Work-related basic need satisfaction and flourishing of employees in a corporate pharmacy environment.

C Coetzer

21086648

B.Pharm

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Supervisor: Mrs MJ Basson

Co-Supervisor   Dr JC Lamprecht

Assistant- Supervisor   Ms MJ Eksteen

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"Psychology is not just the study of weakness and damage; it is also the study of strength and virtue. Treatment is not just fixing what is broken; it is nurturing what is best within us."

Martin E.P. Seligman

SUMMARY

Title

Work-related basic need satisfaction and flourishing of employees in a corporate pharmacy environment

Key terms

Work-related basic need satisfaction, flourishing, performance, pharmacy environment

South Africa currently has one pharmacist per 3849 of the population, which is considerably below the recommendation of one per 2300 of the population. Pharmacists are under a lot of pressure to perform at a certain level with not much to aid them in their day-to-day duties and their psychological needs. If pharmacists' stress levels are not managed, their physical and mental health may be compromised, as may their patients' safety. The construct of basic need satisfaction may be useful to gain insight in employees' functioning and to examine the motivational potential of organisational factors. Information about the need satisfaction of pharmacy employees is important as it may heighten the functioning and productivity of employees to a degree which will reduce costs connected with stress and turnover. This information will aid organisations to create environments that lessen the stress and turnover intentions of employees, thereby reducing the costs related to stress and turnover.

The aims of this research were divided into general and specific aims. The general aim of this study was to investigate work related basic need satisfaction and flourishing of employees in a corporate pharmacy environment.

A cross-sectional survey design was used. Data was collected through questionnaires in the empirical investigation, namely the Work-related Basic Need Satisfaction Scale (W-BNS) and the Mental Health Continuum Short-Form (MHC-SF). The study sample was compiled from a corporate retail pharmacy group.

The satisfaction of the need for relatedness reflected as the most prominent result of the three basic psychological needs. Respondents mostly chose "agree" (mean = 3.9) on a 5-point Likert scale ranging from 1 which is totally disagree to 5 which is totally agree. This indicates that employees feel that their need for relatedness is being satisfied.

Respondents that flourish and are moderately mentally healthy differ in how they feel with regard to the satisfaction of their needs for autonomy and relatedness. It was thus shown that the levels of need satisfaction for autonomy and relatedness of flourishing employees are higher than those of the moderately mentally healthy employees.

Recommendations for further research are made.

OPSOMMING

Titel

Werkverwante basiese behoeftebevrediging en voorspoed van werknemers in 'n korporatiewe farmasie-omgewing.

Sleutelterme

Werkverwante basiese behoeftebevrediging, voorspoed, prestasie, farmasie-omgewing

In Suid-Afrika is daar tans een apteker per 3 849 van die bevolking, wat aansienlik benede die aanbevole een per 2 300 van die bevolking is. Aptekers verkeer onder geweldige druk om teen 'n bepaalde vlak te presteer, sonder veel ondersteuning vir die verrigting van hulle daaglikse pligte en hulle psigologiese behoeftes. Indien die stresvlakke van aptekers nie verlaag word nie, kan hulle fisiese en geestelike gesondheid daaronder ly, wat ook 'n invloed op hulle pasiënte se veiligheid kan uitoefen. Die samestelling van basiese behoeftebevrediging kan handig wees ten einde insig omtrent die funksionering van werknemers te verkry en om die motiveringspotensiaal van organisatoriese faktore te ondersoek. Inligting omtrent die behoeftebevrediging van apteekwerknemers is belangrik aangesien dit die funksionering en produktiwiteit van werknemers sal verhoog, tot op so 'n vlak wat die koste wat aan stres en omset verbonde is, verlaag. Hierdie inligting sal organisasies help om omgewings te skep waar die stres en beplande omset van werknemers laer is, en deur dit te doen, die koste verbonde aan stres en omset verlaag.

Die doel van hierdie navorsing sal in algemene en spesifieke doelstellings verdeel word. Met verwyding na die bogenoemde probleemstelling, is die algemene doel van hierdie studie om die werkverwante basiese behoeftebevrediging en voorspoed van werknemers in 'n korporatiewe farmasie-omgewing te bepaal.

Daar was van 'n deursneeontledingsontwerp gebruik gemaak. Gegewens was deur middel van vraelyste in die studieondersoek ingesamel, naamlik die Werkverwante Basiese Behoeftes Bevredigingskaal (W-BNS) en die Geestelike Gesondheid

Kontinuum Kortvorm (MHC-SF). Die studiemonster was uit 'n korporatiewe handelsapteekgroep saamgestel.

Die genoegdoening van die behoefte om te behoort staan uit as die mees prominente resultaat uit die drie basiese psigologiese behoeftes. Respondente het vernaam "Stem saam" (gemiddeld = 3.9), op 'n 5-punt Likert skaal, waar 1 daarop dui dat die persoon glad nie saamstem nie, en 5 aandui dat die persoon heeltemal saamstem. Dit dui daarop dat die werknemers voel dat hulle behoefte om te behoort bevredig word.

Respondente wat voorspoedig is, en redelik geestelik gesond is, voel verskillend omtrent die bevrediging van hulle behoeftes vir outonomie en om te behoort. Die aanduiding was dus dat die vlakke van behoeftebevrediging van outonomie en om te behoort, van voorspoedige werknemers hoër was as die van redelik geestelik gesonde werknemers.

Aanbevelings vir verdere navorsing word gemaak.

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

SDT   Self-determination Theory

MHC-SF   Mental Health Continuum Short-Form

W-BNS   Work-related Basic Need Satisfaction Scale

MHC-LF   Mental Health Continuum Long-Form

ANOVA   Analysis of Variance

CHAPTER 1

INTRODUCTION

This dissertation discusses work-related basic need satisfaction and flourishing of employees in a corporate pharmacy environment. In Chapter 1 the rationale for the research is given. The problem statement, the research aims; research method and chapter division is deliberated.

1.1 Problem statement and substantiation

The shortage of pharmacists is a well-documented trend. In South Africa the estimated population in 2011 was 50,59 million (Lehohla, 2011). In 1998, according to the South African Pharmacy Council, there were 10 089 pharmacists registered with the council of whom 83% are practicing full time. This means that there was only one pharmacist for every 3 752 people living in South Africa (South African Pharmacy Council, 1998). As of April 2010, according to the South African Pharmacy Council, there were 12 813 pharmacists and 9 071 pharmacist's assistants registered. Of the registered pharmacists, 63% was logged as practicing in the private sector (South African Pharmacy Council, 2011).

Currently a scarcity of pharmacists is still being experienced, with the reported average vacancy rates ranging from 36% to 76% in certain regions. South Africa currently has one pharmacist per 3 849 population which is considerably below the recommendation of one per 2 300 population (South African Pharmacy Council, 2011).

Because of the increased use of prescription drugs, pharmacists' services are in high demand (Mott, Doucette, Gaither, Pedersen, & Schommer, 2004). In the United Kingdom, some pharmacists experience additional pressure because they need to meet certain targets in the corporate environment (Eden, Schafheutle, & Hassell, 2009). The increasing work load influences job satisfaction and, in some cases, the well-being of pharmacists (Gidman, Hassell, Day, & Payne, 2007).

Stress may affect pharmacists' ability to practice efficiently (McCann, Hughes, Adair, & Cardwell, 2009). Community pharmacists in the UK express discontent to the deficiency or lack of resources e.g. support staff (Eden *et al.*, 2009). It is thus evident

that pharmacists are under a lot of pressure to perform at a certain level with not much to aid them in their day-to-day duties and their psychological needs.

According to Cooper and Cartwright (1994), employee health and well-being may be affected by unfavourable job conditions. If the work environment is over-challenging, overly controlling or rejecting, individuals' vulnerabilities will dominate and their dysfunctions will become apparent (Van den Broeck, Vansteenkiste, & De Witte, 2008). If pharmacists' stress levels are not reduced, their physical and mental health may be compromised, as may the safety of their patients (Mott *et al.*, 2004).

According to Harter J.K., Schmidt, and Keyes, (2003) performance of employees and their workplaces are not independent from the employees' well-being. They report that basic needs in workplaces transcend company and industry boundaries. One concept from the well-being perspective is flourishing. Flourishing is described as the presence of mental health, whereas languishing is the absence of mental health. Mental health constitutes three factors, namely emotional, social and psychological well-being (Keyes, 2002).

Employees that flourish have the lowest prevalence of work disability e.g., whether a person missed a whole day or cut back work by a half day at least once in the past 30 days, the least risk to develop major depressive disorders and the healthiest psychological functioning (Keyes, 2007; Van den Broeck, Vansteenkiste, De Witte, Soenens & Lens, 2009).

It has been shown that benefits will be achieved by healthcare organisations if positive work outcomes are maximised and negative work outcomes are minimised. Enhancing interpersonal interactions, developing commitment to the profession and greater consideration of non-work factors are listed as ways to better pharmacists' work environment (Gaither, Kahaleh, Douchette, Mott, Pederson & Schommer, 2008).

Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens (2009, p. 4) found that "the construct of basic need satisfaction may be useful to gain insight in employees' functioning and to examine the motivational potential of organisational factors". Self-

determination theory (SDT) has developed to a rich theory of human motivation and functions most favourable where individuals can be best motivated by sustaining their endogenous capabilities (Van den Broeck *et al.*, 2008) and will be used as framework in this study. Other motivational theories distinguish between external and internal motivation, but SDT distinguishes between autonomous and controlled motivational behaviour that lies on a continuum (Deci & Ryan, 2000). There is a gap in the research literature as to the possibilities of applying the above-mentioned to a corporate pharmacy environment of South Africa.

There are three basic psychological needs: the need for autonomy; competence; and relatedness (Deci & Ryan, 2000). Central to the definition of autonomy within SDT is the desire to act out of own choice, to be the author of one's own actions; competence is about being master of the environment and realising desired outcomes; and belongingness or relatedness is the propensity to feel connected to others.

The fulfilment of these needs has been identified as an important predictor of individuals' flourishing. Employees' need satisfaction is important as it may heighten employees' functioning and productivity to a degree which will reduce costs connected with stress and turnover (Van den Broeck *et al.*, 2009).

Research has been done that confirmed the positive associations between need satisfaction and performance, indicating that the beneficial effects of need satisfaction go beyond employees' well-being (Van den Broeck *et al.*, 2009).

If managers apply SDT as framework, employees are likely to display optimal performance and well-being because they will be working in a context in where their inherent tendency is protected, cared for and encouraged (Deci & Ryan, 2000).

The researcher did not find sufficient literature regarding the relationship between psychological needs, flourishing and work performance in the corporate pharmacy environment.

In conclusion, this study will benefit the corporate pharmacy organisation as a whole, but also the employees as individuals. The study is significant in the sense that every employee's work-related basic needs scale and degree of flourishing were determined. Employees benefited by receiving feedback on the results of the study and also, where interventions were made.

The following research questions followed from the problem statement:

- What is the experience of pharmacy employees in a corporate pharmacy environment?
- How SDT (especially basic psychological need satisfaction) and flourishing are conceptualised in the literature?
- What are the theoretical relationships between work-related basic need satisfaction, performance and flourishing?
- What are the levels of work related basic need satisfaction and flourishing of pharmacy employees in a corporate pharmacy environment?
- Is there a relationship between work related basic need satisfaction and flourishing of pharmacy employees in a corporate pharmacy environment?
- Can work-related basic need satisfaction predict the levels of flourishing of pharmacy employees in a corporate pharmacy environment?

To answer the above research questions, the following research aims were presented.

1.2 Research aims
The research aims were divided into general and specific aims.

1.2.1 General aim

With reference to the above problem statement, the general aim of this study is to investigate work related basic need satisfaction and flourishing of pharmacists in a corporate pharmacy environment.

1.2.2 Specific aims

The specific research aims are divided into literature aims and empirical aims:

1.2.2.1 Literature aims

The literature aims are to:

- Determine the current experiences of pharmacists and employees within the pharmacy environment,
- Conceptualise motivation, work-related basic need satisfaction, flourishing and performance; and
- Conceptualise the possible relationships between motivation, work related basic need satisfaction, well-being (flourishing) and performance.

1.2.2.2 Empirical aims

The empirical aims are to:

- Determine the levels of work related basic psychological needs of pharmacy employees in a corporate environment;
- Determine the proportions of pharmacy employees that are flourishing, moderately healthy or languishing in the corporate work-environment;
- Determine the relationships between work-related basic psychological need satisfaction and flourishing of pharmacy employees; and
- Determine whether work-related basic need satisfaction can predict the level of flourishing of pharmacy employees.

This concludes the research aims.

1.3 Research method

The research method consisted of two phases, namely a literature review and an empirical investigation.

1.3.1 Literature review (Phase 1)

The literature review included the concepts of well-being, performance and flourishing. The literature review also focused on the relationship between these concepts.

1.3.2 Empirical investigation (Phase 2)

The empirical investigation consisted of the following steps:

1.3.2.1 Step 1: The research design

A survey design was used to answer the research questions. This was a cross-sectional survey consisting of questionnaires (Creswell, 2003). A cross-sectional study implies that the data and results will describe the sample at a specific point in time.

1.3.2.2 Step 2: The study sample

A convenience sample was used for the study (N = 82). The organisation has 129 branches spread across all nine provinces of South Africa. Branches in four provinces were involved in the study. The study was approved by the Ethics Committee of North-West University, Potchefstroom Campus with the number NWU0010812S5. The pharmacy employees of a corporate retail pharmacy group took part in the study. The organisation's divisional personnel manager gave permission to assist the researcher with the study.

1.3.2.3 Step 3: The measuring battery

Data was collected through validated questionnaires in the empirical investigation, namely the Mental Health Continuum-Short Form (MHC-SF) (Lamers, Westerhof, Bohlmeijer, Ten Klooster, & Keyes, 2011) and the Work-related Basic Need Satisfaction Scale (W-BNS) (Van den Broeck *et al*., 2009).

The MHC-SF is a newly validated self-report questionnaire for the assessment of positive mental health (Lamers *et al*., 2011). The MHC-SF consists of 14 items (Keyes, Wissing, Potgieter, Temane, Kruger, & Van Rooy, 2008), taking into account the various feelings of well-being (Lamers *et al*., 2011). Employees will rate the frequency of every feeling in the past month according to a six-point Likert scale (every day, almost every day, twice a week, once a week, twice a month, never) (Lamers *et al*., 2011).

The W-BNS (Van den Broeck *et al*., 2009) determines the levels of satisfaction of the three basic psychological needs, namely autonomy; competence; and relatedness in a work context. Employees responded on a five-point Likert scale that ranged from 1

(totally disagree) to 5 (totally agree) (Van den Broeck *et al.,* 2009). Van den Broeck *et al.* (2009) also demonstrated that the W-BNS has a clean factor structure, in that the needs are related yet with distinct constructs and that the satisfaction and frustration of each of the needs may best be conceived of as opposite poles of the same continuum. Good reliability and criterion-related validity of the W-BNS was also proven.

1.3.2.4 Step 4: Administration

The employees had to read the instructions on every questionnaire and respond to each item. All the respondents received exactly the same questions in exactly the same order. Attached to the questionnaire (Addendum 2) was a letter (Addendum 1) to the respondents which explained the focus of the research and requested the respondents' co-cooperation. It was also explained that all the information will be kept confidential. The researcher compiled the questions of the demographic questionnaire (Addendum 2). Both the MHC-SF and the W-BNS are validated questionnaires that have been used in other studies (Keyes, Eisenberg, Perry, Dube, Kroenke & Dhingra, 2012; Keyes *et al.*, 2008; Lamers *et al.*, 2011; Van den Broeck *et al.*, 2009).

Great care was taken to ensure anonymity of respondents as will be discussed in Chapter 3. Results were analysed and feedback were given to employees who request feedback.

1.3.2.5 Step 5: Statistical analysis

The statistical analysis was carried out with the help of a statistician who used IBM SPSS Statistics (originally, Statistical Package for the Social Sciences) Version 21 (SPSS Inc., 2013). Cronbach alpha (α) coefficients were used to determine the reliability of the measuring instruments (Clark & Watson, 1995).

In the analysis of the data, descriptive statistics (the organising and summarisation of data with tables and graphics and the calculation of descriptive measures e.g. standard deviations and means) were used. A non-probability sample was used in the research, thus effect sizes (rather than inferential statistics) were used to determine the practical significance of the results. The relationship between the

variables was specified by Spearman's rho. According to Cohen (1988), a cut-off point of 0,30 (medium effect) must be set for the practical significance of correlation coefficients. Effects sizes were calculated, a One-way ANOVA test as well as cross tabulation were done.

1.3.2.6 Step 6: Report and discussion of the results of the empirical study

The results were evaluated, discussed and tabulated with reference to the research questions. The objective was to relate the results to the literature study. The information gathered in this research aimed to answer the research questions and adhered to the specific objectives.

1.3.2.7 Step 7: Conclusions and recommendations

Conclusions based on the results and research questions were presented. Recommendations for the implementation of results and further research were formulated.

1.4 Chapter division

The chapters are organised as follow:

Chapter 2: Flourishing, work-related basic need satisfaction and performance

Chapter 3: Empirical investigation

Chapter 4: Results and discussion

Chapter 5: Conclusions and recommendations

1.5 Chapter summary

In this Chapter, the problem statement, research aims and research method were briefly discussed. Chapter 2 gives attention to the terms motivation, flourishing, work-related basic need satisfaction and performance.

CHAPTER 2

FLOURISHING, WORK-RELATED BASIC NEED SATISFACTION AND PERFORMANCE

In this Chapter, the experiences of pharmacy employees in a corporate environment are explored. Mental health, work-related basic need satisfaction and performance are also conceptualised and described. The historical paradigms, different models and factors influencing each concept are depicted. The theoretical relationships between flourishing, work-related basic psychological need satisfaction and performance are also described.

2.1 Occupational stress

The practice of a profession can be satisfying and very stressful at the same time (Gaither *et al.*, 2008). Rothmann and Malan (2007) define occupational stress as "the mind-body arousal resulting from physical and/or psychological job demands". Stress is experienced as a feeling of being out of control and helpless (Cooper & Cartwright, 1994).

2.1.1 The experience of pharmacy employees in a corporate environment

A healthy organisation is considered as being financially successful, having a physically and psychologically healthy workforce which can be upheld over time with a satisfying work environment especially through difficult times of changes, for example increasing dispensing volumes, the workload in community pharmacy and the role of community pharmacist (Cooper & Cartwright, 1994; Gidman *et al.*, 2007). All these changes clearly influence the work experience of pharmacists (Desselle & Tipton, 2001). Participants in a previous study felt that, as pharmacists, they are underutilised and undervalued and working in a corporate environment can be very target driven, which can also be a cause of stress in pharmacists (Eden *et al.*, 2009).

This concludes the literature aim of determining what pharmacists and employees presently experience in the pharmacy environment.

2.1.2 Different stressors in the pharmacy

According to Rothmann and Malan, (2007) the most serious stressor is the inaccessibility of medicine. Other stressors include poorly motivated co-employees and unsatisfactory salaries. Previous research also identified that being interrupted by telephone calls or other people while performing duties, an escalating workload and a lack of resources such as a shortage in staff cause stress in community pharmacists (Eden *et al.*, 2009; Rothmann & Malan, 2007). Another important factor which contributes to stress for community pharmacists is staying up to date with new developments to uphold professional competence (McCann *et al.*, 2009). Previous research has shown that pharmacy employees in lower grade jobs are more stressed because they do not have as much control over their job responsibilities (McCann *et al.*, 2009). Relationships with other employees such as superiors, colleagues and subordinate also have the potential of being stressful (Cooper & Cartwright, 1994) but in a more optimal interpersonal environment, the work life of pharmacists can be improved (Gaither *et al.*, 2008). Because of high expectations, high level of responsibility and insufficient social support at work, healthcare workers can also suffer from occupational stress (Gaither *et al.*, 2008; McCann *et al.*, 2009) which may cause decreased employee health and well-being (Gidman *et al.*, 2007; Rothmann & Malan, 2007). A relationship has been identified between stress and the prevalence of mental breakdown (Cooper & Cartwright, 1994).

The imbalance between supply and demand affects the amount and type of work being done, which probably increases the amount of stress pharmacy employees experience. There is an interaction between the work environment and the amount and type of work pharmacists do and this can influence the pharmacists' attitude toward their work (Mott *et al.*, 2004).

Occupational stress is on the increase and it needs to be taken note of and reduced because pharmacists place both themselves and their patients at risk (Gidman *et al.*, 2007; McCann *et al.*, 2009).

2.1.3 Disadvantages of stress in the pharmacy

Stress has a dysfunctional effect on individual outcomes and can also reach as far as organisational outcomes (Cooper & Cartwright, 1994). In a study completed by Eden, Schafheutle and Hassell (2009), participants felt that the leaders within the pharmacy profession could do more to enable role development (Eden *et al.*, 2009). The costs of occupational stress to business and industry in monetary terms have become more documented recently and occupational stress will most likely continue to pressure the financial health of organisations (Cooper & Cartwright, 1994).

A previous study found that time-stressed pharmacists did not provide complete patient counselling in relation to those who were less stressed (Gaither *et al.*, 2008). The stress that pharmacists experience at work can become dangerous to their health, both physically and mentally, and can also endanger patient safety (Rothmann & Malan, 2011).

2.2 The positive side

Besides all these challenges, there are still pharmacy employees that are happy and doing well. So what is different about employees that are doing well and can this be used to assist those employees that are struggling? Burton, Lydon, Alessandro and Koestner (2006:750) asked: "How do we manage to attain our goals while being happy in the process?" Instead of concentrating only on what the organisation can provide the employee with to help them cope better with stress, organisations could be informed to contemplate what they can do to reduce or possibly even eliminate stressors in the workplace (Cooper & Cartwright, 1994).

A possible answer could be positive psychology. Positive psychology does not link itself to a disease model and so does not focus on an individual's weaknesses and the reparation of ill-being (Van den Broeck *et al.*, 2008). Positive psychology is partially defined as the investigation of factors that support human flourishing (Compton, 2005).

Positive psychology is a new discipline, which symbolise a paradigm shift, psychologically speaking, from 'what is wrong with people' to 'what is right with people' (Linley & Nielsen, 2010). Positive psychology's perspective is towards

studying positive subjective experiences and individual traits as well as social factors that nurture individual's strengths and developments (Van den Broeck *et al.*, 2008).

So instead of looking at what is wrong, this approach rather look at what is right and how it can be improved upon. Positive psychology is thus the glasses we look through when trying to answer certain questions, a perspective to find positive solutions.

By directing our focus to positive psychology, turnover related costs can be minimised, the quality of work life of the pharmacist can be increased and ultimately patient care can be improved upon (Gaither *et al.*, 2008).

2.3 Mental health

This section explores the historical perspective, definition and diagnostics of mental health.

2.3.1 Historical perspective

In the past, mental health was only seen as the absence of psychopathology but concepts of mental health have changed over the past few years (Lamers *et al.*, 2011).

2.3.2 Defining mental health

Mental health and mental illness forms part of a two-continuum model (Keyes *et al.*, 2008) which was confirmed by a factor analysis in the USA (Keyes *et al.*, 2008). Mental health is not only the absence of mental illness, as expected. Forming part of mental health, is positive feelings and functioning in both individual and community life (Lamers *et al.*, 2011). But, the absence of mental illness does not mean that an individual will experience positive feelings and function optimally in his/her personal or social life (Lamers *et al.*, 2011). Thus, the absence of mental illness does not mean the presence of mental health (Keyes, 2009; Keyes *et al.*, 2012). This means that people who fit the criteria for flourishing mental health is not equal to the people without a mental disorder (Keyes *et al.*, 2012).

2.3.3 Diagnosing mental health and mental illness

There are no specific diagnostic tests for mental health and mental illness available. Mental health and mental illness are only identifiable by collections of symptoms and observable signs (Keyes *et al.*, 2008). Concepts such as emotional well-being, psychological well-being and social well-being form part of the definition of mental health (Lamers *et al.*, 2011). Mental health can be increased by maximising positive, pleasant feelings while at the same time, minimising negative, unpleasant feelings (Lamers *et al.*, 2011). Keyes combined the social factors to develop an instrument to measure mental health.

Keyes's Categorical Diagnostic Criteria and Signs of Mental Health (Keyes, 2009) are:

1. Autonomy as demonstrated by self-direction that is guided by own, socially accepted and conventional internal standards and resistance of unpleasant social pressures;
2. Social acceptance as having a positive attitude towards others while recognising and accepting people's differences and complexities;
3. Social coherence as being interested in society and/or social life, feeling that the society and culture are intelligible, somewhat logical, foreseeable and having a purpose; and
4. Social integration as having a sense of belonging to a community and obtaining comfort and support from the community.

Mental health is the foundation for well-being (Herrman, Saxena, & Moodie, 2005), a term which will now be discussed.

2.3.4 Well-being

A discussion around the historical perspective, definition and other sub-sections of well-being follow.

2.3.4.1 Historical perspective

Well-being can bedivided into two perspectives namely hedonic and eudemonic well-being and each make exceptional contributions to well-being (Gillet, Fouquereau, Forest, Brunault, & Colombat, 2011). The eudemonic tradition comes from an

established human concern with the development of promising skills and capabilities to become a more optimally functioning person (Keyes *et al.*, 2008). The eudemonic philosophers cared more about why a person is happy instead of whether or not someone is happy (Henderson & Knight, 2012).

The hedonic theorists thought that people ultimately require maximal pleasure to minimise pain. Pleasure and pain was seen as pointers of good and bad. Thus, exploiting pleasure was seen as optimising the good in one's life. This is a rather subjective outlook since the opinion was that each individual can personally determine his or her well-being. Hedonia and eudaimonia have been reflected as ways of living and as two types of well-being (Henderson & Knight, 2012).

Modern psychologists have shown strong links between between hedonia and eudaimonia and agree that these terms can be used. For example an activity can be experienced as hedonic and eudaimonic. But there is also a distinction between hedonia and eudaimonia. For example, an activity can be experienced as hedonic in the absence of eudaimonia and therefore these concepts are different (Henderson & Knight, 2012).

Current models define well-being as a private or personal term; people are still part of a social environments and communities and have to deal with social errands and trials (Keyes, 1998). Hedonia and eudaimonia function side-by-side and that is why the general agreement is that a person who is characterised by both concepts is advantageous. The current view of well-being combined the two traditions of hedonia and eudaimonia to better seize the concept of well-being. It is thus assumed that hedonia and eudaimonia forms integral parts of an all-encompassing construct of well-being (Henderson & Knight, 2012).

2.3.4.2 Definition

In Figure 2.1, the setup of flourishing and well-being is explained as the concepts are currently understood, as fitting into one another.

Figure 2.1 The hierarchical relationship of flourishing and well-being

Adapted from; "Evaluating the psychometric properties of the mental health continuum-short form (MHC-SF)" by S.M.A. Lamers, G.J. Westerhof, E.T. Bohlmeijer, P.M. ten Klooster and C.L.M. Keyes, 2011, *Journal of Clinical Psychology, 67*(1), p. 99-110.
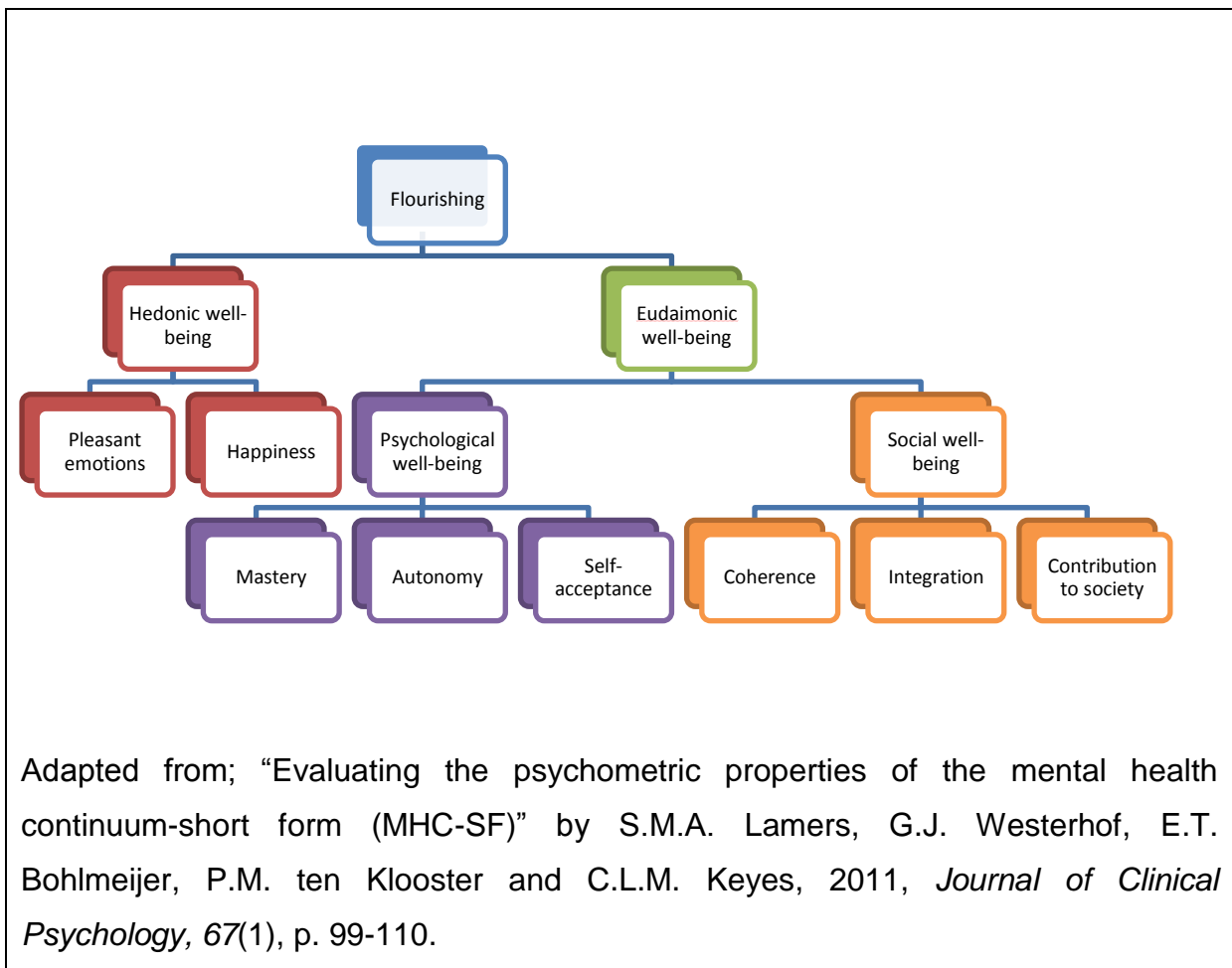
Figure 2.1 can be explained as follows:

2.3.4.2.1 Hedonic well-being

According to the hedonic tradition, happiness and the experience of pleasant emotions is what well-being is made up of (Lamers *et al.*, 2011). Hedonic well-being associates mental health with a sworn happiness in life, thus the experience of positive emotions. Hedonic well-being symbolises human concerns with optimising the amount or duration of upbeat, enjoyable feelings whilst diminishing the amount or duration of bad, unpleasant feelings (Keyes *et al.*, 2008).

The hedonic tradition focuses on the part of research on emotional well-being, which entails not only a sworn happiness in life, but also satisfaction with life and the balance of positive and negative influences over a period of time (Keyes *et al.*, 2008).

2.3.4.2.2 Eudaimonic well-being

Positive functioning compromises of six factors, three of which are related to psychological well-being and three of which are related to social well-being (Keyes, 2009). These six factors developed from the eudemonic well-being. Psychological well-being consists of mastery, autonomy and self-acceptance. Social well-being consists of coherence, integration and contribution to society (Keyes, 2009).

Well-being is an outward sign of mental health; mental health itself is unobservable from the outside (Keyes *et al.*, 2008). Thus, the measure of subjective well-being is a symptom of mental health. The satisfaction of basic psychological needs is thought to be positively closely related to both hedonic and eudemonic well-being (Van den Broeck *et al.*, 2009). Eudaimonic well-being associates mental health with human potential that could cause optimal functioning in life, should it be realised (Keyes *et al.*, 2008).

Social integration is defined as the assessment of the excellence of a person's relationship with the society. If you are healthy, you feel part of the community. In other words, integration is the degree to which a person feels that he or she has shared interests with the community, for example neighbours. Thus, people who share their social reality (Keyes, 1998).

Social responsibility is defined as the description of people's duties to contribute to society. It is thus the degree to which people feel that whatever they do in life, matters to other people in the community (Keyes, 1998).

Social coherence is the awareness of the structure, processes and features of the social environment. Healthy people care about the environment in which they find themselves and they feel that their environment with all its processes can be understood. The social structures of the environment can facilitate or inhibit a person's skill to respond to these social challenges (Keyes, 1998).

2.3.4.3 Flourishing

In 2009, Keyes developed the concept of flourishing. This concept will now be defined and discussed.

2.3.4.3.1 Definition

According to Keyes (2009), flourishing is the presence of mental health and combines both hedonic and eudemonic well-being. On a continuum, a person can be flourishing on one side or languishing on the other side. A person can also be moderately mentally healthy which lies in the middle of the continuum. Thus, high levels of both hedonic and eudemonic well-being are characteristic of a flourishing person.

Figure 2.2 A visualisation of the mental health continuum
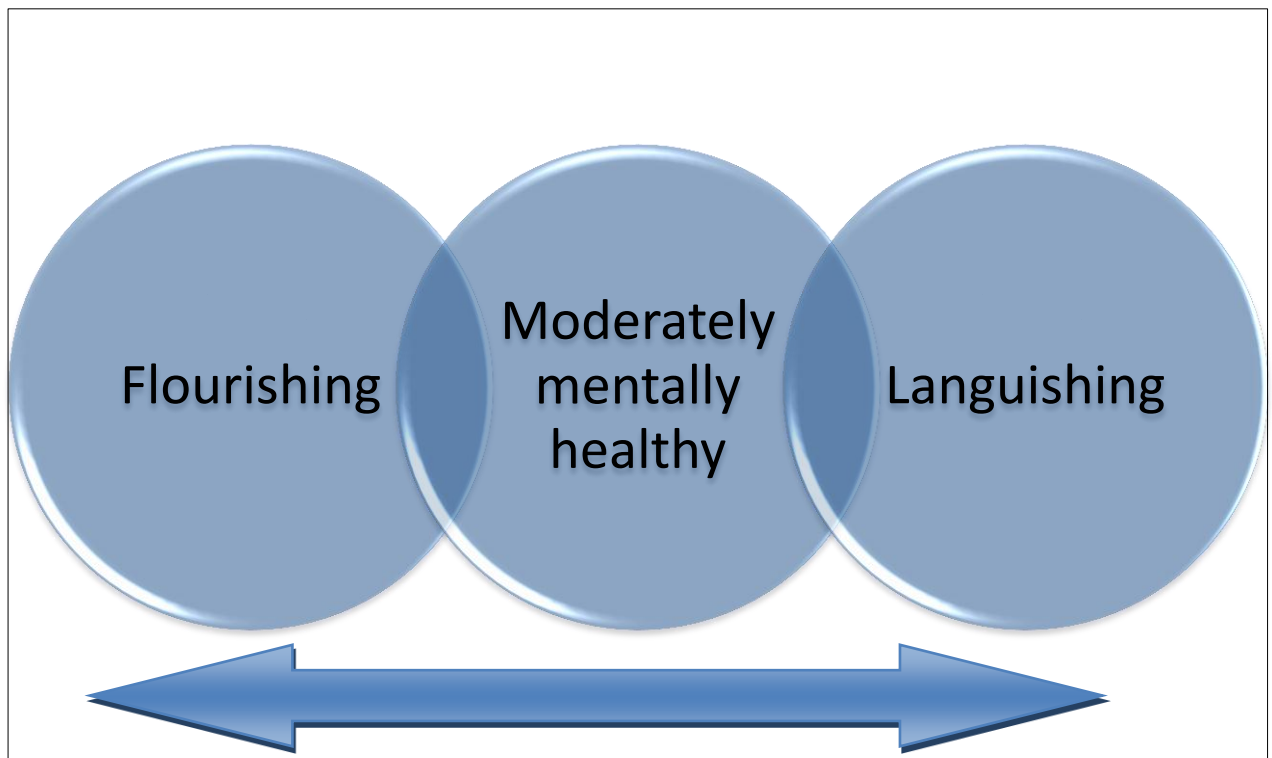
2.3.4.3.2 Implications of flourishing in the corporate environment

Keyes *et al.* (2008) has shown that "individuals who have had an episode of at least one mental disorder and who are languishing, have lower work productivity, more chronic physical conditions and greater health care consumption than moderately mentally healthy individuals with a mental disorder, who in turn function worse than individuals with a mental disorder who are flourishing."

Individuals who are flourishing indicate the lowest prevalence of major depressive incidents and any work impairment (Keyes, 2009). A study completed in the United States of America found that completely mentally healthy adults – free of a 12-month mental disorder and flourishing– had the fewest missed days of work, the healthiest

psychosocial functioning, the lowest risk of cardiovascular disease and the fewest health limitations (Keyes *et al.*, 2008).

The conclusion was made that flourishing individuals function better than those who are languishing or have moderate mental health. Flourishing individuals without a mental disorder function better than individuals who are moderately mentally healthy. Individuals who are moderately mentally healthy function better than individuals who are languishing but have no mental disorder (Keyes *et al.*, 2008). The abovementioned can be summarised according to Table 2.1:

Table 2.1 The mental health continuum

Individuals with one episode of mental disorder and languishing	Moderately mentally healthy individuals with a mental disorder	Individuals with a mental disorder who is flourishing
- **Low work productivity** - **Chronic physical conditions** - **Greater healthcare consumption**	- Moderate work productivity - Hardly any severe physical conditions - Hardly any great healthcare consumption	- Good work productivity - No severe physical conditions - No great healthcare consumption

Flourishing individuals	Languishing / moderate mentally healthy individual	Languishing with no mental disorder
Function best	Function moderately	Functions worse

This concludes the literature aim to conceptualise the term flourishing. Hereafter, motivation will be discussed to investigate possible theories so that flourishing can be improved.

2.4 Motivation

Next the historical perspective and different motivational theories will be explored.

2.4.1 Historical perspective

Various different motivational theories such as Maslow, McClelland (Van den Broeck *et al.*, 2009) and cognitive evaluation theory (Gagné & Deci, 2005) exist. Most contemporary theories of motivation is of the opinion that people initiate and continue

with behaviour because they believe it will lead to desired goals (Deci & Ryan, 2000). Previous research has shown that it is not only goal attainment that leads to well-being; it is also, more importantly, the types of goals pursued and the reason or motivation for the pursuit (Linley & Nielsen, 2010).

A short overview of some of the most influential theories important to the current study will now be discussed.

2.4.2 Maslow's hierarchy of needs

Abraham Maslow is probably the most cited and well-known human motivation theorist (Borkowski, 2011). Maslow (1987) is considered the father of humanistic psychology (Borkowski, 2011). Maslow believed that human behaviour is not only controlled by either internal or external factors but by both (Borkowski, 2011; Maslow, 1987). He also believed that some factors are superior over others (Maslow, 1987; Compton, 2005). Figure 2.3 indicates what he meant.

There are five levels of needs and humans are motivated to satisfy these needs (Borkowski, 2011; Van den Broeck *et al.*, 2009). The first of these levels include physiological needs such as food and water, the second level includes feeling safe, for example living in a safe neighbourhood, medical insurance and a retirement plan (Borkowski, 2011; Compton, 2005).

Levels three to five is less concrete and more psychological. Level three includes the wish to be cared about by others and to feel wanted. Level four, self-esteem falls into two categories namely internal self-esteem and external self-esteem. Internal self-esteem forms the higher tier above external self-esteem. External self-esteem includes for example the want to be respected by others, to be appreciated and to have some professional status (Borkowski, 2011).

Figure 2.3 Maslow's hierarchy of needs

Adapted from: "Organisational behaviour in health care" by N. Borkowski, 2011, 2nd ed, Sudbury: Jones and Bartlett Publishers."
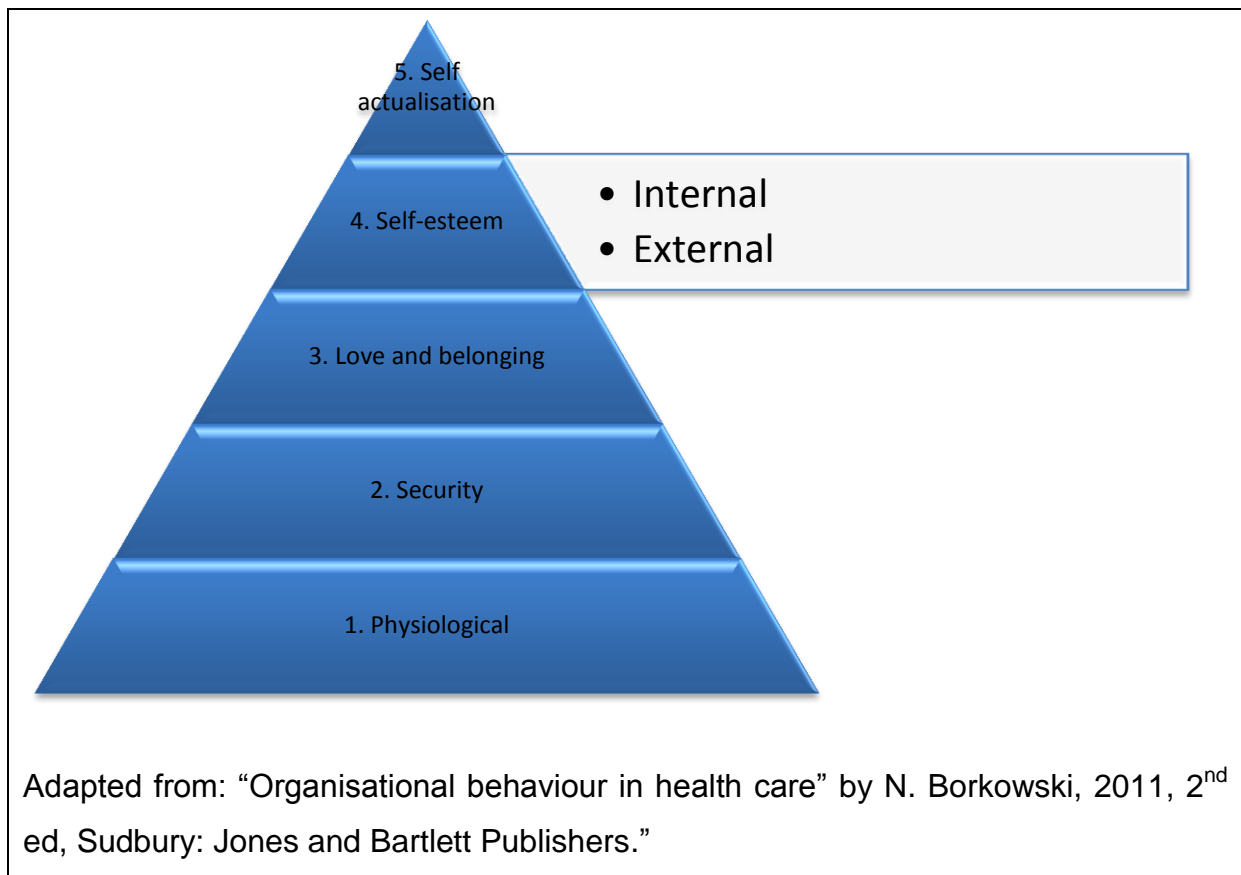
Internal self-esteem includes on the other hand for example the need to have some self-respect, autonomy and feeling confident (Borkowski, 2011). Self-actualisation, level five, describes a person's longing to become all that he or she can be. Thus, to become more than what we are to our fullest capacity.

Maslow believed that every person starts at level one and as these needs are fulfilled he or she moves on to the next level. He also made it applicable in the workplace by giving guidelines to what managers can do to help fulfil these needs of the employees. By doing this, the goal was to motivate employees better.

For example, to fulfil the security need, managers can provide employees with an adequate benefit package. To fulfil the safety need, employees seek the support of co-workers and managers. To fulfil the self-esteem need, managers can give praise to staff and to fulfil the self-actualisation need, managers can give employees a chance to show creativity and innovation (Borkowski, 2011).

2.4.3 McClelland's three-needs theory

David McClelland (McClelland, 1985) also explained human motivation according to needs, and in his theory, three needs. He tested individual's responses to pictures of groups of people gathered together and according to that he identified three needs, namely: achievement; power; and affiliation (Borkowski, 2011; Van den Broeck *et al.*, 2009).

The need for achievement is described as the need to shine and prosper. High achievers are more likely to choose moderately challenging tasks and assume the responsibility for their own performance (Borkowski, 2011). The need for power is described as the need to be influential on other individuals. This can have a positive and a negative impact. The need for affiliation is the need to be adored and accepted by others, thus a strong need for interpersonal relationships.

McCelland believed that people have a combination of these abovementioned needs with a stronger tendency towards one and it is this tendency that affects an individual's behaviour and management style (Borkowski, 2011). McClelland (McClelland, 1985) believed that managers with a strong need for affiliation weaken his or her objectivity and capability to make decisions because of the need to be liked by employees. Persons with high power needs are interested in leadership roles but the downside is that they may not be very adaptable and usually lack human relationship skills, which are very important when interacting with employees (Borkowski, 2011).

McClelland (McClelland, 1985) claimed that persons with high achievement needs are the best leaders, although they could expect too much from employees because he or she could assume that everyone is driven by results (Borkowski, 2011).

2.4.4 Vroom's expectancy-value theory

Victor Vroom's (Vroom, 1964) expectancy theory proposes that for any given situation, the level of the individual's motivation regarding performance depends on three factors namely: 1) his or her need for an outcome; 2) the perception that the individual's job performance is related to achieving other outcomes; and 3) the perceived likelihood that his or her work will lead to the required performance (Borkowski, 2011). According to Vroom, there are three factors that energise an

individual to perform, namely: valence; instrumentality; and expectancy (Vroom, 1964; Borkowski, 2011).

Valence represents the strength of an individual's need or dislike for a specific outcome. An outcome has a positive valence if the individual prefers to achieve the outcome rather to not to achieve it. A valence of zero indicates that the individual is indifferent about whether the outcome is achieved or not and a negative valence indicates that the person would rather not achieve the outcome (Borkowski, 2011).

Instrumentality is the perception of the individual that his or her performance is related to other outcomes, either positively or negatively (Borkowski, 2011). Further, an individual will perform in a certain manner because he or she believes that the behaviour will be rewarded with something that has value to the individual (Borkowski, 2011).

Expectancy is the perception of the individual that his or her work will positively influence his or her performance. It is thus a brief belief that a particular effort will be followed by a particular outcome (Borkowski, 2011).

This is a very valuable theory for managers because it assist them to understand employee behaviour (Borkowski, 2011).

2.4.5 The hierarchical model of intrinsic and extrinsic motivation

Some researchers are of the opinion that the difference in intrinsic and extrinsic motivation is very important to understand mental health, well-being and basic motivation (Compton, 2005).

This model reflects on the different types of motivation (intrinsic and extrinsic) at three levels of overview, how these motivations are connected and the causes and concerns thereof (Vallerand, 2000). Figure 2.4 shows the model as adapted by Vallerand (2000).

This model is based on four postulates (Vallerand, 2000). Firstly, it is important to consider motivation from a multidimensional viewpoint. Secondly, intrinsic motivation, extrinsic motivation and motivation occur at three hierarchical levels of generality, namely: global; contextual; and situational.

Global implies the personality level; contextual implies the life domain level; and situational implies the state level.

Figure 2.4 The hierarchical model of intrinsic and extrinsic motivation

	Social factors	**Mediators**	**Hierarchical levels of motivation**			**Consequences**
Global level	Global factors ➡	Autonomy ➡ Competence Relatedness	Global motivation (*IM, EM, AM) ➡			Affect Cognition Behaviour
Contextual level	Contextual factors ➡	Autonomy Competence Relatedness ➡	Contextual Motivation			Affect Cognition Behaviour
			Education (IM, EM, AM) ⬌	Interper-sonal relations (IM, EM, AM) ⬌	Lei-sure (IM, EM, AM) ➡	
Situational level	Situational factors ➡	Autonomy Competence Relatedness ➡	Situational motivation (IM, EM, AM) ➡			Affect Cognition Behaviour

* IM = Intrinsic motivation, EM = Extrinsic motivation, AM = Amotivation

Global motivation mentions a broad nature to take part in activities with an intrinsic or extrinsic orientation. Contextual motivation mentions motivational orientations that are explicitly related to certain contexts such as interpersonal relationships or leisure. Situational motivation is the last level of generality and indicates the here and now of motivation (Vallerand, 2000).

Another important aspect of the model is the motivational determinants. According to the model, motivation results from social factors at each of the three levels of generality. In other words, situational factors can have an effect on situational motivation, contextual factors can have an effect on contextual motivation and globally factors can have an effect on global motivation (Vallerand, 2000). Also, the influence of social factors on motivation is theorised to be facilitated by experiences of autonomy, competence and relatedness.

Thirdly, motivation is also influenced by the interaction between the three levels of generality (Vallerand, 2000). There is a top-down effect from motivation at a higher level to a lower level (downward arrows in Figure 2.5) and vice versa (upward arrows in Figure 2.4). There is also an interaction between the different types of contextual motivations (sideways arrows in Figure 2.4).

The fourth and final postulate states that motivation creates psychological outcomes namely cognitive, affective and behavioural (Vallerand, 2000). Another important point that the model constructs is that intrinsic motivation produces the most positive consequences and certain types of extrinsic motivation and amotivation produce the most negative outcomes. Intrinsic motivation is working when a person is bound to take part in an activity for its own sake regardless of any external reward (Compton, 2005). Extrinsic motivation operates where people act to receive an external reward, for example praise, money, status or any other enticement that comes from the outside (Compton, 2005).

Out of the discussion it is clear that there are a lot of motivational theories, but the current study focuses on describing motivation from the framework of SDT (see Figure 2.5). This concludes the literature aim of conceptualising motivation.

2.5 Self-determination theory (SDT)

Figure 2.5 The hierarchical relationships of motivation and the self-determination continuum

Adapted from: "The "what" and "why" of goal pursuits: Human needs and the self-determination of behaviour" by E.L. Deci and R.M. Ryan, 2000, *Psychological Inquiry,11*(4), p. 237."
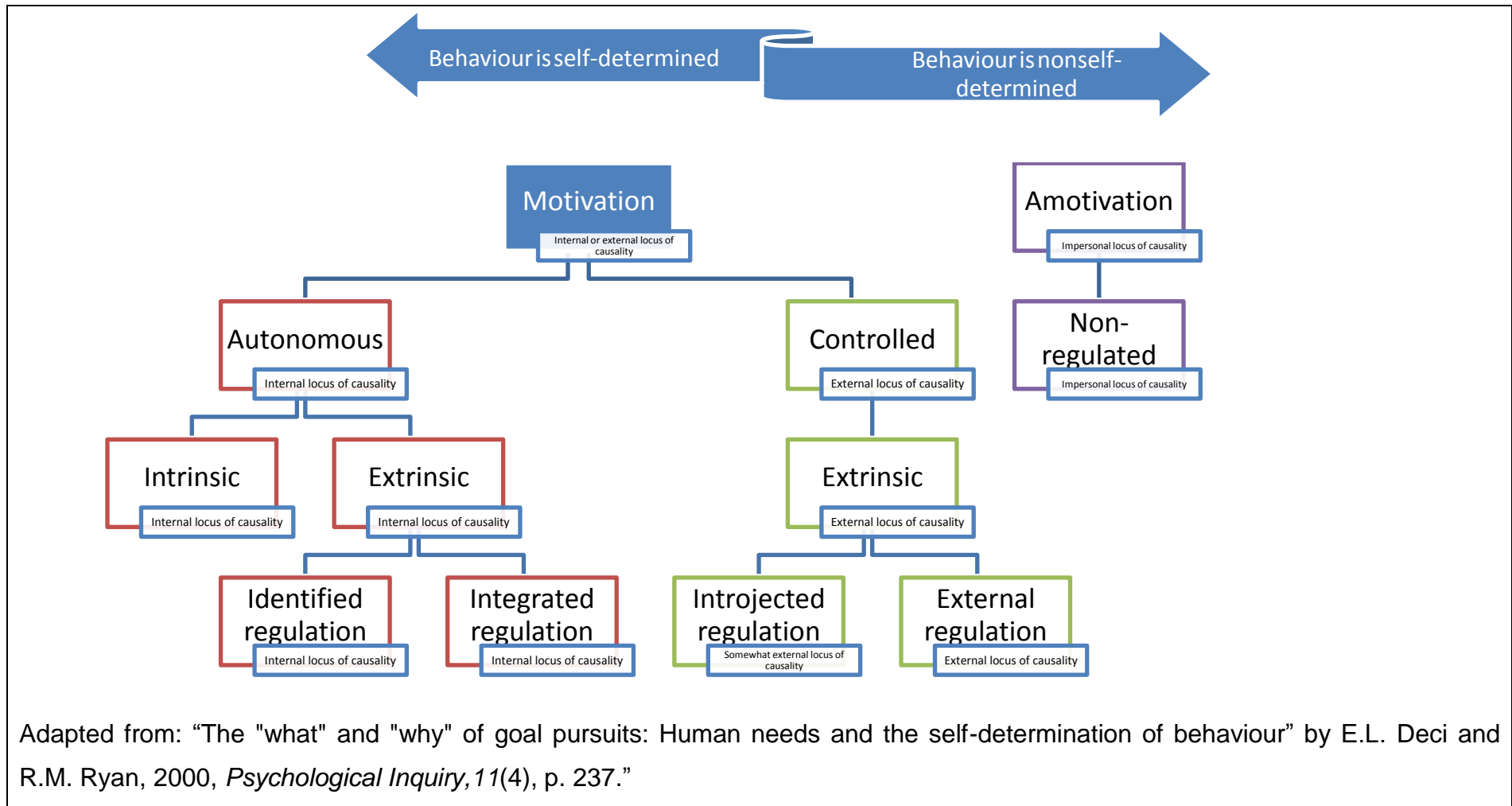
2.5.1 Background on self-determination theory (SDT)

Self-determination theory (SDT) is a motivational theory and it is important for a motivational theory to distinguish between different types of motivation to be able to be used to make forecasts. SDT is such a motivational theory (Gagné & Deci, 2005). SDT distinguishes between the content of goals and the monitoring processes through which goals are chased (Deci & Ryan, 2000). By this distinction, predictions can be made for different goals and different processes.

Other motivational theories distinguish between external and internal motivation, but SDT distinguishes between the relative strength of autonomous and controlled motivational behaviour that lies on a continuum (Deci & Ryan, 2000; Gagné & Deci, 2005). Along this continuum, between intrinsic motivation and amotivation, there are four types of extrinsic motivation namely identified regulation; integrated regulation; introjected regulation; and external regulation. External regulation is the most controlled type (least self-determined) of motivation.

Within previous models, little information is available on the processes underlying the relationships between job characteristics and the employee's well-being. Different studies have shown that SDT can clarify this issue (Van den Broeck *et al.*, 2008).

SDT does not focus on the total amount of motivation like other work motivation theories (Gagné & Deci, 2005). Like positive psychology, SDT is also not linked to a disease model and does not focus on ill-being and flaws (Van den Broeck *et al.*, 2008). Self-determination theory assumes that autonomous and controlled motivation differs because of their underlying processes and experiences. SDT thus developed from the separation of extrinsic motivation into types that vary in degree of autonomy (Gagné & Deci, 2005).

SDT suggests that individuals own an innate striving to make their potentials a reality, to elaborate their knowledge (growth), expand their interests, seek challenges and explore the world (Van den Broeck *et al.*, 2008; Ryan, Bernstein, & Brown, 2010). To prove the effectiveness of SDT, there were researchers who reviewed the results of studies. Reviewed findings were very full-bodied because they were acquired through a diverse lot of methodological designs, methods and statistical analyses (Vallerand, Pelletier, & Koestner, 2008). Methodological designs included

experiments, correlations, prospective studies and longitudinal studies (Vallerand *et al.*, 2008). Methods included observations, informants, paper-pencil and response latencies. Statistical analyses included tests for variance, structural equation modelling and cluster analysis (Vallerand *et al.*, 2008).

All of the abovementioned constantly found similar outcomes across a multitude of different fields, in line with the theoretical views of SDT. This is not only evidence of just how extensive the theory is but also of its internal, external and ecological validity (Vallerand *et al.*, 2008).

SDT describes the level to which an external regulation has been internalised. SDT also postulates that behaviours can be explained in terms of the degree to which it is autonomous or controlled (Gagné & Deci, 2005). SDT postulates that motivation varies in kind and that the most adaptive outcomes can be achieved by the most self-determined types of motivation (Vallerand *et al.*, 2008).

SDT thus has a slightly different perspective of the interplay between intrinsic and extrinsic motivation because other theories consider intrinsic and extrinsic motivation merely as additive (Van den Broeck *et al.*, 2008). According to SDT, people can at any time fully integrate a new regulation, under ideal conditions (Gagné & Deci, 2005).

2.5.2 Why SDT?

SDT considers that both the quantity or strength, and quality or type of motivation determines optimal functioning (Van den Broeck *et al.*, 2008). Thus, we should not only look at the quantity of motivation (i.e. high levels of motivation) but also take into consideration the quality of motivation (i.e. the presence or absence of self-determined forms of motivation, such as integrated and identified regulations and intrinsic motivation) (Vallerand *et al.*, 2008).

From SDT you can learn something of human motivation and the optimal functioning of an individual (Van den Broeck *et al.*, 2008). SDT is a model of internalisation that means that it does not depend on different levels (it is not a stage theory) that people must blindly move through it to achieve certain behaviours. SDT describes these

regulations to guide the degree to which people have integrated the regulation as part of a behaviour/s (Gagné & Deci, 2005).

SDT clearly is a theory with great experimental possibilities (Vallerand *et al.*, 2008) and is based on a strong empirical foundation (Gagné & Deci, 2005).

2.5.3 Themes within SDT

There are three important themes within SDT: 1) the 'why' of behaviour, a distinction between qualitative different types of behavioural regulation; 2) the 'what' of behaviour, a distinction between qualitative different goal orientations; and 3) the 'how' of behaviour which includes the concept of basic psychological needs satisfaction (Van den Broeck *et al.*, 2008).

The content of goal pursuits describe the 'what' of behaviour and the process of goal pursuits describe the 'why' of behaviour (Deci & Ryan, 2000). The 'why' of behaviour includes autonomous versus controlled motivation. Thus, how people are motivated to do something. SDT uses the concept of innate psychological needs (the 'how' of behaviour) as the foundation to incorporate the different goal contents and regulatory processes and the predictions that resulted thereof (Deci & Ryan, 2000), as discussed under the background on SDT (2.5.1).

Hereafter the different types of motivation that sort under SDT will be described according to Figure 2.5.

2.5.3.1 Amotivation

An amotivated individual is deficient in self-determination. Amotivation is the absence of intention to act out of motivation (Gagné & Deci, 2005). If negative feedback is tenacious and if it is also belittling, it will most likely cause amotivation (Deci & Ryan, 2012).

2.5.3.1.1 Amotivation in the workplace
Employees' amotivation is predicted by the amotivating feature of their work setting as well as their personal motivation orientation (Gagné & Deci, 2005).

2.5.3.2 Motivation

Within SDT there are different types of extrinsic motivation, ranging from autonomous to controlling (Gagné & Deci, 2005; Van den Broeck *et al.*, 2008).

According to SDT, extrinsic motivation is something that can vary according to the degree to which individuals experience the reason for an action as part of their self. Thus, extrinsic motivation varies with the degree which individuals have internalised and integrated the reason for an action (Van den Broeck *et al.*, 2008). It is important to note that extrinsic motivation is not only controlling and to take this into account, SDT has distinguished extrinsic motivation using the concept of internalisation (Deci & Ryan, 2012).

Rewards and punishment are the classic extrinsic motivators (Deci & Ryan, 2012). SDT also maintains that individuals are motivated best extrinsically by stimulating autonomous instead of controlled motivation (Van den Broeck *et al.*, 2008).

High self-determination includes high levels of intrinsic motivation and identified regulation and leads to favourable adaptive, affective, cognitive and behavioural outcomes (Vallerand *et al.*, 2008). Both intrinsic and extrinsic motivation is concerned with the particular reasons for engaging in behavioural regulations or an activity. An employee's total amount of motivation will increase by both doing an inherently interesting task and by receiving monetary rewards for it (Van den Broeck *et al.*, 2008).

Autonomous motivation, controlled motivation and amotivation point a person's relation to an activity or sets of activities. An activity is for example writing a report and sets of activities are for example doing one's job. Thus, they are relatively formal motivational concepts. These concepts are predicted from both the social environment and individual differences in causality orientations (Gagné & Deci, 2005).

Aspects of the social environment include aspects of the job and the work climate that can be characterised as autonomy supportive, controlling or amotivating (Gagné & Deci, 2005).

Aspects of individual differences in causality orientations include the autonomous orientation, the controlled orientation and the impersonal orientation (Gagné & Deci, 2005). These are more characteristic features of a person.

2.5.3.2.1 Controlled motivation

Controlled motivation can be divided into external regulation and introjected extrinsic regulation (Gagné & Deci, 2005; Van den Broeck *et al.*, 2008; Van den Broeck *et al.*, 2009). According to SDT, experiencing external or internal contingencies to direct an individual's behaviour leads to controlled motivation (Van den Broeck *et al.*, 2009). Controlled motivation can diminish outcomes, especially if the task involves creativity, deep processing of information or cognitive flexibility. The degree to which people reflect controlled motivation is evident of the degree to which people feel forced by external contingencies or by introjected counterparts. Thus, most internalisation theories view it as a contrast, regulation is either external or internal. Extrinsic motivation is a prototype of controlled motivation (Gagné & Deci, 2005).

2.5.3.2.1.1 Controlled motivation in the workplace

The level to which people feel controlled motivation in their jobs depends on the control in the workplace as well as their own internal controlled causality orientation (Gagné & Deci, 2005).

2.5.3.2.1.2 External regulation

With external regulation, the contingencies for introjected behaviour have been partially taken into account (Van den Broeck *et al.*, 2008). External regulation is a very controlling form of motivation and the emphasis is on contingencies that are controlled by external means along with the resulting outcomes (Deci & Ryan, 2012).

When behaviour is externally regulated, it is started and upheld by external contingencies (Gagné & Deci, 2005). External contingencies are for example supervisory approval or a bonus and internal contingencies are for example shame or guilt (Van den Broeck *et al.*, 2009). When people are externally regulated, people will only act to obtain or avoid a consequence when the behaviour is contributory to that consequence, for example "I work when the boss is looking over my shoulder" (Gagné & Deci, 2005).

Extrinsic motivation can be perceived as controlled because people feel pressured by rewards or the force of threats to complete a task. And so, people's behaviour becomes dependent on the contingencies. If the contingencies are not present, the task is not completed (Deci & Ryan, 2012).

2.5.3.2.1.3 Introjected regulation

The second type of extrinsic motivation is called introjection and is guided by internally pressuring factors (Van den Broeck *et al.*, 2008).

Introjection is merely a means to attain personal pride or to avoid shame or guilt. People who introject thus support their behaviour with internal rewards and scolding (Van den Broeck *et al.*, 2008). Consequently, introjection is a regulation that has been taken in by the person but has not been recognised as his or her own. It seems as if the regulation is controlling the person, almost to seem like internalised extrinsic motivation. For example, "I work because I feel like a worthy person" (Gagné & Deci, 2005).

The less self-determined types of motivation, both introjected and external regulation, are negatively related or unrelated to adaptive outcomes (Vallerand *et al.*, 2008).

2.5.3.2.2 Autonomous motivation

Autonomy includes acting out of own will and with choice. The two different types of autonomous motivation are 1) intrinsic motivation, where identified extrinsic motivation are relatively autonomous and 2) integrated extrinsic motivation that becomes progressively more self-determined (Gagné & Deci, 2005; Van den Broeck *et al.*, 2008).

Autonomous motivation is achieved when individuals set their own goals that are produced from their true self or when the goals set by others are perceived as true to their personal values (Van den Broeck *et al.*, 2008). Thus, autonomous motivation is achieved by a person's interest in an activity (intrinsic motivation) or because the value of the task has been integrated with the self (integrated extrinsic motivation) (Gagné & Deci, 2005). Personal significance and enjoyment can be categorised under autonomous motivation (Van den Broeck *et al.*, 2009).

Intricate tasks have the possibility of being perceived as challenging but meaningful and so are likely to encourage autonomous motivation. A requirement for being autonomously extrinsically motivated is that people recognise the value of certain behaviour for their self-selected goals (Gagné & Deci, 2005).

Identified and integrated motivation includes behaving in a certain way because people have fully accepted its importance and personally merits the behaviour for their well-being and goals. Autonomous and controlled motivation is intentional (Gagné & Deci, 2005).

2.5.3.2.2.1 Extrinsic integrated regulation

With this type of autonomous motivation people are fully aware that the behaviour is an essential part of who they are and that it originates from their sense of self (self-determination). The theory is that this type of motivation signifies the most developmentally advanced form of extrinsic motivation because parts of it concur with autonomous intrinsic motivation. But it still remains extrinsic; it is just a more autonomous form of extrinsic motivation. This is because the motivation is described not by the person being interested in the activity but rather because the activity is instrumentally important for personal goals (Gagné & Deci, 2005).

2.5.3.2.2.2 Extrinsic identified regulation

For identified regulation, behaviour is personally approved and perceived as important (Van den Broeck *et al.*, 2008). Thus, people feel more free and comfortable to behave out of free will because the behaviour corresponds with their personal aims (Gagné & Deci, 2005). Identified motivation is characterised by the degree to which a goal is meaningfully important to individuals and its purpose is to uphold effort and energy in the pursuit of goals when individuals are faced with obstacles, stress and boredom (Burton *et al.*, 2006).

2.5.3.2.2.3 In the workplace

Extrinsically motivated employees work hard at their jobs to obtain, for example, a bonus. Extrinsic goals are more outward oriented (Van den Broeck *et al* 2008) and satisfaction comes from extrinsic consequences rather than the activity itself (Gagné & Deci, 2005). Individuals make an effort to achieve external recognition of worth

and might even abandon their intrinsic interests as to impress other people (Van den Broeck *et al.*, 2008).

The initial action to do the task depends on the perception of a contingency between the action and the desired outcome, such as concrete rewards or unspoken approval (Gagné & Deci, 2005). With extrinsic motivation, the activity and the outcomes are separable from each other (Deci & Ryan, 2012; Van den Broeck *et al.*, 2008). The reward can be tangible or verbal (Gagné & Deci, 2005).

Other types of extrinsic motivation come to play when a behavioural regulation and the associated value are internalised. Internalisation can be described as people taking in values, attitudes or regulatory structures, so that external regulation is converted to internal regulation. The occurrence of an external contingency is no longer required (Gagné & Deci, 2005). Internalisation only reaches completion when integration occurs (Van den Broeck *et al.*, 2008). For example, "I work even when the boss is not watching" (Gagné & Deci, 2005). And so, only when integration occurred, one can engage in activities because it relates to one's broader set of values and beliefs (Van den Broeck *et al.*, 2008). The more fully the internalisation took place, the more autonomous the following extrinsically motivated behaviour (Gagné & Deci, 2005).

Other studies point out that interpersonal context in which external motivation factors/contingencies were employed, could change the average relationship with intrinsic motivation (Van den Broeck *et al.*, 2008).

2.5.3.2.2.4 Intrinsic motivation

Intrinsic motivation is defined as "the engagement in an activity for its own sake – for the satisfaction and enjoyment experienced during the course of the activity itself" (Van den Broeck *et al.*, 2008). But a more precise way of defining intrinsic motivation is in terms of inherently satisfying internal conditions that occur when doing an intrinsically motivated behaviour and so helping to support it (Deci & Ryan, 2012). These inherent satisfactions originate primarily from experiences of autonomy and competence and also in some cases, relatedness (Deci & Ryan, 2012) which will be discussed in section 2.5.3.3.3.

It has been suggested that a person can best be motivated by supporting his or her endogenous potential (Van den Broeck *et al.*, 2008). Intrinsic motivation comes to play when, regardless of any external reward, people are engaged in an activity for its own sake (Compton, 2005). Thus, people do an activity because they find it stimulating and gains unprompted satisfaction by doing it (Gagné & Deci, 2005). Thus, the activity is its own reward (Deci & Ryan, 2012). Intrinsic motivation is the most self-determined. Intrinsic motivation involves behaving because activities are interesting and enjoyable (Deci & Ryan, 2012; Gagné & Deci, 2005). Goals that come from intrinsic motivation are personally valued, chosen without restrictions but are still realistic, and seem to raise subjective well-being (Compton, 2005).

An accomplishment can be intrinsically motivated (Deci & Ryan, 2012). But when there is no inherent interest or enjoyment associated with a task, psychological well-being may deteriorate (Burton *et al,*. 2006). To enhance intrinsic motivation, it is important to give information about how well someone performed on a task (Van den Broeck *et al.*, 2008).

Intrinsic motivation is the most autonomous type of motivation and occurs when people can choose to complete a task out of personal interest (Burton *et al.*, 2006).

2.5.3.2.2.4.1 In the workplace

Intrinsic motivation is the most autonomous type of motivation because individuals follow their personal interests when performing activities (Van den Broeck *et al.*, 2008; Gagné & Deci, 2005). For example: "I work because it is fun" (Gagné & Deci, 2005). An intrinsically motivated employee is genuinely interested in his job and enjoys doing his work (Van den Broeck *et al.*, 2008; Gagné & Deci, 2005).

An example of an intrinsic goal might be to work hard as an employee because a higher ranked job offers more opportunities and new challenges. But, this example can also be true of an extrinsic goal because the higher ranked job can lead to status and social recognition (Van den Broeck *et al.*, 2008).

It is suggested to encourage employees to compile their strivings in terms of intrinsic instead of extrinsic goals. SDT is of meaning that employees' inherent enjoyment

and interest in tasks decrease when the reward is financial for intrinsically motivating tasks (Van den Broeck *et al.*, 2008).

2.5.3.2.3 Conclusion

There are different reasons why employees put effort into their jobs, which might include: 1) out of external pressure, 2) out of internal pressure, 3) they find their jobs personally important, 4) they find their jobs interesting and enjoyable (Van den Broeck *et al.*, 2009). Some of the thoughts of employees explains each reason: 1) 'because others put pressure on me to do so', 2) 'because I will feel bad about myself otherwise', 3) 'because putting effort into my job aligns with my personal values', 4) 'because I enjoy this work very much' (Van den Broeck *et al.*, 2009).

If the reward is removed, an individual's motivation will decline to the pre-rewarded baseline. It was also shown that tangible rewards only undermine intrinsic motivation if the employee expects it and if it was made contingent upon task engagement, completion or performance. The opposite is also true, if the tangible reward is not expected, or do not require doing the task, intrinsic motivation is not undermined when completing the task or achieving a particular performance. According to occupational health psychology, job design is an important way to motivate employees (Van den Broeck *et al.*, 2008).

Pressuring aspects can be social or material, for example external regulated employees might work hard to obtain a bonus or to get recognition from their supervisor (Van den Broeck *et al.*, 2008). According to SDT, a major challenge in the effects of goal pursuits and accomplishment depends on the degree to which people can satisfy their basic psychological needs as they pursue and accomplish their goals (Deci & Ryan, 2000).

2.5.3.3 Basic psychological needs

The basic psychological needs describe the "how" of behaviour.

2.5.3.3.1 History of the concept of needs

The concept of needs was previously implemented in empirical psychology to organise the concept of motivation and was specified as a substantive base for direction of action (Deci & Ryan, 2000). Around the 1960s there was a scenic shift

to cognitive theories that caused the concept of needs to be replaced by the concept of goals, which was considered as the dominant motivational concept. Thus, the focus was more on the process of goal selection and pursuit and less on the content of the goals. Because of this shift, most motivational theorists are still not eager to consider needs. SDT is of the opinion that a broad understanding of goal-directed behaviour, psychological development and well-being cannot be achieved without considering the needs that causes working towards goals (Deci & Ryan, 2000).

2.5.3.3.2 Background

The most important reason for assuming that there are basic psychological needs is because they stipulate the groundwork for predicting which aspects of a social context will encourage intrinsic motivation and enable internalisation of extrinsic motivation (Gagné & Deci, 2005). Needs are defined as the organismic supplies for health and psychological needs and a subsection of these supplies are vital for psychological growth and wellness (Deci & Ryan, 2012).

According to SDT, the social context, regardless of the level in which the individual finds himself, can support and nurture (Deci & Ryan, 2000) or deny and frustrate the individual's inherent growth tendency and thus the satisfaction of the basic psychological needs (Deci & Ryan, 2012; Van den Broeck *et al.*, 2008). If an environment allows need satisfaction, positive results will be produced but if an environment is need thwarting, negative results will be produced (Baard, Deci, & Ryan, 2004). People's autonomous and controlled motivations, as well as their life goals are influenced by the degree to which their social contexts support or thwart their basic psychological needs for competence, relatedness and autonomy (Deci & Ryan, 2012). Satisfaction and frustration of the three basic psychological needs are considered as two opposite poles of the same continuum (Van den Broeck *et al.*, 2009).

2.5.3.3.3 Satisfaction of the basic psychological needs

SDT proposes that the growth oriented culture of individuals requires fundamental nutrients and can only come in play if the individual has sufficient inner resources to nourish this tendency or if the individual can find the necessary support in the environment (Van den Broeck *et al.*, 2008).

People require exactly three psychological nutriments or basic needs to function healthily: 1) they need to feel autonomy or self-determination with regards to their own lives and behaviours; 2) they need to feel related to other people and groups of people; and 3) they need to feel competent in conveying their internal and external environments (Deci & Ryan, 2012; Deci & Ryan, 2000; Van den Broeck *et al.*, 2009). The three needs for autonomy, relatedness and competence (Sheldon & Filak, 2008) are not merely assumptions or formulated on casual theorising but were derived empirically (Deci & Ryan, 2012). The concept of needs is very attractive because of the considerable empirical usefulness. The concept of needs can be used to define the aspects of the environment that leads to both positive and negative work-related results (Baard *et al.*, 2004).

Individuals want to integrate and organise new experiences into a balanced and authentic sense of self, and so according to SDT, the satisfaction of psychological needs are very important for an individual's optimal psychological well-being (Van den Broeck *et al.*, 2008; Greguras & Diefendorff, 2009; Vander Elst, Van den Broeck, De Witte, & De Cuyper, 2012; Van den Broeck *et al.*, 2009) and also to understand the content and process of goal pursuits (Deci & Ryan, 2000).

It has been found that individuals are attracted to circumstances where satisfaction of their needs might occur. This is in accordance with SDT that states that individuals do not need to have a shortcoming for the needs to initiate behaviour, unlike other motivational theories. In other words, even if an individual is not experiencing any shortcoming, he or she will still be enticed by the possibility of more satisfaction of his or her needs and does not require a particular order in which the three needs have to be satisfied (Van den Broeck *et al.*, 2009). This differs from Maslow's theory.

SDT assumes that the social context must satisfy the inherent basic psychological needs (Van den Broeck *et al.*, 2008).

2.5.3.3.4 Frustration (thwarting) of the basic psychological needs

Frustration of the psychological needs may lead to sickness, malfunctioning and loss of energy. Need frustration may happen under hard circumstances or in disorder (Vander Elst *et al.*, 2012). Thwarting of the needs causes nervousness and feelings

of insufficiency that leads to the chase of external indicators of worth to compensate for the feelings of worthlessness (Deci & Ryan, 2012).

As a motivational theory, SDT must take into account the energy of behaviour and the basic psychological needs for competence, autonomy and relatedness signify one important energiser of behaviour (Deci & Ryan, 2012).

Hereafter each specific need will be discussed.

2.5.3.3.5 The need for autonomy

To be autonomous means to behave in a certain way out of own choice, out of free will and with congruence. It is to fully favour and agree with certain behaviour (Deci & Ryan, 2012). The need for autonomy is the need to decide self-sufficiently about areas in life that are important to the person (Compton, 2005). Within self-determination, the term autonomy is used to describe a motivational state or an important psychological need depending on the context (Deci & Ryan, 2012). An individual might experience autonomy even if he or she depends on others or follow other's requests (Van den Broeck *et al.*, 2009).

When a request is meaningful to an employee, autonomy frustration will be low (Vander Elst *et al.*, 2012).

According to SDT, autonomy is aided by awareness, which includes the true attempt to experience and to become aware of what is happening within and around oneself, thus the tranquil and interested attention to what is taking place within and without (Deci & Ryan, 2012).

2.5.3.3.6 The need for relatedness

The need for relatedness is the need for shared helpful relationships (Compton, 2005). The need for relatedness can be satisfied when people experience a sense of communion and have sustainable, close and intimate relationships (Van den Broeck *et al.*, 2008). Relatedness can also be defined as the sense of being cared for and to be connected to others (Ryan & Deci, 2008).

2.5.3.3.7 The need for competence

The need for competence is the need to experience mastery that allows a person to conduct his or her environment effectively (Compton, 2005; Van den Broeck *et al.*, 2009). The need for competence is an inborn need that results from mastering a task and is classified as a more general, emotional experience of effectiveness (Van den Broeck *et al.*, 2009).

The pursuit of affiliation and personal development are intrinsic goals that are likely to be related to the satisfaction of the needs for competence and relatedness. As the pursuit progresses, it becomes more likely to be executed volitionally and thus satisfy the need for autonomy (Van den Broeck *et al.*, 2008).

2.6 Motivation and the satisfaction of needs

Intrinsically, motivated behaviour is sometimes an effort to satisfy the needs for autonomy, competence and relatedness and if these needs are met, people show better adaptive functioning (Compton, 2005). A few studies have examined the relationship between satisfaction of needs and autonomous versus controlled motivation (Van den Broeck *et al.*, 2008). The nature of a task is important when predicting the type of motivation that will have the most positive effect on the results (Vallerand*et al.*, 2008). The aim is to find a balance between the three needs and so SDT does not consider individual differences in need strength. SDT upholds that when an individual's needs are satisfied, they will feel naturally attracted to and become committed to situations. Satisfaction of each of the three basic needs relates positively to employees' autonomous motivation (Van den Broeck *et al.*, 2009).

Satisfaction of the need for relatedness can cause internalisation of social norms and values so that introjection takes place. The satisfaction of the need for competence is necessary for introjection to occur (Van den Broeck, *et al.*, 2008). Within SDT, the meaning is that the environment does not matter but rather what the environment means functionally, for example the degree to which the environment supports people's psychological needs (Vallerand *et al.*, 2008).

From the definition of positive psychology it can be concluded that one way to measure the success of factors that support human flourishing might be to determine

the degree to which people nurture a sense of autonomy, competence and relatedness (Compton, 2005). Studies have been completed on the effects of feedback on autonomous motivation and it was found that positive feedback improved intrinsic motivation and enables internalisation because positive feedback provides satisfaction of the need for competence and is also autonomy supportive (Deci & Ryan, 2012).

All three needs relate positively to autonomous motivation. Autonomy satisfaction negatively relates to controlled motivation (Van den Broeck *et al.*, 2009). SDT hypothesises that when people experience satisfaction of the needs for relatedness and competence, they are more inclined to internalise the behaviour's value and regulation. But it is the degree of satisfaction of the need for autonomy that differentiates for integration rather than merely introjection to occur. The concept of the three basic psychological needs is important because it is necessary in the social environment and can be categorised as autonomy supportive, controlling or amotivating (Gagné & Deci, 2005).

2.7 Well-being (flourishing) and the satisfaction of needs

Results from a study from various large French companies (study 1: n = 468 and study 2: n = 650) completed by Gillet, Fouquereau, Forest, Brunault and Colombat, (2011) suggest that the three needs must be satisfied for hedonic and eudaimonic well-being to be experienced. Also, from an SDT view, basic need satisfaction (either within or outside of work) is vital for well-being. The results of the study among both male and female adult employees in a wide variety of professions (n=74) with different ethnicities and Japanese college students (n=18) showed that both daily and weekly variations in well-being corresponds to variations in need satisfaction (Ryan *et al.*, 2010).

It is characteristic of the basic psychological needs that all three needs are taken into account for an individual to flourish (Van den Broeck *et al.*, 2009). To the degree that these needs are satisfied, people will develop healthily and flourish but to the degree that the needs are not satisfied, people will experience psychological losses. It was shown that when social contexts in different cultures supported the basic psychological needs, the people flourished in contrast to people whose social contexts were need thwarting (Deci & Ryan, 2012).

Current results indicate that all three needs are associated with employees' well-being (Van den Broeck *et al.*, 2009).

2.8 Work-related basic need satisfaction

The satisfaction of the basic needs in the work area will now be discussed.

2.8.1 Characteristics of organisations that encourage basic psychological need satisfaction

The concept of basic need satisfaction may be useful to learn something about the functioning of employees and to explore the motivational potential of organisational factors (Van den Broeck *et al.*, 2009). Work-related basic need satisfaction is thus the application of basic psychological need satisfaction in a corporate environment.

It is important that organisations create environments that positively affect employees' psychological need satisfaction (Greguras & Diefendorff, 2009). Gagné & Deci (2005) claimed that work climates that encourage basic psychological need satisfaction will improve employees' intrinsic motivation and stimulate the full internalisation of extrinsic motivation. Numerous studies confirmed SDT as an approach to work motivation by verifying the theory within organisations (Gagné & Deci, 2005). Therefore even in the work area, the core motivational processes of SDT are applicable (Vallerand *et al.*, 2008).

2.8.2 Work-related basic need satisfaction of managers

The term "needs" usually refers to a person's desires, motives or wants, and so are handled as individual-difference variables where the strength of a person's needs are determined and used to predict work-related outcomes (Baard *et al.*, 2004). Some people are at the centre of these effects, such as the manager. How other people behave towards them, has a great impact on their needs being satisfied (Vallerand *et al.*, 2008). This influences the degree of managers' motivation being optimal or not (Vallerand *et al.*, 2008).

Employees are also affected by this. Optimal functioning at work is not determined by organisational rewards but rather by basic need satisfaction (Van den Broeck *et al.*, 2008). Employees evaluate the need supportive character of their jobs and pursue environments that will nourish their motivational energy and kindle their

optimal functioning (Van den Broeck *et al.*, 2009). If the work environment is too challenging, rejecting or highly controlled, employees' weaknesses will be exposed and they will not be able to function properly (Van den Broeck *et al.*, 2008; Deci & Ryan, 2000). Need frustration might cause an employee to leave the organisation (Van den Broeck *et al.*, 2009).

It is thus the manager's responsibility to pay attention to employees' need satisfaction because it may improve employees' functioning and so reduce costs associated with stress and turnover but also increase productivity (Van den Broeck *et al.*, 2009).

2.8.3 Advantages of basic need satisfaction in the workplace

The beneficial effects of need satisfaction to an individual's well-being have been shown. Results indicate that work-related need satisfaction versus frustration holds implications for individuals' functioning, both on the job and in general (Van den Broeck *et al.*, 2009).

In a study by Imamoğlu & Beydoğan (2011), among 383 employees from Ankara, Istanbul and Turkey it was proved that need satisfaction at work forecast both hedonic and eudaimonic well-being.

The three needs will now be discussed separately as applicable in the work-environment.

2.8.4 The need for autonomy in the workplace

There is not much managers can do to influence employees' enduring of individual differences, that is why focusing on changing the environment to promote autonomous extrinsic motivation is more important (Gagné & Deci, 2005).

Need satisfaction is also related to turnover, of which it is an objective indicator. Only autonomy satisfaction seemed to prevent turnover (Van den Broeck *et al.*, 2009).

2.8.5 The need for relatedness in the workplace

Employees who feel lonely and does not have any social support have a need for relatedness, while employees who feel part of a team and are free to express their

concerns and happiness are more likely to have their need for relatedness met (Van den Broeck *et al.*, 2008). Imamoğlu & Beydoğan (2011) found that among 383 employees from Ankara and Istanbul, Turkey, the need for relatedness correlated with psychological well-being.

2.8.6 The need for competence in the workplace

By satisfying the need for competence, you help employees develop their skills and learn to adapt to complex and changing environments (Van den Broeck *et al.*, 2008). Competence frustration comes forth when employees feel ineffective and cannot achieve their goals at work (Vander Elst *et al.*, 2012).

This concludes the literature aim of conceptualising work-related basic need satisfaction.

2.9 Managers' to-do-list

Next will be explained what the organisation and its managers can do to improve employees' psychological need satisfaction, well-being and motivation.

2.9.1 Creating an autonomy supportive environment at work

Psychological needs take into account a substantial amount of variances. This gives the organisation numerous chances and ways to boost employee well-being, for example by creating autonomous supportive environments. Autonomy support falls into two categories: 1) specific factors in the social setting and 2) interpersonal ambience (Gillet *et al.*, 2011).

Specific factors include for example choice and meaningful positive feedback. This can be seen as parallel to specific aspects of job contents and contexts (Gagné & Deci, 2005).

Personal ambience on the other hand is parallel to the organisation's climate and the manager's interpersonal style (Gagné & Deci, 2005). Autonomy supportive environments are those that acknowledge the perception of individuals, especially by an authoritive figure and where individuals are cheered to be experimental and to make choices (Deci & Ryan, 2012; Deci, Connell, & Ryan, 1989). It is thus important for managers to behave in an autonomy supportive manner for example to provide

employees with options instead of trying to control them by threats and deadlines. Also, by understanding and acknowledging the employees' needs, feelings and approaches with regards to a certain matter, the result is that the employee will be more trusting of the setting and will have faith that it will be reactive to his or her proposals (Deci *et al.*, 1989). Ultimately employees' basic psychological needs will be satisfied and this will increase their well-being (Gillet *et al.*, 2011).

Autonomy supportive authorities will be more aware of challenges to need satisfaction that is frustration of competence and relatedness. When people feel autonomy supported, they will feel freer to do what is needed to satisfy their other needs. Controlling language and contingencies should be kept to a minimum (Deci & Ryan, 2012).

The autonomy orientation aids to interpret the environment as being autonomy supportive and to provide information on the choices people are making (Deci & Ryan, 2012).

Autonomy supportive climates and the specific factors mentioned promote both types of autonomous motivation. Autonomy support predicts the level of autonomous motivation for their jobs as well as their internal autonomous causality orientation (Gagné & Deci, 2005).

Environments that are autonomy supportive lead to qualitatively exceptional forms of motivation which include high self-determination (Vallerand *et al.*, 2008). Autonomy support was the most important enabler of integration. Studies have discovered relations between managerial autonomy support and positive work outcomes (Gagné & Deci, 2005). The first step of autonomy support is the manager taking the employees' perspective into consideration and to provide choices and encourage self-initiation (Gagné & Deci, 2005; Baard *et al.*, 2004). Sufficient evidence shows that this will support intrinsic motivation and autonomous extrinsic motivation. For all of this to be true, the work climate needs to be autonomy supportive and employees need to be high on the autonomous causality orientation (Gagné & Deci, 2005).

Studies specifically in organisations have provided confirmation for the proposals that autonomy supportive work environments and management encourage basic

need satisfaction, intrinsic motivation and internalisation of extrinsic motivation (Gagné & Deci, 2005).

It is thus clear those managers who are autonomy supportive leads to employees experiencing self-determination which have positive consequences for employees' work lives (Deci *et al.*, 1989). Thus, the approach is that with adequate support, the individual's functioning and well-being will be endorsed (Ryan *et al.*, 2010).

Studies have shown that a manager's autonomy-supportive leadership style has a positive impact on employees' well-being and performance (Van den Broeck *et al.*, 2008). Supervisor support contains a range of behaviours all of which may influence pharmacists' performance in a positive way. This includes for example the manager providing feedback on how to better perform in the future or giving praise where appropriate. But to achieve this, pharmacy managers need to be trained in providing the supportive environment that promotes commitment and productivity (Desselle & Tipton, 2001).

2.9.2 Creating a relatedness supportive environment at work

The argument is that it is important to distinguish between autonomy supportiveness and relatedness supportiveness. Even though these two correlate, they need to be considered separately (Imamoğlu & Beydoğan, 2011; Ryan & Deci, 2008). An example of relatedness support is where the organisation sponsors an event for employees like a retreat (Greguras & Diefendorff, 2009). Relatedness support is hypothesised to play an important role in the encouragement of change and growth in individuals (Vallerand *et al.*, 2008; Ryan & Deci, 2008). Individuals need people to support them, to get involved and to convey that the person is important and cared for (La Guardia & Patrick, 2008). This might also be true for managers and employees in the corporate environment.

Both studies in the field and laboratory proved that, by supporting the basic needs for autonomy, relatedness and competence, internalisation and integration of extrinsic motivation are enabled (Gagné & Deci, 2005). Thus, the extent to which the environment allows people to feel autonomy, relatedness and competence will determine the degree of motivation toward a given task (Vallerand *et al.*, 2008).

2.9.3 Creating a competence supportive environment at work

According to Sheldon and Filak (2008), it is important for competence support that positive expectations and a learning orientation are boosted. Their study among introductory psychology students at the Univerity of Missouri (n = 196) found that competence support had an effect on intrinsic motivation, positive and negative mood and also on performance (Sheldon & Filak, 2008). According to SDT, apparent competence is not an indication of greater well-being, except when the action is autonomous. Individuals' need for competence is best satisfied in an autonomy-supportive environment. Thus, according to cognitive evaluation theory, competence satisfaction cannot in itself produce greater well-being; individuals should also feel autonomous in their actions (Levesque, Stanek, Zuehlke, & Ryan, 2004).

When the need for competence is thwarted, reduced feelings of effectiveness occur (Sheldon & Filak, 2008). The abovementioned might also be true for the work environment and it is important for managers to take note of this.

Managers should boost employees' feelings of personal value. Managers should focus on keeping their contributions informational instead of controlling. By doing this, employees' competence will be promoted. Informational contributions also nurture self-determination whereas controlling contributions reduces self-determination (Deci *et al.*,1989).

2.10 Performance in the workplace

Knowledge, skill and ability are important for pharmacists to perform constantly to decided standards (Coombes, Avent, Cardiff, Bettenay, Coombes, Whitfield, &Bates, 2010). The focus on need satisfaction provides a framework for experimental investigation of the contextual factors that lead to intrinsic need satisfaction and so facilitate performance. But the concept of satisfaction of the three basic psychological needs also allow for predictions of the circumstances that most likely will encourage performance (Baard *et al.*, 2004). SDT states that satisfying the need for competence increases autonomous motivation, which in turn leads to optimal performance (Deci & Ryan, 2000; Greguras & Diefendorff, 2009). All of the abovementioned relationships will be discussed next.

This concludes the aim to conceptualise the term performance.

2.10.1 The possible relationships between performance and motivation

SDT maintains that it is more important to know whether people are more autonomously or controlled motivated because then predictions about the quality of people's engagement, performance and well-being can be made, based on the overall amount or intensity of motivation. The differentiation between autonomous and controlled motivation are very important for making forecasts about the quality of performance and well-being (Deci & Ryan, 2012). Controlled motivation does not aid effective performance and well-being (Gagné & Deci, 2005). Autonomous motivation and behaviour aids effective performance, well-being and behaviours that are personally healthy (Gagné & Deci, 2005; Deci & Ryan, 2012).

It is hypothesised that the attainment of extrinsic goals and the abandonment of intrinsic goals is harmful to the employee's well-being and performance (Van den Broeck *et al.*, 2008). Well internalised extrinsic motivation is needed to enhance performance when activities are not interesting or not intrinsically motivating (Gagné & Deci, 2005). Some economists and management scholars have supported SDT by stating that raised payment caused increased effort and performance, but that it was counteracted by decreased intrinsic motivation (Van den Broeck *et al.*, 2008). The degree that people feel controlled by extrinsic motivators, their need for autonomy is thwarted, which has a negative influence on performance and well-being (Deci & Ryan, 2012). When employees' personify controlled motivation effective performance will result in need satisfaction (Gagné & Deci, 2005).

2.10.2 The possible relationships between performance and well-being (flourishing)

The effects of social environments on the motivation, well-being and performance in people provides the groundwork for creating corporations that conduce toward the satisfaction of basic psychological needs of individuals (Deci & Ryan, 2012). Changes in well-being are not dependent on performance (Burton *et al.*, 2006). Employees of an organisation are more likely to display optimal performance and well-being in situations where their inherent tendency is protected and encouraged (Van den Broeck *et al.*, 2008).

2.10.3 The possible relationships between performance and need satisfaction

Need satisfaction of employees will produce important work outcomes such as 1) maintained changed behaviour and determination, 2) effective performance, especially where creativity, cognitive flexibility and conceptual understanding is needed, 3) well-being and psychological adjustment, 4) job satisfaction, 5) positive work related attitudes and 6) organisational citizenship (Gagné & Deci, 2005).

Reward structures and performance systems that offer feedback about employees' competency will improve employees' psychological need satisfaction (Greguras & Diefendorff, 2009). Psychological need satisfaction predicts affective commitment and performance (Greguras & Diefendorff, 2009; Van den Broeck *et al.*, 2009). When employees perform well at their jobs, they will experience satisfaction of their three basic psychological needs and their attitude toward their jobs will be more positive (Gagné & Deci, 2005).

To optimise human potential, achieving personally important goals and being happy while doing it are important (Burton *et al.*, 2006). Both total need satisfaction and the satisfaction for the need for relatedness predict performance. This suggests that it is valuable to use need satisfaction in research on organisational performance (Baard *et al.*, 2004).

SDT further suggests that bearing individual differences and the social context of the environment influence intrinsic need satisfaction and also people's performance and adjustment (Baard *et al.*, 2004). Satisfaction of the need for relatedness significantly predicts performance evaluations (Gagné & Deci, 2005).

It is expected that the autonomy support of managers will lead to the satisfaction of all three basic psychological needs of employees (Baard *et al.*, 2004). This leads to effective performance, psychological well-being, determination, job satisfaction, positive work attitudes and organisational commitment (Gagné & Deci, 2005).

This concludes the literature aim to conceptualise the possible relationships between work-related basic need satisfaction, flourishing and performance.

2.11. Chapter summary

In this Chapter, different concepts were explained that is important for the reader to understand the empirical investigation. The following literature aims have been achieved:

- Determine what are pharmacists and employees presently experiencing in the pharmacy environment,
- Conceptualise work related basic need satisfaction, flourishing and performance; and
- Conceptualise the possible relationships between work related basic need satisfaction, flourishing and performance.

In the next chapter the methodology will be discussed.

CHAPTER 3
EMPIRICAL INVESTIGATION

In this Chapter, the empirical investigation (phase 2) will be discussed. Phase two included the following steps:

Step 1: The research design

Step 2: The study sample

Step 3: The measuring battery

Step 4: Administration

Step 5: Statistical analysis

Step 6: Report and discussion of the results of the empirical study

Step 7: Conclusions and recommendations

Step 1 was discussed in Chapter 1 and step 2 to step 5 will be discussed in this Chapter. Step 6 will be discussed in Chapter 4 and step 7 will be discussed in Chapter 5. This Chapter gives an overview of what was done during the experimental part of the study.

3.1 The study sample

The study population was compiled from a corporate retail pharmacy group that has branches in all of the nine provinces of South Africa. This study used a convenience study sample. It would have been ideal to use all the branches in South Africa but unfortunately only four out of the nine provinces were available to take part in the study. A total of 82 questionnaires were sent out and 65 were received back, thus a return percentage of 79.

The respective branches that formed part of the study sample were situated in four provinces of South Africa, namely Gauteng, North-West, Northern Cape and Free State. Chapter 4 contains more information on the descriptive statistics of the study sample. It was assumed that all pharmacists and qualified pharmacist assistants were registered with the South African Pharmacy Council and those pharmacy

assistants whose highest education was Grade 12, were busy with training under the supervision of a tutor.

Next, the measuring battery that reflects all the instruments used in the current study will be discussed.

3.2 Measuring battery

The measuring battery was compiled out of a demographic questionnaire, the MHC-SF (Keyes, 2009) and the W-BNS (Van den Broeck *et al*., 2009) (see Addendum 2). Attached to the questionnaire was a letter (Addendum 1) to the respondents which explained the focus of the research and to request the respondents' co-cooperation. It was also explained that all the information will be kept confidential. The researcher compiled the questions of the demographic questionnaire. Both the MHC-SF and the W-BNS are validated questionnaires that have been used in other studies (Keyes *et al*., 2012; Keyes *et al*., 2008; Lamers *et al*., 2011; Van den Broeck *et al*., 2009).

The letters and the questionnaires were placed in envelopes and handed to two district managers who personally took the questionnaires to each branch that formed part of the study. The managers handed out an envelope to each employee. After the questionnaires were filled out, the employee sealed the envelope and handed it back to the manager. The manager collected all the envelopes and handed it, still sealed, back to the researcher. The researcher checked that all the envelopes were sealed as to protect anonymity.

The two measuring instruments of the measuring battery will now be discussed. This discussion will include the description, administration, rationale, reliability, validity and scoring of each instrument. First, all the aspects of the MHC-SF will be discussed and thereafter all the aspects of the W-BNS.

3.2.1 MHC-SF

The rationale, description, administration, reliability, scoring and validity of the MHC-SF are discussed next.

3.2.1.1 Rationale

Mental health is not only made up of symptoms of hedonia (emotional well-being). A clinical diagnosis cannot be made adequately just because a person may be feeling virtuous, in the same way as only feeling unhappy. Symptoms of positive functioning like social well-being and psychological well-being should also be present (Keyes *et al.*, 2012).

The MHC-SF was developed from a longer version of the questionnaire namely the Mental Health Continuum Long Form (MHC-LF) (Keyes *et al.*, 2012). The MHC-LF contains 40 items that created a problem with the diagnostic threshold and number of items in the MHC-LF (Keyes *et al.*, 2012; Keyes, 2009). Thus, the MHC-LF was too long and took up a lot of time to answer for population surveys (Keyes *et al.*, 2008).

The response format of the MHC-LF was changed to ask respondents how often they operated in a specific manner: ranging from 'never' to 'every day' (Keyes *et al.*, 2008). The MHC-SF questionnaire is brief and provides a wide-ranging understanding of mental health that looks beyond the mere presence or absence of mental health (Keyes *et al.*, 2012).

3.2.1.2 Description

The MHC-SF is a valuable, short self-report questionnaire that assesses positive mental health (Lamers *et al.*, 2011). The MHC-SF contains 14 of the most typical items that characterises each aspect of emotional, psychological and social well-being (Keyes *et al.*, 2012; Keyes, 2009). The MHC-SF contains six items of psychological well-being, three items of emotional well-being and five items of social well-being (Keyes, 2009). Figure 3.1 gives a visual exposition of the MHC-SF. Each psychological and social well-being item represents one dimension (Lamers *et al.*, 2011).

Figure 3.1 Exposition of the MHC-SF

Adapted from "Evaluating the psychometric properties of the mental health continuum-short form (MHC-SF)" by S.M.A Lamers, G.J. Westerhof, E.T. Bohlmeijer, P.M. ten Klooster and C.L.M. Keyes, 2011, *Journal of Clinical Psychology, 67*(1), p. 99-110."
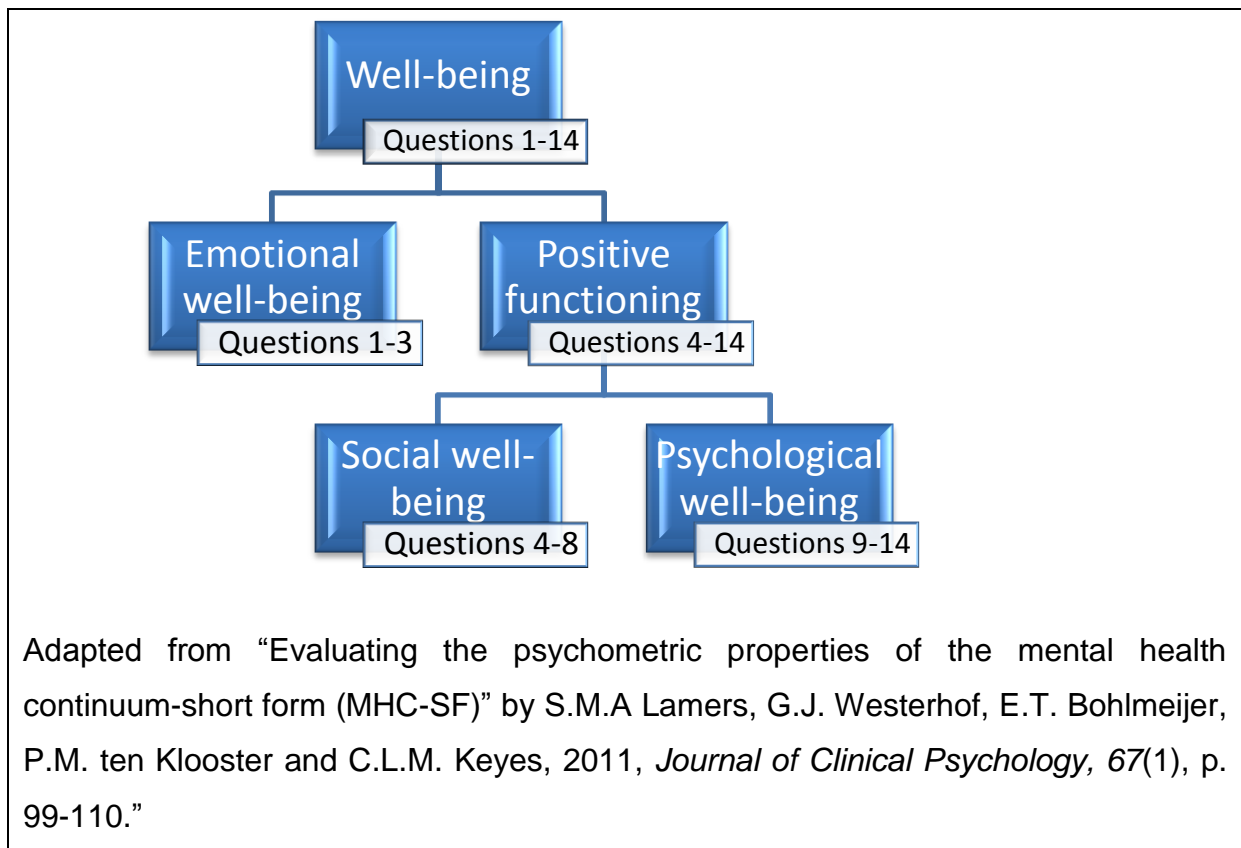
Questions four to 14 represent a different part of positive functioning (Lamers *et al.*, 2011) namely:

Social well-being

- Question 4 – Social contribution

- Question 5 – Social integration

- Question 6 – Social growth

- Question 7 – Social acceptance

- Question 8 – Social coherence

Psychological well-being

- Question 9 – Self acceptance

- Question 10 – Environmental mastery

- Question 11 – Positive relationship with others

- Question 12 – Personal growth

- Question 13 – Autonomy

- Question 14 – Purpose in life

Correlations of the questionnaire are steady over time but also responsive to change, which suggest that it is adaptable (Lamers *et al.*, 2011). The response options measure the frequency with which respondents felt each sign of mental health in the past month. The response options range from 'never' to 'every day'. Because of this, the assessment and categorisation of the levels of mental health can be standardised almost perfectly (Keyes *et al.*, 2012).

3.2.1.3 Administration

The MHC-SF is a self-report questionnaire and takes about 10 minutes to complete. The questionnaire was completed anonymously.

3.2.1.4 Reliability

Reliability is the capacity of a measure to generate consistent results when the same entities are measured under different conditions. In this study Cronbach α is used to measure scale reliability. Cronbach α is the most common measure of scale reliability. The guideline is that a Cronbach α value should be above 0,7 and substantially lower values are indicative of an unreliable scale (Field, 2009).

Cronbach α is a measure of the reliability of a scale defined by:

$$\alpha = \frac{N^2 \overline{Cov}}{\sum s_{item}^2 + \sum Cov_{item}}$$

in which the top half of the equation is the number of items (N) squared multiplied by the average covariance (*Cov*) between items. The bottom half is the sum of all the elements in the variance-covariance matrix (Field, 2009).

3.2.1.4.1 Internal reliability

Internal reliability gives an indication of internal consistency (Kline, 2000). It is important that a test is internally consistent because it means that the test measures what it is intended to measure (Kline, 2000).

Examples where the internal reliability of the MHC-SF has been proven by other studies are given. A study among Dutch respondents (N = 1,662) between the ages of 18 and 87 years, with regard to the total MHC-SF, internal reliability was high with an alpha coefficient of 0,89 as well as for the subscales of emotional well-being with an alpha coefficient of 0,83 and psychological well-being with an alpha coefficient of 0,83 (Lamers *et al.*, 2011). For the subscale of social well-being, the internal reliability was adequate with an alpha coefficient of 0,74 (Lamers *et al.*, 2011). The internal reliability of the overall MHC-SF scale was 0,74 in the study among the college students (Keyes *et al.*, 2008).

3.2.1.4.2 Test-retest reliability

Each subscale is prognostic of the matching subscale at follow-up after three and nine months (Lamers *et al.*, 2011). The moderate test-retest reliability suggests that the MHC-SF is sensitive to change but also stable over time (Lamers *et al.*, 2011). The MHC-SF shows good internal consistency for both the total scale and the three subscales with Cronbach α above 0,80 among the college students (Keyes *et al.*, 2012). Thus, the MHC-SF is a reliable measurement tool (Keyes *et al.*, 2012).

3.2.1.5 Scoring

To be identified as flourishing in life, the respondent must display high levels of at least one measure of hedonic (emotional) well-being and high levels of at least six measures of positive functioning (Keyes *et al.*, 2012; Keyes *et al.*, 2008; Keyes, 2009). Respondents who display low levels of at least one measure of the hedonic well-being and low levels of at least six measures of positive functioning are identified as languishing in life (Keyes *et al.*, 2008; Keyes, 2009). Respondents who do not fit the standards for either flourishing or languishing in life are moderately mentally healthy (Keyes *et al.*, 2008; Keyes, 2009).

3.2.1.6 Validity

Validity is the proof that a study allows correct inferences about the question it was meant to answer or that the test measures what it theoretically set out to measure (Field, 2009).

3.2.1.6.1 Convergent validity

A study among Dutch respondents (N = 1,662) between the ages of 18 and 87 years found the convergent validity of the MHC-SF to be good, which suggests that it is a valid instrument (Lamers *et al.*, 2011). The MHC-SF has good psychometric properties and validation was proven for emotional, psychological and social well-being (Lamers *et al.*, 2011).

3.2.1.6.2 Discriminant validity

The study among Dutch respondents also confirms discriminant validity of the MHC-SF (Lamers *et al.*, 2011).

3.2.1.6.3 Construct validity

In a study among Setswana-speaking South Africans (N = 1050) the three subscales of the MHC-SF showed good construct validity (Keyes *et al.*, 2008).

3.2.1.6.4 Criterion validity

The total MHC-SF scale and its three subscales produced good criterion validity (Keyes *et al.*, 2008). The MHC-SF was also a proven valid measurement instrument by a study among 5689 college students in the United States of America (Keyes *et al.*, 2012). Results are positive for the potential use of the MHC-SF in different cultures (Keyes *et al.*, 2008). Overall, the MHC-SF had an internal consistency of above 0,70, which is acceptable (Keyes *et al.*, 2008).

Validity was not determined in the current study because of the small sample size.

3.2.2 W-BNS

The rationale, description, administration, reliability, scoring and validity of the W-BNS are discussed next.

3.2.2.1 Rationale

The W-BNS (Vander Elst *et al.*, 2012) assesses the satisfaction or thwarting (frustration) related to the needs for:

- Autonomy;

- Relatedness; and

- Competence at work.

3.2.2.2 Description

With the W-BNS, all the items were prepared as declarative statements following the stem: 'The following statements aim to tap into your personal experience at work.' Responses were made on a five-point Likert scale ranging from one (totally disagree) to five (totally agree) (Van den Broeck *et al.*, 2009).

3.2.2.3 Administration

The W-BNS is a self-report questionnaire and takes about 10 minutes to complete. The questionnaire was completed anonymously.

3.2.2.4 Reliability

An example of studies where reliability was proven, is given. In a study among Dutch respondents, the subscales for each of the need for autonomy, competence and relatedness at work were on average 0,81, 0,85 and 0,82 of the Work-related Basic Need Satisfaction Scale. This indicates good reliability (Van den Broeck *et al.*, 2009). The three need satisfaction measures were thus determined to represent related but distinct constructs (Van den Broeck *et al.*, 2009). A study with a heterogeneous sample of 3 185 Flemish employees found the Cronbach α coefficients to be 0,85, 0,86 and 0,86 for autonomy, competence and relatedness respectively (Vander Elst *et al.*, 2012).

3.2.2.5 Scoring

Question 1 to 7 combines to form construct 1, the need for autonomy. Question 8 to 13 combines to form construct 2, the need for competence and question 14 to 23

combines to form construct 3, the need for relatedness at work. Thereafter the factors scores are calculated by computing the mean of each construct.

3.2.2.6 Validity

There is evidence that proves the criterion-related validity of the W-BNS namely that the satisfaction of the three basic needs was related to environmental aspects, as well as employees' functioning in a predictable way among the Dutch respondents (Van den Broeck *et al.*, 2009). Validity was not determined in the current study because of the small sample size. That is why only an example of a study where it was proven is given.

3.3 Statistical analysis

The statistical analysis was carried out with the help of a statistician who used IBM SPSS Statistics Version 21 (SPSS Inc., 2013).

3.3.1 Measuring tools

Measuring tools are statistical tools used to interpret the data as obtained by the measuring battery. The reliability of the measuring tools was tested. The data was analysed, correlations were calculated, effect sizes were calculated, a one-way ANOVA test as well as cross tabulation were done.

3.3.1.1 Descriptive statistics

Data was processed by drawing up of frequency tables. The standard deviation (*s*) is an approximation of the average variability or inconsistency of a set of data measured in the same units of measurement as the original data. It is calculated by the square root of the variance (Field, 2009):

$$s = \sqrt{\frac{\sum (x_i - \bar{x})^2}{N - 1}}$$

The variance is an estimate of average spread of a set of data and is calculated by the sum of squares divided by the number of values (*N*) on which the sum of square is based minus 1 (Field, 2009).

3.3.1.2 Independent t-test

An independent t-test is a test using the t-statistic that establishes whether two means collected from independent samples differ significantly (Field, 2009). A value of 0,2 is indicative of a small difference (no practically significant difference), a value of 0,5 is indicative of a medium difference (practically visible difference) and a value of 0,8 is indicative of a large difference (practically significant difference) (Field, 2009). If the sample was determined at random, it could have been determined whether the difference was statistically significant.

An independent t-test was completed because different respondents were sorted into two different groups (Field, 2009). For an independent t-test, a few assumptions are made (Field, 2009):

- Populations are normally distributed

- Data are measured at least at the interval level

- Homogeneity of variance (variances in the two populations are roughly equal)

- Scores from different subjects are independent

Fisher originally stated that the researcher should be very sceptic and only believe that a result is true if there is a 95% certainty that it is or when there is only a 5% chance that the results could occur due to chance (Field, 2009). But even if researchers are 95% sure, there is always a small chance that it is wrong. When researchers believe that there is an authentic effect in the population when there is not, it is called a type 1 error. If researchers use Fisher's criteria, the probability of this error is 0,05 or 5% when there is no effect in the population. This value is called the α-level (Field, 2009). If it is assumed that there is no effect in the population and the data collection is repeated 100 times, it could be expected to display on occasion a statistic large enough to make researchers think that there was an authentic effect even though there is not (Field, 2009). The use of the calculation of effect sizes is valuable because they provide an objective measure of the importance of an effect (Field, 2009).

The equation for an independent t-test is $t = \dfrac{\bar{X}_1 - \bar{X}_2}{\sqrt{\dfrac{s_p^2}{n_1} + \dfrac{s_p^2}{n_2}}}$

Where t is the measure for an independent t-test, X is the mean, s is the standard deviation and N is the sample size where the sample sizes are unequal (Field, 2009).

3.3.1.3 Non-parametric correlations

With correlation analysis, the aim is to determine if there is a linear relationship between two variables or constructs. For example, if one factor goes up, another factor also goes up. The correlation coefficient is a measure of the strength of association between two variables (Field, 2009). Spearman's rho was used to determine the relationship between variables. Spearman's rho is calculated for ordinal data (Field, 2009).

Correlation coefficients give no sign of the direction of causality (Field, 2009). This means that it cannot show which variable causes the other to change and also not in which direction (Field, 2009). Also, correlation coefficients vary from sample to sample, especially in small sample sizes (Field, 2009).

Another challenge that occurs with correlation coefficients is the third variable problem, namely that there may be other measured or unmeasured variables affecting the results (Field, 2009).

Spearman's correlation coefficient is a standardized measure of the strength of the relationship between two variables that does not rely on the assumptions of a parametric test (Field, 2009). Values of r = 0,1, r = 0,3 and r = 0,5 are retrieved. A value close to 0,1 indicates a small, no practical significant relationship. A value close to 0,3 indicates a medium, practical visible relationship and a value close to 0,5 indicates a large, practical significant relationship (Ellis & Steyn, 2003; Field, 2009).

Spearman's test is performed by ranking the data first and then applying Pearson's equation to the ranks (Field, 2009).

Pearson's equation: $r = \dfrac{cov_{xy}}{s_x s_y} = \dfrac{\sum (x_i - \bar{x})(y_i - \bar{y})}{(N-1) s_x s_y}$

In this equation x represents the independent variable, y the dependent variable and *cov* the covariance. The standardised covariance is known as the correlation coefficient where the standard deviation of the first variable is s_x, s_y is the standard deviation of the second variable and all the other letters are the same as in the equation defining covariance (Field, 2009):

$$cov(x, y) = \frac{\sum(x_i - \bar{x})(y_{i-\bar{y}})}{N - 1}$$

3.3.1.4 One-way ANOVA

The One-way ANOVA uses the same equation and cut-off points as the independent t-test (See 3.3.1.2). It compares several means when those means come from different groups (Field, 2009). The sample was divided into three different groups according to province, namely Free State, Gauteng and Other. The researcher wanted to determine whether a difference exists between the provinces in terms of their responses on the total MHC-SF and the work-related basic psychological needs separately.

3.3.1.5 Cross-tabulation

The researcher wanted to determine whether there is a practically significant association between the province in which the respondent worked and whether respondents flourished or were moderately mentally healthy. Cross-tabulation measures whether a relationship between two variables are practically significant (Ellis & Steyn, 2003). The effect size is independent of the sample size.

The phi-value (*w*) is an indication of the effect size. A *w*-value of close to 0,1 indicates a practical non-significant association or small effect. A *w*-value of close to 0,3 indicates a practical visible significant association or medium effect and a *w*-value of close to 0,5 indicates a practical significant association or large effect (Cohen, 1988; Ellis & Steyn, 2003).

The effect size is given by $w = \sqrt{\frac{x^2}{n}}$

where x^2 is the Chi-square statistic for the contingency table and *n* is the sample size (Cohen, 1988; Ellis & Steyn, 2003; Steyn, 2002).

3.4 Chapter summary

This concludes the explanation of the methodology used for the empirical investigation. Next, the results of the current study will be presented and discussed.

CHAPTER 4

RESULTS AND DISCUSSION

In this Chapter, the results of the study are reported and described. Firstly, the demographics will be reported and thereafter the descriptive statistics, frequency tables, the reliability of the measuring instruments, T-test and lastly the non-parametric correlations. The results are discussed after the report thereof.

4.1 Demographic description

4.1.1 Gender participation

Of the 65 respondents, 15 were male (23,8%) and 48 were female (76,2%). Two respondents did not answer the question. There are currently more female pharmacists in the corporate environment than there are male pharmacists. In South, Africa there are more male pharmacists than females over the age of 55 years but, there are more female pharmacists than males under the age of 55 years (South African Pharmacy Council, 2011) which coincides with the result.

4.1.2 Age

Of the 65 respondents, eight did not report their age but of the 57 that did, the minimum age was 19 years, the maximum age was 59 which gives a mean of 31,9 and a standard deviation of 8.8. This shows that the workforce of pharmacists in the sample is of relative young age with many working years ahead.

4.1.3 Highest educational qualification

Of the 65 respondents, 29 had a high school degree or equivalent (44,6%), 15 had a diploma (23,1%), 20 had a graduate degree (30,8%) and one had a post-graduate degree (1,5%). Pharmacy employees are educated and skilled workers.

4.1.4 Job description

Of the 65 respondents, 13 were both pharmacists and managers (20,3%), five respondents were pharmacists only (7,8%), one respondent was a manager only (1,6%), 37 respondents were assistants, both basic and post-basic (87,5%), seven were students (10,9%) and one was an intern (1,6%). One respondent did not answer this question of the questionnaire.

It seems that the corporate environment rely highly on assistants in the pharmacy. This may be because of the high shortage of pharmacists in South Africa (South African Pharmacy Council, 2011). In this context pharmacists play more of a managerial role. Their role includes supervise over assistants, tutoring interns and supervising students (South African Pharmacy Council, 2011).

4.1.5 Language

The mother tongue of the 65 respondents is indicated in Figure 4.1.

Figure 4.1: Mother tongue of the sample
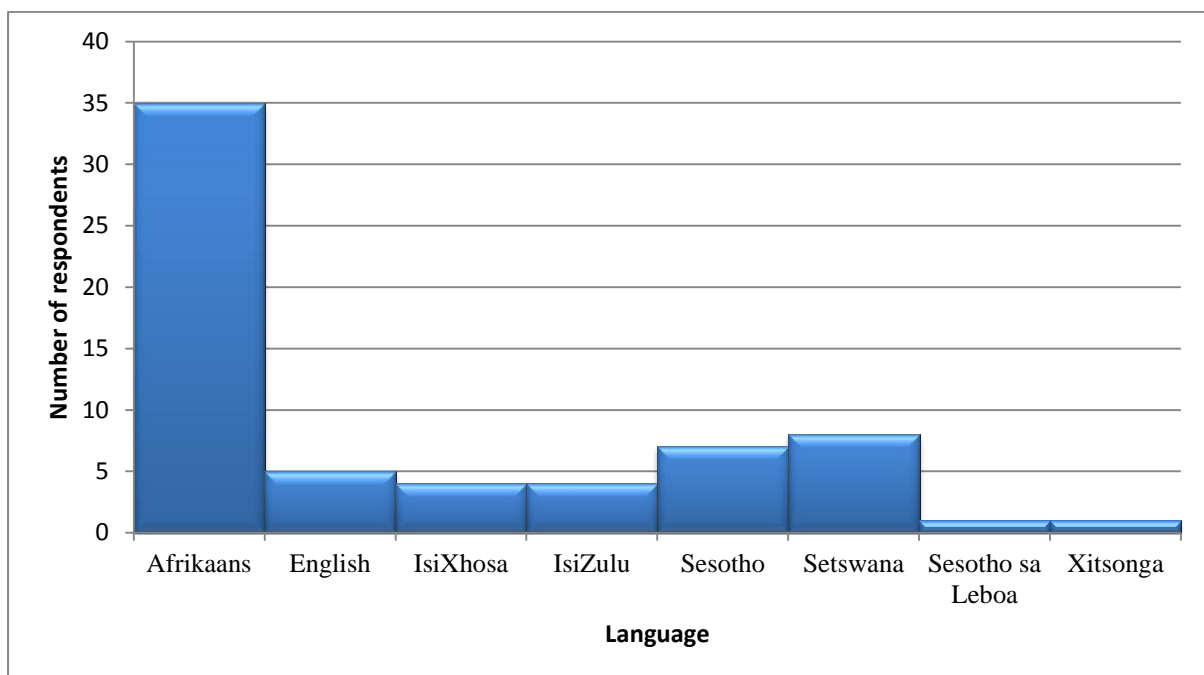
Of the 65 respondents, 35 respondents' mother tongue was Afrikaans (53,8%), eight respondents' mother tongue was Setswana (12,3%), one respondent's mother tongue was Sesotho sa Leboa (1,5%) and one respondent's mother tongue was Xitsonga (1,5%).

Language is synonym with culture; language is needed to convey culture (Kramsch, 1998; Raja, 2013). The sample's mother tongue was mostly Afrikaans, which makes the culture of the sample very one-sided. This means that employees can relate to each other because when a group of people speak the same language it creates social agreements and standards of social appropriateness (ethics) (Kramsch, 1998; Raja, 2013). But on the other hand, the sample was not a very diverse group of

people. This means that everyone in the sample could be constrained by the presuming structure and values (Kramsch, 1998).

4.1.6 Geographic spread

Of the 65 respondents, eight worked in the North-West province (12,5%), 22 worked in the Free State (34,4%), 15 worked in the Northern Cape (23,4%) and 19 worked in Gauteng (29,7%). One respondent did not answer this question. Four pharmacies were located in the Free State, six were located in the Northern Cape, two in North-West and seven were located in Gauteng. The distribution of employees among pharmacies is indicated in Figure 4.2.

Figure 4.2 Quantity of pharmacy employees per pharmacy in the sample
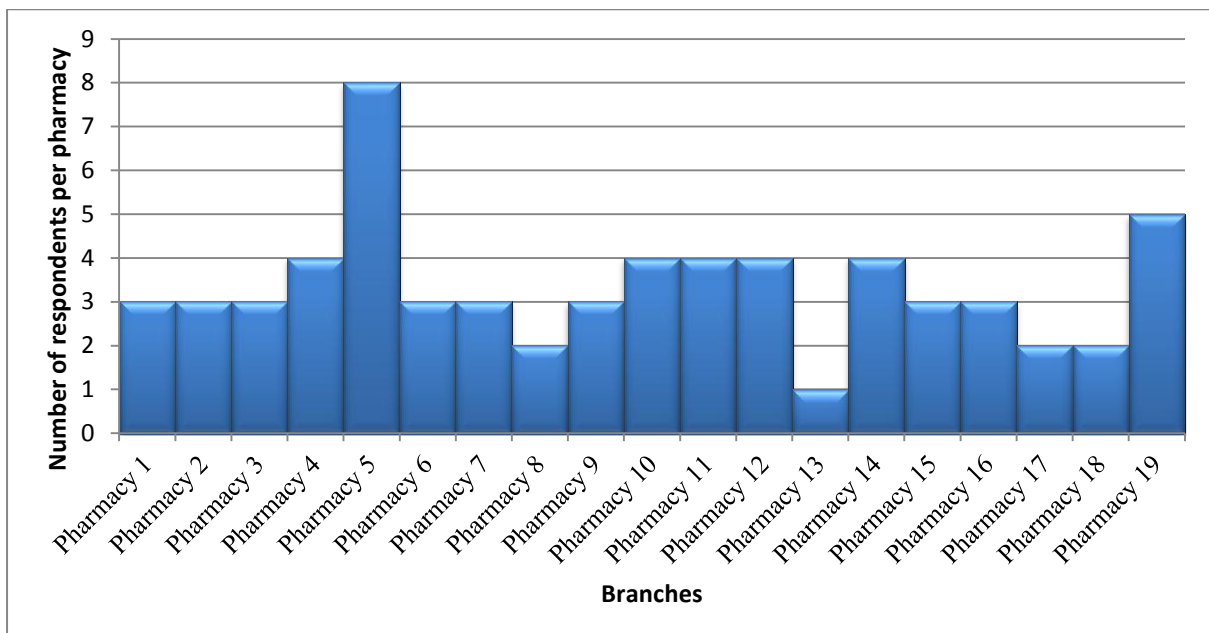
It can be seen that the distribution of pharmacy employees per pharmacy is rather evenly spread.

4.1.7 Marital status

Hereafter the distribution of the marital status within the sample is indicated in Figure 4.3.

66

Figure 4.3 Marital status of the sample
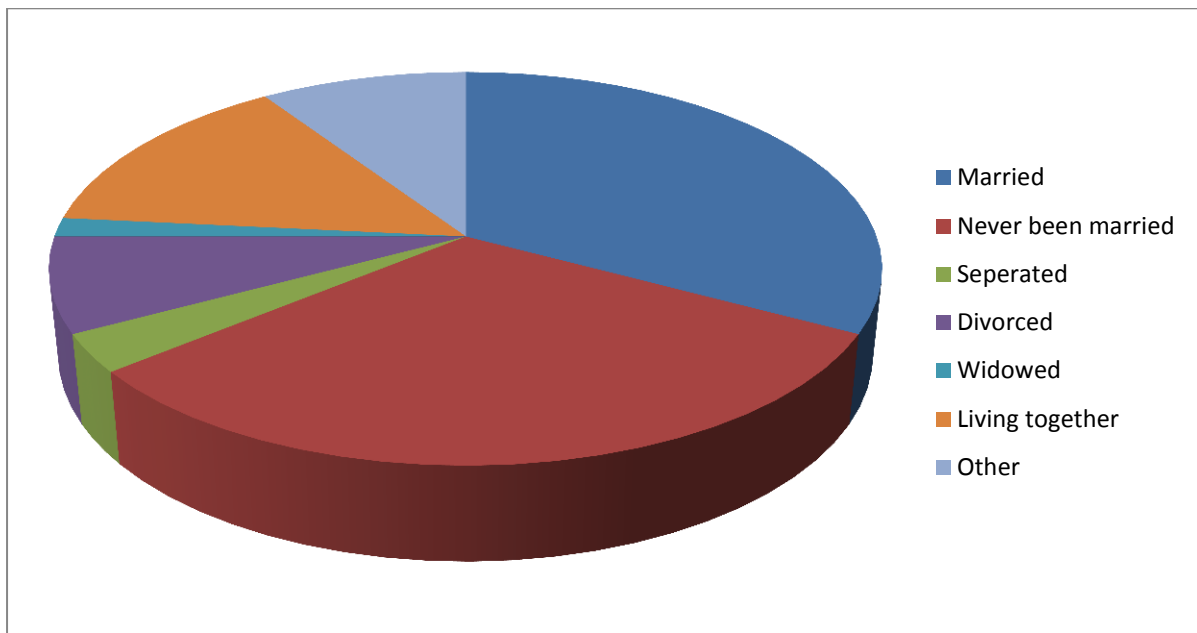
Of the 65 respondents, 21 were married (32,8%), one was widowed (1,6%), and six chose other (valid percent of 9,4). It might be that some of these respondents were engaged and therefore chose other. One respondent did not answer the question.

4.2 Frequency tables

Frequency tables depict an indication of how many respondents of the sample chose a specific option with each question. Hereafter the frequency tables of the questionnaire will be shown.

4.2.1 The Mental Health Continuum-Short Form (MHC-SF)

The frequency table of the MHC-SF is shown in Table 4.1. Questions 1 to 3 measured emotional well-being. From Table 4.1 it is clear that the employees in the sample felt positive about their emotional well-being. It would appear that most of the employees in the sample felt happy and interested in life. Questions 4 to 14 assessed positive functioning. From Table 4.1 it can be seen that positive functioning is present in the sample of employees. Questions 4 to 8 measured social well-being consisting of social contribution, social integration, social growth, social acceptance and social coherence. This is where the employees from the sample chose the lowest scores but it is still a positive result.

Table 4.1 Frequency table of the MHC-SF

	Question: How often during the past month did you feel:	Never	Once or twice	About once a week	About 2 or 3 times a week	Almost every day	Every day
1	happy	0	6	5	16	28*	9
2	interested in life	1	0	5	11	23	23
3	satisfied	6	3	7	7	25	7
4	that you had something important to contribute to society	3	7	4	15	20	15
5	that you belonged to a community (like a social group, your neighbourhood)	5	7	7	11	15	20
6	that our society is becoming a better place for people like you	7	10	9	14	13	12
7	that people are basically good	2	10	10	18	17	8
8	that the way our society works made sense to you	12	9	9	17	13	4
9	that you liked most parts of your personality	0	2	4	5	26	28
10	good at managing the responsibilities of your daily life	0	4	3	8	29	21
11	feel that you had warm and trusting relationships with others	2	3	1	9	32	18
12	that you had experiences that challenged you to grow and become a better person	0	6	3	9	21	26
13	confident to think or express your own ideas and opinions	0	1	5	15	25	19
14	That your life has a sense of direction or meaning to it	2	3	2	12	18	28

*The highest frequency appears in blue. Adapted from "Brief description of the Mental Health Continuum Short Form (MHC-SF)" by C.L.M Keyes, 2012, retrieved November, 2012, from http://www.sociology.emory.edu/ckeyes/.

As can be seen from Table 4.1, employees felt good about their social well-being. Questions 9 to 14 assessed psychological well-being consisting of self-acceptance, environmental mastery, positive relationships with others, personal growth, autonomy and purpose in life. Again from the table it is clear that employees feel very positive about their psychological well-being.

Question 4 measured social contribution. Employees mostly felt that they had something important to contribute to society. Question 5 measured social integration. Most employees felt that they belonged to a community. Question 6 measured social growth. Employees feel that the society is becoming a better place for them but most felt like that about two to three times a week. Question 7 measured social acceptance. Employees felt that people are basically good about two to three times a week. Question 8 measured social coherence. Only about two to three times a week, the employees felt that the way society works made sense to them.

Question 9 measured self-acceptance. Employees really felt that they liked most parts of their personality. It might be good news since this may mean more confidence at work. Question 10 measured environmental mastery. Most employees felt that they were good at managing the responsibilities of their daily lives. Because of the high pressure at work and to minimise the stress, the employees have to be more organised to manage all of the responsibilities. In other words, it may be out of compulsion rather than free will.

Question 11 measured positive relationships with others. Most of the employees felt that they have warm and trusting relationships with others. This may be because of an understanding, supporting spouse or because of friendships at work. Question 12 measured personal growth. Most employees felt that they had experiences that challenged them to grow and become a better person every day. This might be because pharmacy employees mostly interact with other people which give them these opportunities. Question 13 measured autonomy. Employees mostly felt confident to think or express their own ideas and opinions. This might be because the organisation allows them the freedom to work mostly independent. Question 14 measured purpose in life. Employees felt that their life has a sense of direction or meaning to it every day.

Out of the 65 respondents, some did not answer all of the questions. One respondent, not necessarily the same one, did not answer questions one, four and eight. Two respondents did not answer question two and 10 respondents did not answer question three. With question three, 10 respondents (15,4%) did not answer the question. It may be possible that the question was unclear as to what was meant with the words "being satisfied."

4.2.1.1 Prevalence of flourishing

Respondents that flourished (construct 1) was 39 (60%), respondents that were moderately mentally healthy (construct 2) were 22 (33,8%) and respondents that were languishing (construct 3) were 4 (6,2%). Because only 6,2% respondents were languishing (construct 3), it was not used in any further analyses.

These results differ in terms of the respondents that flourish and are moderately mentally healthy compared to the results of other studies that made use of the MHC-SF. A study performed on Setswana-speaking South Africans (N = 1050) found that 20% of the sample were flourishing, 67,8% were moderately mentally healthy and 12,2% of the sample was languishing (Keyes *et al*., 2008). This may mean that the employees are very happy at their job. The company where the employees work is also ranked one of the best companies to work for, which could also have an influence on the results. The results of the current study compares to a study among college students in the USA (N = 5689) with a widespread ethnic composition were 54,8% of the students were flourishing, 44,6% were moderately mentally healthy and 3,6% were languishing (Keyes *et al*., 2012).

The implication is that individuals who are flourishing would indicate the lowest prevalence of major depressive incidents and any work impairment (Keyes, 2009), have the fewest missed days of work, the healthiest psychosocial functioning, the lowest risk of cardiovascular disease and the fewest health limitations (Keyes *et al*., 2008). Employee well-being is of value in business because of its strategic worth for instead of seeing employee well-being as a cost, it can be seen as an investment in the employee who produces direct economic profits to the organisation (Zwetsloots & Pot, 2004).

The frequency table of the Work-related Basic Need Satisfaction Scale (W-BNS) will now be reported and discussed.

4.2.2 The W-BNS

Frequency tables are an indication of how many respondents of the 65 of the sample chose a specific option with each question. The frequency table of the questionnaire is shown in Table 4.2. From Table 4.2 it is evident that employees feel that they can express their ideas and opinions on the job. This may be because the corporate environment they are part of gives them the freedom to express themselves and not judge them and so everyone can just be themselves. Employees mostly chose "neutral" when asked if they have to follow other people's commands at work. This may be because there are some situations where you have to do what your manager tells you to do, but it also could mean that there are certain situations where the employee could decide for himself or herself what the course of action would be.

Most employees felt that they would do things differently at work if they could. This may be because every one of us has an idea of how things should be done. Here is a great opportunity for management to find out exactly what employees would do differently by using autonomy support as discussed in 2.9.1. There may be some good ideas that will benefit the corporate environment.

Employees feel that the tasks they have to do at work are in line with what they really want to do. This may be because being a pharmacist requires years of study and devotion. People who are pharmacists went through all the effort and to be successful means that they really want to do it.

Employees feel that they can do their work as they think it could best be done and they do not feel forced to do anything they do not want to. This already shows the autonomy support of the corporate environment. The employees also feel that they want to do what is expected of them at work. In other words nothing unrealistic is expected of them because they do it out of free will.

Table 4.2 Frequency table of the W-BNS

	Question:	Totally disagree	Disagree	Neutral	Agree	Totally agree	Mean	Standard Deviation
1	I feel free to express my ideas and opinions in this job	5	7	13	24*	14	3.5	1.1
2	I feel like I can be myself at my job	5	5	11	24	18	3.7	1.1
3	At work, I often feel like I have to follow other people's commands	3	16	23	14	7	3.0	1.0
4	If I could choose, I would do things at work differently	4	11	13	21	14	3.4	1.2
5	The tasks I have to do at work are in line with what I really want to do	4	3	15	18	21	3.8	1.1
6	I feel free to do my job the way I think it could best be done	2	7	10	26	18	3.8	1.0
7	In my job, I feel forced to do things I do not want to do	15	16	14	10	8	2.6	1.3
8	I do not really feel competent in my job	26	22	9	4	1	1.9	0,9
9	I really master my tasks at my job	3	3	9	28	20	3.9	1.0
10	I feel competent at my job	1	4	8	25	25	4.0	0,9
11	I doubt whether I am able to execute my job properly	23	18	12	3	1	1.9	0,9
12	I am good at the things I do in my job	1	0	8	24	29	4.2	0,8
13	I have the feeling that I can even accomplish the most difficult tasks at work	1	1	15	23	23	4.0	0,9
14	I do not really feel connected with other people at my job	24	23	7	7	2	2.0	1.1
15	At work, I feel part of a group	1	4	12	19	27	4.0	1.0
16	I do not really mix with other people at my job	31	24	5	1	2	1.7	0,9
17	At work, I can talk with people about things that really matter to me	3	10	13	18	18	3.6	1.2
18	I often feel alone when I am with my colleagues	25	21	13	1	3	1.9	1.0
19	At work, people involve me in social activities	3	5	16	23	16	3.6	1.0

	Question:	Totally disagree	Disagree	Neutral	Agree	Totally agree	Mean	Standard Deviation
20	At work, there are people who really understand me	2	2	18	18	22	3.9	1.0
21	Some people I work with are close friends of mine	2	11	21	15	14	3.4	1.1
22	At work, no one cares about me	33	18	11	1	0	1.6	0,8
23	There is nobody I can share my thoughts with if I would want to so	30	17	13	3	0	1.8	0,9

*The highest frequency appears in blue. Adapted from: "Capturing autonomy, competence and relatedness at work: construction and initial validation of the Work-related basic need satisfaction scale by A. Van den Broeck, M. Vansteenskiste, H. De Witte, B. Soenens and W. Lens, 2009, *Journal of Occupational and Organisational Psychology, 1,* p. 991.

Employees also feel very competent at their job, which could mean excellent tertiary education but it could also mean that the organisation train their employees and prepare them for what they could expect on the job and that could also be why they feel they can execute their jobs properly and can accomplish the most difficult tasks.

Employees feel very connected to each other being part of a group. This may be because of the huge amounts of time employees spend in each other's company but could also be because of effective management and team-building. Most employees feel that they can talk to other employees about what is really important to them, they are part of social activities and employees really understand each other. This may be because the sample consisted mostly out of Afrikaans speaking employees with mostly the same culture.

It is interesting to note that most employees chose "neutral" at the statement that some people they work with are close friends of theirs. This suggests that there is a sense of professionalism between co-workers and a feeling that you do not mix work and home activities even though they care for each other and can share their thoughts.

Table 4.3 The number of respondents that did not answer the questions

Number of respondents that did not answer	Question number
2	1, 2. 3, 4, 6, 7, 9, 10, 13, 14, 15, 16, 18, 19, 21, 22 and 23
3	8, 12, 17 and 20
4	5
8	11

There are three types of response bias: yeasaying/naysaying, trait desirability and need for approval. Type 1 can be described as the propensity of respondents to choose "agree" or "disagree" with a question regardless of what the question entails. Trait desirability can be defined as the extent to which the respondents' answers imitate the level to which they see a question as desirable or undesirable. Research on the need for approval (type 3) is not very extensive but it means that respondents will choose answers that will be acceptable to others (Gove & Geerken, 1977).

From Table 4.3 it is evident that eight respondents did not answer question 11. This may be because they do feel that they cannot execute their job properly but was too afraid to answer the question so because they were afraid that they will be exposed in some way or that the fieldworker, who was a district manager, will compromise their anonymity. It is also possible that they do not want to shed negative light on the company because the question could imply that the employees did not receive proper training to execute their jobs properly.

In summary, in this study very positive results were obtained in terms of the work-related basic need satisfaction of the sample. Hereafter the reliability of the questionnaire will be discussed.

4.3 Reliability

As previously noted, the Cronbach α value is an indication of the reliability of a questionnaire (Field, 2009).

4.3.1 MHC-SF

The reliability of the MHC-SF for this study is indicated in Table 4.4.

Table 4.4 Reliability of the MHC-SF

	Mental Health Continuum Short Form	
	Construct	Cronbach α
1	Emotional well-being (Q1-3)	0,85
2	Social well-being (Q4-8)	0,81
3	Psychological well-being (Q9-14)	0,82

The Cronbach α of the total questionnaire is 0,92 which is higher than 0,7, making it reliable. The Cronbach α for the three constructs, emotional well-being, psychological well-being and social well-being are all higher than 0,7, making it reliable. Thus, every construct of the questionnaire is reliable, which means that the questionnaire has the capacity to generate consistent results when the same entities are measured under different conditions (Field, 2009) and so is the whole questionnaire.

4.3.2 W-BNS

The reliability of the W-BNS for this study is indicated in Table 4.5.

Table 4.5 Reliability of the W-BNS

	Work-related Basic Need Satisfaction Scale			
	Construct	Cronbach α	Mean	Standard deviation
1	Need for autonomy (Q1-7)	0,82	3,37	0,83
2	Need for competence (Q8-13)	0,47*	3,71	0,65
3	Need for relatedness (Q14-23)	0,.89	3,95	0,74

*For the need for competence (construct 2), Question 8, 'I do not really feel competent in my job', caused construct 2 to be unreliable. After question 8 has been left out of the analysis, the Cronbach α is **0,611**. This made construct 2 reliable.

The need for autonomy (construct 1) and the need for relatedness (construct 3) is reliable because the alpha value is higher than 0,7.

4.4 Independent T-test

The independent t-test was used to determine how respondents who flourish and who are moderately mentally healthy differed according to the satisfaction of their needs for autonomy, relatedness and competence. The T-Test analysis was only completed using construct 1 (flourishing) and 2 (moderately mentally healthy) of the MHC-SF and all the constructs of the W-BNS. The results are depicted in Table 4.6.

On average, respondents who flourished, tended to choose "agree" (M = 3,6 and SD = 0,77) for the need for autonomy. On average, respondents that are moderately mentally healthy tended to choose "neutral" (M = 3.1 and SD = 0,78) for the need for autonomy. The effect size of 0,68 for the need for autonomy indicated a medium practical significant difference between the levels of need satisfaction of flourishing and moderately mentally healthy employees. Thus, employees feel that their need for autonomy is relatively satisfied. So, flourishing employees' need for autonomy (M = 3,62) was more satisfied than the need for autonomy of moderately mentally healthy (M = 3,08) employees.

The need for autonomy is the most important need that has to be satisfied, because when people feel autonomy supported, they will feel freer to do what is needed to satisfy their other needs (Deci & Ryan, 2012). In other words, the satisfaction of the need for autonomy flows through to the other needs which most likely then also be satisfied. Only autonomy satisfaction seemed to prevent turnover. Thus, it is possible that because employees' need for autonomy is satisfied, employees will be less likely to resign (Van den Broeck *et al.*, 2009).

Table 4.6 How work-related basic need satisfaction affect employees who are flourishing and moderately mentally healthy

Construct	W-BNS	MHC-SF	Mean (M)	Standard deviation (SD)	Effect size	*p-value
1	The need for autonomy	Flourishing	3,62	0,77	0,68	0,15
		Moderately mentally healthy	3,08	0,78		
2	The need for competence	Flourishing	3,75	0,69	0,16	0,48
		Moderately mentally healthy	3,64	0,47		
3	The need for relatedness	Flourishing	4,15	0,73	0,65	0,02
		Moderately mentally healthy	3,68	0,70		

*The p-value is only reported for completeness. Because a convenience sample was used, the p-value is not interpreted. The p-value reported is with equal variances not assumed.

On average, respondents that flourish tended to choose "agree" (M = 3,8 and SD = 0,69) for the need for competence. On average, respondents that are moderately mentally healthy tended to also choose "agree" (M = 3.6 and SD = 0,47) for the need for competence. The effect size of 0,16 regarding the need for competence means that there is a small but no practical significant difference between the level of competence satisfaction for flourishing and moderately mentally healthy employees. Thus, employees feel that their need for competence is satisfied. So, there was no difference in the level of need satisfaction for competence between flourishing and moderately mentally healthy employees.

The implications of the satisfaction of the need for competence are that people will feel more able to master a task and feel more effective (Van den Broeck *et al.*, 2009). Also, employees will be more able to adapt to the ever changing environment (Van den Broeck *et al.*, 2008).

On average, respondents that flourish tended to choose "agree" (M = 4,2 and SD = 0,73) for the need for relatedness. On average, respondents that are moderately mentally healthy tended to also choose "agree" (M = 3,7 and SD = 0,70) for the need for relatedness. The effect size of 0,65 for the need for relatedness indicated a medium practical significant difference between the levels of need satisfaction of flourishing and moderately mentally healthy employees. So, the need for relatedness of flourishing employees is significantly more satisfied than for moderately mentally healthy employees.

When the need for relatedness is satisfied, people experience a sense of communion and have sustainable, close and intimate relationships. Also, employees feel part of a team and are free to express their concerns and happiness at work (Van den Broeck *et al.*, 2008).

It is thus evident that respondents that flourish and are moderately mentally healthy differ in how they feel with regard to the satisfaction of their needs for autonomy and relatedness. It was shown that the levels of need satisfaction for autonomy and relatedness of flourishing employees are higher than those of the moderately mentally healthy employees.

4.5 Non-parametric correlations

The total count of the MHC-SF and the mean per factor of the work-related basic need satisfaction scale was compared to determine whether there were any correlations between constructs.

Table 4.7 Correlation coefficients (Spearman's rho) of the comparison of the MHC-SF and the W-BNS

		The need for autonomy	The need for competence	The need for relatedness
Spearman's rho	Mental health	0,33	0,302	0,36
	p-value	0,008	0,016	0,004

*The p-value is only reported for completeness. Because a convenience sample was used, the p-value is not interpreted.

For all three work-related basic needs there is a medium, practical visible relationship with the MHC-SF because the values are close to 0,3 as reflected in Table 4.7.

The sample size was too small to perform a regression analysis to determine whether work-related basic need satisfaction can predict the level of flourishing of pharmacy employees. However, in this study, employees with satisfied needs were the flourishers.

4.6 One-way ANOVA

The researcher wanted to determine whether there is a difference between the provinces in terms of their responses on the total MHC-SF and the work-related basic psychological needs, separately. The sample was divided into three different groups according to province, namely Free State, Gauteng and Other. The results are indicated in Table 4.8.

Table 4.8 Workplace and mental health and work-related basic need satisfaction

	Group	Mean (M)	Standard deviation (SD)	Effect size		Anova p-value*	Welch p-value*
				Free State with...	Gauteng with...		
MHC-SF total questionnaire	Free State	46,16	15,58			0,239	0,155
	Gauteng	52,80	7,48	0,43			
	Other	48,69	12,32	0,16	0,33		
	Total	49,04	12,53				
Need for autonomy	Free State	3,27	1,00			0,633	0,627
	Gauteng	3,32	0,73	0,05			
	Other	3,51	0,77	0,23	0,24		
	Total	3,37	0,84				
Need for competence	Free State	3,9	0,76			0,142	0,197
	Gauteng	3,84	0,49	0,46			
	Other	3,83	0,63	0,45	0,02		
	Total	3,71	0,65				
Need for relatedness	Free State	3,95	0,74			0,855	0,849
	Gauteng	3,89	0,57	0,08			
	Other	4,02	0,89	0,08	0,15		
	Total	3,96	0,74				

*The p-value is only reported for completeness. Because a convenience sample was used, the p-value is not interpreted.

In terms of the total MHC-SF there was a medium practically visible difference between the employees working in the provinces Free State and Gauteng (M = 52,80 and SD = 7,48), Free State with Other (M = 48,69 and SD = 12,32) or Gauteng with Other (M = 48,69 and SD = 12,32) since the values fluctuated around 0,2. Since flourishing is the presence of mental health (Keyes, 2009), this means that the province in which an employee worked, did not make a difference on employees' flourishing.

In terms of the satisfaction of the need for autonomy, there was no practically significant difference between the employees working in the provinces Free State and Gauteng (M = 3,32 and SD = 0,73), Free State and Other (M = 3,51 and SD = 0,77) or Gauteng with Other (M = 3.51 and SD = 0,77) since the values fluctuated around 0,2. This means employees feel the same about how their need for autonomy is satisfied.

In terms of the satisfaction of the need for competence, there was a medium, practically visible difference between the employees working in the provinces Free State and Gauteng (M = 3,84 and SD = 0,49) and between Free State and Other (M = 3,82 and SD = 0,63) since the values fluctuated around 0,5. This means that employees feel different about how their need for competence is satisfied. There was no practically significant difference between Gauteng and Other (M = 3,82 and SD = 0,63) since the value was 0,02 which means that these groups feel the same about how their need for competence is satisfied. Thus, the Free State employees felt different about their levels of need satisfaction in terms of the need for competence. Thus, their need for competence was less satisfied.

In terms of the satisfaction of the need for relatedness, there was no practically significant difference between the employees working in the provinces Free State and Gauteng (M = 3,89 and SD = 0,57), Free State and Other (M = 4,02 and SD = 0,89) or Gauteng with Other (M = 4,02 and SD = 0,89) since the values were lower than 0,2. This means that employees feel the same about how their need for relatedness is satisfied.

4.7 Cross-tabulation

The researcher wanted to determine whether there is a practically significant association between the province where the respondent worked in and whether respondents flourished or were moderately mentally healthy.

Table 4.9 Cross-tabulation of flourishing and moderately mentally healthy employees grouped according to province

			MHC-SF		Total	Phi-value (*w*)	p-value*
			Flourishing	Moderately mentally healthy			
Groups according to province	Free State	Count of group	12	7	19		
		% of group	63,2%	36,8%	100,0%		
	Gauteng	Count of group	14	5	19		
		% of group	73,7%	26,3%	100,0%		
	Other	Count of group	13	9	22		
		% of group	59,1%	40,9%	100,0%		
Total		Count of group	39	21	60	**.129**	.608
		% of group	65,0%	35,0%	100,0%		

*The p-value is only reported for completeness. Because a convenience sample was used, the p-value is not interpreted.

There is not any practical significant association between employees' flourishing and the province where they work since the phi-value is close to 0,1.

4.8 Chapter summary

In this Chapter, the results of the empirical investigation were reported. The following empirical aims have been achieved:

- The levels of work related basic psychological needs of pharmacy employees in a corporate environment, (see Table 4.5) were determined;

- The proportions of pharmacy employees that are flourishing, moderately healthy or languishing in the corporate work-environment, see section 4.2.1.1. were determined;

- The relationships between work-related basic psychological need satisfaction and flourishing of pharmacy employees, see section 4.4 were indicated; and

- Whether work-related basic need satisfaction can predict the level of flourishing of pharmacy employees, see section 4.5 were discussed.

In Chapter 5 the conclusions, limitations and recommendations of the research will be discussed.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

This Chapter contains the conclusions and a précis of the results attained in this study. It therefore concludes this inquiry. Several research questions were identified in the commencement of this study and the objectives for the investigation were posed. The conclusion, results and recommendations thereof are presented here. The limitations of the study are also be noted in this Chapter.

5.1 Conclusions

The conclusions of this study are framed according to the specific research aims.

5.1.1 Literature aims

The following three literature aims were set for this study in Chapter 1. Conclusions from this study are included.

- **Determine what are pharmacists and employees presently experiencing in the pharmacy environment.**

  Pharmacy employees experience stress, mental ill-health, cruel working conditions, increased workload, more work demands and unhealthy workplace relationships.

- **Conceptualise motivation, work related basic need satisfaction, flourishing and performance.**

  It was determined that there are a lot of different motivational theories but SDT was the most applicable theory to what the researcher wanted to investigate. The more a person's needs are satisfied, the more self-determined they become. SDT distinguishes between autonomous and controlled motivation and regards it as equally important to motivate individuals. Autonomous motivation can be categorised as both intrinsic and extrinsic. Extrinsic motivation are categorised under identified regulation and integrated regulation. Controlled motivation is regarded as merely extrinsic motivation. Under controlled motivation are introjected regulation and external regulation categorised.

It was conceptualised from the literature that there are three work-related basic needs namely 1) the need for autonomy, 2) the need for relatedness and 3) the need for competence.

During this study, the literature revealed that flourishing is the presence of mental health and is an umbrella term for hedonic and eudaimonic well-being. Keyes operationalised well-being into the concept of flourishing and posited that a person can either be flourishing, moderately mentally healthy or languishing as part of a continuum. Hedonic well-being proposes that extreme happiness in life is what is important, thus the experience of positive feelings. Eudaimonic well-being involves the commitment to challenges in life and is functioning with the assessments of purpose in life, personal growth, autonomy, environmental mastery, self-acceptance and positive relationships with others.

Performance was conceptualised in terms of the things that are important to facilitate or enhance performance. And so it was determined from the literature that knowledge, skill and ability are important for pharmacists to perform constantly according to decided standards. Need satisfaction of employees and motivation are also important to facilitate performance as is discussed next.

- **Conceptualise the possible relationships between motivation, work related basic need satisfaction, flourishing and performance.**
Need satisfaction of employees produce effective performance and harvest increased well-being. The satisfaction of the three basic psychological needs is a significant predictor of individuals' flourishing. However, changes in well-being are not dependent on performance. The satisfaction of the three basic psychological needs increases employees' autonomous motivation. It was conceptualised that performance is not facilitated by controlled motivation but by autonomous motivation.

5.1.2 Empirical aims

The empirical aims were to:

- **Determine the levels of work related basic psychological needs of pharmacy employees in a corporate environment.**

  It was found that employees feel that their needs for autonomy, relatedness and competence are satisfied. The levels were 3,37, 3,95 and 3,71 for autonomy, relatedness and competence respectively on a 5-point Likert scale ranging from 1 which is totally disagree to 5 which is totally agree.

- **Determine the proportions of pharmacy employees that are flourishing, moderately healthy or languishing in the corporate work-environment.**

  Respondents that flourished (construct 1) was 39 (60%), respondents that were moderately mentally healthy (construct 2) were 22 (33,8%) and respondents that were languishing (construct 3) were 4 (6,2%).

- **Determine the relationships between work-related basic psychological need satisfaction and flourishing of pharmacy employees.**

  Flourishing employees' need for autonomy was more satisfied than the need for autonomy of moderately mentally healthy employees. There was no difference in the level of need satisfaction for competence between flourishing and moderately mentally healthy employees. The need for relatedness of flourishing employees is significantly more satisfied than for moderately mentally healthy employees.

- **Determine whether work-related basic need satisfaction can predict the level of flourishing of pharmacy employees.**

  For all three work-related basic needs there is a medium, practical visible relationship with the MHC-SF. The sample size was too small to perform a regression analysis to determine whether work-related basic need satisfaction can predict the level of flourishing of pharmacy employees. However, in this study, employees with satisfied needs were the flourishers.

The researcher confirmed that employees' needs in the sample were satisfied at that point in time. The researcher also confirmed that employees in the sample also flourished at that point in time and that there is a correlation between the two concepts.

5.2 Limitations

This study was completed using a convenience sample in one organisation. As a result, the generalisability of the results can be interrogated. The researcher notes that generalisation is not the aim of all research. Similar research are aimed primarily as a groundwork studies. This study determined the levels of flourishing and work-related basic need satisfaction of pharmacy employees in a corporate environment rather than trying to develop generalisable empirical results. The researcher could not find any study that was completed in this particular environment. The results are only applicable to the specific sample because a convenience sample was used. Therefore, the sample was not representative of the total organisation and the composition of the sample did not represent the population of South Africa. The participants were mostly white Afrikaans speaking females.

The questionnaire was a self-report questionnaire that means that the results depend on the opinion of the respondents and may not be factually true. It has long been documented that data obtained from self-report questionnaires may be inaccurate because of the possibility of the presence of response bias. Because the measures were based on self-reports, there is a risk for both recall and response bias. Response bias was discussed in Chapter 4.

Another limitation was the fact that the sample size was small (n=65). Because of this, the study involved correlational data and the direction of the correlation of the constructs under investigation could not be determined. Therefore a regression analysis could not be done.

5.3 Recommendations

As mentioned previously, staying up to date with developments is a big source of stress for pharmacy employees. That is why it is so important that the well-being of pharmacy employees are taken into account when certain development are about to happen, because it is the employees who have to implement these changes and who are mostly affected by it.

It is vital that organisations create cultures that take employees' psychological need satisfaction into account as to have a constructive influence. This can be done by:

- Managers who create an environment of autonomy support. It is recommended to give employees choices and to provide meaningful, positive feedback. Managers should also take into account the perceptions of employees and give employees options instead of controlling them with deadlines. This will enhance employees' satisfaction of their need for autonomy. Autonomy support is the most important recommendation.

- Organisationally subsidised social events can be organised that satisfy the need for relatedness. Managers can organise a retreat for employees and should really express their care. This will enhance the satisfaction of their need for relatedness.

- Performance systems and reward arrangements can be put in place that provides comments about employees' competence. Managers should incorporate positive expectations and a learning orientation in the pharmacy. This will enhance employees' satisfaction of their need for competence.

By satisfying the work-related basic psychological needs, pharmacy employees' flourishing will also be safeguarded.

For further studies, the following recommendations can be made:

- Choose a sample randomly to make the generalisability of results possible;
- Use a sample size so that a regression analysis can be performed; and
- Try to incorporate a more diverse culture into the sample;
- Use a sample that represents the cultural diversity of the South African population.

Future research in the same environment with different organisations and different countries may add to the generalisability of the results. Future studies might also inspect the contributions of the needs to predict certain consequences such as performance, stress relief and adaption to change.

It seems that there is some positive news in terms of what can be done to support pharmacy employees in their day-to-day duties.

This concludes the study on work-related basic need satisfaction and flourishing of employees in a corporate pharmacy environment.

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ADDENDUM 1
RECRUITMENT LETTER

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOMKAMPUS

November 2012

Dear colleague,

I would like to thank you for your willingness to contribute to my research which will focus on the correlation between work-related basic need satisfaction and how it contributes to the flourishing of pharmacy employees within a corporate environment. I believe that this study will contribute greatly to the study field of pharmacy practice and specifically how organisational factors impact on the performance of pharmacists or pharmacy employees. Currently very little information is available on work-related basic need satisfaction within the pharmacy context in South Africa. I also plan to publish a scientific article based on the findings once the research project is completed.

I hereby wish to request your co-operation and support for the study. The questionnaires you are about to complete will be used for research purposes and people rarely request feedback on them. If you would like any feedback however, I will make arrangements for such an opportunity.

Please note that none of your responses to individual questionnaire items, your individual test profiles or any of your personal information will be disclosed or discussed with the management of MediRite without your written consent. The confidentiality of all information obtained during the study will be safeguarded throughout. The reference number for the ethics application now pending at the North-West University (NWU) Research Committee is NWU-00108-12-S5. The final report on the project will, however, be interpreted and presented to MediRite for management purposes. In this report tendencies regarding the entire sample as a group will be analysed and based on the findings recommendations will be made.

You may withdraw from the study at any time, without having to provide a reason and will not be discriminated against.

The research forms part of my Master's degree in Pharmacy Practice at the NWU. I have a B.Pharm degree and have to complete the study to obtain my M.Pharm degree. All of my supervisors are members of the Department of Pharmacy Practice at the Potchefstroom Campus of the North-West University and include:

Ms Mariëtta Basson (M.Sc., registered industrial psychologist with the Health Professionals Council of South Africa)

Ms Mariet Eksteen (M.Pharm, registered pharmacist with the South African Pharmacy Council)

Dr Johan Lamprecht (Ph.D., registered pharmacist with the South African Pharmacy Council)

If you have any further questions or queries, please contact my supervisor Mariëtta Basson at marietta.basson@nwu.ac.za or 083-660-2917.

Thank you for your participation in this study.
Yours sincerely,

Ms C. Coetzer   Ms Mariëtta Basson
(Researcher)   (Supervisor)

ADDENDUM 2
QUESTIONNAIRE

Thank you for your time and willingness to help me with my research. Please note that the questionnaire is anonymous. Feedback will be given in terms of each branch. If you would like personal feedback, you are welcome to contact me. Therefore, **please note**, that no results of your responses to individual test items, your individual test profiles or any of your personal information will be discussed with the management of MediRite without your written consent. Under no circumstances will your dignity be impaired. Completing the questionnaire is completely out of free will and nobody can force you to do it. This questionnaire will take you about 10 minutes to complete.

SECTION 1

Question 1: What is your gender?

Male	1
Female	2

Question 2: What is your age?_____

Question 3: What is the highest level of education you have completed?

Less than high school degree	1
High school degree or equivalent	2
College but no degree (diploma)	3
Associate degree	4
Bachelor degree	5
Graduate degree	6
Post-graduate degree	7

Other (specify):_____

Question 4: What is your current employment status?

Both pharmacist and manager	1
Pharmacist	2
Manager	3
Assistant	4
Student	5
Intern	6

Other (please specify):_____

Question 5: What is your mother tongue?

Afrikaans	1
English	2
IsiXhosa	3
IsiZulu	4
IsiNdebele	5
Sesotho	6
Setswana	7
Sign Language	8
Sesotho sa Leboa	9
SiSwati	10
Tshivenda	11
Xitsonga	12

Question 6: In what province do you work?

North-West	1
Free State	2
Northern Cape	3
Gauteng	4

Question 7: What is your marital status?

Married	1
Never married	2
Separated	3
Divorced	4
Widowed	5
Living together	6

Other (specify):_____

Question 8: At which branch do you work?

Bloemfontein (Fleurdal)	1
Heidedal Bloemfontein	2
Sentraal Bloemfontein	3
Westdene Bloemfontein	4
Kimberley	5
Welkom	6
Kroonstad	7
Diamond Pavilion	8
Goldfields	9

Upington	10
Klerksdorp	11
Mooirivier Mall Potchefstroom	12
Bram Fisher	13
Dobsonville	14
Fourways	15
Horizon View	16
Jabulani Mall	17
Lenasia	18
Nicolway	19
Northcliff Corner	20
Ontdekkers	21
Randburg	22
Roodepoort	23
Sandton	24
Southgate	25
Westgate	26
Protea Glen	27

SECTION 2

No	Question: How often during the past month did you feel:	Never	Once or twice	About once a week	About 2 or 3 times a week	Almost every day	Every day
1	happy	1	2	3	4	5	6
2	interested in life	1	2	3	4	5	6
3	satisfied	1	2	3	4	5	6
4	that you had something important to contribute to society	1	2	3	4	5	6
5	that you belonged to a community (like a social group, your neighbourhood)	1	2	3	4	5	6
6	that our society is becoming a better place for people like you	1	2	3	4	5	6
7	that people are basically good	1	2	3	4	5	6
8	that the way our society works made sense to you	1	2	3	4	5	6
9	that you liked most parts of your personality	1	2	3	4	5	6
10	good at managing the responsibilities of your daily life	1	2	3	4	5	6
11	Feel that you had warm and trusting relationships with others	1	2	3	4	5	6
12	that you had experiences that challenged you to grow and become a better person	1	2	3	4	5	6

13	confident to think or express your own ideas and opinions	1	2	3	4	5	6
14	that your life has a sense of direction or meaning to it	1	2	3	4	5	6

SECTION 3

The following statements aim to tap into your personal experience at work.

No	Question:	Totally disagree	Disagree	Neutral	Agree	Totally agree
1	I feel free to express my ideas and opinions in this job	1	2	3	4	5
2	I feel like I can be myself at my job	1	2	3	4	5
3	At work, I often feel like I have to follow other people's commands	1	2	3	4	5
4	If I could choose, I would do things at work differently	1	2	3	4	5
5	The tasks I have to do at work are in line with what I really want to do	1	2	3	4	5
6	I feel free to do my job the way I think it could best be done	1	2	3	4	5
7	In my job, I feel forced to do things I do not want to do	1	2	3	4	5
8	I do not really feel competent in my job	1	2	3	4	5
9	I really master my tasks at my job	1	2	3	4	5
10	I feel competent at my job	1	2	3	4	5
11	I doubt whether I am able to execute my job properly	1	2	3	4	5
12	I am good at the things I do in my job	1	2	3	4	5
13	I have the feeling that I can even accomplish the most difficult tasks at work	1	2	3	4	5

14	I do not really feel connected with other people at my job	1	2	3	4	5
15	At work, I feel part of a group	1	2	3	4	5
16	I do not really mix with other people at my job	1	2	3	4	5
17	At work, I can talk with people about things that really matter to me	1	2	3	4	5
18	I often feel alone when I am with my colleagues	1	2	3	4	5
19	At work, people involve me in social activities	1	2	3	4	5
20	At work, there are people who really understand me	1	2	3	4	5
21	Some people I work with are close friend of mine	1	2	3	4	5
22	At work, no one cares about me	1	2	3	4	5
23	There is nobody I can share my thoughts with if I would want to so	1	2	3	4	5

Thank you very much for taking part.

ADDENDUM 3

INFORMED CONSENT FORM

Consent form: Participation in a research study

Because of the increased use of prescription drugs, pharmacists' services are high in demand. Pharmacy employees experience a lot of stress because of the need to meet certain targets in the corporate environment. But besides all these challenges, there are pharmacy employees that still flourish.

Instead of looking at all these challenges, we want to learn from those employees that are flourishing. Thus, not fixing what is broken, but nurturing what is best within us. Work-related basic need satisfaction is considered a driving force in motivated behaviour. There is a positive relation between basic need satisfaction and performance. Mental health is not only the absence of mental illness but the sum of emotional well-being, social well-being and psychological well-being. Mental health lies on a continuum from languishing through mentally healthy to flourishing. Flourishing individuals indicate the lowest prevalence of work impairments.

_____

Herewith, I agree to participate in a research study regarding **work related basic need satisfaction and flourishing of pharmacy employees in a corporate environment** by completing the biographical information page**, mental health continuum short-form and the work-related basic need satisfaction scale**

The objective of the above-mentioned study is to determine the basic psychological need satisfaction and flourishing of pharmacy employees in a corporate pharmacy environment.

All information obtained will be treated confidentially and this consent form and the questionnaires won't be linked. All information will only be viewed by the

researcher(s). In the report to the company, only tendencies of the whole sample will be presented.

I understand that my participation is voluntarily.

_____   _____

Signature   Date

ADDENDUM 4

ABSTRACT

Podium presentation (contender for Young Scientist of the year award) at the annual 3's Company conference of South Africa at Lagoon Beach Hotel, Milnerton, South Africa from 4-6 October 2013.

TITLE

Work-related basic need satisfaction and flourishing of pharmacy employees in a corporate environment

AUTHORS

<u>Coetzer, Christelle;</u> Basson, Mariëtta; Eksteen, Mariet; Lamprecht, Johan.

AFFILIATIONS

North-West University Potchefstroom campus, Private bag X6001 Potchefstroom 2520, Division of Pharmacy Practice, Faculty of Health Sciences, South Africa.

SCOPE

South Africa currently has one pharmacist per 3849 population which is considerably below the World Health Organisation's (WHO) recommendation of one per 2300 population. Pharmacists are under a lot of pressure to perform at a certain level with not much to aid them in their day-to-day duties and their psychological needs. If pharmacists' stress levels are not reduced, their physical and mental health may be compromised, as may their patients' safety. The construct of *basic need satisfaction* may be useful to gain insight in employees' functioning and to examine the motivational potential of organizational factors. Information about pharmacy employees' need satisfaction is important as satisfied needs may heighten

employees' functioning and productivity to a degree which will reduce costs connected with stress and turnover.

METHOD

This study was a cross-sectional study. Data was collected through questionnaires in the empirical investigation, namely the Work-related Basic Need Satisfaction Scale (W-BNS). The W-BNS determines the levels of satisfaction of the three basic psychological needs, namely autonomy, competence and relatedness in a work context. The study population was compiled from a corporate retail pharmacy group. A total of 82 questionnaires were sent out and 65 were received back. This study used a convenience study sample. The respective branches that formed part of the study popluation were situated in four provinces of South Africa, namely Gauteng, North-West, Northern Cape and Free State.

RESULTS

The satisfaction of the need for relatedness reflected as the most prominent result of the three basic psychological needs. Respondents mostly chose "agree" (mean = 3.9) which indicate that employees feel that they have helpful relationships, experience a sense of communion and feel part of a team.

CONCLUSIONS AND RECOMMENDATIONS

Even though South Africa faces a lot of challenges in terms of pharmacist services, it seems that there is still some positive news in terms of what corporations do to aid employees by fulfilling their work-related basic psychological needs.

Managers should continue to pay attention to employees' need satisfaction by creating an environment that facilitates autonomous motivation which would result in higher performance, commitment and well-being of employees.

ADDENDUM 5

CERTIFICATE

The runner-up of the Young Scientist award of 2013 at the 3's Company Congress

The Academy of Pharmaceutical
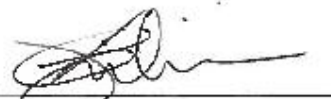Sciences of the Pharmaceutical
Society of South Africa

hereby commends

Christelle Coetzer

As the Runner-up of the
Young Scientist award for
2013

Chairman   Secretary