, vii and viii), and measurements of the same items or sub-constructs at the start (t1) and conclusion (t2) of the study (v, vi, ix, x, xi and xii). This is presented in Table 43.

Table 43: Model D – Covariances and correlations between error terms

#	Covariances	P	Corr.
		Managers	
i	**ECS_Info ↔ ECSEmo**	***	0,752
ii	**ECS_Instru ↔ ECS_Emo**	***	0,763
iii	**ECS_Instru ↔ ECS_Info**	***	0,976
iv	**Resilience_Hope(t1) ↔ Efficacy (t1)**	***	0,597
v	**Hope_Optimism (t1) ↔ Hope (t2)**	0,002 ***	0,366
vi	**Efficacy (t1) ↔ Resilience_Efficacy (t2)**	***	0,749
vii	**Hope_Optimism (t1) ↔ Resilience_Hope(t1)**	***	0,773
viii	**Hope_Optimism (t1) ↔ Efficacy (t1)**	***	0,481
ix	**Hope (t1)4 ↔ Optimism (t1)2**	0,035 **	-0,227
x	**Resilience (t1)2 ↔ Resilience (t2)2**	***	0,492
xi	**Optimism (t1)2 ↔ Optimism (t2)2**	***	0,406
xii	**Resilience (t1)1 ↔ Resilience (t2)1**	***	0,430

***. p<0,01
**. p<0,05

5.8.6 Model E: Perceived support, satisfaction with enacted support, and PsyCap

The relationships between perceived support, satisfaction with enacted support from both co-workers and supervisors, and PsyCap are the focus of Model E. The model fit for both managers and non-managers is considered acceptable and presented in Table 44.

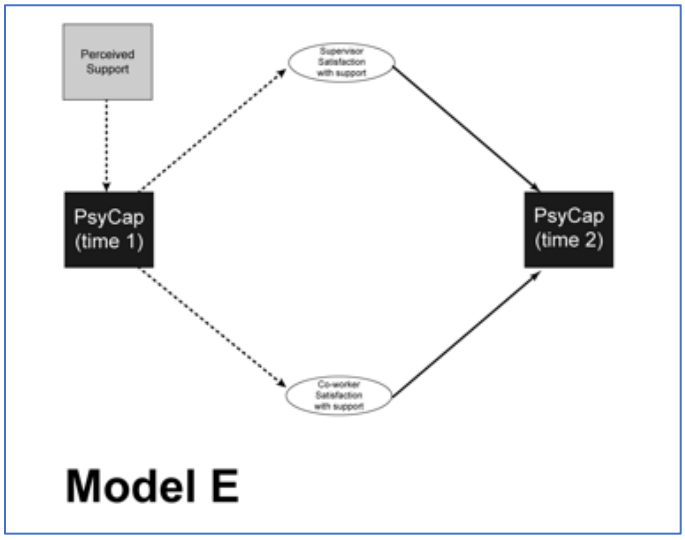

Figure 14: Graphical representation of Model E

Both groups have CFI and IFI values below 0,9 but above 0,8, which are permissible (Lai & Green, 2016; Wisting et al., 2019). Managers had a RMSEA below 0,08, while non-managers' RMSEA was 0,084, and thus below 0,1. Model E is graphically illustrated in Figure 14.

Table 44: Model E – Fit statistics (Managers and Non-managers)

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
								Score	Lo 90	Hi 90
Model E: PS, ES Satisfac-tion & PsyCap	Manager	610,067	388	0,000	1,572	0,882	0,879	0,069	0,059	0,080
	Non-manager	745,738	389	0,000	1,917	0,861	0,859	0,083	0,074	0,092

As it pertains to *managers*, five statistically significant relationships, at the 5% level of significance (p<0,05), are identified in Model E. Positive relationships are observed between perceived support and PsyCap (t1) (p=0,000), PsyCap (t1) and satisfaction with ECS (p=0,005), and PsyCap (t1) and satisfaction with ESS (p=0,015). The relationship between PsyCap (t1) and PsyCap (t2) – the two times that this construct was measured – was also positive (p=0,000). A negative relationship between satisfaction with ECS and PsyCap (t2) was also significant (p=0,013). For *non-managers*, four significant relationships were noted at the 10% level of significance (p<0,10) in Model E. Positive relationships were observed between perceived support and PsyCap (t1) (p=0,000), satisfaction with ESS (p=0,078) and PsyCap (t1) and

PsyCap (t2) (p=0,000). A negative relationship was observed for satisfaction with ECS and PsyCap (t2) (p=0,044). These are presented in Table 45.

Table 45: Model E – Summary of significant relationships

Relationships			P	Estimates
Managers				
PsyCap (t1)	<---	PS (Perceived Sup)	***	0,699
ECS_Satisf	<---	PsyCap (t1)	0,005 ***	0,315
ESS_Satisf	<---	PsyCap (t1)	0,015 **	0,265
PsyCap (t2)	<---	ECS_Satisf	0,013 **	-0,290
PsyCap (t2)	<---	PsyCap (t1)	***	0,768
Non-managers				
PsyCap (t1)	<---	PS (Perceived Sup)	***	0,726
PsyCap (t2)	<---	ECS_Satisf	0,044 **	-0,164
PsyCap (t2)	<---	ESS_Satisf	0,078 *	0,143
PsyCap (t2)	<---	PsyCap (t1)	***	0,860

***. p<0,01
**. p<0,05
*. p<0,1

Improvements to this model included the covariance relationships between the error terms of these items and the error terms of constructs presented in Table 46. These were theoretically justified as relationships exist between satisfaction with ECS and satisfaction with ESS (i). Furthermore, the between-covariance of the items is justified as they are before (t1) and after (t2) measurements of the same construct. Thus, covariance between these items is to be expected (ii, iii, iv, v, vi and vii).

Table 46: Model E – Covariances and correlations between error terms

#	Covariances	P	Corr.	P	Corr.
		Managers		**Non-managers**	
i	**ECS_Satisf ↔ ESS_Satisf**	***	0,463	***	0,613
Ii	**Resilience (t1)2 ↔ Resilience (t2)2**	***	0,501	0,001	0,305
iii	**Resilience (t1)1 ↔ Resilience (t2)1**	***	0,397	0,143	0,137
iv	**Efficacy (t1)2 ↔ Efficacy (t2)2**	***	0,438	***	0,400
v	**Hope (t1)2 ↔ Hope (t2)2**	0,006 ***	0,316	***	0,521
vi	**Optimism (t1)2 ↔ Optimism (t2)2**	***	0,398	0,007	0,282
vii	**Hope (t1)4 ↔ Hope (t2)4**	***	0,486	***	0,395

***. p<0,01

5.8.7 Model F: Perceived support, enacted support, satisfaction with enacted support, and PsyCap

All the constructs of this study – perceived support, enacted support from both supervisors and co-workers, satisfaction with enacted support from both co-workers and supervisors, and PsyCap, are the focus of Model F. The model fit for both managers and non-managers is presented in Table 47.

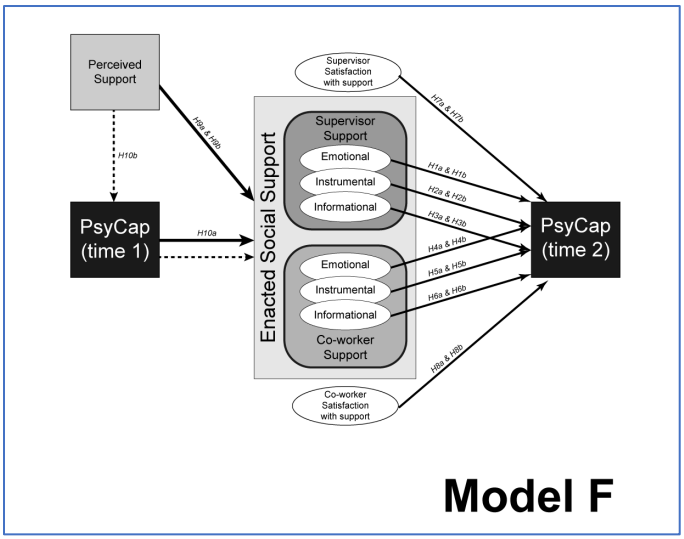

Figure 15: Graphical representation of Model F

Managers have CFI and IFI values below 0,9 but above 0,8, which are considered permissible (Lai & Green, 2016; Wisting et al., 2019) and RMSEA below 0,1. However, non-managers do not fall within the thresholds of all the model fit statistics evaluated. Although it meets the requirements of the thresholds for CMin/df <3,0 (2,233) and RMSEA <0,1 (0,097), it falls below the 0,8 limit for both IFI and CFI fit statistics. Model F is graphically represented in Figure 15.

Table 47: Model F – Fit statistics (Managers and Non-managers)

	Control	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
								Score	Lo 90	Hi 90
Model F: PS, ES, Satisfac-tion & PsyCap	Manager	1663,379	864	0,000	1,925	0,811	0,808	0,088	0,082	0,095
	Non-manager	1928,953	864	0,000	2,233	0,792	0,789	0,097	0,091	0,102

For *managers*, fourteen statistically significant relationships were observed in Model F, at the 10% (p<0,1) level of significance. Positive relationships were observed between perceived support and PsyCap (t1) (p=0,090), and ECS Instrumental and PsyCap (t2) (p=0,085). Positive relationships with PsyCap (t1) were also observed with ESS (Emotional) (p=0,074), ESS (Informational) (p=0,075), ESS (Instrumental) (p=0,074), ECS (Instrumental) (p=0,097), ECS (Emotional) (p=0,092), satisfaction with ECS (p=0,089), and satisfaction with ESS (p=0,075). Negative relationships with perceived support were observed with ESS (Emotional) (p=0,020), ESS (Informational)

(p=0,068) and ECS (Informational) (p=0,065). A negative relationship was also observed between ECS (Informational) and PsyCap (t2) (p=0,075), and satisfaction with ECS (p=0,004) and PsyCap (t2).

For *non-managers*, although the fit was not deemed adequate, the statistically significant relationships are mentioned for comparative purposes. Only three relationships were statistically significant at the 10% level (p<0,1). A negative relationship between perceived support and ECS (Informational) (p=0,074), and satisfaction with ECS and PsyCap (t2) (p=0,046) were observed. However, a positive relationship between ECS (Informational) and PsyCap (t2) (p=0,028) was identified. These are presented in Table 48.

Table 48: Model F – Summary of significant relationships

Relationships			P	Estimates
Managers				
PsyCap (t1)	<---	PS (Perceived Sup)	0,090 *	0,473
ESS_Emo	<---	PsyCap (t1)	0,074 *	0,993
ESS_Info	<---	PsyCap (t1)	0,075 *	1,054
ESS_Instru	<---	PsyCap (t1)	0,074 *	0,969
ECS_Instru	<---	PsyCap (t1)	0,097 *	0,449
ECS_Emo	<---	PsyCap (t1)	0,092 *	0,503
ESS_Emo	<---	PS (Perceived Sup)	0,020 **	-0,133
ESS_Info	<---	PS (Perceived Sup)	0,068 *	-0,126
ECS_Info	<---	PS (Perceived Sup)	0,065 *	-0,229
ECS_Satisf	<---	PsyCap (t1)	0,089 *	0,449
ESS_Satisf	<---	PsyCap (t1)	0,075 *	0,917
PsyCap (t2)	<---	ECS_Instru	0,085 *	2,168
PsyCap (t2)	<---	ECS_Info	0,075 *	-3,010
PsyCap (t2)	<---	ECS_Satisf	0,004 ***	-0,359
Non-managers				
ECS_Info	<---	PS (Perceived Sup)	0,058 *	-0,152
PsyCap (t2)	<---	ECS_Info	0,014 **	0,675
PsyCap (t2)	<---	ECS_Satisf	0,022 **	-0,307

***. p<0,01
**. p<0,05
*. p<0,1

To improve model F, the covariance relationships between the error terms of these items and the error terms of constructs presented in Table 49 were included. Most of these relationships were also used to improve Model A, Model C and Model D (i to xii). Furthermore, the between covariances of some constructs and items are reflective of the latent construct they are nested in, as well as the cross-loading of items from the research instrument (xiii, xiv and xv).

Table 49: Model F – Covariances and correlations between error terms

#	Covariances	P	Corr.	P	Corr.
		Managers		Non-managers	
i	**ECS_Instru ↔ ECS_Info**	***	0,948	***	0,720
ii	**ECS_Info ↔ ECS_Emo**	***	0,818	***	0,674
iii	**ECS_Instru ↔ ECS_Emo**	***	0,735	***	0,701
iv	**ECS_Satisf ↔ ESS_Satisf**	0,002 ***	0,346	0,004***	0,318
v	**Resilience_Hope(t1) ↔ Efficacy (t1)**	***	0,498	***	0,584
vi	**Efficacy (t1) ↔ Resilience_Efficacy (t2)**	***	0,825	***	0,686
vii	**Hope_Optimism (t1) ↔ Hope (t2)**	0,032 **	0,365	***	0,777
viii	**Hope_Optimism (t1) ↔ ECS_Info**	0,061 *	-0,167	0,010 **	0,179
ix	**Hope (t1)4 ↔ Optimism (t1)2**	0,007 ***	-0,374	0,002 ***	-0,324
x	**Resilience (t1)2 ↔ Resilience (t2)2**	***	0,499	0,003 ***	0,289
xi	**Optimism (t1)2 ↔ Optimism (t2)2**	***	0,457	0,015 ***	0,249
xii	**Resilience (t1)1 ↔ Resilience (t2)1**	***	0,417	0,146	0,140
xiii	**PCS ↔ ECS Satisfaction**	***	0,474	***	0,439
xiv	**ESS_Satisfaction ↔ ESS Emo**	***	0,790	***	0,993
xv	**ECS_Instru1 ↔ ECS_Satisfaction_Instru1**	–	–	***	0,528

***. p<0,01
**. p<0,05
*. p<0.1

5.8.8 Conclusion

The study's goal was to investigate how enacted support measures and PsyCap relates — as informed by theory. Because CB-SEM is a theory-testing analytical method, it was particularly useful for this research. However, it should be reiterated that CB-SEM is not used for discovery, exploration or prediction (Babin & Svensson, 2012; Hair et al., 2011; Svensson, 2015; Zhang et al., 2021). Additionally, as CB-SEM tries to determine "how well a proposed theoretical model can estimate the covariance matrix for sample data set et" (Janadari et al., 2018, p. 188), improvement of the theoretical model – as insights are gained – would thus also better the model fit statistics.

Considering the aim of the research to investigate how these constructs relate, the exploratory nature of this premise cannot be disregarded. Therefore, although the strictly accepted thresholds for model fit were not reached in all instances, evidence was provided that these models offer an adequate explanation of this relationship.

Furthermore, although other error covariances could be introduced to improve model fit, these were not theoretically justified and would alter the conceptual model dramatically. Therefore, the final CB-SEM model, as per Model F, and considering all the relationships between constructs as proposed, are presented in Figure 16 and Figure 17.

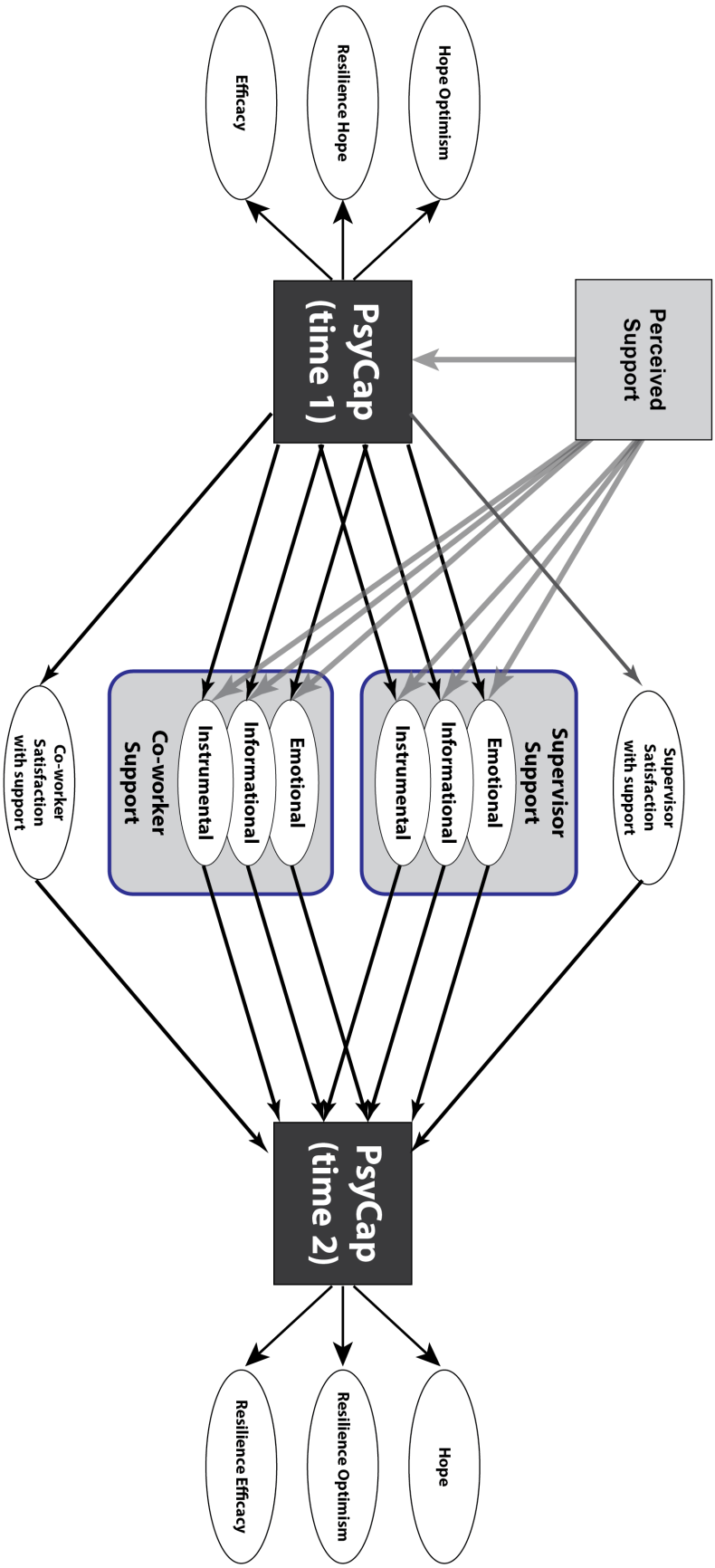

Figure 16: Model F - Final CB-SEM model (Version 1 – summarised)

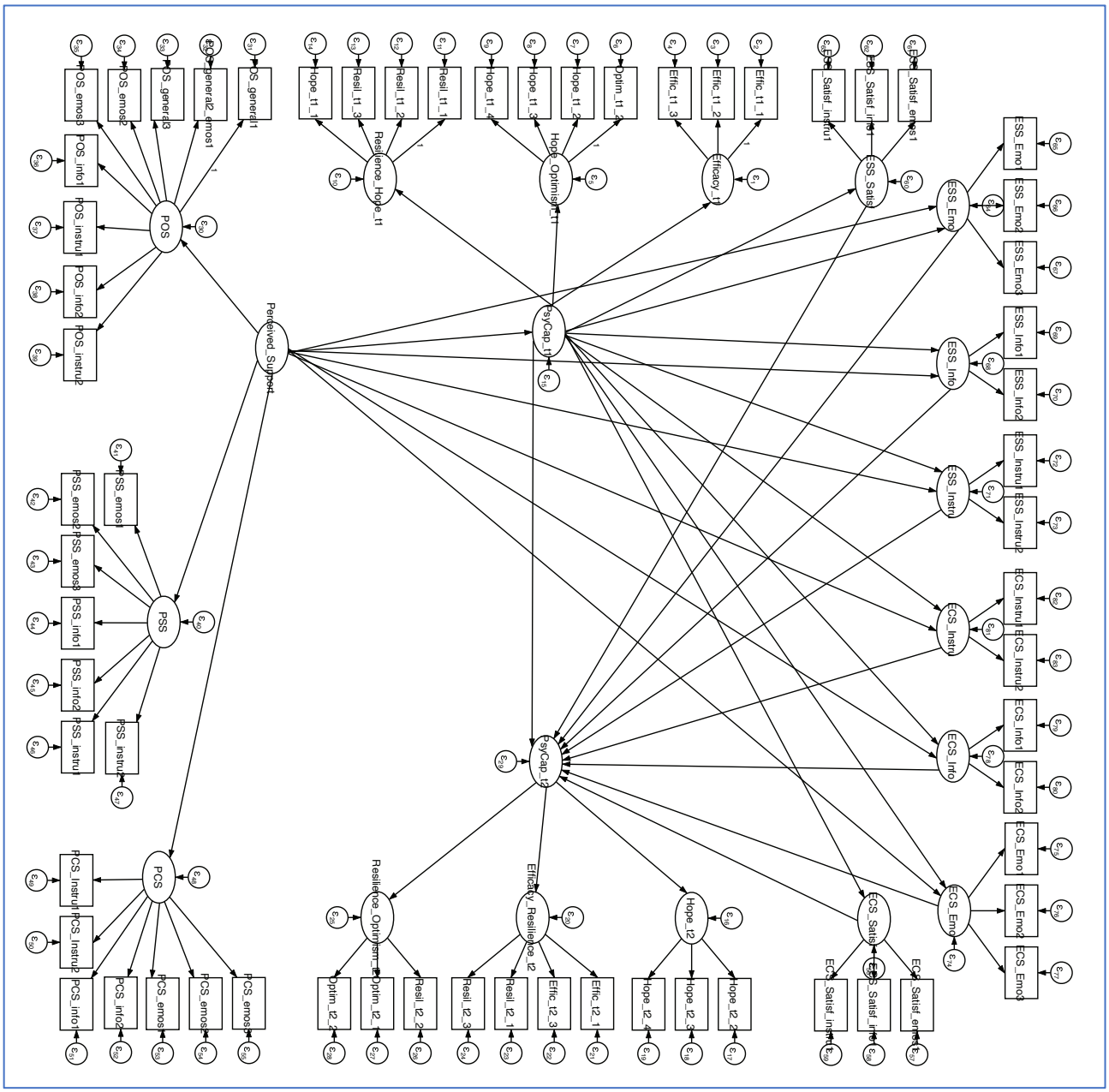

Figure 17: Model F - Final CB-SEM model (Version 2 - extended)

5.9 Mediation analysis

To investigate whether PsyCap (M) mediates the relationship between perceived support (X) and enacted support (Y), mediation analysis was conducted.

The mediating relationship between the constructs is graphically illustrated in Figure 18. The relationships between the three constructs (perceived support, PsyCap (t1) and enacted support) meet the four conditions for mediation proposed by Baron and Kenny (Baron & Kenny, 1986). Table 50 shows that 1) perceived support and enacted support are related (c'), 2) perceived support and PsyCap are related (a), 3) PsyCap and enacted support are related (b), and 4) the significant indirect effects observed between perceived support and enacted support through PsyCap (t1) are presented in Table 52. If these criteria are met, the mediating construct partially or completely explains or facilitates the relationships between the other two (Hair Jr. et al., 2019; Hayes & Preacher, 2010).

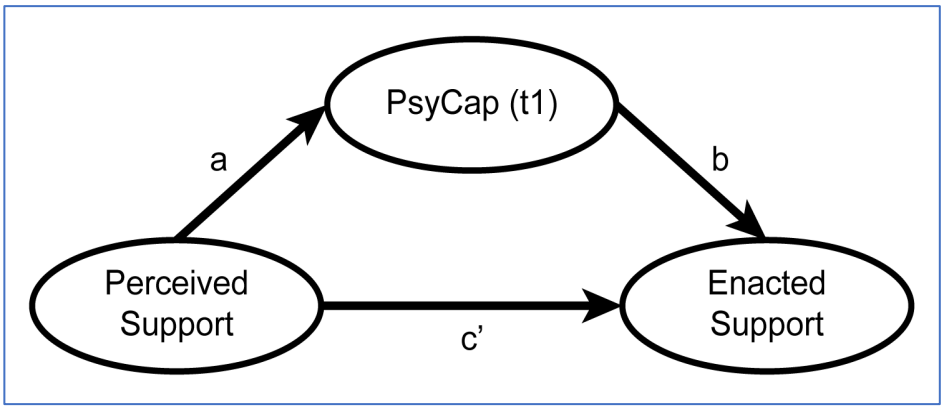

Figure 18: Hypothesised path diagram – Mediation analysis

Table 50: Correlation for mediation analysis

	Perceived support	PsyCap (t1)	Enacted support
Perceived support	–	–	–
PsyCap (t1)	0,533 ***	–	–
Enacted support	0,685 ***	0,510 ***	–

***. p<0,01

Analysis was conducted through CB-SEM using Model F — taking the entire sample (n=253) into account, and not separated into managers (n=110) or non-managers (n=143). The model fit statistics for this sample are set out in Table 51. The IFI and CFI exceed the 0,8 threshold, and the RMSEA is 0,089, which falls below the 0,1 threshold.

Table 51: Model F for mediation analysis (Entire sample)

Model	CMin	Df	P (<0,05)	CMin /df (<3,0)	IFI (>0,8)	CFI (>0,8)	RMSEA (<0,1)		
							Score	Lo 90	Hi 90
Model F:	1689,702	868	0,000	1,947	0,806	0,802	0,089	0,083	0,096

In Table 52, both the direct effects and indirect effects of how the constructs relate are presented. The indirect effects – where perceived support's influence on enacted support is mediated through PsyCap (t1), all enacted support measures indicated significant relationships, and none of the confidence intervals include zero.

Table 52: Mediation analysis (Based on Model F)

Construct	Direct effects				Indirect effects			
	St. Regr. Weights	Lower bounds	Upper bounds	p	St. Regr. Weights	Lower bounds	Upper bounds	p
Perceived support and …								
PsyCap (t1)	0,055	0,004	0,138	0,030 **	–	–	–	–
ESS (Satisfaction)	–	–	–	–	0,619	0,326	0,799	0,048 **
ECS (Satisfaction)	–	–	–	–	0,268	0,151	0,415	0,026 **
ECS (Emotional)	-0,202	-0,460	0,081	0,298	0,356	0,140	0,630	0,026 **
ECS (Informational)	-0,253	-0,521	-0,017	0,047 **	0,288	0,154	0,475	0,013 **
ECS (Instrumental)	-0,146	-0,349	0,067	0,310	0,250	0,082	0,397	0,038 **
ESS (Instrumental)	-0,165	-0,378	0,031	0,163	0,715	0,321	0,932	0,077 *
ESS (Informational)	-0,144	-0,294	-0,015	0,081 *	0,595	0,446	0,860	0,010 **
ESS (Emotional)	-0,180	-0,378	0,004	0,117	0,661	0,363	0,924	0,030 **

**. p<0,05
*. p<0,1

This analysis showed that PsyCap is a partial mediator between perceived support and enacted support, as some direct effect relationships remain statistically significant. With closer observation, partial mediation is observed for ECS (Informational) (p=0,047, β= -0,238) at the 5% level of confidence (p<0,05) and ESS (Informational) (p=0,081, β=0,092) at the 10% level of confidence (p<0,01). For all other ESS and ECS constructs, complete mediation takes place. Therefore, PsyCap completely explains the relationship between perceived support and enacted support – apart from information support (regardless of source), where perceived support indicates a direct effect.

5.10 Hypotheses testing

Reflecting on the CB-SEM and mediation analysis in this chapter, the significant relationships that have been observed offer insight into whether the hypotheses found support in the data or not. Notably, Hypotheses 1, 2 and 4 did not find support in the data – for either of the competing hypotheses. Table 53 summarises the hypotheses and their respective results, the detail of which will be discussed in depth in the following chapter.

Table 53: Hypotheses of the study

H	Hypotheses	Results	Discussed in …
Supervisor			
1a	Enacted emotional support from a supervisor will have a *positive* relationship to the PsyCap of an employee.	Not supported in the data	Section 6.1.2.1
1b	Enacted emotional support from a supervisor will have a *negative* relationship to the PsyCap of an employee.	Not supported in the data	
2a	Enacted instrumental support from a supervisor will have a *positive* relationship to the PsyCap of an employee.	Not supported in the data	Section 6.1.2.2
2b	Enacted instrumental support from a supervisor will have a *negative* relationship to the PsyCap of an employee.	Not supported in the data	
3a	Enacted informational support from a supervisor will have a *positive* relationship to the PsyCap of an employee.	Supported for managers [Model C]	Section 6.3.1
3b	Enacted informational support from a supervisor will have a *negative* relationship to the PsyCap of an employee.	Supported for managers [Model A]	
Co-workers			
4a	Enacted emotional support from a co-worker will have a *positive* relationship to the PsyCap of an employee.	Not supported in the data	Section 6.1.2.1
4b	Enacted emotional support from a co-worker will have a *negative* relationship to the PsyCap of an employee.	Not supported in the data	
5a	Enacted instrumental support from a co-worker will have a *positive* relationship to the PsyCap of an employee.	Supported for managers [Model C, Model D, Model F]	Section 6.2
5b	Enacted instrumental support from a co-worker will have a *negative* relationship to the PsyCap of an employee.	Not supported in the data	
6a	Enacted informational support from a co-worker will have a	Supported for non-managers [Model F]	Section 6.3.2

H	Hypotheses	Results	Discussed in …
	positive relationship to the PsyCap of an employee.		
6b	Enacted informational support from a co-worker will have a *negative* relationship to the PsyCap of an employee.	Supported for managers [Model A, Model C, Model D, Model F]	
	Satisfaction with support		
7a	Satisfaction with enacted support from a supervisor will have a *positive* relationship to the PsyCap of an employee.	Supported for non-managers [Model B, Model E] and managers [Model C]	Section 6.4.1
7b	Satisfaction with enacted support from a supervisor will have a *negative* relationship to the PsyCap of an employee.	Not supported in the data	
8a	Satisfaction with enacted support from a co-worker will have a *positive* relationship to the PsyCap of an employee.	Not supported in the data	Section 6.4.2
8b	Satisfaction with enacted support from a co-worker will have a *negative* relationship to the PsyCap of an employee.	Supported for managers [Model B, Model C, Model E, Model F] and non-managers [Model C, Model E, Model F]	
	Perceived support		
9a	Perceived support is *positively* related to enacted support.	Although correlations were observed between these two constructs, CB-SEM analysis suggests a negative relationship when other constructs are taken into account.	Section 6.5
9b	Perceived support is *negatively* related to enacted support.	Supported for managers: Perceived support and ECS (Informational) and ECS (Instrumental) [Model D]; Perceived support and ESS (Emotional), ESS (Informational) and ECS (Informational) [Model F] Supported for non-managers: Perceived support and ECS (Informational) [Model F]	
10a	The employee's PsyCap relates positively to the enacted support they receive.	Supported for managers: ESS and ECS [Model D]; ESS (Satisfaction) and ECS (Satisfaction) [Model B, Model E]; All ESS and ECS, and Satisfaction constructs, except ECS (Informational) [Model F]	Section 6.6.1
10b	The employee's PsyCap mediates the relationship between their perceptions of workplace support and the enacted support they receive.	Perceived support and PsyCap (t1) relate positively for managers [Model D, Model E, Model F] and non-managers [Model E]. In addition, mediation analysis on Model F shows several significant relationships.	Section 6.6.2

5.11 Conclusion

In this chapter, the analysis and results of the study were reported. First, the descriptive statistics offered a demographic profile of the sample, followed by an investigation of the control variables and their effect on the model. Job role – and managers or non-managers in particular – was found to be an important consideration to take into account. Hence, all further testing was conducted for those two groups. Next, the data quality of the study was tested to ascertain the normality and validity of the constructs, followed by factor analysis to further understand the structure of the data and the PsyCap construct, in particular. The data's discriminant validity, correlations, and multicollinearity were acknowledged and accommodated in six CB-SEM models presented to test the hypotheses. Finally, mediation analysis was performed to gain insight into the relationship between perceived support, enacted support and PsyCap.

The following chapter will discuss these results in light of existing theory and findings from the data.

6 Discussion

6.1 Introduction

This discussion responds to the research question of the study as to what the relationship between enacted social support and PsyCap is, and the role that perceived social support plays in that relationship. In this chapter, the results obtained and reported in the preceding chapter are interpreted. This study made use of competing hypotheses to investigate which mechanisms – albeit resource-building, resource-depleting, or gain/loss spirals – are at play when it comes to this complex relationship, and which conditions or contexts are influential thereupon. As was noted, some hypotheses were supported, others were not, and some obtained mixed results. Before discussing these findings, the salience of the job role is highlighted and the hypotheses which did not find support in the data examined.

6.1.1 Considering the support recipient: The role of managers

Several characteristics of the recipient of support have been highlighted as playing a role in how enacted support is valued and interpreted, and whether the beneficiary is satisfied with such support. For example, the receptivity to support can be influenced by the usefulness of the support provided, the accountability propensity of the beneficiary, their self-efficacy and their social awareness about how they are perceived (Rasheed et al., 2015).

As mentioned before, the perceived positional status and power differential, or lack thereof, between the recipient and the source, inform how the enacted support is interpreted (Bamberger, 2009; Mathieu et al., 2019; Monnot & Beehr, 2014). This could mean that support from a supervisor might carry greater value than that of a co-worker; or support from a co-worker be viewed as ego-threatening due to their similarity in status. However, support resources from co-workers are more accessible and broader in scope than leader-based resources (Chiaburu & Harrison, 2008).

There are differences in the job demands and resources between managers or leaders, and non-managers or followers (Nylén et al., 2019). Additionally, leaders have "a more optimistic view of themselves and the world around them than … non-leaders" (Avey, Avolio, et al., 2011, p. 284). Leaders and managers – as role models – are influential sources of information to followers as to what behaviours and values are worth emulating in the organisation. As such, they endure different scrutiny than non-managers (S. Chen, 2015; Walumbwa et al., 2010). Therefore, it is likely that their receptivity to and interpretation of support would affect them differently, and by implication, their levels of PsyCap. This study observed that the PsyCap between managers and non-managers

differed significantly, with managers' PsyCap being higher than that of the non-managers (Section 5.6.5).

When investigating the control variables of the study, the job role of the participant was identified as an important factor. As will be discussed, the role of the support recipient influences which type and source of support are beneficial to the development of PsyCap or have a deteriorating effect. As such, mixed results were obtained around the direction of the relationship between enacted support and PsyCap based on the job role of the recipient.

For example, where some forms of support show a positive relationship to PsyCap if the recipient is a non-manager, the same form of support has an opposite effect if the recipient is a manager (for example, 6.3.2). This will be expanded upon in upcoming sections.

6.1.2 Unsupported hypotheses (H1a&b, H2a&b, H4a&b)

Some hypotheses did not find support in the data for either of its competing arguments. As such, neither the resource-building nor resource-depleting effect could be observed in its relationship to PsyCap across the period, in the sample that participated in the study.

6.1.2.1 Emotional support from supervisors and co-workers (H1, H4)

Hypothesis 1 and Hypothesis 4 tested whether enacted emotional support from both supervisors (H1) and co-workers (H4) have a significant positive or negative relationship to PsyCap for managers or non-managers. None found support in the data.

Although enacted emotional support from a supervisor informs the extent to which an employee feels valued and cared for (Eisenberger et al., 2002), it can also be humiliating, belittling, abusing or patronising (Shoss et al., 2013). Additionally, enacted emotional support from co-workers has a buffering effect for undesirable workplace behaviours like unfair treatment, bullying or abusive supervision (Chiaburu & Harrison, 2008; Sloan, 2012) – at times being more effective than supervisor support (Mayo et al., 2012). However, it can add complexity to uncertain situations (Shah et al., 2018), and damage how recipients want to be perceived by both supervisors and peers (Bolino et al., 2008; P. S. Thompson & Bolino, 2018).

In an earlier section (Section 3.3.1), it was observed that the resource-building mechanism could be triggered by any enacted support behaviours that inspire motivation, improves competence, develops positive affect, decreases stress, promotes well-being, and builds engagement and trust. However, it was also indicated that the

resource-depleting mechanism could be triggered in instances where the enacted support increases feelings of incompetence, decreases confidence or positive affect, threatens autonomy, and increases stress (Section 3.3.2). As such, it was expected that either resource-building or resource-depletion would be observed in the data from this study, when the relationship between enacted emotional support and PsyCap is considered. However, neither found support in the data obtained.

Several reasons could potentially explain why these hypotheses were not supported. Amongst others, emotional support (sympathy, acceptance, esteem for others) and instrumental support (task instruction, task assistance) can be similarly interpreted, depending on the context in which it is provided (Mathieu et al., 2019; Semmer et al., 2008). This could mean that the type of support received might not have been clear. Furthermore, enacted emotional support from workplace sources was not observed during the period under consideration, or it was not considered as valuable as non-work support providers and hence scored lower (Shah et al., 2018; Smollan, 2017). Furthermore, emotional social support-seeking involves more risk than informational or instrumental support-seeking, especially as support seekers need to make themselves vulnerable by exposing these needs (Kammrath et al., 2019). Taking into consideration that this study was conducted within the COVID-pandemic, and while some work restrictions were still in place, in-person access to co-workers and supervisors might not have been prevalent; or such was not adequately provided or understood as such through digital interaction platforms upon which meetings were conducted. Additionally, becoming vulnerable through such an online or digital platform, might contain higher and different barriers to overcome in order to seek emotional support. However, the study of digital and online means of providing support is still in its infancy, but indications are there – that although support does occur – different boundary conditions exist from its in-person counterpart (e.g., Alhadlaq et al., 2019; Quan-Haase et al., 2017; Wohn et al., 2016). Regardless, it merits further investigation to ascertain why neither hypotheses found support (Section 7.4).

6.1.2.2 Instrumental support from supervisors (H2)

The data did not indicate any significant positive or negative relationship between enacted instrumental support from supervisors and PsyCap (t2) for both managers and non-managers.

Supervisors are better providers of enacted instrumental support than co-workers (Mathieu et al., 2019). Although this type of support's influence on PsyCap's constituent resources has been observed (Harber et al., 2005; Klyver et al., 2018), the impact of

supervisor interference can elicit feelings of incompetence and inhibit initiative-taking (Beehr et al., 2010; Burnett et al., 2015; Lewis & Rook, 1999; Shumaker & Hill, 1991).

The lack of support for neither of the competing hypotheses could relate to what was discussed around emotional support from supervisors as well (6.1.2.1). Thus, instrumental support from a supervisor could have been interpreted as emotional support, or vice versa (Semmer et al., 2008). Practically, supervisors' means of providing instrumental support might have been limited due to COVID-19-related restrictions and in-person interactions. Hence, it could be a result of the methodology of the study resulting in a lack of observation of this type of support in that instrumental help from supervisors is likely to be scarce when compared to informational support or guidance from the same. As such, co-worker support is more prevalent than supervisor support, which is more scarce and intermittent by comparison (Chiaburu & Harrison, 2008).

Regardless, the conditions presented in this study offered no further insight as none of the competing hypotheses found support in the data and hence future investigation is suggested (Section 7.4).

6.1.2.3 Conclusion

The lack of support for the above hypotheses can also result from the conditions of the study. This could be because the nett effect of the resource-building and the resource-depleting mechanisms resulted in little to no change across the period. Additionally, the industry in which the participants work can also be taken into account to investigate whether such could provide insights as to why neither of the hypotheses was supported. As mentioned, the study was conducted during a period of COVID restrictions, during which many of the participants worked from home as opposed to at a work office. This could influence access to these types of support. Therefore, future research could aim to gain further clarity around this potential influence (Section 7.4).

6.2 Instrumental support from co-workers (H5)

A significant statistical relationship was observed between enacted instrumental support from co-workers and PsyCap (t2) in three of the models proposed (Model C: p=0,084, β=3,258; Model D: p=0,035, β=4,1721; Model F: p=0,085, β=2,168) and presented in Table 54.

Despite reporting standardised regression weights greater than one (Deegan, 1978), the data confirm a significant positive relationship between these constructs for the managers' group. No significant relationship was observed for non-managers.

This supports previous observations that instrumental support from co-workers has a resource gain effect (Chiaburu & Harrison, 2008), and that PsyCap is sensitive to the developmental influence of instrumental support (F. Luthans et al., 2015; F. Luthans, Youssef, et al., 2007). As support from co-workers is considered highly valuable in situations of high role overload, it can explain the beneficial impact of this type of support on this type of recipient (manager) (Chiu et al., 2015). As such, a resource-building mechanism was observed in how these constructs relate, for managers in particular. Hence, help can provide resources in a manner that develops their confidence (PsyCap). As such, tangible aid from peers has a confidence-building (PsyCap developing) effect on managers.

Table 54: Hypothesis 5 – Summary of significant relationships

H	Model	Job role	Relationship			P	Estimates
Hypothesis 5							
5a	C	Manager	PsyCap (t2)	<---	ECS_Instr	0,084 *	3,258
5a	D	Manager	PsyCap (t2)	<---	ECS_Instr	0,035 **	4,721
5a	F	Manager	PsyCap (t2)	<---	ECS_Instr	0,085 *	2,168

**. p<0,05
*. p<0.1

6.3 Informational support from supervisors and co-workers (H3, H6)

Mixed observations – both resource-building and resource-depleting mechanisms – were indicated when investigating the relationship between enacted informational support from supervisors and PsyCap; as well as for the same from co-workers and its relationship to PsyCap.

6.3.1 Informational support from supervisors and PsyCap (H3)

Although no significant relationships were observed for non-managers, Model C indicated a statistically significant positive relationship between these constructs for managers (Model C: p=0,008, β=1,799). However, in Model A (p=0,060, β= -1,726), this relationship was significant in a negative direction. These are presented in Table 55.

The prominent difference between Model A and Model C is the inclusion of the satisfaction with enacted support constructs in the latter.

As previous literature attests, perceived support implies some satisfaction with support measure in its operationalisation (Barrera, 1986; Gottlieb & Bergen, 2010; I. G. Sarason et al., 1983, 1986), and seeing that perceived support is a driver of PsyCap (Pitichat et al., 2018), this strengthening could potentially be the underlying reason for this shift in the directionality of the relationship. In other words, considering satisfaction with support within the model, could have an effect on how PsyCap is interpreted.

Model C supports the idea that enacted informational support from supervisors is considered highly valuable and influential on the confidence measures of the beneficiary (Lee et al., 1991; Lindorff, 2005; Shah et al., 2018; Sommer & Kulkarni, 2012). Hence, a resource-building effect is observed.

However, the significant negative relationship observed in Model A cannot be ignored. Previous literature suggested that informational supervisor support can contribute to feelings of incompetence, disenfranchisement or defensiveness, which would negatively impact PsyCap (Beehr et al., 2010; Deelstra et al., 2003; Linderbaum & Levy, 2010; Marigold et al., 2014; Shumaker & Hill, 1991). In this instance, it indicates a resource-depleting effect.

However, as Model D onwards encapsulates more components of organisational life, it is likely that this embedded satisfaction with supervisor advice or guidance influences how informational support from supervisors is received, and, taken together, decreases in significance.

Thus, both a resource-building and a resource-depleting effect were observed in how these constructs relate for managers – as suggested by the factors considered for the development of Models A and C. As such, both Hypothesis 3a and Hypothesis 3b received partial support and merits future investigation to gain clarity.

Table 55: Hypothesis 3 – Summary of significant relationships

H	Model	Job role	Relationship			P	Estimates
Hypothesis 3							
3a	C	Manager	PsyCap (t2)	<---	ESS_Info	0,008 **	1,799
3b	A	Manager	PsyCap (t2)	<---	ESS_Info	0,060 *	-1,726

**. p<0,05
*. p<0.1

6.3.2 Informational support from co-workers and PsyCap (H6)

As it pertains to informational support from co-workers, significant relationships for both managers and non-managers were observed – notably in opposite directions.

Several models reported a statistically significant negative relationship between enacted informational support from co-workers and PsyCap for managers (Model A: p=0,080, β= -3,652; Model C: p=0,078, β= -3,441; Model D: p=0,026, β= -5,433; Model F: p=0,075, β= -3,010). However, for non-managers, this statistically significant relationship was positive (Model F: p=0,028, β=0,524). These findings are summarised in Table 56.

This suggests that advice, guidance, or feedback (informational support) from co-workers have a markedly different influence on confidence measures (like PsyCap) based on the management or non-management role the beneficiary performs.

Hence, for non-managers, Hypothesis 6a was supported by the data. Informational support is particularly beneficial for learning, development and its influence on decreasing uncertainty and unpredictability (Chiaburu & Harrison, 2008; Lindorff, 2005; Monnot & Beehr, 2014; Shah et al., 2018). The latter of which might be more important to non-managers than managers. Thus, informational support can trigger a resource-building mechanism for non-managers that can develop their PsyCap.

For managers, the data supported Hypothesis 6b. As has been argued, negative communication from co-workers has a more damaging effect than same from supervisors. The fact that guidance, advice or feedback is provided by a peer of similar stature can contribute to feelings of inadequacy and incompetence (Bolger & Amarel, 2007; Monnot & Beehr, 2014; T. W. H. Ng & Sorensen, 2008). Therefore, for managers, a resource-depleting mechanism explains the relationship between enacted informational support and PsyCap. In other words, guidance and advice can deplete the confidence of managers if such is provided by their peers.

Therefore, the data indicate that enacted informational support from co-workers is influenced by the job role the recipient finds themselves in, albeit management or non-management. Furthermore, this form of support has a resource-building effect for non-managers, but a resource-depleting effect for managers when it comes to how it relates to PsyCap.

Table 56: Hypothesis 6 – Summary of significant relationships

H	Model	Job role	Relationship			P	Estimates
Hypothesis 6							
6a	F	Non-Mngr	PsyCap (t2)	<---	ECS_Info	0,028 **	0,524
6b	A	Manager	PsyCap (t2)	<---	ECS_Info	0,080 *	-3,652
6b	C	Manager	PsyCap (t2)	<---	ECS_Info	0,078 *	-3,441
6b	D	Manager	PsyCap (t2)	<---	ECS_Info	0,026 **	-5,433
6b	F	Manager	PsyCap (t2)	<---	ECS_Info	0,075 *	-3,010

**. p<0,05
*. p<0.1

6.4 Satisfaction with enacted support (H7, H8)

Satisfaction with supervisor enacted support exhibited a positive relationship to PsyCap (resource-building), whereas satisfaction with co-worker enacted support indicated a negative relationship to PsyCap (resource-depleting) – for both managers and non-managers. This suggests that satisfaction with enacted support is susceptible to the provider of the support.

6.4.1 Satisfaction with supervisor enacted support and PsyCap (H7)

A statistically significant positive relationship between these constructs was observed for both managers (Model C: p=0,083, β=0,479) and non-managers (Model B: p=0,060, β=0,153; Model E: p=0,078, β=0,143), as summarised in Table 57. This supports previous findings that the positive effect associated with satisfaction measures has a developmental influence on PsyCap and its dimensions (Green et al., 2012; Rasheed et al., 2015; Siu et al., 2015). Therefore, satisfaction with supervisor enacted support has a resource-building relationship with PsyCap. Said differently, both managers' and non-managers' confidence measures (PsyCap) will develop if they are satisfied with the support that their supervisors provide.

Table 57: Hypothesis 7 – Summary of significant relationships

H	Model	Job role	Relationship			P	Estimates
Hypothesis 7							
7a	C	Manager	PsyCap (t2)	<---	ESS_Satisf	0,083 *	0,479
7a	B	Non-Mngr	PsyCap (t2)	<---	ESS_Satisf	0,060 *	0,153
7a	E	Non-Mngr	PsyCap (t2)	<---	ESS_Satisf	0,078 *	0,143

*. p<0.1

6.4.2 Satisfaction with co-worker enacted support and PsyCap (H8)

Several models indicated the statistically significant negative relationship between these constructs for managers (Model B: p=0,022, β= -0,272; Model C: p<0,001, β= -0,390; Model E: p=0,013, β= -0,290; Model F: p=0,004, β= -0,359) and non-managers (Model B: p=0,037, β= -0,169; Model C: p=0,013, β= -0,222; Model E: p=0,044, β= -0,164; Model F: p=0,046, β= -0,243). These are set out in Table 58.

This inverse relationship and resource-depleting mechanism might suggest that the support provided was not useful or helpful, leaving the recipient dissatisfied and with their support needs unmet (Uchino, 2009a). This could lead to a greater reliance on personal resources like PsyCap to solve problems, achieve objectives or bounce back from failure (P. S. Thompson & Bolino, 2018). Thus, both managers and non-managers will experience an increase in their PsyCap if they are unsatisfied with the enacted support provided by their peers. This can be due to the developmental, motivational, and agentic nature of PsyCap that is observed in, for example, overcoming adversity or problem-solving.

Table 58: Hypothesis 8 – Summary of significant relationships

H	Model	Job role	Relationship			P	Estimates
Hypothesis 8							
8b	B	Manager	PsyCap (t2)	<---	ECS_Satisf	0,022 **	-0,272
8b	C	Manager	PsyCap (t2)	<---	ECS_Satisf	***	-0,390

H	Model	Job role	Relationship			P	Estimates
8b	E	Manager	PsyCap (t2)	<---	ECS_Satisf	0,013 **	-0,290
8b	F	Manager	PsyCap (t2)	<---	ECS_Satisf	0,004 ***	-0,359
8b	B	Non-Mngr	PsyCap (t2)	<---	ECS_Satisf	0,037 **	-0,169
8b	C	Non-Mngr	PsyCap (t2)	<---	ECS_Satisf	0,013 **	-0,222
8b	E	Non-Mngr	PsyCap (t2)	<---	ECS_Satisf	0,044 **	-0,164
8b	F	Non-Mngr	PsyCap (t2)	<---	ECS_Satisf	0,046 **	-0,243

***. p<0,01
**. p<0,05
*. p<0.1

6.5 Perceived and enacted support (H9)

Both a positive and a negative relationship were observed when looking at these two constructs. As mentioned, this is the relationship between the perceptions of what support might be available if needed, and the actual support behaviours that were provided.

A significant positive relationship was observed when only taking the correlation between perceived and enacted support composite scores into account (r=0,683, p<0.01). This could be explained by the gain or loss spirals suggested by COR theory: Where great enacted support resources inform the belief of greater perceived support. This leads to a greater willingness to seek support when needed, and hence the cycle continues.

Whereas correlation tests how two variables relate, regression (and CB-SEM) takes into consideration the effect of a change in the independent variable (perceived support) on the dependent variable (enacted support), while also taking cognisance of other relationships, variances and errors in the data (Hair Jr. et al., 2019). As such, a negative regression coefficient is indicated when considering the relationship between perceived support and some of the types of enacted support in the CB-SEM.

As reported in Table 59, for managers, four statistically significant negative relationships were observed in Model D and Model F: between perceived support and enacted emotional support from a supervisor (p=0,020, β -0133), enacted informational support from a supervisor (p=0,068, β= -0,126), enacted informational support from a co-worker (Model D: p=0,031, β= -0,240; Model F: p=0,065, β= -0,229), and enacted instrumental support from a co-worker (Model D: p=0,091, β= -0,167). For non-managers, a statistically significant negative relationship was indicated between perceived support and enacted informational support from a co-worker (p=0,074, β= -0,143).

The study, therefore, offers some support that perceived and enacted support have a positive relationship, as suggested by previous authors (Birditt et al., 2012; Gleason et al., 2008; Lakey & Cassady, 1990). However, it also indicated conditions

under which this relationship is negative, which supports the idea that those with higher perceived support resources have less need for enacted support and might be more self-reliant (Birditt et al., 2012; Eagle et al., 2018; Feeney & Collins, 2015; Wethington & Kessler, 1986). Conversely, this also means that those with low perceived support resources would value and seek out enacted support more.

Framed within COR theory, those with abundant perceived support resources have substitutes in their resource reservoirs from which they can draw, without much threat or stress. As such, their need for other contextual resources like enacted support will not be as high. On the other hand, those whose contextual resource reservoirs are low, would have a greater need to seek out enacted support to build such reservoirs.

Hence, both Hypotheses 9a and 9b found some support in the data, and deserves further investigation.

Table 59: Hypothesis 9 – Summary of significant relationships

H	Model	Job role	Relationship			P	Estimates
Hypothesis 9							
9b	D	Manager	ECS_Info	<---	PS (Perceived Sup)	0,031 **	-0,240
9b	D	Manager	ECS_Instru	<---	PS (Perceived Sup)	0,091 *	-0,167
9b	F	Manager	ESS_Emo	<---	PS (Perceived Sup)	0,020 **	-0,133
9b	F	Manager	ECS_Info	<---	PS (Perceived Sup)	0,065 *	-0,229
9b	F	Manager	ESS_Info	<---	PS (Perceived Sup)	0,068 *	-0,126
9b	F	Non-Mngr	ECS_Info	<---	PS (Perceived Sup)	0,074 *	-0,143

**. p<0,05
*. p<0.1

6.6 Perceived support, enacted support and PsyCap

6.6.1 PsyCap and enacted support (H10a)

This study observed that PsyCap not only is influenced by enacted support, but that PsyCap influences the value attributed to enacted support as well. Through the CB-SEM study, it was suggested that there is a cyclical nature in the relationship between these two constructs.

When taking into account the cyclical relationship between positive affect and enacted support (Lakey et al., 2010), noting that positive affect is a driver of PsyCap (Siu et al., 2015), and that PsyCap is often used as an indicator of positivity (Avey, Avolio, et al., 2011; Avey, Hughes, et al., 2008; Friend et al., 2016) – the cyclical and iterative nature of the relationship between enacted support and PsyCap can be argued. This cyclical relationship was particularly evident for managers.

Statistically significant positive relationships were observed between PsyCap (t1) and enacted emotional support from a supervisor (Model D: p<0,001, β=1,002; Model F: p=0,074, β=0,993), enacted informational support from a supervisor (Model D: p<0,001,

β=1,027; Model F: p=0,075, β=1,054), enacted instrumental support from a supervisor (Model D: p<0,001, β=0,994; Model F: p=0,074, β=0,969), enacted emotional support from a co-worker (Model D: p<0,001, β=0,633; Model F: p=0,092, β=0,503), enacted informational support from a co-worker (Model D: p<0,001, β=0,688), enacted instrumental support from a co-worker (Model D: p<0,001, β=0,574; Model F: p=0,097, β=0,449), satisfaction with enacted support from a supervisor (Model B: p=0,058, β=0,268; Model E: p=0,015, β=0,265; Model F: p=0,075, β=0,917) and satisfaction with enacted support from a co-worker (Model B: p=0,014, β=0,286; Model E: p=0,005, β=0,315; Model F: p=0,089, β=0,449). These are set out in Table 60.

These observations provide evidence that those with higher PsyCap are more likely to receive enacted support and help from others (Asgari, 2016; Marigold et al., 2014; Scheier et al., 1986; P. S. Thompson & Bolino, 2018). Authors have even gone as far as saying that differences in accountability and *self-efficacy* predict how satisfied recipients would be with informational support or feedback (Keeping & Levy, 2000; Linderbaum & Levy, 2010). When considered with coachability – where the receptivity for feedback is associated with the seeking of feedback and the implementation thereof – improvements in performance, adaptability and promotability were observed (Weiss & Merrigan, 2021).

Additionally, it has been observed that more confident people (*self-efficacy*) attract more help and cooperation (Silva, 2017) but also mitigate a need for emotional social support (Klyver et al., 2018). Additionally, although *optimists* are more proactive in seeking social support, support providers find it difficult to offer support to pessimistic individuals in times of stress (Asgari, 2016; Marigold et al., 2014; Scheier et al., 1986). The receptivity to support can be influenced by the usefulness of the support provided, the accountability propensity of the beneficiary, their *self-efficacy* and their social awareness about how they are perceived (Rasheed et al., 2015). It should be noted that the influence of these underlying dimensions of PsyCap (efficacy and optimism mentioned) is salient in the receptivity to support.

Therefore, it could be argued that PsyCap informs some 'support readiness' component – where those with higher PsyCap are more receptive to be the beneficiaries of enacted support, and value or interpret it in a positive manner. This could be similar to feedback orientation, as it relates to a readiness to receive informational support (Linderbaum & Levy, 2010), developmental readiness as observed with training and instrumental support initiatives (Hannah & Avolio, 2010), or a growth mindset (Harms et al., 2018; F. Luthans et al., 2011; Meyers et al., 2015; Zingoni, 2017). Research around leader development PsyCap might also explain why this 'support readiness' was

observed in managers, rather than non-managers, as it might be informed by the leadership of the individual (Pitichat et al., 2018).

Explained through the lens of COR theory, the relationship between enacted support and PsyCap indicates a resource-building mechanism, but also, a gain spiral is evident. As such, improved enacted support resources, like advice or guidance, build the efficacy of the recipient, and hence grow their PsyCap. Those with greater PsyCap have more confidence and hope to approach their supervisors or co-workers for more guidance or advice when they need it, and – if provided – the gain spiral continues, and the mechanism is observed.

Table 60: Hypothesis 10a – Summary of significant relationships

H	Model	Job role	Relationship			P	Estimates
Hypothesis 10							
10a	B	Manager	ECS_Satisf	<---	PsyCap (t1)	0,014 **	0,286
10a	B	Manager	ESS_Satisf	<---	PsyCap (t1)	0,058 *	0,214
10a	D	Manager	ESS_Emo	<---	PsyCap (t1)	***	1,002
10a	D	Manager	ESS_Info	<---	PsyCap (t1)	***	1,027
10a	D	Manager	ESS_Instr	<---	PsyCap (t1)	***	0,994
10a	D	Manager	ECS_Instr	<---	PsyCap (t1)	***	0,574
10a	D	Manager	ECS_Info	<---	PsyCap (t1)	***	0,688
10a	D	Manager	ECS_Emos	<---	PsyCap (t1)	***	0,633
10a	E	Manager	ECS_Satisf	<---	PsyCap (t1)	0,005 ***	0,315
10a	E	Manager	ESS_Satisf	<---	PsyCap (t1)	0,015 **	0,265
10a	F	Manager	ESS_Emo	<---	PsyCap (t1)	0,074 *	0,993
10a	F	Manager	ESS_Instr	<---	PsyCap (t1)	0,074 *	0,969
10a	F	Manager	ESS_Info	<---	PsyCap (t1)	0,075 *	1,054
10a	F	Manager	ESS_Satisf	<---	PsyCap (t1)	0,075 *	0,917
10a	F	Manager	ECS_Emos	<---	PsyCap (t1)	0,092 *	0,503
10a	F	Manager	ECS_Instr	<---	PsyCap (t1)	0,097 *	0,449
10a	F	Manager	ECS_Satisf	<---	PsyCap (t1)	0,089 *	0,449
10b	D	Manager	PsyCap (t1)	<---	PS (Perceived Sup)	0,003 ***	0,347
10b	E	Manager	PsyCap (t1)	<---	PS (Perceived Sup)	***	0,699
10b	E	Non-Mngr	PsyCap (t1)	<---	PS (Perceived Sup)	***	0,726
10b	F	Manager	PsyCap (t1)	<---	PS (Perceived Sup)	0,090 *	0,473

***. p<0,01
**. p<0,05
*. p<0.1

6.6.2 PsyCap as a mediator (H10b)

In Section 5.9, the analysis indicated that PsyCap (t1) partially mediated the relationship between perceived support and enacted support. Said differently, the relationship between the types of support is partially explained by the recipient's PsyCap. In fact, PsyCap completely explains how enacted support and perceived support relate, apart from where direct effects are still observed between perceived support and enacted informational support (of both supervisors and co-workers).

Social support literature attests that the relationship between perceived support and enacted support is ambivalent. According to the *stress and coping perspective*, the correlation between these two constructs should be modest to high – which this study confirms ($r=0,683$, $p<0.01$) (Barrera, 1986; Eagle et al., 2018; Haber et al., 2007). On the other hand, the *social-cognitive perspective* argues that high positive perceived support would interpret enacted support positively as well. This implies that perceived support frames a schema by which enacted support is evaluated (Lakey & Cassady, 1990). However, this was not supported by the regression coefficients in the CB-SEM models, suggesting a negative relationship as opposed to the positive results indicated by the correlation analysis. These mixed observations from this study encouraged further investigation to gain an understanding of how these constructs relate.

Previous attempts to explain the relationship between enacted support and perceived support looked to possible third variables. For example, self-esteem was proposed as playing a potential role, with only partial support obtained for this notion (Gleason et al., 2008). When taking into account that self-esteem and self-efficacy are considered important antecedents to help-seeking (Bamberger, 2009), and that self-esteem is related to PsyCap albeit distinct (Howard, 2017), the study investigated how PsyCap relates to these constructs and potentially influences them.

The mediation analysis indicated that PsyCap partially mediates the relationship between perceived support and enacted support, thereby suggesting it as a third variable that explains how these social support constructs relate. Furthermore, it reconciles the opposing observations from the *stress-and-coping perspective* and *social-cognitive perspective* by going so far as to change the direction of the regression weights – from negative to positive – when taken together.

Because the social-cognitive perspective holds that the recall of recent support behaviours is not closely linked to the perceived availability of support, the influence of PsyCap would suggest that higher PsyCap individuals are more confident to seek support, are more prone to receive enacted support because of their optimistic nature, and are more receptive of support as this study also observed (Asgari, 2016; Marigold et al., 2014; Scheier et al., 1986). Additionally, perceived support is grounded in some measure of past enacted support received, as influenced by PsyCap. Taken together, through PsyCap's influence, their schema would align their perceived support and enacted support beliefs and experiences.

The counter of such would arguably hold as well. Lower perceived support individuals would have lower levels of PsyCap (Pitichat et al., 2018). These lower levels of PsyCap will influence the extent to which enacted support is provided (for example,

as pessimists tend to receive less enacted support), their confidence (efficacy) would be less to seek out support, and finding ways to obtain support (hope) should they need it. Therefore, they would experience less enacted support being provided to them. Or, notably, not even be aware that support is provided when it occurs (Bolger et al., 2000).

As such, PsyCap would strongly inform how enacted support is interpreted. For example, an individual with strong support perceptions and high levels of PsyCap that experiences low levels of enacted support would either 1) ascribe greater value to such when it is provided, or have a positive recall should it take place, due to the optimism and positive affect influence of PsyCap; or 2) have more use for support when it is provided, because of their enhanced confidence to apply these resources, or broaden their scope of possibilities due to the waypower dimension of hope – informing a resource gain spiral (Halbesleben & Wheeler, 2015; Hobfoll et al., 2018; Singh et al., 2018).

This observation could prompt further investigation into why these social support constructs influence outcomes differently (Nahum-Shani & Bamberger, 2011; Poortvliet et al., 2015; Singer, 2000), going so far as to even change the direction of influence from positive to negative as was observed by this study. It also proposes some explanation of why these constructs sometimes have a strong relationship, and relate weakly at other times (Barrera, 1986; Eagle et al., 2018; Gleason et al., 2008; Haber et al., 2007; Lakey et al., 2010). This could potentially also offer suggestions to clarify why ambiguous observations are made when it comes to enacted support as opposed to perceived support studies (Cassidy et al., 2014; Deelstra et al., 2003; Gottlieb & Bergen, 2010; Hämmig, 2017; Kaufmann & Beehr, 1986; Sloan, 2012).

6.7 Conclusion

In the discussion and interpretation of the results obtained from this study, notable insights have been gained that provide greater clarity for both the PsyCap and social support literatures:

- There is a significant difference between the PsyCap of managers and that of non-managers. Managers tend to have a higher level of PsyCap than their non-manager colleagues.
- No significant relationship between **enacted emotional support** and PsyCap was observed – regardless of support provider or beneficiary role. Therefore, based on the data from this study and how it was measured, being valued and cared for in the workplace (emotional social support) did not indicate a significant relationship to PsyCap from the data obtained.

- Mixed observations were found when it comes to **enacted informational support provided by a supervisor,** and how it relates to PsyCap. Both resource-building and resource-depleting mechanisms were observed and found support in the data.
- How **enacted informational support from co-workers** is interpreted with relation to PsyCap is influenced by the beneficiary's **job role** – albeit management or non-management. As such, a resource-building effect was observed in how ECS (Informational) related to the PsyCap of non-managers. A resource-depleting effect was observed if the beneficiary of support was a manager.

  This would suggest that managers ascribe a lower value to advice and guidance (informational support) from co-workers, and interpret such negatively in how it applies to workplace PsyCap. In other words, obtaining feedback, guidance or advice from peers has a negative effect on managers' problem-solving capacity (hope), their orientation to the future (optimism), their capacity to bounce back from failure (resilience) or confidence in what they do (efficacy). On the other hand, those managers who receive less advice, feedback, or guidance (informational support) would likely exhibit greater PsyCap as they are left to their own devices to deal with adversity. As such, this resource-depleting effect observed for managers indicates that informational support from co-workers or peers will have an adverse effect.

  The opposite mechanism was observed for non-managers. They value informational support from their peers and its positive relationship to PsyCap suggests that it would enhance their capacity to identify ways forward (hope), positive expectations about the future (optimism), deal with adversity (resilience) and build their confidence (efficacy). As such, informational support buffers the effects of stress or demands and potentially decreases its impact on PsyCap. Hence, a resource-building effect is observed for non-managers in how they process informational support from co-workers.
- It is worth noting that despite the negative relationship to informational support from co-workers, managers value **instrumental support** from their peers as it is positively related to PsyCap. In other words, whereas guidance and advice from co-workers might negatively impact core confidence (PsyCap), tangible help and aid could have a more developmental (resource-building) effect. In the converse situation, a lack of tangible help or instrumental support would decrease the manager's confidence (PsyCap).

Thus, a positive resource-building relationship was observed for managers between instrumental support from co-workers and PsyCap.

- The relationship between **satisfaction** with enacted support and PsyCap is greatly influenced by the status of the support provider, as markedly different relationships were observed for the support provided by supervisors and that provided by co-workers, irrespective of whether they perform a management role. Satisfaction with enacted supervisor support showed a positive resource-building relationship with PsyCap, whereas satisfaction with enacted co-worker support presented a negative resource-depleting relationship with PsyCap. In other words, if the beneficiary is satisfied with the support they receive from their supervisor, their PsyCap would be enhanced. However, dissatisfaction with the support received from their peers would also enhance the PsyCap of the beneficiary – arguably because they have to rely on their own resources instead of their peers' resources to deal with challenges.
- PsyCap determines the beneficiary's '**support readiness'** and thereby influences the extent to which they value enacted support. A significant positive relationship was observed between the levels of PsyCap, and the extent to which enacted support is received, valued, or positively interpreted. This suggests that those with higher PsyCap are more receptive to support, tend to receive more support, or interpret it more positively than those with lower PsyCap. Therefore, it is likely that PsyCap determines this capacity to receive enacted support and interpret it beneficially.
- The relationship between perceived support and enacted support has been shown to be **partially mediated** by PsyCap. In other words, this study provides some evidence to suggest that previous ambivalent findings around the extent to which perceived support and enacted support relate, could be partially explained by the mediating effect of PsyCap. Therefore, this study proposes – with supporting initial findings – that PsyCap could be considered as a potential 'third variable' between these two forms of social support.

In the final chapter, a review of the study will be presented, as well as the contributions, limitations, future research, and practical applications be discussed.

7 Conclusion and recommendations

7.1 Introduction

The study's objective was to determine how enacted support and PsyCap relate – and consider how perceived support fits into that dynamic, as the latter has been identified as an antecedent to PsyCap. As the literature suggests that different mechanisms are at play that could influence how enacted support relates to PsyCap (Lakey & Cohen, 2000; Thoits, 1986; Uchino et al., 1996; Wills & Cohen, 1985), competing hypotheses were developed to gain insight into the direction of influence between these constructs. Framed within the lens of COR theory, three mechanisms are proposed to explain this relationship: resource-building, resource-depleting, and gain/loss spirals. To this end, this study used Experience Sampling Methodology to gather data from 253 participants across South Africa over a two-week period.

Data analysis indicated that both PsyCap and enacted support are latent constructs measured by various sub-dimensions, which provided ambiguous results regarding the discriminant validity amongst these sub-components. As PsyCap's underlying factor structure changed across the period, it was viewed as a higher-order construct. However, the sub-dimensions of enacted support were considered separately to enable a nuanced inspection of its relationship to the dependent variable (PsyCap), as proposed by previous authors (Fenlason & Beehr, 1994; Kickul et al., 2001; Wills & Cohen, 1985).

The job role of the beneficiary of the support became salient in how any enacted support was interpreted. Therefore, multigroup CB-SEM analyses were consequently conducted to determine the constructs and relational impact for managers and non-managers. This provided some suggestions as to the support constellations that activate either a resource-building or resource-depleting mechanism when it comes to its impact on PsyCap.

Because CB-SEM is a theory-testing analysis technique that enables some control for multicollinearity and covariance complex relationships (Byrne, 2010; Hooper et al., 2008; Janadari et al., 2018), it was selected to test the various relationships amongst the constructs for the groups. After various iterations informed by theory, six CB-SEM models were developed to test the study's hypotheses. Several hypotheses found support in the analysis.

Additionally, mediation analysis investigated how perceived support, enacted support, and PsyCap relate, suggesting that PsyCap is a mediating variable that partially explains that relationship. This expands the decades-long conversation of explaining the inconclusive relationship sometimes observed in how these two support constructs relate

(Barrera, 1986; J. L. Cohen et al., 2005; Eagle et al., 2018; Haber et al., 2007; Kaul & Lakey, 2003; Lakey et al., 2010).

In the remainder of this chapter, the study's contributions are highlighted, implications for practitioners emphasised, and limitations and future research suggestions discussed.

7.2 Contributions

This study makes several contributions to move both the PsyCap and social support literatures, research methodology and practices forward. These are summarised as follows.

7.2.1 Theoretical and academic contribution and findings

Making use of the lens provided by COR theory, the theoretical contribution of this study was framed along four themes in the opening chapter, based upon the findings indicated by the competing hypotheses tested, the research approach that was undertaken and the context within which it took place.

7.2.1.1 The relationship between enacted support and PsyCap

Social support is a multidimensional construct. Previous studies have only taken into consideration some of its dimensions when investigated with PsyCap, in particular perceived support measures (Brunetto et al., 2017, 2021; F. Luthans, Norman, et al., 2008; Newman et al., 2018; Pitichat et al., 2018). However, not all social support is created equal (Zhan et al., 2021). Therefore, this study's main contribution lies in the observations drawn from investigating how enacted support relates to PsyCap. As enacted support behaviours are part of everyday work life and ingrained into the organisational function, this thesis investigated its likely effect on the desirable psychological resource, PsyCap, and its potential development.

To gain insight into this social support construct and its relation to PsyCap, several dimensions were taken into account. This study considered not only the nature of support (perceived or enacted), but also the support provider (supervisor or co-worker), the type of support (emotional, instrumental, or informational), as well as the job role of the support beneficiary (managers or non-managers). By considering these, insights could be gained on how social support and PsyCap relate. Hence, the following was observed:

7.2.1.1.1 The type of support

The study found that managers interpreted enacted support from their co-workers differently, dependent on whether such was informational (advice, guidance) or instrumental (tangible assistance) in type. As such, a statistically significant positive relationship suggests that managers experience a resource-building effect with instrumental support from peers — which enhances their PsyCap. Juxtaposed, informational support from the co-workers of managers indicates a resource-depleting mechanism when it comes to PsyCap. In other words, where tangible help or aid from peers can build the core confidence of managers, receiving advice and feedback from their co-workers can deplete it.

When it comes to enacted informational support from supervisors, both competing hypotheses found support in the data. As in, both the resource-building and resource-depleting mechanisms were observed in the management cohort. This means that guidance provided by a supervisor can have both an enhancing or depleting effect on PsyCap under conditions not directly examined in this study. This phenomenon was not observed in later iterations of the model, as more constructs were added. This mixed support for both hypotheses could be influenced by conditions highlighted earlier that influence the extent to which supervisor informational support is valued and interpreted (Section 3.4.3). These included the recipient's beliefs around the possibility of change, their openness to feedback or their capacity to take action (Braddy et al., 2013). Furthermore, informational support can trigger an affective response instead of a cognitive one, influencing how such support is interpreted (Linderbaum & Levy, 2010; Semmer et al., 2008). Hence, both mechanisms are identified as being at play, but future research would be needed to investigate further the conditions or constellations in which each mechanism's effect could be identified.

Finally, as this study's data did not offer any insights on any of the competing hypotheses investigating enacted emotional support with PsyCap, it is encouraged for future research and study. Nevertheless, significant relationships between informational support from co-workers and PsyCap were observed in this study. These are discussed next.

7.2.1.1.2 The job role of the support beneficiary

A notable finding of this study is that the PsyCap of managers tends to be significantly higher than that of non-managers. This also informed their respective receptivity to some types of support, most notably how they responded differently to the provision of enacted informational support from co-workers.

That is, enacted informational support from co-workers indicated a significant relationship to PsyCap. However, whereas non-managers indicated a positive (resource-building) relationship with PsyCap when receiving advice from peers, managers reflected a negative (resource-depleting) relationship. This suggests that how guidance, advice, feedback and the like affect the support recipient, are informed by the job role in general, and the management role, in particular, that they hold.

This could offer insights into why previous studies have observed ambivalent findings regarding informational support measures such as advice, guidance, or coaching (Bolger & Amarel, 2007; Chiaburu & Harrison, 2008; F. Luthans et al., 2011; Monnot & Beehr, 2014), as the influence of study participants' job or management role was not considered.

7.2.1.1.3 The source of support

Satisfaction with enacted support's relationship to PsyCap was strongly informed by the support source it was anchored in. As such, whereas satisfaction with supervisor enacted support related positively to PsyCap (resource-building), satisfaction with co-worker enacted support had an inverse relationship (resource-depleting).

In other words, how satisfaction with enacted support is interpreted depends on the provider of said support. As argued (Section 6.4), being satisfied with the enacted support provided by a supervisor has a positive influence on PsyCap, which provides further support that the positional status and power differential between the support recipient and support provider affect how support behaviours are interpreted (Bamberger, 2009; Mathieu et al., 2019; Monnot & Beehr, 2014).

However, *dissatisfaction* with enacted support from co-workers has a positive influence on PsyCap. Or, said differently, satisfaction with the enacted support of co-workers has a negative effect on PsyCap. Despite support resources from co-workers being more accessible and broader in scope than leader-based resources, the similarity in status could be perceived as ego-threatening (Chiaburu & Harrison, 2008). Resultantly, not being satisfied with peer-provided enacted support resources likely means that the employee needs to tap into their personal resource reserves to get things done, leading to improved PsyCap. Conversely, being satisfied with enacted support resources provided by co-workers can deplete PsyCap as the employee can rely on peers to problem-solve, navigate challenges or be solution-oriented – instead of themselves.

7.2.1.1.4 The cyclical nature of the relationship

A notable observation from the study relates to the cyclical and iterative nature of the relationship between enacted support and PsyCap. Not only was the influence of enacted support on PsyCap observed, but also PsyCap's influence on enacted support was noted. By measuring PsyCap at two different times, insights could be gained around changes and influences across the study. As such, it was noted that the higher the level of PsyCap, the more enacted support was received and *vice versa*. It is likely that the higher levels of positivity and optimism associated with PsyCap also meant that more enacted support was provided to them, and the lower PsyCap resulted in less support (Section 6.6).

However, this cyclical nature suggests that either a gain spiral or a loss spiral can develop, a mechanism explained by COR theory. In fact, this cyclical, iterative or spiralling relationship between different types of resources is foundational to COR theory (Hobfoll, 1989, 2002, 2014; Hobfoll et al., 2018).

This means that higher PsyCap leads to more enacted support provided. This leads to improved PsyCap, and those will receive more enacted support, and so on. However, the inverse will be true as well. Individuals whose resources are outstretched or exhausted can become defensive, aggressive and irrational in an attempt to preserve themselves (Hobfoll et al., 2018). This can initiate a loss spiral, as such behaviour is detrimental to building social relations. This could result in poorer performance, which could lead to decreasing their confidence and PsyCap. This lower PsyCap would eventually lead to the person becoming discouraged from pursuing energising endeavours like social interaction, which would further deplete access to social support. In other words, helping and supporting behaviours can be beneficial in certain circumstances, but exponentially more so because of this cyclical and spiralling relationship with PsyCap.

Furthermore, looking at the *social cognitive perspective* of social support that argues that perceived support informs the schema by which enacted support is interpreted (Lakey & Cassady, 1990; Uchino, 2009a), it could be argued that PsyCap informs that schema.

Therefore, it seems as if PsyCap determines some measure of 'support readiness' of the beneficiary, as it indicates the extent to which enacted support might be valued or positively interpreted. Hence, PsyCap improves the employee's receptivity to actual enacted support behaviours.

7.2.1.2 The relationship between enacted support and PsyCap whilst taking into consideration perceived support.

Making sense of why mixed results are frequently observed in the relationship between enacted support and perceived support (Birditt et al., 2012; Y. Chen & Feeley, 2012; Cutrona & Russell, 1990; Kaul & Lakey, 2003; Lakey et al., 2010; Maisel & Gable, 2009; Uchino, 2009a), could be explained by the partially mediating effect of PsyCap. PsyCap (t1) changed the direction of regression weights, reflecting the relationship between perceived support and enacted support. This could suggest that PsyCap might be the long sought-after 'third variable' (Bolger et al., 2000; Gleason et al., 2008) that could explain the complicated relationship between perceived and enacted support and bring together the *stress-and-coping* perspective and *social cognitive* perspective of social support.

Said differently, enacted support is influenced by both the social support perceptions that the employee holds, as well as their level of PsyCap. Because of the partial mediation observed, although perceived support influences informational enacted support, PsyCap has shown significant relationships to all other dimensions of enacted support. Also, PsyCap informs the lens by which perceived support is interpreted to influence how enacted support is valued.

Additionally, as perceived support is likely grounded in some level or past experienced enacted support (Hobfoll, 2009), along with the influence that PsyCap has on enacted support as shown by this study, there is a potential spiralling and cyclical relationship between these three constructs, indicative of the gain or loss spirals proposed in COR theory.

7.2.1.3 The social mechanisms that develop PsyCap

By using Experience Sampling Methodology for this between-person longitudinal study, data were gathered from the real-life setting of the organisation, whereby participants were asked to reflect upon their daily experiences. As PsyCap is argued to be state-like and relatively stable for a period of six months (F. Luthans & Youssef, 2007; Wright, 1997), as well as deteriorate if left unchecked (Dawkins et al., 2013; Peterson et al., 2011), the short time interval between measurements (about two weeks), indicated: a) managers' PsyCap was slightly but statistically significantly higher than that of non-managers (t1: p=0,035; and t2: p=0,031), and b) a slight mean improvement for both groups across the period (managers, t1: $\bar{x}$=4,917, t2: $\bar{x}$=4,994; non-managers, t1: $\bar{x}$=4,768, t2: $\bar{x}$-4,805). Along with the preceding insights, this study continues the conversation by previous authors to explain the social mechanisms that develop PsyCap

(F. Luthans & Youssef-Morgan, 2017; Nielsen et al., 2017), and to investigate social support in a more nuanced manner in the workplace (Bolino & Grant, 2016; Zhan et al., 2021).

As mentioned, the interplay between social support in the workplace context and PsyCap is cyclical in nature. Therefore, investigating these constructs within the organisational setting offered valuable insights towards an improved understanding of how they relate.

7.2.1.4 The context of the study

This study was conducted in a context (South Africa) described as highly complex and challenging, and deemed the most pessimistic in the world (Du Plessis & Barkhuizen, 2012; Ipsos & Gates Foundation, 2017; F. Luthans, Van Wyk, et al., 2004). This already challenging environment was made more complex due to the stress associated with the COVID-19 pandemic that ravaged the economy and work environment in the country since lockdowns were initiated in March 2020 (South African Government, 2020b, 2020a; *Disaster Management Act, 2002 (Act no 57 of 2002) - Classification of a national disaster*, 2020). Some portions of industry were still closed or restricted when the study was conducted (January to March 2021), and many participants were operating in what was the inception of the new normal, whether it meant working from home, or limited office hours and interaction (South African Government, 2021). As such, the context of the study offers insights and observations around how social support is processed during highly disruptive and challenging times and how it relates to employees' PsyCap.

7.2.2 Summary of theoretical observations

The key findings of the study are summarised below, and framed within the COR mechanisms that are offered as an explanation of their relationships.

7.2.2.1 Resource-building mechanism

- For managers, enacted instrumental support from supervisors builds PsyCap
- For managers, enacted informational support from supervisors builds PsyCap
- For non-managers, enacted informational support from co-workers builds PsyCap
- For managers and non-managers, satisfaction with enacted supervisor support builds PsyCap

7.2.2.2 Resource-depleting mechanism

- For managers, enacted informational support from supervisors depletes PsyCap
- For managers, enacted informational support from co-workers depletes PsyCap
- For managers and non-managers, satisfaction with enacted co-worker support depletes PsyCap

7.2.2.3 Gain/Loss spirals and other COR observations

- Although enacted support and perceived support can exhibit a positive relationship, they can exhibit a negative relationship as well. When considered through the lens of a resource reservoir, excess resources or lack thereof might inform the need for, or response to the other.
- A positive gain spiral influences the relationship between how enacted support and PsyCap relate; where a cyclical relationship continually develops resources over time.
- PsyCap, as a mediating variable, offers a partial explanation for how perceived and enacted support related, and is likely instrumental in triggering whether a loss or gain spiral mechanism is activated between these two forms of support.

7.2.2.4 The influence of job role

i. Managers' PsyCap tends to be higher than non-managers' PsyCap.

7.2.3 Methodological contribution

The first methodological contribution of this study relates to the novel longitudinal manner (experience sampling methodology, ESM) in which the relationship between the constructs was investigated. Because enacted support (social support behaviours) was the focus of the study, and not perceived support, the data needed to be gathered as close as possible to its occurrence. Hence, a between-person interval-based ESM was decided upon. ESM gathers data in-situ over short periods and is qualitatively different from cross-sectional data (Alliger & Williams, 1993; McCormick et al., 2020). Longitudinal studies investigating PsyCap are scarce, and encouragement by authors to pursue such is prevalent (F. Luthans & Frey, 2018; F. Luthans & Youssef-Morgan, 2017; Parker et al., 2013). Because the study was between-person in nature, an aggregated score for enacted support was calculated at the person-level and analysed by means of a multigroup CB-SEM – as proposed for between-person studies (Blanke et al., 2020; Cortina & Landis, 2013; Daniels et al., 2011, 2013; Droit-Volet & Wearden, 2016; Jones

et al., 2003; Koopman et al., 2014; Lattimore et al., 2010; Romanzini et al., 2019; Turnbull et al., 2020; Udachina et al., 2009).

A further methodological contribution relates to how the study operationalised enacted support measures. Based upon the recommendations of other authors (Asgari, 2016; Mathieu et al., 2019), existing perceived support measures were reframed to be past-directed and behavioural in nature, and thereby providing insights around enacted support. This was affirmed in exploratory factor analysis (EFA). Five distinct factors were observed (enacted supervisor support, enacted co-worker support, perceived supervisor support, perceived co-worker support and perceived organisational support) (Section 5.5.1.1).

Operationalising enacted social support is not without its challenges, as many studies have struggled to differentiate between the influences of the various types of support. For example, although informational support might be provided, the beneficiary might experience it as both advice (instrumental support) and emotional social support, as it might indicate that they are valued and seen (Gottlieb & Bergen, 2010; Linderbaum & Levy, 2010; Semmer et al., 2008). As such, a Likert scale measuring the response to the enacted support items offered a range of agreement from 'Strongly disagree' to 'Strongly agree'. This enabled participants to provide more comprehensive responses, by weighting the value of the type of support received.

Measurement of enacted support constructs is predominantly focussed on quantity-based or inventory-based measures (Barrera et al., 1981; Dunkel-Schetter et al., 1987; Nurullah, 2012; Smith et al., 1983; Trobst, 2000; Vaux et al., 1987) as opposed to investigating what the quality of such provided support is. This study aimed to lean towards investigating both the quantity and quality of social support. First, a response option was offered that required the respondent to indicate whether support behaviours of that type were observed for the period ('the past day'). Secondly, the recipient could rate the extent to which that particular type of support was prevalent. Finally, their satisfaction with said type of support receipt was requested.

It has been suggested that satisfaction with enacted support is a better indicator of enacted support than measuring the enacted support itself (Krause & Hayward, 2014; Melrose et al., 2015). The findings of this study did not fully support this argument. Factor analysis did suggest some overlap between the constructs, as nested in the source of support. For example, the satisfaction with enacted supervisor support items, loaded on the same factor as the other enacted supervisor support items that measured enacted instrumental, informational, and emotional support (Section 5.5.1.1). However, the granular insights offered by CB-SEM analysis, which looked at the types of support

nested within the provider (that is, instrumental, informational, and emotional support as independent sub-constructs), showed nuanced differences in its influence on PsyCap. For example, consider these observations for enacted support from co-workers (ECS). Managers in Model C (Section 5.8.4) showed a positive relationship between ECS (Instrumental) and PsyCap (t2), and a negative relationship between ECS (Informational) and PsyCap (t2); whereas ECS (Satisfaction) only indicated a negative relationship to PsyCap (t2). Alternatively, as can be seen in Model F (Section 5.8.7), non-managers indicated a positive relationship between ECS (Informational) and PsyCap (t2) but a negative relationship between ECS (Satisfaction) and PsyCap (t2).

This suggests that valuable insights could be missed if only satisfaction with enacted support measures is used in lieu of more granular enacted support measures.

7.2.4 Practical contribution and recommendations for practitioners

This study offers two groups of insights for managers and organisations to take into consideration. The first offers suggestions as to the influence of enacted support on PsyCap, and the second around the influence of PsyCap on enacted support.

7.2.4.1 The influence of enacted support on PsyCap

Because not all social support is created equal, it needs to be tailored to be effective (Marigold et al., 2014). This study offers suggestions and evidence to adopt enacted support practices that could influence the development of PsyCap, or minimise its deterioration.

Firstly, as managers' PsyCap are significantly higher than their non-managerial counterparts, any programme for the development of future managers would benefit from PsyCap development interventions, strategies, or enacted support systems. By developing the PsyCap of employees, they grow a differentiating capacity from their non-managerial peers.

This study found that how enacted support is valued or interpreted, differs whether the support recipient is a manager or a non-manager. Therefore, helping behaviours within the workplace could be framed with such awareness in mind. For example, managers seem more receptive to instrumental support than informational support if their peers provide such. As such, improved co-worker instrumental support would likely enhance their PsyCap, whereas co-worker informational support would have a more negative influence. Therefore, employees could be encouraged to rather offer tangible assistance, instead of advice to managerial colleagues as such is more likely to benefit PsyCap development.

However, non-managers showed a positive relationship for PsyCap when it comes to their receipt of co-worker informational support. Therefore, an improved awareness of how peers provide informational support to their colleagues could be helpful if the beneficiary's managerial role can be considered.

Furthermore, enacted informational support seems to be the most influential of the types that supervisors can provide. Even though a resource-depleting effect was observed [Model A], taken with satisfaction with the enacted support provided, a resource-building effect [Model C] was observed. The latter, being the more comprehensive model by incorporating more boundary conditions, is, therefore, more indicative of the effect of enacted informational support from supervisors. Also, satisfaction with enacted support from a supervisor has a positive influence on the recipient's PsyCap.

On the other hand, satisfaction from co-workers is inversely related to PsyCap. This latter observation might indicate a decrease in initiative and problem-solving because the beneficiary's satisfaction with co-worker enacted support negatively relates to PsyCap. On the other hand, this could indicate that facilitating some measure of dissatisfaction with co-worker enacted support might benefit the employee (whether such is a manager or non-manager) to develop the ability to come up with their own solutions, problem-solving or initiatives for development and performance (in other words, improved PsyCap).

In summary, for managers, practitioners could recommend that instrumental enacted support should be supplied by supervisors, as informational enacted support from supervisors can have an unpredictable effect on PsyCap development. It is also important to educate managerial teams as to the way in which they provide support to each other and their peers. Most notably, enacted informational support from a manager's peers will deteriorate their PsyCap resources. Therefore, it seems as if managers should rather offer tangible help on projects, than advice on how to achieve objectives.

For non-managers, on the other hand, enacted informational support from co-workers will have a developmental effect. Non-managers value the guidance and advice (instrumental support) received from their peers in a different manner than their managerial counterparts, as it builds their confidence measures. This could inform the way in which collaboration on projects of teams consisting of non-managers be framed to be of the utmost benefit to the employee, and, thereby, the organisation. For example, a non-managerial team would respond better to collaboration that involves informational support, than a managerial team providing the same.

As it pertains to satisfaction, both groups (managers and non-managers) respond similarly, in that satisfaction with enacted supervisor support builds PsyCap, and satisfaction with enacted co-worker support depletes it. This does suggest that support satisfaction is not necessarily the gold standard to pursue for all measures of enacted support, especially as it pertains to PsyCap. Practitioners would do well to identify a different measure to evaluate such, as there seems to be some benefit in not scoring highly on satisfaction with the support provided by co-workers, and that dissatisfaction could trigger a resource-depleting mechanism with PsyCap.

The aforementioned offers ideas on how enacted support can have an impact on PsyCap. The inverse is discussed next.

7.2.4.2 The influence of PsyCap on enacted support

This study observed that developing PsyCap can affect how enacted support is interpreted. In other words, the positive relationship observed between PsyCap and the various types of enacted support measures suggests that those with higher PsyCap, would also value enacted support more. Alternatively, those with lower PsyCap would interpret enacted support negatively. Said differently, the employee's level of PsyCap determines the extent to which they are open to receiving and observing enacted support.

Apart from enacted support, several other measures and interventions exist to develop the PsyCap of an employee. These include supervision (authentic leadership, ethical leadership, empowering leadership), job characteristics (task complexity) (Avey, 2014), positive affect (Avey, Wernsing, et al., 2008; Siu et al., 2015; Wijewardena et al., 2017), positive team dynamics (Dawkins et al., 2015), employee engagement (De Waal & Pienaar, 2013), leadership (Howard, 2017; Rego et al., 2012), improved quality-of-life (Firestone & Anngela-Cole, 2016), need satisfaction (Verleysen et al., 2015) and training interventions (Dello Russo & Stoykova, 2015; B. C. Luthans et al., 2014).

Therefore, by deploying any of these measures and thereby improving the PsyCap of employees, additional benefits – besides being more positive, optimistic, hopeful, and confident organisation members – they would also be more receptive to enacted support from their colleagues and supervisors. As such, this could influence receptivity to feedback, guidance, performance appraisals, coaching and other developmental initiatives that these sources of support can provide.

The cyclical nature of how enacted support and PsyCap relates would continue a positive gain spiral to the organisation's benefit. As such, managers and practitioners are encouraged to make use of initiatives to develop the PsyCap of their employees. Apart from the several other benefits associated with such – this study provides evidence

that improved PsyCap would not only 1) improve the receptivity to and value of enacted support received, but also 2) enhance or correct how perceived support around the organisation and its agents and received enacted support behaviours align.

7.3 Limitations

Throughout this research project, decisions were made to keep the reliability, validity, and ethical values in the foreground. However, some choices did imbue limitations on the study. Some limitations have been discussed previously regarding theory (Section 2.6) and methodology (Section 4.7). Further limitations are set out next:

i. Firstly, because two vast bodies of knowledge relating to multidimensional resource constructs (social support and Positive Organisational Behaviour) form the foundation of this study – and interpreted through a lens of COR theory – some decisions were made to **limit the scope**. These are discussed in Section 2.6. It meant that not all dimensions of social support and PsyCap could be investigated extensively. For example, with regards to social support, the influence of support needs, characteristics of the support event, support preferences of the beneficiary, the support-seeking characteristics or all workplace sources of support were taken into account. Similarly, only PsyCap as a latent construct was investigated and not the impact on each of its sub-dimensions. Hence, not all elements or features that affect the support situation could be disentangled to isolate the influence of enacted support behaviours.

ii. The **sampling technique and sample size** placed limitations on the study. Although different sampling techniques (snowball sampling and purposive sampling) were undertaken, they remain non-probability sampling methods, limiting the generalisability of the findings. Additionally, as multigroup analysis became necessary, the smaller sample sizes of the groups became salient. Alternative statistical methods were used to accommodate these restrictions (like factorial analysis of variance and moderator analysis). Due to the complexity of a SEM model, power analysis can usually not be conducted to verify that the sample size was adequate, as there were several dependent variables at different stages presented in the model, which complicates such analysis. Nonetheless, the study still exceeded the requirements of the lower bounds on sample size for CB-SEM (Westland, 2010).

iii. When considering **control variables** of the study – although the 'industry' in which the participant is working could have an influence on how the study constructs relate (see Section 4.4.1.4), inconsistent responses meant that no reliable data were obtained, which necessitated its exclusion from analysis. Respondent error was observed in more than 20% of responses where participants from the same organisation indicated different industries representing their organisation.

Furthermore, some responses selected 'public sector', whereas the 'organisation name' did not agree with this selection. As the 'organisation name' was not an obligatory response question – to offer anonymity to participants should they choose – the data could not be verified for all responses. As such, industry was not considered when developing the models. If taken into account, however, it could offer some explanation for hypotheses that did not find support in the data and hence merits consideration in future research. For example, the need for emotional support is influential in service-oriented organisations due to the social needs associated with many roles in that industry (Nesher Shoshan & Venz, 2021; Tews et al., 2020; van Erp et al., 2018). Notwithstanding, it is recommended that greater clarity be provided to participants as to what the response categories represent, and agreement from the organisation – or amongst participants – be obtained to ascertain which 'industry'-category best describes their organisation.

iv. Although several strategies were adopted to decrease the likelihood of **common-method bias** in the study, the risk for such remains. Attempts to address such include: 1) Assuring confidentiality and anonymity to response participants, apart from their unique email address serving as identifier variable; 2) Measuring the predictor and criterion variables at different times, in other words, enacted support and PsyCap were not part of the same survey or even the same days emphasising the temporal difference that counters common-method bias; 3) Items within the surveys were randomised to not be in the same sequence for each daily repeated survey; 4) By mean-centring daily variables controls for between-person issues such as response tendencies; 5) A test conducted between participants with lower signal response rates (five or less) were compared to those with higher signal response rates (six or more) and no significant difference was observed; and 6) No single or dominant factor emerged during factor analysis to explain the covariance between the variables. For the most part, factors aligned across the dimensions expected (apart from PsyCap, which is discussed next). The aforementioned are all strategies to decrease the potential for common-method bias to be an issue in research studies where the same instrument measures several constructs (Koopman et al., 2014; P.M. Podsakoff et al., 2003; Philip M. Podsakoff et al., 2012). Because participants no longer mentally aggregate across extended or indeterminate periods of time, ESM-style repeated measurements can help eliminate biases related to common-source bias (N. P. Podsakoff et al., 2019).

v. Issues with some of the **Psychological Capital Questionaire-12** (PCQ-12) items surfaced in the data as no clear four-factor structure emerged as was expected from the literature (i.e., hope, efficacy, resilience, and optimism). Similar issues with this

copyrighted measurement instrument have been raised (Djourova et al., 2019; Grobler & Joubert, 2018; Rus et al., 2012; Santana-Cárdenas et al., 2018). As such, an 11-item combination for Time 1 and a 10-item combination for Time 2 was used in the analysis. This placed some restrictions on the interpretation of data investigating the difference in PsyCap scores over the period. However, this could also suggest that one of the underlying resources is the dependent variable of the other three. However, as PsyCap is considered to be a resource caravan, or latent construct that is more than the sum of its parts, there is confidence that the observations were reflective of this construct (Dawkins et al., 2013, 2015; Hobfoll, 2011, 2014).

vi. The **measurement of enacted support and satisfaction** with enacted support was done in a novel and contemporary manner, and indicated different factors than their perceived support counterparts. However, mixed observations around the discriminant validity of these constructs resulted in multicollinearity in the resultant models. This resulted in standardised regression weights greater than one, and only enabled the reporting of the direction of influence, not the size thereof (Deegan, 1978). As such, the decision was made to continue to observe the dimensions of each construct (e.g., instrumental, emotional and instrumental enacted support), in line with the suggestions of prior authors (e.g., Fenlason & Beehr, 1994; Kickul et al., 2001; Wills & Cohen, 1985). This was done in an attempt to gain insights into their respective effects, despite adequate discriminant validity between these dimensions of the constructs not being achieved. This can also be indicative of the latent or resource caravan nature that undergirds these constructs.

vii. The **percentage of missing data** in the study informed the decision to conduct **analysis by means of CB-SEM**. Within-person and cross-level ESM studies are prevalent, and they are analysed by means of multilevel modelling techniques. However, although some form of multilevel modelling was investigated, the percentage of missing data for the 20 enacted support variables measured daily was considered too high for replacement by multiple imputation methods as required. Hence, the comparison of the lower daily signal response rates (five or less) to the higher signal response rates (six or more), did not indicate a significant difference between any of the constructs of the study. Thus, it was decided to aggregate the data per item across the period, and use this mean score per participant in a CB-SEM. As such, for between-person ESM studies mean-centring and aggregating to the person-level (Level 2) is an accepted practice (Cortina & Landis, 2013). Hence, if the data adhered to the necessary properties and assumptions that would have

enabled within-person analysis and multilevel modelling, such would have been pursued (see Section 5.3).

viii. Related to the aforementioned, the distribution of daily ESM responses was not taken into consideration, apart from ascertaining the number of responses per participant. The decision was made to aggregate and mean centre the responses to prepare them for CB-SEM analysis, and it was investigated whether there was a mean difference between those who provided fewer than six, and those who provided more than six responses [Section 5.3]. Future researchers might consider investigating whether there are differences between early responses and late responses. This study found that the number of responses was weighted towards the later part of the study, presumably due to participation reminders via in-app notifications and emails when little or no responses were received for a period of more than two to three days. This is illustrated in Figure 19.

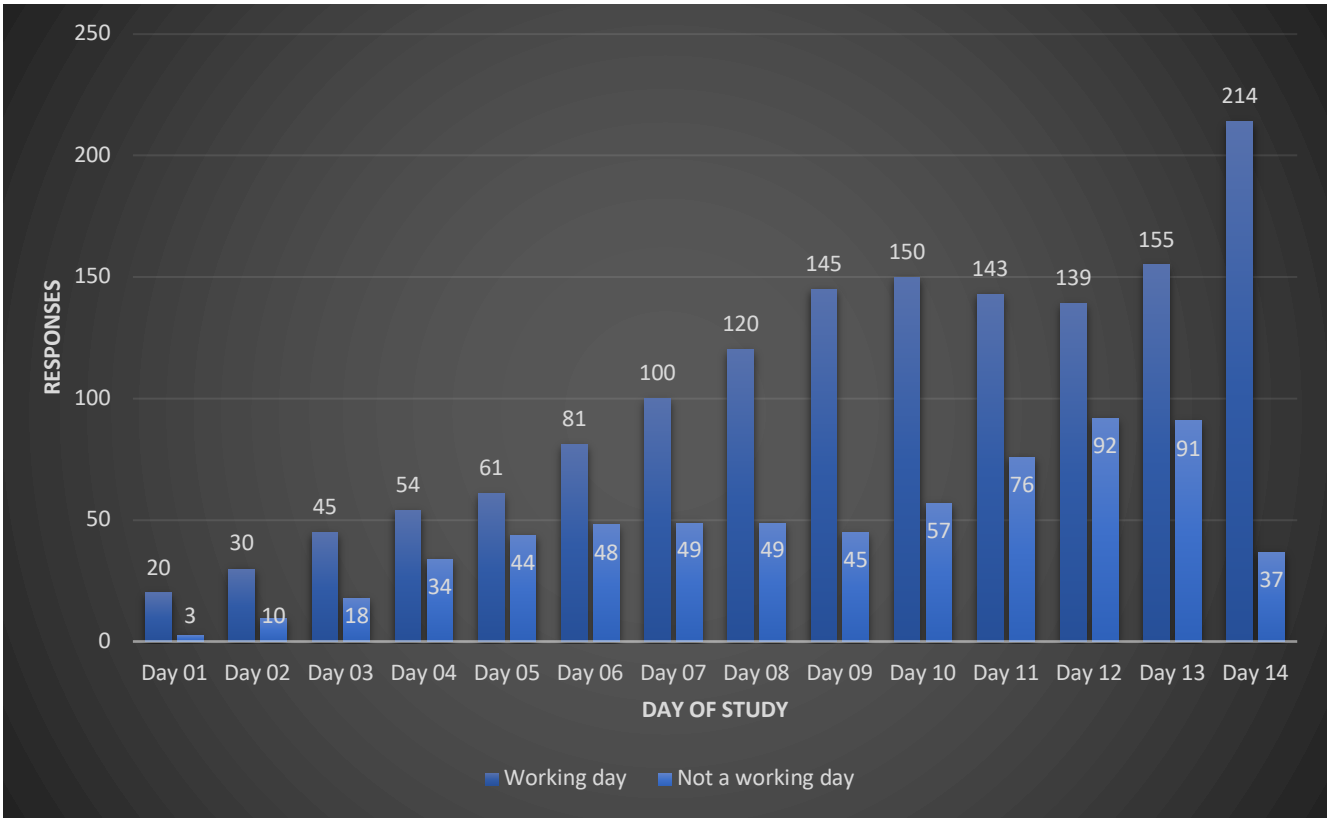

Figure 19: Number of responses received by day of study

ix. Although the duration of the study (two weeks) was tested during the pilot and deemed adequate [Section 4.2.4], it is likely that extending the period under investigation and using a different longitudinal design might yield results that show a stronger resource-building or resource-depleting effect.

x. For scholars adopting the theoretical lens of Job Demands-Resources (Bakker & Demerouti, 2007; Demerouti et al., 2001), it might be valuable to not only interpret perceived support as a singular construct, but to operationalise such in terms of perceived demands and take cognisance of its emotional, informational and instrumental dimensions as well.

7.4 Future research

The current study assessed the relationship between the nature, source, and type of social support, and PsyCap. Based upon the findings of this study, several questions remain unanswered or opened up avenues for future study and are categorised by theoretical avenues for research and methodological avenues for research.

7.4.1 Theoretical avenues for future research

Three avenues for future research are highlighted to advance theory:

Firstly, the competing hypotheses investigating the influence of enacted support on PsyCap found no (H1, H2, H4) to mixed (H3) support in the data, for both manager and non-manager groups. As such, ESS (Emotional), ESS (instrumental) and ECS (Emotional) indicated neither a resource-building nor a resource-depleting mechanism in its relationship to PsyCap, albeit previous literature suggests such should exist (Beehr et al., 2010; Bolger et al., 2000; S. Cohen & McKay, 1984; J. Fisher et al., 1982; French et al., 2018; Marigold et al., 2014; Shoss et al., 2013; Siu et al., 2015). This could be because the type of enacted support behaviours might not have been adequately observed during the study period; or, in situations where both mechanisms were at play, the effect cancelled each other out.

- As it pertains to enacted emotional support (H1, H4) (discussed in Section 6.1.2.1), it was highlighted that although emotional support can aid in feelings of being valued and cared for, it can also be experienced as humiliating and patronising (Eisenberger et al., 2002; Shoss et al., 2013). However, receiving enacted emotional support influences how support beneficiaries are perceived by both supervisors and co-workers, for example, as being needy, weak or sensitive (Bolino et al., 2008; P. S. Thompson & Bolino, 2018). The lack of support for either of these competing hypotheses could be because enacted emotional support was not considered as valuable as non-work support providers of such (Shah et al., 2018; Smollan, 2017). As self-efficacy mitigates the need for enacted emotional support (Klyver et al., 2018), higher

PsyCap would, by implication, be associated with enacted emotional support being less valuable. Additionally, seeking emotional social support carries more social risk than its informational or instrumental counterparts, due to the vulnerability associated with expressing these needs (Kammrath et al., 2019). However, each potential explanation relies on additional factors or variables that were not assessed in the study and would need a more detailed investigation.

- When it comes to enacted instrumental support provided by supervisors (H2), it was expected that although supervisors are better providers of enacted instrumental support than co-workers (Mathieu et al., 2019), and this type of support has been shown to influence PsyCap (Harber et al., 2005; Klyver et al., 2018), the effect of eliciting feelings of incompetence and inhibiting initiative-taking cannot be discounted (Beehr et al., 2010; Burnett et al., 2015; Lewis & Rook, 1999; Shumaker & Hill, 1991). Neither of these mechanisms found support in the data. This could be a result of the period the study was undertaken in and the lockdown restrictions associated with the COVID-19 pandemic. Under these conditions, many employees worked from home, instead of in an office-based environment. Hence, access to obtain instrumental help or tangible aid from supervisors could have been more limited, than obtaining such help from co-workers. Furthermore, interaction with co-workers tends to be more frequent than that with supervisors. As such, instrumental help from supervisors is likely to be scarce when compared to informational support or guidance from the same, especially when not being located at an office.
- Mixed findings were observed concerning enacted informational support provided by supervisors (H3). Both the resource-building and resource-depleting hypotheses found support in the data, as it pertains to managers. However, no supportive findings were observed for non-managers. Investigating ESS (Informational) and PsyCap by itself indicated a resource-depleting relationship (Model A). In this case, supervisor guidance would arguably have a depleting effect on PsyCap. However, when satisfaction with supervisor support was also considered, the relationship became positive (Model C), and when perceived support was added to the model, no effect was observed. Previous studies suggested that the effect of this type of support is highly susceptible to the extent to which a recipient believes they can change, how receptive they are to feedback, and their ability to take action (Braddy et al., 2013). Furthermore, instead of triggering a cognitive

response associated with informational support, it can trigger an affective one that could score stronger on emotional measures (Linderbaum & Levy, 2010). Hence, further investigation is required to gain clarity around the conditions informing this relationship.

Secondly, an important observation of the study suggests that managers and non-managers interpret enacted support differently. As such, there are still more questions remaining as to how these support constellations influence the PsyCap of the different job roles, what other factors need to be considered to improve the models, and especially what characteristics of managers and non-managers differentiate both their enacted support needs and interpretation of enacted support.

Finally, this study suggests that PsyCap sets the platform for some measure of 'support readiness' or receptivity to receive enacted support. The data suggested that significant positive relationships exist between PsyCap (t1) and the enacted support. As such, higher PsyCap was related to greater value and interpreted to enacted support behaviours across the period. Therefore, as PsyCap likely informs how enacted support is interpreted in the workplace, the construct of 'support readiness' could be further developed and investigated – as it could hold beneficial promise for the organisation. As the literature has identified related constructs such as feedback orientation (when it comes to a type of informational support) (Linderbaum & Levy, 2010), developmental readiness (as it relates to instrumental support (Hannah & Avolio, 2010), or a growth mindset (Harms et al., 2018; F. Luthans et al., 2011; Meyers et al., 2015; Zingoni, 2017), future work will need to investigate whether these are independent constructs, or more indicative of a latent support readiness construct that undergirds the phenomenon. Investigating and expanding this construct and how it relates to both PsyCap and enacted support might be beneficial for both feedback, appraisal, and coaching literatures.

7.4.2 Methodological avenues for future research

When it comes to the operationalisation of the constructs, the opportunity for study is also prevalent. The findings of this study were drawn from observations using the PCQ-12 instrument. The challenges with this instrument were discussed (Section 5.5.2). Therefore, it would be worth investigating whether some relationships become more salient with other measurement instruments, such as the PCQ-24 (24-item instrument) or the implicit PCQ (I-PCQ).

Furthermore, by honing the items used to measure enacted support, richer data might be gained. As mentioned, enacted support was measured in a novel way, and

further testing – making use of both quantitative, inventory and qualitative scales – could improve understanding around this construct.

Additionally, this study aimed to investigate how PsyCap and enacted social support relate, but did not offer insight into predicting these desirable outcomes. As such, future research can investigate the extent to which not only enacted support predicts PsyCap, but also how PsyCap predicts enacted support interpretation and the value ascribed to it.

Finally, as this study followed a between-person ESM approach, observations on the person-level (Level 2) were drawn to explore its relationship to PsyCap. Future studies can conduct a within-person ESM approach – nested within a supervisor and co-worker relationship – to investigate the phenomenon of the support situation (Level 1) itself, and how that might inform the relationship between the variables. This would further enable analytical approaches that make use of multilevel modelling techniques.

7.5 Conclusion

This study took a theory-testing approach through CB-SEM to investigate how enacted support and PsyCap relate in the workplace, as well as the role that perceived support plays with these constructs. Although CB-SEM is not a prediction tool, it offered acceptable model-fit insights into how the constructs likely relate. Findings suggest that the source of support, type of support, and the job role of the beneficiary all influence the way in which these constructs relate. Most notable was the cyclical nature in how enacted support not only influences PsyCap, but that PsyCap influences enacted support as well. Furthermore, it was found that PsyCap partially mediates the relationship between enacted support and PsyCap, suggesting a potential explanation for ambivalent findings in prior studies.

Not all social support is created equal, and, as such, unpacking this multidimensional construct and investigating how it affects desirable psychological resources, such as PsyCap, offer valuable benefits to the organisation. There are complex relationships between these constructs, and as understanding improves around them, the successful deployment of helping behaviours could contribute to an optimistic, hopeful, resilient, and confident workforce – to the benefit of all.

In summary, this study considered whether social support was good or bad for the PsyCap of an employee. As such, it was observed that such depends on the nature, source and type of support provided, their level of PsyCap, and the managerial role of the employee.

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Appendix A Questionnaire items

This appendix sets out all the questionnaire items of the study. There are three sections: the initial survey, the daily survey and the final survey.

INITIAL SURVEY

This survey would be taking place at the commencement of the study.

Initial survey: Access

To obtain access to the survey, the following would need to be answered:

- Consent needs to be provided as per the consent form in Appendix E.
- Agreement that the respondent qualifies to participate in the study by attesting that he or she reports to a supervisor and has at least one person he or she considers to be a co-worker.

Table 61: Initial survey – Control variables

Item	Statement	Responses	Source
	Characteristics of participant		
1	My gender is …	1: Male; 2: Female	
2	My age is …	1: 18 to 25 years; 2: 26 to 35 years; 3: 36 to 45 years; 4: 46 to 55 years; 5: 56 to 65 years; 6: 66 years or older	
3	The name of my organisation is …	Text-based answer	
4	I have been with my current organisation for …	1: less than 1 year; 2: 1-2 years; 3: 3-5 years; 4: 6-10 years; 5: more than 10 years	(amended from Kirrane et al., 2017)
5	The industry I work in can be best described as …	1: Services; 2: Manufacturing; 3: Public sector; 4: Non-governmental or public benefit organisations; 5: State-owned enterprises; 6: Other	(Youssef & Luthans, 2007)
6	I perform a management role:	1: Yes 2: No	
7	My role/s can be described as:	1: Administrative 2: Customer-facing 3: Non-customer-facing 4: Sales 5: Leadership or management 6: Follower or supporter 7: Other	

Item	Statement	Responses	Source
8	My first language is …	1: English; 2: Afrikaans; 3: Ndebele 4: Northern Sotho; 5: Southern Sotho; 6: Swati; 7: Tsonga; 8: Tswana; 9: Venda; 10: Xhosa; 11: Zulu; 12: Other	
9	My proficiency in English is …	1: Poor; 2: Fair; 3: Average; 4: Good 5: Excellent	
10	My highest level of education is …	1: not finished high school; 2: matric or grade 12 3: certificate, diploma or equivalent 4: bachelor's degree or equivalent 5: master's degree, equivalent or greater	(as informed by Kirrane et al., 2017)
11	My ethnicity is …	1: African; 2: Coloured; 3: Indian 4: White; 5: Other	
12	My country of residence is ..	1: South Africa 2: Other	
	Characteristics of supervisor		
13	My supervisor is …	1: Male; 2: Female	
14	I have worked with my current supervisor for …	1: less than 1 year; 2: 1 to 2 years; 3: 3 to 5 years; 4: 6 to 10 years; 5: more than 10 years	
15	I interact with my supervisor …	1: daily; 2: multiple times per week; 3: once per week / weekly; 4: multiple times per month; 5: once per month / monthly; 6: longer than a month between interactions; 7: Never	
	Characteristics of organisation and team		
16	The size of my organisation is …	1: less than 10 people; 2: 11 to 30 people; 3: 31 to 100 people; 4:101 to 1000 people; 5: more than 1001 people	
17	The size of my team is …	1: less than 3 people 2: 4 to 8 people; 3: 9 to 12 people; 4: 13 to 20 people; 5: more than 20 people; 6: I do not work in a team	

Table 62: Initial survey – Construct items

Item	Statement	Source	Construct
"The following section considers your organisation. Your organisation is the company or firm by which you are employed, within which your supervisor and co-workers operate."			
18	"The organisation values my contribution to its well-being"	(Eisenberger et al., 1986)	POS (general)^

Item	Statement	Source	Construct
19	"The organisation strongly considers my goals and values"	(Boyar et al., 2014; Eisenberger et al., 1986)	POS (emotional/ general)
20	"The organisation really cares about my well-being"	(Eisenberger et al., 1986)	POS (general)^
21	"My organisation cares about my opinions"	(Boyar et al., 2014)	POS (emotional)
22	"My organisation is willing to help me if I need a special favour"	(Boyar et al., 2014)	POS (emotional)
23	"In general, organisational policies are fair"	(Boyar et al., 2014)	POS (informational)
24	"My organisation provides the tools necessary for doing my job"	(Boyar et al., 2014)	POS (instrumental)
25	"My organisation provides me with the necessary training"	(Boyar et al., 2014)	POS (informational)
26	"When I have a problem, my organisation provides needed help"	(Eisenberger et al., 1986)	POS (instrumental)
"The following section considers your supervisor. Your supervisor is the person you report to, or the person that is designated to be your manager."			
27	"My supervisor acts in ways that show they appreciate what I do"	(Abbey et al., 1985)	Emotional support (Sup)
28	"My supervisor cares about me as a person"	(Abbey et al., 1985)	Emotional support (Sup)
29	"My supervisor encourages me when I need it"	(Vinokur et al., 1987)	Emotional support (Sup)
30	"My supervisor gives me useful information when I need it"	(Vinokur et al., 1987)	Informational support (Sup)
31	"When I have a work problem, my supervisor gives me advice on how to solve it"	(Abbey et al., 1985; Bhanthumnavin, 2003)	Informational support (Sup)
32	"My supervisor helps out when too many things need to be done"	(Abbey et al., 1985)	Instrumental support (Sup)
33	"My supervisor goes out of his way to do things to make life easier for me at work"	(Caplan et al., 1975)	Instrumental support (Sup)
"The following section considers your co-workers. Co-workers are colleagues on the same level of hierarchy as you are with whom you interact on work-related matters."			
34	"My co-workers help me get my work done"	(Colbert et al., 2016)	Instrumental support (Co)
35	"My co-workers are always willing to give me a hand with my work"	(Colbert et al., 2016)	Instrumental support (Co)
36	"My co-workers answer questions I have about my job."	(Colbert et al., 2016)	Informational support (Co)
37	"My co-workers communicate work-related information to me"	(Rousseau & Aubé, 2010)	Informational support (Co)
38	"My co-workers help me cope with stress"	(Colbert et al., 2016)	Emotional support (Co)

Item	Statement	Source	Construct
39	"My co-workers allow me to vent my frustrations when I need to"	(Colbert et al., 2016)	Emotional support (Co)
40	"My co-workers help me release tension when I need to"	(Colbert et al., 2016)	Emotional support (Co)
	PsyCap		
41	"I feel confident in representing my work area in meetings with management"	(Parker, 1998)	Efficacy
42	[redacted]	(Parker, 1998)	Efficacy
43	[redacted]	(Parker, 1998)	Efficacy
44	"If I should find myself in a jam at work, I could think of many ways to get out of it"	(Snyder et al., 1996)	Hope
45	[redacted]	(Snyder et al., 1996)	Hope
46	[redacted]	(Snyder et al., 1996)	Hope
47	[redacted]	(Snyder et al., 1996)	Hope
48	"I can be 'on my own', so to speak, at work if I have to"	(Wagnild & Young, 1993)	Resilience
49	[redacted]	(Wagnild & Young, 1993)	Resilience
50	[redacted]	(Wagnild & Young, 1993)	Resilience
51	[redacted]	(Scheier & Carver, 1985)	Optimism
52	[redacted]	(Scheier & Carver, 1985)	Optimism
"Thank you for participating in today's questionnaire. Tomorrow (and for the following two weeks) between 3pm and 4pm, a shorter daily questionnaire would become available which should take around four to five minutes to complete."			

^ The two POS (General) measures were excluded from analysis, to align with emotional, instrumental and informational focus of other support measures. The influence on the Cronbach alpha of scale was minimal, as it adjusted the alpha score from 0.929 to 0,905, which is still considered to be favourable.

[NOTE: Text was redacted in accordance with the copyright associated with the PCQ-12 instrument, as explained in Appendix D]

DAILY SURVEY

This survey would be taking place at the end of each working day of the study.

Daily survey: Access

To obtain access to the survey, the following would need to be answered:

- **Today was a working day for me: Yes or No.**

Table 63: Daily survey – Construct items

Item	Statement	Source	Construct
"Consider whether you have observed or been the recipient of the behaviours and actions referred to in the following statements, and indicate the extent to which you agree with the statements."			
1	"In the past day, my supervisor acted in a way that showed appreciation for what I do"	(Abbey et al., 1985)	Emotional support (Sup)
2	"In the past day, my supervisor showed that he or she cares about me as a person"	(Abbey et al., 1985)	Emotional support (Sup)
3	"In the past day, my supervisor encouraged me"	(Vinokur et al., 1987)	Emotional support (Sup)
4	"In the past day, my supervisor provided me with work-related information"	(Vinokur et al., 1987)	Informational support (Sup)
5	"In the past day, my supervisor gave me advice or guidance on a work problem"	(Abbey et al., 1985; Bhanthumnavin, 2003)	Informational support (Sup)
6	"In the past day, my supervisor helped me to get things done"	(Abbey et al., 1985)	Instrumental support (Sup)
7	"In the past day, my supervisor tried to make life easier for me at work"	(Caplan et al., 1975)	Instrumental support (Sup)
"The following section considers your co-workers. Co-workers are colleagues on the same level of hierarchy as you are with whom you interact on work-related matters."			
8	"In the past day, at least one of my co-workers helped me get my work done"	(Colbert et al., 2016)	Instrumental support (Co)
9	"In the past day, at least one of my co-workers went out of their way to assist me with work-related problems"	(Caplan et al., 1975; Colbert et al., 2016)	Instrumental support (Co)
10	"In the past day, at least one of my co-workers answered questions I had about my job"	(Colbert et al., 2016)	Informational support (Co)

Item	Statement	Source	Construct
11	"In the past day, at least one of my co-workers communicated work-related information or advice to me"	(Rousseau & Aubé, 2010)	Informational support (Co)
12	"In the past day, at least one of my co-workers helped me to cope with stress"	(Colbert et al., 2016)	Emotional support (Co)
13	"In the past day, at least one of my co-workers allowed me to vent my frustrations"	(Colbert et al., 2016)	Emotional support (Co)
14	"In the past day, at least one of my co-workers helped me release tension"	(Colbert et al., 2016)	Emotional support (Co)
Satisfaction with support			
15	"I feel satisfied with the emotional support (like encouragement, care, and listening) I have received from my supervisor in the past day"	(Hobfoll et al., 1991; Krause et al., 1989)	Emotional support (Sup)
16	"I feel satisfied with the informational support (like guidance and advice) I have received from my supervisor in the past day"	(Krause et al., 1989)	Informational support (Sup)
17	"I feel satisfied with the tangible aid, help or instrumental support I have received from my supervisor in the past day"	(Krause et al., 1989)	Instrumental support (Sup)
"The following section considers your co-workers. Co-workers are colleagues on the same level of hierarchy as you are with whom you interact on work-related matters."			
18	"I feel satisfied with the emotional support (like encouragement, care, and listening) I have received from my co-workers in the past day"	(Hobfoll et al., 1991; Krause et al., 1989)	Emotional support (Co)
19	"I feel satisfied with the informational support (like guidance and advice) I have received from my co-workers in the past day"	(Krause et al., 1989)	Informational support (Co)
20	"I feel satisfied with the tangible aid, help or instrumental support I have received from my co-workers in the past day"	(Krause et al., 1989)	Instrumental support (Co)
"Thank you for participating in today's questionnaire. Tomorrow between 3pm and 4pm, another daily questionnaire would become available which should take around four to five minutes to complete."			

CONCLUDING SURVEY

The PsyCap measures (items 41 to 52 of the Initial Survey) was repeated.

Appendix B ExpiWell screenshot

An example of what the questionnaire might look like on the ExpiWell interface on a mobile device. Mind Garden, who holds the copyright for the PCQ-12 instrument, measuring Psychological Capital, has required that an initial complete copyright statement is used (in graphical format) (Figure 21), followed by (© 2007) after each item from the questionnaire (Figure 20). Additionally, Figure 22 represents an item measuring perceived informational support from a supervisor on a mobile device with 'dark mode' activated.

Figure 21: Initial copyright statement example

Figure 20: Copyright per item example

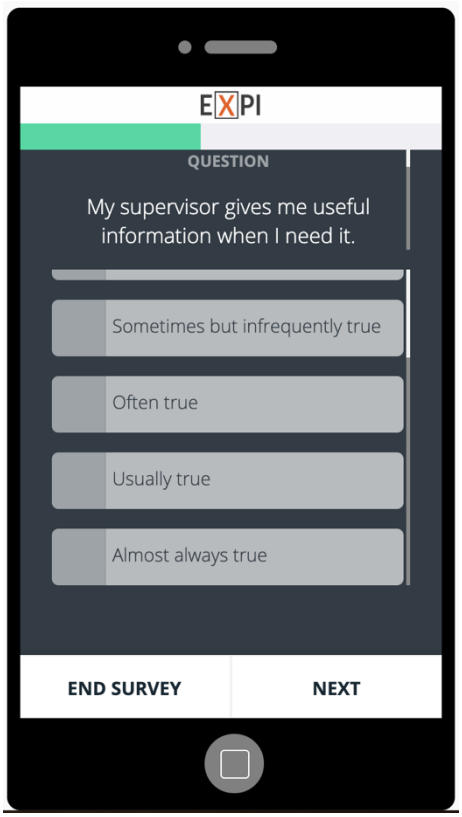


Figure 22: ExpiWell example: Perceived supervisor support

Appendix C ExpiWell privacy and data information

The following information was drawn from the Expimetrics (renamed ExpiWell) website regarding data privacy (Purdue University, n.d.). Additional information is available at https://app.expimetrics.com/privacy regarding data control, active and passive information that is collected, the security of information and consent revocation.

EXPIMETRICS

Privacy Policy

- Please visit https://app.expimetrics.com/privacy for the full Expimetrics Privacy Policy.

Expimetrics Data Security and Privacy information

- Expimetrics uses industry best standards to protect customer data and data collected for research.
- Our servers are protected by high-end firewall systems, and scans are performed regularly to ensure that any vulnerabilities are quickly found and patched.
- Expimetrics uses Transport Layer Security (TLS) encryption, or HTTPS, for all transmitted data. All stored data is encrypted at rest using a standard Amazon EBS encryption protocol
- Our services are hosted by Amazon Web Services (AWS) which is a well-known and trusted data center that meets the requirements of security-sensitive organizations while providing data privacy.
    - As further discussed in the web link: https://aws.amazon.com/compliance/data-privacy-faq/ "AWS's alignment with ISO 27018 has been validated by an independent third party assessor. ISO 27018 is the first International code of practice that focuses on protection of personal data in the cloud. It is based on ISO information security standard 27002 and provides implementation guidance on ISO 27002 controls applicable to Personally Identifiable Information (PII) processed by public cloud service providers. This demonstrates to customers that AWS has a system of controls in place that specifically address the privacy protection of their content."
- Expimetrics subscribers control their users and their data. Therefore, it is important for subscribers to practice sound security practices by using strong account passwords, not storing passwords in easily accessible places, and restricting access to their accounts to authorized persons who can access data.
- Expimetrics Makers control their users and their own data. Makers may request any of their data to be deleted and it will immediately be removed from Expimetrics' databases. To make a deletion request, Maker must select the item they wish to delete and confirm they would like to send their request. Expimetrics performs daily backups and thus the deleted data will be retained for a set period of time. After this retention period (8 days), the Data will be automatically removed from Expimetrics' servers.

PII and Passive info

- Expimetrics collects sensitive information and follows industry standards to protect this data (see above). Information that may be collected include: first name, last name, date of birth, ethnicity, gender, country and state.

- This information collected is for the purpose of building a Taker's Expimetrics profile and not shared with Makers at any time.
- Submission data may also include sensitive information, but will not include profile information and both are protected under our Data Protection practices.

- Expimetrics currently collects only two forms of passive information.
- One form of passive information includes location or GPS (long, lat, and timezone) data. If Makers enable data location collection, Takers must first consent to allow passive GPS information to be collected. Expimetrics requests access for Taker's phone microphone, camera (photo and video), storage, and GPS (long, lat, timezone). We do not store any device identifiers or any other passive information that would link back to the user on the app side.
- The second form of passive information includes anonymous passive app usage data for the purpose of detecting mobile issues and performance metrics.

- Expimetrics team

Appendix D Permission to use PCQ

Permission to use the PCQ-12 has been obtained from Mind Garden, as shown in Figure 23. Furthermore, permission to place on the online platform, ExpiWell, has been received on 23 April 2019. Attention is drawn to the noted exclusion, and hence the complete PCQ-12 are not included in Appendix A

Ettienne Booysen

mind garden

To whom it may concern,

This letter is to grant permission for Ettienne Booysen to use the following copyright material:

Instrument: ***Psychological Capital (PsyCap) Questionnaire (PCQ)***

Authors: ***Fred Luthans, Bruce J. Avolio & James B. Avey.***

Copyright: ***"Copyright © 2007 Psychological Capital (PsyCap) Questionnaire (PCQ) Fred L. Luthans, Bruce J. Avolio & James B. Avey. All rights reserved in all medium."***

for his/her thesis/dissertation research.

Three sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Mind Garden, Inc.
www.mindgarden.com

Copyright © 2007 Fred Luthans, Bruce J. Avolio, and James B. Avey. All rights reserved in all medium. Published by Mind Garden, Inc. www.mindgarden.com 13

Figure 23: Permission letter for PCQ from Mind Garden.

Appendix E Invitation to participate and consent (Individual)

The 'Participant informed consent' form was sent to all potential participants and offered instructions to join the study.

Gordon Institute of Business Science
University of Pretoria

January 2021

To whom it may concern

DATA GATHERING: DOCTORAL THESIS – Ettienne Booysen

Thank you for your willingness to participate in this study. I am intrigued about how social support in the work environment can influence our confidence. Therefore, I am doing this study and would highly value your help with this **two-week study** to investigate this phenomenon.

What does it involve:

- An *initial questionnaire* (9 minutes to complete);
- *Daily questionnaires for two weeks* (4 minutes to complete. They are available between 3pm and midnight, when it expires. If you miss one, please continue the following working day); and,
- A *concluding questionnaire* (2 minutes to complete).

How do you participate:

- By downloading a **free mobile application** (about 40Mb in size) for your iOS or Android device, called **ExpiWell**; and entering the access code for this study (**ss2021**). ***[Once you register you need to take the first survey of the study as it is only available for that day].***
- The *ExpiWell* application will remind you when surveys are available, track your progress and automatically submit your responses. Therefore, there is slight data usage involved.
- Step-by-step instructions are set out on the following pages.

What must you know:

- Should you agree to participate, please be aware that your participation is voluntary, and you can withdraw at any time without penalty.
- Your participation is anonymous – apart from your email address which serves as personal registration on the platform and your ID. This information would be treated as confidential and its individual disclosure is in no way pertinent to the outcomes of the study, as only aggregated data will be reported.
- At the conclusion of the study, should you wish to receive feedback, you can submit your information to the researcher, however, this is optional.

What makes you eligible to participate:

- You need to be based in South Africa;
- Be employed by an organisation;
- Report to a supervisor (usually your manager); and
- Have one or more co-workers. Co-workers are colleagues on the same level of hierarchy as you are, with whom you interact on work-related matters.

Once again, thank you for your willingness to participate and take hands with me in conducting this study. I am excited to see what we can learn about these behaviours and its effect in our workplaces.

If you have any concerns, please contact me or my supervisor. Our details are provided below:

Researcher name:	*Ettienne Booysen*
Email:	*et1@iafrica.com*
Phone:	*0832666036*
Research supervisor's name:	*Professor Katherina Pattit*
Email:	*glac6548@stthomas.edu*

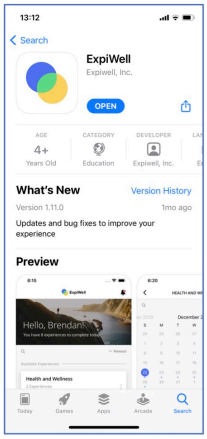
Kind regards
Ettienne

Invitation to participate_2021 1

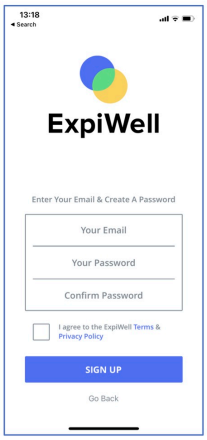
Gordon Institute of Business Science
University of Pretoria

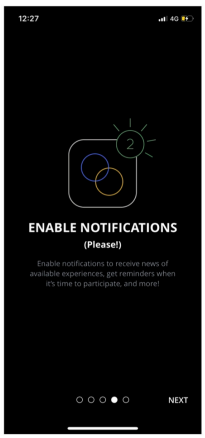
INSTRUCTIONS TO PARTICIPATE, SHOULD YOU CHOOSE TO:

1) Download the free EXPIWELL application from the Apple App Store, or the Google Play Store. *[Images shown are from Apple iPhone]*

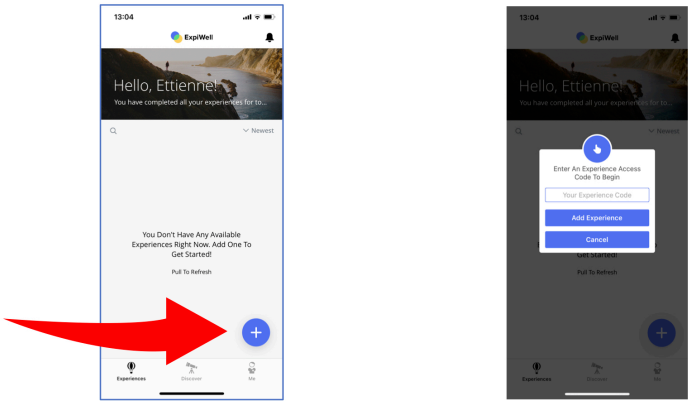


2) Install and register on the application ***Please allow for notifications from the application, as it will aid in adherence to the research protocol of the study***.

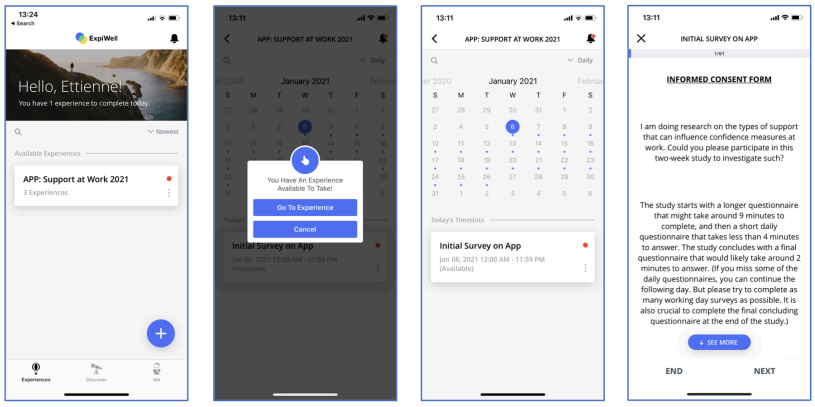




3) Click on the Blue Plus Sign at the bottom right to add this study experience to the application. Enter the access code for this study is **ss2021** and "Add experience".



4) The "**Support at Work 2021"** study would be loaded onto your profile. Additionally, the "**Initial Survey on App**" will become available immediately and should take around 9 minutes to complete. *Please do this study now, as it would expire at midnight on the day of registration*, and is crucial to the successful participation in the study.



5) Thereafter, "**Daily Survey on App**" would become available around 3:30pm every day. It should take around four minutes to complete. You will be notified of its availability through an application notification. **Should you miss a day or two, no worries. Kindly attempt to do as many workday surveys as possible.**

6) On the final day of the study, a **'Concluding Survey on App'** would become available and should take around two minutes to complete. At this point you would also be asked to provide your email-address should you like to receive feedback around the study. This is optional. **It is imperative to do this concluding survey, as it looks into the key areas of consideration for this study.**

Thank you for your participation. It is highly appreciated.

Appendix F Invitation to participate and consent (Organisation)

A covering letter for the "Organisational consent form" was provided and sent to all potential organisations as an invitation to participate in the study.

Gordon Institute of Business Science
University of Pretoria

January 2021

To whom it may concern

DATA GATHERING: DOCTORAL THESIS – Ettienne Booysen

I am currently a student enrolled with the Gordon Institute of Business Science (GIBS), which is affiliated to the University of Pretoria. I am pursuing a PhD and find myself in the data gathering phase of my research.
Could you please help me to gather data for my study?

What am I studying?

- I am investigating how social support from co-workers and supervisors can develop an employee's core confidence (also known as Psychological Capital or PsyCap).
- The paper intends to explore which forms of support are most beneficial in developing the PsyCap of employees. PsyCap has been shown to be a sought-after resource for companies.
- Hence, the unit of analysis is on the employee level, and the organisation is only controlled for.
- However, if adequate response rates within your organisation is obtained, a consolidated report of findings specific to your firm can be provided, should you request such.

What does participation entail?

- The intended study takes place over a two-week period.
- Employees are invited to download a mobile phone application through which the surveys are delivered; or participate via a daily email link.
- Apart from the initial questionnaire (estimated to take around 10 minutes to complete), all other questionnaires are around 2-5 minutes in length and are gathered daily over the period in question.

Are you willing to help?

Should the above meet with your approval and you are willing that you and your organisation's employees can assist, kindly advise the following:

- The intended contact person for this study that I can liaise with.
- The number of employees of the organisation; or the size of the team in the organisation that consent is provided for.
- *Making contact with employees:*
    - Would you/your nominated person prefer to invite employees to participate? Or would you prefer me to handle that? (I want to limit the burden that this might place on anyone, so I am more than willing to connect with employees on your behalf.)
    - The ethical handling of any information is crucial to this study, and as such any contact information would be used for the purposes of this study alone.
- The study takes place in a staggered manner; meaning everyone does not need to start on the same day.
- My hope is to conduct this study in January-February 2021. It would be great if all permissions or questions could be cleared up before embarking on such.

More questions?

If you have any further enquiries regarding this study, you are welcome to direct them towards either myself, or my supervisor, whose information is set out below.

Researcher name:	*Ettienne Booysen*	**Research supervisor's name:**	
Email:	*et1@iafrica.com*		*Professor Katherina Pattit*
Phone:	*0832666036*	**Email:**	*glac6548@stthomas.edu*

I enclose a copy of the letter of consent which would be helpful for you or a suitable representative to undersign at your earliest convenience, should you agree to help with this study – to aid in investigating how social support can play a role in building confidence of employees. Your consideration of the above is greatly appreciated; and your favourable response would be highly valued.

Kind regards
Ettienne

Gordon Institute of Business Science
University of Pretoria

I, _____ *(name and surname)*, as authorised signatory on behalf of _____ *(organisation)* hereby provide consent for this study around the relationship between the types of support and confidence measures (Psychological Capital) by Ettienne Booysen (15023771 – student number).

I understand that employees will be requested to participate in this two-week study which can take around five to ten minutes to complete on a daily basis. I understand that such study will make use of an application (ExpiWell) that needs to be downloaded to employee's mobile devices and that daily questionnaires will need to be uploaded. Or participate via a daily email link. Hence there would be some data usage involved.

I understand that participants will be informed that their participation is voluntary and that they can withdraw at any time. Despite their participation, being recorded in an anonymous manner, their email address would be used as registration handle on the platform linking their device to the study, and to nest responses within such identifier.

I understand that participants will have the option to provide the name of this organisation to enable aggregated organisational reporting. Such report can be provided to this organisation upon conclusion of the study, if requested and an adequate response rate it obtained.

I understand and agree to:

- ❑ **provide the required information to the researcher as a database (sampling frame) to make contact with participants, or**
- ❑ **to distribute an invitation to participate in the study on his behalf. (Information would be provided to contact person to distribute.)**

Additionally, I undertake to officially encourage participation in the study and endorse it. As such, I hereby officially grant access to the researcher to engage the organisation's employees for the purpose of gathering data for this study.

I take cognisance of the following and would raise any concerns or questions to them directly if they arise.

Researcher name:	*Ettienne Booysen*	**Research supervisor's name:**	
Email:	*et1@iafrica.com*		*Professor Katherina Pattit*
Phone:	*0832666036*	**Email:**	*glac6548@stthomas.edu*

My agreement and consent to the above is indicated by my signature below. The official contact person at the organisation, that enquiries can be referred to is _____ *(name),* _____ *(telephone),* _____ *(email).*

For organisation	For student:
Signed: _____	Signed: _____
Date: _____	Date: _____

Appendix G Abnormalities in the data

Several issues with responses that could be considered as abnormal took place during the data gathering. These are summarised below.

Two participants enrolled in the study twice. Participant #181's first responses were removed entirely, as no Daily Surveys for that session was recorded. Additionally, Participant #43r was removed, as that candidate re-enrolled for similar reasons, as Participant #241.

Two participants' data needed to be removed (#100 and #150) because no Daily Surveys were submitted.

Participant #66 and #97 did not complete Initial Surveys, despite following the remainder of the protocol and was hence excluded.

Two 'Concluding Surveys' had to be conducted via Google Forms (#139 and #175) due to early deletion of the application and mobile phone issues, respectively.

An unforeseen issue with a software update of the ExpiWell application disrupted the study for at least 24 hours (11 and 12 March 2021), which caused some participants' applications to malfunction. As a result, a further two 'Concluding Survey' was completed via Google Forms (#245 and #255) due to the inability to get the application to work on the participants' devices after the update. In addition, participant #255 also submitted three Daily Survey responses via Google Forms due to the app update issue.

A single participant (#78) indicated her country as "Namibia". However, she was contacted and clarified that she had misread the question. She does reside and work in South Africa, but was born in Namibia. As such, her data was rectified.

The data of a final participant (#269) was removed, as she started on the study at too late a stage, which would let her conclude after the end of the data gathering period.

Appendix H Item-level descriptive statistics

The study's descriptive statistics and demographic profile are discussed in Section 5.4, and the normality of the sample in 5.7.1. As was observed earlier (Section 5.3), the differences in sample size with enacted support measures is attributable to the data coded as missing data for a seventh response option where no enacted support behaviour was observed.

Table 64: Item-level descriptive statistics of study variables

	n		Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Valid	Missing	Statistic	Std. Error			Statistic	Std. Error	Statistic	Std. Error
Perceived organisational support										
POS_emos1	253	0	4,4150	0,08091	1,28703	1,656	-0,891	0,153	0,244	0,305
POS_emos2	253	0	4,5652	0,06952	1,10585	1,223	-0,903	0,153	0,895	0,305
POS_emos3	253	0	4,8340	0,07074	1,12516	1,266	-1,151	0,153	1,226	0,305
POS_info1	253	0	4,8024	0,06838	1,08766	1,183	-1,614	0,153	3,292	0,305
POS_instru1	253	0	4,9328	0,05872	0,93405	0,872	-1,102	0,153	2,146	0,305
POS_info2	253	0	4,5217	0,08050	1,28039	1,639	-1,072	0,153	0,669	0,305
POS_instru2	253	0	4,7826	0,06350	1,00996	1,020	-1,253	0,153	2,678	0,305
Perceived supervisor support										
PSS_emos1	253	0	4,8696	0,06913	1,09960	1,209	-1,327	0,153	1,966	0,305
PSS_emos2	253	0	5,0435	0,06633	1,05507	1,113	-1,579	0,153	3,137	0,305
PSS_emos3	253	0	4,8142	0,07327	1,16542	1,358	-1,316	0,153	1,936	0,305
PSS_info1	253	0	4,9012	0,06244	0,99309	0,986	-1,197	0,153	2,231	0,305
PSS_info2	253	0	4,7905	0,07150	1,13721	1,293	-1,327	0,153	2,149	0,305
PSS_instru1	253	0	4,3518	0,08565	1,36232	1,856	-0,743	0,153	-0,171	0,305
PSS_instru2	253	0	4,4190	0,07777	1,23698	1,530	-0,675	0,153	0,066	0,305
Perceived co-worker support										
PCS_Instru1	253	0	4,4822	0,07379	1,17374	1,378	-0,862	0,153	0,519	0,305
PCS_Instru2	253	0	4,6917	0,06859	1,09100	1,190	-1,026	0,153	1,036	0,305
PCS_info1	253	0	4,5810	0,07146	1,13667	1,292	-0,970	0,153	0,670	0,305
PCS_info2	253	0	4,7905	0,06210	0,98782	0,976	-1,287	0,153	2,461	0,305
PCS_emos1	253	0	4,1542	0,07871	1,25196	1,567	-0,466	0,153	-0,367	0,305
PCS_emos2	253	0	4,6640	0,07221	1,14857	1,319	-0,962	0,153	0,670	0,305
PCS_emos3	253	0	4,3083	0,07940	1,26295	1,595	-0,574	0,153	-0,239	0,305

	n		Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Valid	Missing	Statistic	Std. Error			Statistic	Std. Error	Statistic	Std. Error
PsyCap (t1)										
Efficacy_t1_1	253	0	5,1028	0,05703	0,90704	0,823	-1,105	0,153	1,392	0,305
Efficacy_t1_2	253	0	4,7747	0,07174	1,14115	1,302	-1,454	0,153	2,642	0,305
Efficacy_t1_3	253	0	5,0593	0,06137	0,97613	0,953	-1,358	0,153	2,223	0,305
Hope_t1_1	253	0	4,8103	0,05500	0,87490	0,765	-0,839	0,153	1,662	0,305
Hope_t1_2	253	0	4,7470	0,06056	0,96323	0,928	-1,166	0,153	2,080	0,305
Hope_t1_3	253	0	4,6917	0,06211	0,98793	0,976	-0,967	0,153	1,145	0,305
Hope_t1_4	253	0	4,6206	0,05788	0,92060	0,848	-0,682	0,153	0,847	0,305
Resilience_t1_1	253	0	5,3241	0,04937	0,78534	0,617	-1,633	0,153	4,673	0,305
Resilience_t1_2	253	0	4,4822	0,06617	1,05253	1,108	-0,755	0,153	0,897	0,305
Resilience_t1_3	253	0	5,2451	0,04699	0,74750	0,559	-1,008	0,153	1,852	0,305
Optimism_t1_1	253	0	4,6561	0,06521	1,03717	1,076	-0,907	0,153	1,336	0,305
Optimism_t1_2	253	0	4,5534	0,07068	1,12428	1,264	-0,928	0,153	0,873	0,305
PsyCap (t2)										
Efficacy_t2_1	253	0	5,1028	0,06178	0,98264	0,966	-1,751	0,153	4,414	0,305
Efficacy_t2_2	253	0	4,7708	0,07332	1,16616	1,360	-1,315	0,153	1,862	0,305
Efficacy_t2_3	253	0	5,1383	0,05876	0,93469	0,874	-1,396	0,153	2,700	0,305
Hope_t2_1	253	0	4,9644	0,05353	0,85142	0,725	-0,632	0,153	0,859	0,305
Hope_t2_2	253	0	4,7866	0,05881	0,93536	0,875	-0,999	0,153	1,980	0,305
Hope_t2_3	253	0	4,8103	0,05886	0,93625	0,877	-1,075	0,153	1,738	0,305
Hope_t2_4	253	0	4,6008	0,06443	1,02485	1,050	-0,832	0,153	1,031	0,305
Resilience_t2_1	253	0	5,3281	0,05653	0,89923	0,809	-1,818	0,153	4,585	0,305
Resilience_t2_2	253	0	4,6008	0,05936	0,94424	0,892	-0,664	0,153	0,708	0,305
Resilience_t2_3	253	0	5,2885	0,04409	0,70129	0,492	-0,816	0,153	1,106	0,305
Optimism_t2_1	253	0	4,6838	0,06516	1,03645	1,074	-0,823	0,153	0,926	0,305
Optimism_t2_2	253	0	4,6561	0,06895	1,09668	1,203	-0,886	0,153	0,742	0,305
Enacted supervisor support										
ESS_Emo1	244	9	4,3934	0,06649	1,03865	1,079	-0,760	0,156	0,417	0,310
ESS_Emo2	246	7	4,3502	0,07052	1,10613	1,224	-0,775	0,155	0,346	0,309
ESS_Emo3	240	13	4,2549	0,07234	1,12064	1,256	-0,785	0,157	0,298	0,313
ESS_info1	245	8	4,6062	0,06104	0,95546	0,913	-1,177	0,156	1,992	0,310
ESS_info2	239	14	4,2857	0,07291	1,12723	1,271	-0,644	0,157	0,123	0,314

	n		Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Valid	Missing	Statistic	Std. Error			Statistic	Std. Error	Statistic	Std. Error
ESS_instru1	239	14	4,0876	0,07445	1,15095	1,325	-0,496	0,157	-0,277	0,314
ESS_instru2	237	16	4,1793	0,07506	1,15551	1,335	-0,686	0,158	0,117	0,315
Satisfaction with enacted supervisor support										
ESS_Satisfaction_emos1	240	13	4,2983	0,07500	1,16191	1,350	-0,756	0,157	0,065	0,313
ESS_Satisfaction_info1	243	10	4,4041	0,06919	1,07857	1,163	-0,807	0,156	0,453	0,311
ESS_Satisfaction_instru1	240	13	4,3459	0,07295	1,13011	1,277	-0,930	0,157	0,705	0,313
Enacted co-worker support										
ECS_Instru1	246	7	4,3878	0,06686	1,04864	1,100	-0,850	0,155	0,388	0,309
ECS_Instru2	248	5	4,2978	0,06859	1,08013	1,167	-0,708	0,155	0,374	0,308
ECS_Info1	244	9	4,4269	0,06852	1,07038	1,146	-0,898	0,156	0,729	0,310
ECS_Info2	251	2	4,7768	0,05208	0,82503	0,681	-1,265	0,154	3,073	0,306
ECS_Emo1	234	19	4,0612	0,07740	1,18396	1,402	-0,581	0,159	-0,252	0,317
ECS_Emo2	240	13	4,1999	0,07347	1,13826	1,296	-0,744	0,157	0,199	0,313
ECS_Emo3	234	19	4,0966	0,07856	1,20181	1,444	-0,536	0,159	-0,272	0,317
Satisfaction with enacted co-worker support										
ECS_Satisfaction_emos1	240	13	4,4043	0,06669	1,03316	1,067	-0,988	0,157	1,157	0,313
ECS_Satisfaction_info1	246	7	4,4660	0,06155	0,96530	0,932	-0,844	0,155	1,136	0,309
ECS_Satisfaction_instru1	244	9	4,4303	0,06362	0,99373	0,988	-0,904	0,156	1,060	0,310

Appendix I Construct-level descriptive statistics

The descriptive statistics and demographic profile of the study are discussed in Section 5.4, and the normality of the sample in 5.7.1. As was observed earlier (Section 5.3), the differences in sample size with enacted support measures is attributable to the data coded as missing data for a seventh response option where no enacted support behaviour was observed. Additionally, although the constructs of the four-factor model of PsyCap (t1) and PsyCap (t2), as suggested by theory and the copyrighted PCQ-12 instrument, the three factor model for both these constructs were used in analysis and CB-SEM development.

Table 65: Construct-level descriptive statistics of the study

	n		Mean	Median	Std. Deviation	Variance	Skewness		Kurtosis	
	Valid	Mis-sing					Statis-tic	Std. Error	Statis-tic	Std. Error
Perceived social support										
POS Total	253	0	4,6047	4,6667	1,03601	1,073	-1,028	0,153	1,004	0,305
PSS Total	253	0	4,7414	4,8571	1,00577	1,012	-1,166	0,153	1,798	0,305
PCS Total	253	0	4,4670	4,5714	0,89204	0,796	-0,556	0,153	0,395	0,305
Perceived Total	253	0	4,6339	4,7413	0,82841	0,686	-0,882	0,153	1,329	0,305
PsyCap (t1) – four-factor model (before EFA)										
Efficacy (t1)	253	0	4,9789	5,0000	0,87262	0,761	-1,254	0,153	1,893	0,305
Hope (t1)	253	0	4,7174	4,7500	0,74614	0,557	-0,922	0,153	1,743	0,305
Resilience (t1)	253	0	5,0171	5,0000	0,65071	0,423	-0,457	0,153	0,102	0,305
Optimism (t1)	253	0	4,6047	5,0000	0,94486	0,893	-0,824	0,153	1,076	0,305
PsyCap (t1) - four-factors	253	0	4,8389	4,8943	0,64160	0,412	-0,921	0,153	1,563	0,305
PsyCap (t2) – four-factor model (before EFA)										
Efficacy (t2)	253	0	5,0040	5,0000	0,85164	0,725	-1,180	0,153	1,873	0,305
Hope (t2)	253	0	4,7905	4,7500	0,72347	0,523	-0,596	0,153	0,591	0,305
Optimism (t2)	253	0	4,6700	5,0000	0,92516	0,856	-0,742	0,153	0,631	0,305
Resilience (t2)	253	0	5,0725	5,0000	0,60968	0,372	-0,529	0,153	0,127	0,305
PsyCap (t2) – four factors	253	0	4,8943	4,9167	0,62537	0,391	-0,577	0,153	0,529	0,305

	n		Mean	Median	Std. Deviation	Variance	Skewness		Kurtosis	
	Valid	Mis-sing					Statis-tic	Std. Error	Statis-tic	Std. Error
PsyCap (t1) – three-factor model (after EFA)										
Hope-Optimism (t1)	253	0	4,6532	4,7500	0,81254	0,660	-1,016	0,153	1,687	0,305
Efficacy (t1)	253	0	4,9789	5,0000	0,87262	0,761	-1,254	0,153	1,893	0,305
Resilience-Hope (t1)	253	0	4,9654	5,0000	0,63429	0,402	-0,561	0,153	0,603	0,305
PsyCap (t1) – three-factors	253	0	4,8556	4,9091	0,64004	0,410	-0,926	0,153	1,540	0,305
PsyCap (t1) – three-factor model (after EFA)										
Hope	253	0	4,7325	4,6667	0,80620	0,650	-0,809	0,153	1,214	0,305
Efficacy-Resilience	253	0	5,2144	5,2500	0,65330	0,427	-1,091	0,153	1,717	0,305
Resilience-Optimism	253	0	4,6469	4,6667	0,82512	0,681	-0,610	0,153	0,387	0,305
PsyCap (t2) – three factors	253	0	4,8996	4,9000	0,62154	0,386	0,567	0,153	0,607	0,305
Enacted supervisor support and satisfaction										
ESS (Emotional)	234	19	4,3701	4,5694	1,06516	1,135	-0,784	0,159	0,269	0,317
ESS (Informational)	238	15	4,4599	4,5000	0,99298	0,986	-0,873	0,158	1,084	0,314
ESS (Instrumental)	228	25	4,1462	4,3000	1,12066	1,256	-0,583	0,161	-0,123	0,321
ESS Total	219	34	4,3218	4,4762	1,01971	1,040	-0,691	0,164	0,238	0,327
ESS (Satisfaction)	229	24	4,3605	4,5556	1,10081	1,212	-0,811	0,161	0,341	0,320
Enacted co-worker support and satisfaction										
ECS (Emotional)	221	32	4,1145	4,2667	1,12091	1,256	-0,554	0,164	-0,199	0,326
ECS (Informational)	244	9	4,5943	4,7500	0,91064	0,829	-0,980	0,156	1,592	0,310
ECS (Instrumental)	241	12	4,3493	4,5000	1,02630	1,053	-0,715	0,157	0,266	0,312
ECS Total	219	34	4,2933	4,3878	0,96721	0,936	-0,646	0,164	0,321	0,327
ECS (Satisfaction)	233	20	4,4515	4,6000	0,97562	0,952	-0,883	0,159	0,958	0,318

Appendix J Validity analysis

Table 66 presents the composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), maximal reliability (MaxR(H)), as well as the correlations between the sub-components of the constructs as indicated.

Greater reliability is reflected in scores higher than 0,7 for CR and Cronbach's Alpha. The square root of AVE is indicated on the diagonal. To achieve convergent validity (the extent to which a selected measure compares with others investigating the same construct), it is proposed that AVE needs to be greater than 0,5. Thus, to ascertain the discriminant validity, the square root of its AVE needs to be greater than its correlation with any other construct. Additionally, MSV must be less than AVE. However, Malhotra and Dash (2011) hold that AVE can be too strict and argue that reliability can be established by CR alone.

Another way to investigate discriminant validity is through HTMT analysis (heterotrait-monotrait ratio of correlations), with thresholds 0,85 for strict and 0,9 for liberal discriminant validity (Fornell & Larcker, 1981; Henseler et al., 2015; Hinkin, 1995). These are reported in Table 67.

Mixed results were observed in Table 66 and Table 67, which was summarised in Table 27 in Section 5.7.3.2.

Table 66: Validity analysis of constructs

Construct	CR	Cron-bach	AVE	MSV	MaxR(H)	Correlations			
Perceived organisational support						**POS (emo)**	**POS (info)**	**POS (instr)**	**POS (gen)**
POS (Emo-tional)	0,854	0,856	0,663	1,027	0,880	**0,814**			
POS (Infor-mational)	0,753	0,747	0,604	0,972	0,754	0,738 *** (0,934 ^^)	**0,777**		
POS (Instru-mental)	0,695	0,682	0,536	0,972	0,732	0,716 *** (0,927 ^^)	0,732 *** (0,986 ^^)	**0,732**	
POS (general)	0,795	0,779	0,660	1,027	0,803	0,834 *** (1,013 ^^)	0,729 *** (0,943 ^^)	0,691 *** (0,933 ^^)	**0,812**
Perceived supervisor support						**PSS (emo)**	**PSS (info)**	**PSS (instr)**	

Construct	CR	Cron-bach	AVE	MSV	MaxR(H)	Correlations			
PSS (Emo-tional)	0,933	0,932	0,823	0,846	0,934	**0,907**			
PSS (Infor-mational)	0,863	0,858	0,759	0,837	0,867	0,886 *** (0,887 ^)	**0,871**		
PSS (Instru-mental)	0,854	0,851	0,846	0,846	0,861	0,920 *** (0,920 ^^)	0,915 *** (0,918 ^^)	**0,863**	
Perceived co-worker support						**PCS (emo)**	**PCS (info)**	**PCS (instr)**	
PCS (Emo-tional)	0.896	0,892	0,743	0,730	0,906	**0,862**			
PCS (Infor-mational)	0,742	0,737	0,590	0,886	0,854	0,854 *** (0,869 ^)	**0,768**		
PCS (Instru-mental)	0,870	0,867	0,771	0,886	0,829	0,829 *** (0,846)	0,941 *** (0,939 ^^)	**0,878**	
Enacted supervisor support						**ESS (emo)**	**ESS (info)**	**ESS (instr)**	
ESS (Emo-tional)	0,932	0,949	0,820	0,911	0,937	**0,905**			
ESS (Infor-mational)	0,839	0,875	0,723	0,911	0,854	0,954 *** (0,966 ^^)	**0,850**		
ESS (Instru-mental)	0,925	0,916	0,861	0,902	0,927	0,926 *** (0,927 ^^)	0,950 *** (0,943 ^^)	**0,928**	
Enacted supervisor support and satisfaction						**ESS (Satisf)**	**ESS (Total)**		
ESS (Satis-faction)	0,933	0,959	0,823	0,848	0,934	**0,907**			
ESS (Total)	0,951	0,966	0,734	0,848	0,956	0,921 *** (0,929 ^^)	**0,857**		
Enacted co-worker support						**ECS (emo)**	**ECS (info)**	**ECS (instr)**	

Construct	CR	Cron-bach	AVE	MSV	MaxR(H)	Correlations			
ECS (Emo-tional)	0,931	0,940	0,819	0,696	0,942	**0,905**			
ECS (Infor-mational)	0,788	0,824	0,651	0,766	0,797	0,760 *** (0,767)	**0,807**		
ECS (Instru-mental)	0,892	0,934	0,806	0,766	0,908	0,834 *** (0,833)	0,875 *** (0,890 ^)	**0,898**	
Enacted co-worker support and satisfaction						**ECS (Satisf)**	**ECS (Total)**		
ECS (Satis-faction)	0,923	0,963	0,800	0,673	0,936	**0,894**			
ECS (Total)	0,903	0,951	0,577	0,673	1,000	0,821 *** (0,955 ^^)	**0,760**		
PsyCap (t1) – three-factor model						**Hope-Opti-mism**	**Effica-cy**	**Resil-ience-Hope**	
Hope-Optimism	0,834	0,815	0,558	0,537	0,844	0,747			
Efficacy	0,839	0,826	0,635	0,448	0,850	0,669 *** (0,687)	0,797		
Resilience-Hope	0,714	0,702	0,390	0,745	0,745	0,733 *** (0,732)	0,645 *** (0,622)	0,625	
PsyCap (t2) – three-factor model						**Hope**	**Effica-cy-Resil-ience**	**Resil-ience-Opti-mism**	
Hope	0,783	0,782	0,546	0,541	0,784	0,739			
Efficacy-Resilience	0,734	0,720	0,421	0,534	0,783	0,731 *** (0,726)	0,648		
Resilience-Optimism	0,728	0,724	0,474	0,541	0,742	0,736 *** (0,735	0,635 *** (0,679)	0,689	

***. p<0.01
(In brackets). HTMT ratio
^ *HTMT ratio exceeds threshold of < 0,850 for strict discriminant validity*

^^ *HTMT ratio exceeds threshold of < 0,9 for liberal discriminant validity)*

Table 67: HTMT analysis to assess discriminant validity for latent constructs

	Psy-Cap (t1)	Psy-Cap (t2)	ESS (Emo)	ESS (Info)	ESS (instr)	ECS (Instr)	ECS (Info)	ECS (Emo)	ECS (Sat)	ESS (Sat)
PsyCap (t1)										
PsyCap (t2)	0,792									
ESS (Emo)	0,138	0,061								
ESS (Info)	0,134	0,072	0,967 ^^							
ESS (Instru)	0,188	0,122	0,927 ^^	0,943 ^^						
ECS (Instru)	0,144	0,036	0,444	0,435	0,468					
ECS (Info)	0,149	0,000	0,528	0,577	0,510	0,931 ^^				
ECS (Emo)	0,152	0,014	0,491	0,481	0,545	0,832	0,809			
Perceived support	0,685	0,473	0,255	0,249	0,316	0,236	0,237	0,246		
ECS (Sat)	0,162	0,000	0,477	0,501	0,470	0,897	0,956 ^^	0,867	0,374	
ESS (Sat)	0,151	0,100	0,915 ^^	0,946 ^^	0,877 ^	0,520	0,594	0,526	0,283	0,579

^ *HTMT ratio exceeds threshold of < 0,850 for strict discriminant validity*
^^ *HTMT ratio exceeds threshold of < 0,9 for liberal discriminant validity*

/end