

Contextualisation of the Minnesota Satisfaction Questionnaire to determine job satisfaction in South African public health systems

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DECLARATION

I, Henri Jordaan, ID Number 9103215032080, herewith declare that this research paper titled Contextualisation of the Minnesota Satisfaction Questionnaire to determine job satisfaction in South African public health systems, is my own work and has not been submitted to any tertiary institution before.

Henri Jordaan

20 November 2018

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With this I give my sincere gratitude to:

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- The university's Statistical Consultation Services for all your assistance.

RESEARCH OUTLINE

This mini-dissertation is presented in an article format and includes the following:

Chapter 1: Introduction to the research problem and methodology

This introductory chapter allows for a brief literature review and an overview of the research problem and its methodology.

Chapter 2: A literature review on job satisfaction and the South African healthcare systems

The literature review offers a broad overview of job satisfaction, first in general, but also applied to healthcare systems in South Africa. This chapter considers all the prominent job satisfaction measurements tools.

Chapter 3: Article

An article reports on the contextualisation of the MSQ short-form to determine the job satisfaction of healthcare workers in the South African public healthcare system.

ARTICLE TITLE	JOURNAL FOR SUBMISSION
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Chapter 4: Evaluation and recommendations

Chapter 4 provides a concise summary of the results and the conclusions drawn from the manuscript. The chapter evaluates the research endeavour and highlights the limitations of the study and formulates recommendations.

ABSTRACT

The South African health system consists of two environments, public and private (Young, 2016:23). Private healthcare is expensive whilst public healthcare are for free. Access to healthcare is limited and inequalities exist mainly due to poverty (Booyesen, 2003:659). Wagner (2017), chief executive officer of Frere Hospital in the Eastern Cape, South Africa, voiced that health systems are currently on the right track in providing quality and affordable healthcare services to people regardless of socio-economic circumstances. When South African citizens can access healthcare, one presumes that they will receive quality care. One occupational attitude impacting on quality healthcare is job satisfaction (Pillay, 2009:2). Job satisfaction as defined by Spector (*cited by* Horwitz & Pundit, 2008:26) are emotions of an employees attributed towards job experiences. Lu *et al.* (*cited by* Horwitz & Pundit, 2008:26) placed an emphasis on an employee's attitudes towards different aspects of their work. Job satisfaction in the healthcare sector in general has been explored using numerous tools to determine the level of job satisfaction of many occupations within the healthcare environment (Bodur, 2002:353).

A literature study related to job satisfaction in the healthcare environment and how it can be measured identified the need for a suitable tool to establish job satisfaction amongst healthcare workers contextualised to South African public health systems. Especially when most research related to job satisfaction in healthcare environments utilised tools developed in the Global North, with very different working environments. This research therefore aimed to contextualise one such measuring tool, the Minnesota Satisfaction Questionnaire (MSQ) short-form, making it more applicable to determine job satisfaction experienced by South African healthcare workers in general. The MSQ short-form presents 20 items (part B) with some demographic detail (part A). An ultimate hypothesis was a differentiation between the current MSQ short-form, compared to the MSQ short-form contextualised to South African public health systems.

A quantitative research design was adopted with the setting a typical level three public hospital in the Dr Kenneth Kaunda district, North West province. The hospital has 776 beds and is regarded as a regional hospital serving the Matlosana - , Southern - and the Bophirima regions (ANSA, 2015). An all-inclusive sampling method was used, including all registered healthcare workers whilst adhering to inclusion criteria. Data was collected after face validity was obtained from a panel of experts. After official permissions and informed consent, the amended MSQ short-form was distributed, collected and captured onto RedCAP.

From the 350 questionnaires distributed, 62(*n*) were completed despite repetitive follow-up attempts from field workers to motivate participation. During the time of data collection the North West province's health systems experienced severe staff shortages and functioned on the brink of collapse. Regarding data analysis, the original Cronbach alpha was replaced with the McDonald's omega coefficient to determine the reliability of the contextualised MSQ short-form questionnaire. The omega coefficient entailed a more complex analysis process but served as an alternative to alpha, when the data at hand presents a smaller sample size. This implied first a correlation matrix through Holm's application, utilising the Psychometric Package from R statistics. Thereafter followed an exploratory factor analysis. From the twenty items in the questionnaire, only one presented with an omega value of 0.47. This factor was "compensation". All other 19 items had omega coefficients larger than 0.5 implying a good internal consistency. Taking the realities of the small sample size into consideration it can be deduced that the MSQ short-form was successfully contextualised to be used in the South African public health system. Recommendations are formulated to utilise the MSQ short-form to measure job satisfaction amongst healthcare workers as a fast and simple method to not only identify job satisfaction but also to identify areas of dissatisfaction.

Key words: Construct validity, face validity, job satisfaction, MSQ short-form, public health care, public hospital, healthcare workers.

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LIST OF DEFINITIONS

The list of definitions below contains the key terms frequently used in the discussion of this research.

Construct validity – A measurement of the degree to which a test or other measure is able to test the content it is designed to test (Bryman & Bell, 2016:239).

Contextualisation – Obtaining the true or greater meaning of a subject in an effort to gain a better understanding in a specific context. Aligning the MSQ short-form with the context of the public health system will make it more appropriate as a measure for job satisfaction of healthcare workers in public health systems.

Extrinsic motivators – This is the level of job satisfaction gained from being motivated by rewards. It is less associated with autonomy. Examples of rewards include the quality of supervision and pay and are less related to an employee's job (Hansen *et al.*, 2002:66).

Face validity – Face validity relating to the survey tool implies that the tool must be practical, pertinent and must be relatable to the purpose; it must also be pragmatically and statically valid (Baruch, 1985:287). Validity is determined by means of expert review (Sweet *et al.*, 2004:1953).

Intrinsic motivators – Intrinsic motivators, according to Deci (*cited* by Vansteenkiste, 2006:19), result in job satisfaction when an individual is motivated inherently by interest in the job and the enjoyment gained from doing the actual work. Examples include: promotion, rewards, recognition and feedback. Thus, intrinsic motivation is the immediate effect gained from various situational variables (Vallerand, 1997:1).

Job satisfaction – Job satisfaction as stated by Woods and West (2016:92) can be described as a general attitude that reflects the overall feeling's a person has about their job.

Minnesota Satisfaction Questionnaire (MSQ) short-form – A survey tool developed by Weiss *et al.* (1967) and used to quantify job satisfaction by means of 20 questions.

Motivation – Defined as the process that accounts for the intensity, direction and persistence relating to the effort of an individual in achieving a goal (Robbins & Judge, 2009:209).

Public health – As defined by the World Health Organisation (WHO, 2018), public health is the art and science of promoting health by making use of an organised society, associated with preventing disease and prolonging life.

Public health systems – Also known as public healthcare systems. The term refers to all the public, private and non-profit entities delivering indispensable health services.

South African public hospitals – Hospitals functioning in the public sector usually serve individuals that do not have a medical aid. Public hospitals provide care to approximately 80% of the South African population (Jobson, 2015:10).

LIST OF ABBREVIATIONS

AUTHeR	Africa Unit for Transdisciplinary Health Research
CEO	Chief executive officer
COPE	Committee of Publication Ethics
EMS-REC	Economic and Management Sciences Research Ethics Committee
ESI	Employee satisfaction index
GDP	Gross domestic product
GP	General practitioner
HIV	Human Immunodeficiency Virus
HPCSA	Health Professions Council of South Africa
IRT	Item response theory
JDI	Job descriptive index
JSS	Job satisfaction survey
JCM	Job characteristics model
MJS	Measure of Job Satisfaction
MSQ	Minnesota Satisfaction Questionnaire (refers to the MSQ short-form)
NGO	Non-profit organisation
NHI	National Health Insurance
NWU	North-West University
OC	Organisational commitment
PHCS	Public healthcare system
RedCAP	Research Electronic Data Capture

SA	South Africa
SAJPH	South African journal of public health
SHS	Strengthening health systems
SPSS	Statistical Package for Social Sciences
USA	United States of America
VPR	Vocational Psychology Research
WCW	Warr-Cook-Wall

CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM AND METHODOLOGY

1.1 INTRODUCTION

The aim of this research was to present a contextualised survey for healthcare workers in public hospitals in South Africa to measure job satisfaction. This might assist a public hospital's management to manage job satisfaction among these staff members based on empirical evidence. Over the years research on the job satisfaction of healthcare workers all over the world has been conducted by means of numerous research surveying tools. This includes but is not limited to the Minnesota Satisfaction Questionnaire (MSQ), the Measure of Job Satisfaction (MJS) and the Warr-Cook-Wall Questionnaire (Tran, 2015:37-38). Despite a variety of tools available to measure the level of job satisfaction in health systems only a few of these tools show a high degree of reliability and validity (Munyewende *et al.*, 2014:2).

The public health system in South Africa is essential as it provides care for approximately 80% of the country's population (Jobson, 2015). This health system caters mainly for indigent citizens and only accounts for 40% of the healthcare expenditure in South Africa, compared to the 60% expenditure in the private sector (Pillay, 2009:1). The under-resourced and overused nature of the public health system contributes to the stigma already associated with the public sector as being inefficient and unreliable (Pillay, 2009:1). The work environment in the South African public health system is of great importance since it plays a major role in the level of job satisfaction healthcare workers in this sector experience (Pillay, 2009:2).

The focus of this research was to contextualise the MSQ short-form for use as a tool that could be more specific to the public healthcare environment of South Africa. This chapter provides the reader with an overview of the importance of the job satisfaction of healthcare workers in the healthcare environment, the research problem, aims and objectives, and the research methodology.

1.2 BACKGROUND

Job satisfaction can be loosely defined as the general attitude a person has about his (her) job (Pasaron, 2013:2594). The job satisfaction of healthcare workers does not only affect their own wellbeing, but also affects patient care and influences the turnover rate and retention (Munyewende *et al.*, 2014:12). It is important for healthcare management to assess the level

of job satisfaction associated with healthcare workers to identify the facilitating factors for and effectively mitigating the inhibiting factors that negatively influence job satisfaction, be it remuneration, the environment or opportunities of various sorts (Munyewende *et al.*, 2014:12).

A satisfied workforce holds numerous benefits for public health systems and for the interests of the patients being treated. It leads to improved turnaround times as patients are discharged at a quicker rate; improved reputation for the hospital and countless other benefits. A generally negative workforce will result in the opposites (Visser *et al.*, 2012:112). Healthcare workers, especially those employed at a hospital, have difficulties meeting patients' needs when they are not even able to satisfy their own needs. Hospital management has the responsibility of considering the needs of their staff and the patients in their care (Nemmaniwar *et al.*, 2016:27). Positive feedback from patients will result in positive outcomes for the hospital, such as improved reputation and financial gain. The study conducted by Peltier and Dahl (2009:26) in a New York city hospital (United States of America [USA]) where they investigated the relationship between patient and employee satisfaction, found that departments with higher levels of job satisfaction resulted in patients with better experiences when compared to departments with lower levels of job satisfaction. Staff retention, lower turnover rate and improved performance from committed and motivated staff due to a high level of job satisfaction, will most certainly contribute to positive outcomes for hospitals in the public health system in South Africa (Sojane *et al.*, 2016:1).

A study conducted in 2005 in the Capricorn district of Limpopo, South Africa (Pietersen, 2005:19) revealed that hospital managers realise that job satisfaction affect staff retention at public hospitals in. Job satisfaction was important to both the employee and the employer, especially in healthcare, since low levels of satisfaction leads to low levels of job performance and inferior patient care (Pillay, 2009:2). Job satisfaction is essential in the healthcare environment since it is directly related to the quality care and will influence patient satisfaction (Nemmaniwar & Deshpande, 2016:28).

Job satisfaction can be influenced by a multitude of factors such as promotions, work environment and personal relationships (Eslami & Gharakhani, 2012:85). These factors are discussed in greater detail in Chapter 2. Outcomes relating to job satisfaction in organisations in general can either be positive or negative. According to Nemmaniwar and Deshpande (2016:27), such outcomes can increase employee performance, lead to lower staff turnover and increased organisational commitment when job satisfaction is high, and the opposite when employees are dissatisfied.

Researchers on job satisfaction generally come from the Global North such as the USA, Europe and Canada. A large body of research already exists for these countries. It focuses on determining the level of job satisfaction and not the determinants of job satisfaction (Munyewende *et al.*, 2014:2). According to Bodur (2002:353) and supported by Nicholson (*cited by* Agho *et al.*, 1993:1008), a considerable amount of research has been conducted on job satisfaction in the healthcare domain, with job satisfaction remaining one of the most widely studied concepts in organisational research. Job satisfaction, according to Misener *et al.* (*cited by* Pasaron, 2013: 2594), can be described as multifaceted with numerous definitions and concepts. According to Nemmaniwar and Deshpande (2016:27), job satisfaction is regarded as one of the most widely researched subjects in organisational behaviour and human resources in general.

The first gap in this research field is that job satisfaction research does not explore across professional boundaries. Yet, in Greece the Employee Satisfaction Index (ESI) is widely used as it was developed and validated by Koustelios and Bagiatis in 1997 for public employees working in state-owned enterprises such as public power, telecommunications and state banks in Greece and for private sector employees (Koustelios & Bagiatis, 1997:470). In South Africa, there is no generally accepted measuring tool to assess job satisfaction (Pietersen, 2005:21). Job satisfaction studies try to shed light on the job satisfaction of healthcare workers based on factors that may not generally be regarded as principle factors in the South African healthcare environment as the healthcare environments differ drastically between high income and lower income countries (Munyewende *et al.*, 2014:2). This is the second gap, namely that job satisfaction measuring tools indicate the levels of job satisfaction, but not the areas of dissatisfaction.

Job satisfaction in practice can be measured with single question questionnaires or more sophisticated instruments such as the Job Descriptive Index (JDI) (Al-Rubaish, 2011:1). Other tools include the MSQ, MJS and Warr-Cook-Wall questionnaire (Tran, 2015:37–38). The MSQ short-form used in this research is a widely used and popular survey tool that has been used in many research studies and has been extensively studied and validated, although not in public hospitals in South Africa (Fields, 2002; Martins & Proenca, 2012:1). Buitendach and Rothman (2009:2) specify in their paper titled: “The validation of the Minnesota Job Satisfaction Questionnaire in selected organisations in South Africa”, that the MSQ short-form is a popular tool in job satisfaction research. The MSQ is a well-known research measuring tool, widely used in the literature and determined to be stable over time while also yielding a good coefficient alpha (Martins & Proenca, 2012:1). This makes the MSQ short-form a very attractive tool to use for this research. The twenty items listed in the questionnaire make it

easy to use. The above attributes make the MSQ the most appropriate tool to contextualise for use in the South African public system.

1.3 PROBLEM STATEMENT

Job satisfaction among healthcare workers is important when considering the wider community and especially the patients being treated by these employees. Job satisfaction in the public health system forms an integral part of the commitment and retention of healthcare workers. It reduces staff turnover rates and leads to improved, high quality patient care, yielding numerous positive outcomes for the hospitals themselves. Managers of public hospitals must take cognisance of the importance of job satisfaction and how it can be managed by means of employee interaction and discussions, incentives, growth and developmental strategies, as well as intervention activities (Pietersen, 2005:19).

The South African public health system is often associated with mal-administration, poor work conditions, poor patient treatment, long waiting times, poor security and disease control and a higher rate of death compared to the private health sector (Young, 2016:15). Coovadia *et al.* (2009:817) describe the South African health system as being dysfunctional due to numerous historical factors such as the apartheid regime, violence, the HIV epidemic, etc. It is widely presumed that the healthcare worker employed in the public health system is generally dissatisfied. This statement is substantiated by Delobelle *et al.* (2011:370), who conclude that nurses in rural South African public healthcare settings were generally dissatisfied with their remuneration and working conditions and showed high levels of intent to leave.

The MSQ short-form was identified as the most suitable measurement tool to measure job satisfaction throughout history. The MSQ short-form holds the potential with only 20 items to measure the levels of job satisfaction experienced by employees, it is quick, easy and especially cost effective. The contextualisation of the MSQ can assist with the identification of the major factors that result in low levels of job satisfaction among healthcare workers, allowing hospital management to address these factors effectively.

The problem this research wants to address is that most of the research on job satisfaction in the South African public health system was based on satisfaction questionnaires not specifically designed for the wider public health system. The majority of job satisfaction questionnaires used for research on the public health environment are generic questionnaires,

sometimes adapted to suit the study at hand. The **primary research question** asked “*how can the MSQ short-form be contextualised to measure job satisfaction among healthcare workers in the public hospitals of South Africa*”.

1.4 RESEARCH AIM, OBJECTIVE AND HYPOTHESIS

1.4.1 Research aim

The research aim was to present a contextualised version of the MSQ short-form applied to a level three public hospital in the North West province, South Africa.

1.4.2 Research objective

In order to achieve the aim, the objectives were:

- to present a detailed literature review on job satisfaction in general, but also in the context of South African health systems;
- To adapt the original MSQ short-form based on input from experts for face validity;
- To conduct statistical analysis to determine the construct validity.

1.4.3 Hypothesis

A possible hypothesis is that it would be possible to contextualise the original MSQ short-form to work in the South African public health system.

1.5 RESEARCH METHODOLOGY

1.5.1 Research design

The research used a quantitative approach with a cross-sectional design, which is often associated with social surveys (Bryman & Bell, 2016:106). Quantitative measures are suitable for testing hypothetical generalisations, as well as it emphasising the measurement and analysis of the casual relationship among variables (Bryman & Bell, 2016:31). Winter (2000:7) points out that the purpose of quantitative research is the fragmentation and differentiation of phenomena into common and measurable classes that can be applied to all subjects.

The focus was on validating the contextualised MSQ short-form by determining the level of job satisfaction of the healthcare workers at one point in time using a social survey (Bryman & Bell, 2016:105). The sample pool was provided with the contextualised MSQ short-form at a certain point in time. The questionnaires were administered at that time and only once. A cross-sectional approach allows for different variables to be compared, such as the level of job satisfaction relating to income or to age or even gender (Bryman & Bell, 2016:106).

1.5.2 Description of overall research context

This research was conducted in a typical public hospital in the Dr Kenneth Kaunda district, North West province. This hospital was selected because it is the only level three hospital in the North West province and it is a National Health Insurance (NHI) pilot site. The hospital at the time of this research had 776 beds, of which 40 were maternity beds, and it had 14 surgical theatres. The hospital is a regional hospital serving the Matlosana region, the Southern region and the Bophirima region (ANSA, 2015). The hospital also collaborates with the Witwatersrand Medical School (ANSA, 2015), providing ample clinical opportunities for specialisation. At the time of this research there were 1 036 employees with professional registration working at the hospital complex. They serve on average 22 688 patients in various departments of the hospital complex on a monthly basis.

Figure 1 provides a typical organogram of a regional public hospital functioning as a level three hospital. It identifies the various departments and management positions. The panel of experts who contributed to the face validity of the MSQ short-form all served in one of the managerial positions indicated in Figure 1 (Department of Health, 2018).

1.5.3 Population and sampling

The population was identified as healthcare workers with six or more months of permanent employment at the public hospital in the Dr Kenneth Kaunda district, North West province. The unit of analysis was not biased in any sense, with an all-inclusive sampling technique being adopted. The population adhered to an inclusion criterion as mentioned below under 1.5.3.2. The unit of analysis was the most appropriate unit as it consisted of healthcare workers with permanent employment.

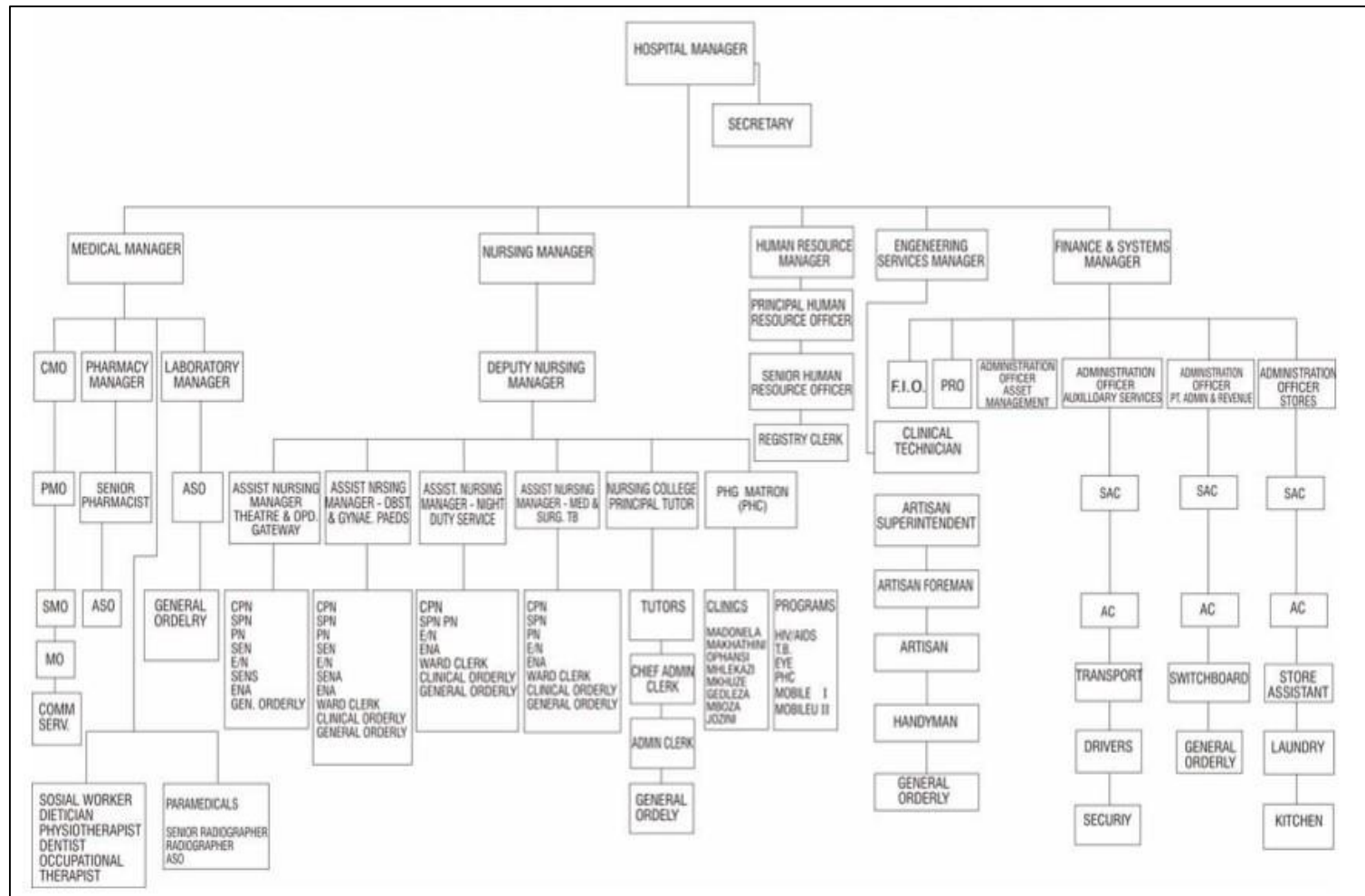


Figure 1.1: Generic hospital organogram for public hospitals in South Africa (Department of Health, 2018)

1.5.3.1 Sampling size

The size of a sample depends on two principle factors, namely sample saturation and sample sufficiency. Sample saturation occurs when the data being gathered no longer provides new evidence on the research problem. This is more likely to occur with purposeful sampling (Harsh, 2011:9). Sampling must be sufficient enough to enable the researcher to answer the research question and to enable comparisons between different constructs and dimensions (Harsh, 2011:9). The sample included approximately 350 participants on the advice of the Statistical Consultation Services of the NWU to ensure sample saturation and sufficiency. This number of participants would allow the research to be statistically significant. Making use of a larger number would have exposed more participants to the procedure, increasing cost and potentially resulting in statistically insignificant research (Suresh & Chandrashekara, 2012:2). Due to severe staff shortages and a failing healthcare system at the selected hospital during the time of data collection, only 62(*n*) healthcare workers completed the contextualised MSQ short-form despite active and daily support by fieldworkers at the hospital to facilitate data collection.

1.5.3.2 Sampling technique and inclusion criteria

An all-inclusive sampling technique was used based on the following inclusion criteria:

- Participants had to have been contractually employed for six months or more. The high staff turnover rate at hospitals necessitates this requirement. Participants had to have had enough time to observe and gather enough experience in the specific hospital environment.
- Participants had to have a qualification relating to a healthcare profession and must be registered (doctors, professional nurses, dieticians, dentists, psychologists, radiologists, occupational therapists, staff nurses and enrolled nurse auxiliaries etc.).
- Participants had to be available and willing to participate voluntarily.

1.5.4 Recruitment of the participants

After the NWU's Economic and Management Sciences Research Ethics Committee (EMS-REC) (Addendum D) granted ethics clearance, the North West Provincial Department of Health gave the researcher permission to conduct the research at the identified hospital (Addendum E). Access and permission to conduct the research at the identified hospital was

granted by the hospital's CEO, who acted as the gatekeeper. The gatekeeper assigned mediators to assist in indicating and recruiting participants.

1.5.5 Obtaining informed consent

Informed consent forms were signed by all the participants involved in the data gathering process as facilitated by the fieldworkers. The form explained the research and provided information on how the data would be gathered and analysed, how their privacy would be respected by keeping all the identities of all the participants confidential. Please refer to Addendum C.

1.5.6 Data collection

1.5.6.1 Permission to use the content of the MSQ short

Prior to any amendment of the MSQ short-form, permission to utilise this instrument for research purposes was obtained from the University of Minnesota's Vocational Psychology Research (VPR) Department. The department indicated on its website that it no longer sells the MSQ and that it is freely available for research purposes under Creative Commons Attribution-Non-commercial 4.0 International License.

The original MSQ was developed by Weiss, J. D., Davis, R. W., England, G. W. and Lofquist, L. H in 1967. It is used to measure the satisfaction of an employee with his or her job. Three versions are available, two long versions (1977 version and 1967 version) and the short version. The MSQ provides a more specific outlook on aspects that influence the job satisfaction of an individual based on what an individual finds more rewarding with his/her job (VPR, 2018:1). The VPR Department (2018:1) states that the MSQ can also be used to explore client vocational needs by producing information on reinforcements in a job and in follow-up studies pertaining to counselling.

The long version of the MSQ includes twenty-five item scales derived from asking one hundred questions in the questionnaire. As mentioned above, two versions of the long form are available. The 1977 version makes use of five responses, namely (VPR, 2018:1):

- Very satisfied.
- Satisfied.
- "N" (Neither satisfied nor dissatisfied).
- Dissatisfied.

- Very dissatisfied.

A “ceiling effect” observed in the 1967 version resulted in negatively skewed results, with most results being “satisfied” or “very satisfied”. The 1977 version adjusted for the “ceiling effect” by making use of the following five responses (VPR, 2018:1):

- Not satisfied.
- Somewhat satisfied.
- Satisfied.
- Very satisfied.
- Extremely satisfied.

The same Likert-type scale is applicable to the short version of the MSQ, referred to the MSQ short-form. The 1967 version is best used when normative data is not required in studies such as prediction studies or comparison studies. The MSQ short-form includes twenty items taken from the long version. These items best represent the 20 scales contained in the long version. The MSQ short-form consists of twenty questions contained in the questionnaire. The MSQ short-form makes it possible to get a more individualised perspective of the level of job satisfaction, since two individuals may express the same level of job satisfaction, but for entirely different reasons (Weiss *et al.*, 1967:6). A demographic section was included to gather data on the participants’ ages, genders, marital statuses, health professions, their shifts (day or night), etc.

The items in the original MSQ short-form are as follows:

- (B1) Being able to keep busy all the time.
- (B2) The chance to work alone on the job.
- (B3) The chance to do different things from time to time.
- (B4) The change to be “somebody” in the community.
- (B5) The way my boss handles his/her workers.
- (B6) The competence of my supervisor in making decisions.
- (B7) Being able to do things that don’t go against my conscience.
- (B8) The way my job provides for steady employment.

- (B9) The chance to do things for other people.
- (B10) The chance to tell people what to do.
- (B11) The chance to do something that makes use of my abilities.
- (B12) The way company policies are put into practice.
- (B13) My pay and the amount of work I do.
- (B14) The chances for advancement in this job.
- (B15) The freedom to use my own judgement.
- (B16) The chance to try my own methods of doing the job.
- (B17) The working conditions.
- (B18) The way my co-workers get along with each other.
- (B19) The praise I get for doing a good job.
- (B20) The feeling of accomplishment I get from the job.

The factor analysis of the original MSQ short-form identified three scales (Weiss *et al.*, 1967:3, 13). These include an intrinsic scale, an extrinsic scale and a general satisfaction scale. Table 1 presents the three factors of the original MSQ short-form. The highlighted items were amended during the process of face validity.

Table 1.1: Subscales of the original MSQ short-form (Weiss *et al.*, 1967:4).

Three scales of the MSQ short-form		
Intrinsic	Extrinsic	General satisfaction
B1 – Activity	B5 – Supervision and human relations	B1 – Activity
B2 – Resource availability (Independence)	B6 Supervision and technology	B2 – Resource availability (Independence)
B3 – Variety	B12 – Company policies & practices	B3 – Variety
B4 – Social status	B13- Compensation	B4 – Social status
B7 – Moral values	B14- Advancement	B5 – Supervisor human relations
B8- Security	B17 – Working conditions	B6 – Supervisor technical
B9 – Social service	B18 – Co-workers	B7 – Moral values
B10 – Authority	B19 – Recognition	B8 – Security (Job)
B11 – Ability utilization		B9 – Social service

Three scales of the MSQ short-form		
Intrinsic	Extrinsic	General satisfaction
B15 – Responsibility		B10 – Authority
B20 – Achievement		B11 – Ability utilization
B18 – Co-workers		B12 – Company policies & practices
		B13 – Compensation
		B14 – Advancement
		B15 – Responsibility
		B16 – Job quality (Creativity)
		B17 – Working conditions
		B18 – Co-Workers
		B19 – Recognition
		B20 – Achievement

1.5.6.2 Data collection method

Voluntary participation, anonymity and confidentiality were maintained (Bester & Engelbrecht, 2009:107). Firstly, the original MSQ short-form was handed to experts who were healthcare workers with at least ten years' experience in public hospitals. They were asked to amend the current MSQ short-form by assessing the MSQ short-form for comprehension and semantic clarity in a South African public hospital. Four experts (one medical specialist and three advanced nurse practitioners) completed the questionnaires. Feedback from the experts contributed to the face validity of the tool. Secondly, the amended MSQ short-form was distributed among the sample of healthcare workers in the identified hospital for completion. The MSQ short-form contained the informed consent form on the front page, an introduction and an explanation of why the research was being conducted, how to complete the questionnaire, the amount of time allocated for completion, where to deposit the completed questionnaire and assurance of the anonymity and confidentiality of the participants (Visser *et al.*, 2012:113). The completed questionnaires were deposited in predetermined collection boxes. The response rate was calculated after the collection of the questionnaires. Two fieldworkers from the Africa Unit for Transdisciplinary Health Research (AUFHeR) distributed and retrieved the completed questionnaires.

1.5.6.3 Contextualised MSQ short-form by expert reviewers

The contextualised self-administered questionnaire consisted out of three parts. Part 1 contained a cover page and informed consent statement. Part A contained questions relating to the demographics of the participants. Part B contained questions relating to the level of job satisfaction as included in the MSQ short-form (Dreyer, 2012:49). The original MSQ and contextualised MSQ short form can be found under Addendum A and Addendum B respectively with the amended questions, items number B1, B2, B6, B14, B16 and B19 (highlighted in grey in the amended MSQ short-form on the following page 71).

The feedback from the panel of experts allowed the researcher to contextualise the short-form MSQ. The experts provided feedback on the questions they identified could be altered in order to make the MSQ short-form a better tool to determine job satisfaction in the public healthcare sector in South Africa. These amendments were based on language, semantic clarity, and comprehension specific in the context of a public hospital. The feedback was then used to modify the questions they identified by changing the question in such a manner that it would be more appropriate for the context in which it will be used.

Table 2 presents the original MSQ questions and the amended questions used in the contextualised version. Column 1 lists the original items. Column 2 shows the amended items. Column 3 reports on whether the amended items remained within the original dimensions of intrinsic or extrinsic motivation. Please refer to the results in the article in Chapter 3 to view the exploratory factor analysis conducted in this study.

Table 1.2: Original and contextualised MSQ questions

Original MSQ short-form questions	Contextualised MSQ short-form questions	Alignment with constructs
B1: Being able to keep busy all the time.	The amount of work that must be done.	Remained in intrinsic sub-scale.
B2: The chance to work alone on the job.	The resources available to conduct work (Equipment, staff shortages, etc.).	Remained in intrinsic sub-scale.
B6: The competence of my supervisor in making decisions.	The availability of my supervisor to assist in making competent decisions.	Was originally an extrinsic motivation, but grouped with intrinsic motivation in the factor analysis conducted in this study.

Original MSQ short-form questions	Contextualised MSQ short-form questions	Alignment with constructs
B14: The chances for advancement in this job.	The chances for advancement in this job (based on experience, work ethic, education, etc.).	Was originally an extrinsic motivation, but grouped with overall job satisfaction in the factor analysis conducted in this study.
B16: The chance to try my own methods of doing the job.	The quality of care being provided to patients.	Remained in intrinsic sub-scale.
B19: The praise I get for doing a good job.	The praise and feedback I get for doing a good job.	Remained in extrinsic sub-scale.

Data were collected by distributing the contextualised MSQ as closed-ended, self-answer questionnaires to the identified sample after face validity had been established. The questions asked in the contextualised MSQ short-form helped determine the construct validity of the questionnaire. A high overall score on the contextualised MSQ short-form indicated a high level of job satisfaction; a low score indicated a low level of job satisfaction.

1.5.6.4 Validity and reliability of the original MSQ short-form

The MSQ short-form has been widely used in the literature and is viewed as being a well-known and understood measuring tool that is stable over with the possibility of yielding a good coefficient alpha (Martins & Proenca, 2012:1). Validity assisted the researcher in decision-making since it provided some confidence in the tool that was used to collect the data.

Reliability as defined by Joppe (*cited by* Golafshani, 2003:598) is the “extent to which results are consistent over time and an accurate representation of the population under study”. Validity on the other hand can be described as the level of truthfulness of the results obtained from a research study. Buitendach and Rothmann (2009:5) did a study to validate the MSQ short-form and concluded that the MSQ short-form with its intrinsic- and extrinsic subscales proved to be internally consistent and thus reliable. The internal reliability was assessed by first attempting to determine the Cronbach’s alpha coefficient, followed by the McDonald’s omega coefficient. A Cronbach’s alpha coefficient with a value of 0.7 and higher indicated adequate and acceptable internal reliability (Woods & West, 2016:71) while according to Boermans and Cattenberg (2011:2), coefficients lower than 0.5 are seen as unreliable. The McDonald’s omega coefficient holds the similar value to that of Cronbach’s alpha.

1.5.7 Data analysis

Completed surveys were captured in the Research Electronic Data Capture (RedCAP) (Harris *et al.* 2009:1-2) system by two fieldworkers of AUTHeR. RedCAP is a software solution and workflow methodology used for the speedy development and deployment of electronic data capturing tools used for supporting translational and clinical research studies. It also includes a data export functionality, allowing the data to be exported to statistical software programmes such as R, which was ultimately used in this research (Harris *et al.*, 2009:1-2). The statistical analysis was conducted by making use of a statistical consultant affiliated with AUTHeR. The consultant utilised R and the associated psychology package used in the R software. R is open source statistical software that can be used for statistical computation and the creation of graphs. R was used to determine McDonald's omega and Cronbach's alpha coefficients (Revelle, 2018:5).

1.5.7.1 Validity and reliability

Figure 1.2 on the following page provides an outline of the test for validity (Bolarinwa, 2015:196).

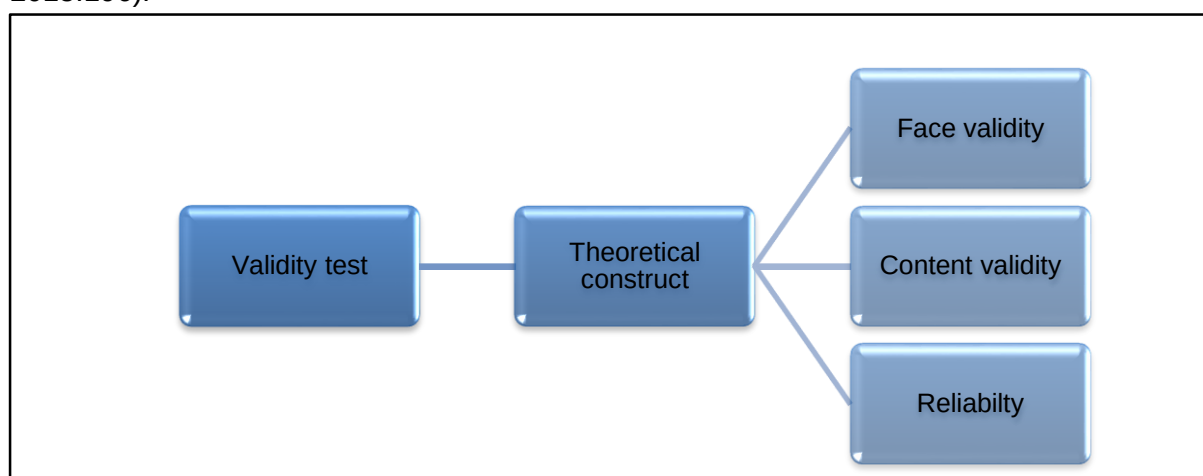


Figure 1.2: Various validity subtests (adapted from Bolarinwa, 2015:196)

Face validity was determined during the phase of amending the original MSQ short-form by asking experts to provide feedback on the current questionnaire. The feedback from the experts helped the researcher enhance face validity. Construct validity was determined by means of conducting a factor analysis. Factor analysis is a statistical technique used to reduce the number of variables into fewer factors. The maximum common variance is extracted from all the variables and is put into a common score (Tryfos, 1997:1). Construct validity is a measurement of the degree to which a test or other measure is able to assess the theoretical content it is designed to measure (Bryman & Bell, 2016:239). Cronbach's alpha coefficient, as

stated by Dreyer (2012:52), can help determine the reliability and validity of the contextualised questionnaire, with a value of 0.6 being viewed as acceptable for exploratory purposes, 0.7 as acceptable for confirmatory purposes and values of 0.8 considered good (Woods & West, 2016:71). Another coefficient capable of determining the reliability and validity of questionnaires is the McDonald's omega coefficient, with values of 0.5 being acceptable for the omega coefficient (Boermans & Cattenberg, 2011:2).

The internal reliability was assessed by making use of both the McDonald's omega coefficient with values of 0.5 and lower being considered as unreliable and the Cronbach's alpha coefficient with values of 0.7 and higher being representative of acceptable levels of internal consistency and reliability. In the event that the data is not sufficient for a Cronbach's alpha coefficient to be determined, the McDonalds omega coefficient will take preference.

1.6 ETHICAL CONSIDERATIONS

Research ethics is defined by Berg and Tranoy (*cited by Aita & Richer, 2005:119*) as the moral problems encountered during research by the researcher, the participants of the research and their social environment. Numerous ethical considerations and principles must be upheld when conducting social studies for business related research.

The NWU's Economic and Management Sciences Research Ethics Committee (EMS-REC) was responsible for giving ethical clearance (NWU-00543-18-S4) (Addendum D). According to the EMS-REC's research risk level descriptors, this research was classified as medium risk due to the involvement of healthcare workers. The researcher got permission from the Provincial Department of Health (see addendum E) and verbatim permission from the CEO prior to the recruitment of participants and data collection.

The research attended to the following ethics considerations:

- **Harm to participants:** Harm can either be physical or physiological and can be harmful to the participants' development and esteem, result in stress and be harmful to their career prospects, etc. (Bryman & Bell, 2016:121). In this research harm was minimised by respecting healthcare workers when they were too busy to participate and by considering the high patient volumes and staff shortages in the hospital.
- **Confidentiality:** Each participant received a research code to protect their identity.

Only the researcher is able to link the participants to the completed questionnaires, but this master list is safeguarded on a password-protected computer in the lockable office of the supervisor on the premises of the NWU.

- **Consent, privacy and anonymity:** Prior to data collection, participants were informed and received an opportunity to consider their voluntary participation by means of signing an informed consent form. The informed consent form was user-friendly. They were handed to participants to take home with the questionnaire to consider participation and to complete the questionnaire in a private setting. Once the completed questionnaires were handed back to the fieldworkers, it was immediately anonymised.
- **Influence of the researcher:** The researcher adhered to the culture, rules and regulations of the hospital and the code of conduct for research ethics of the NWU. The researcher received support from the CEO, who appointed mediators to assist in recruitment. Two fieldworkers visited the hospital daily to distribute the MSQ short-form and returned to pick up completed questionnaires from predetermined collection points. There was no power play or coercion between the researcher, the fieldworkers and the participants.
- **Deception:** Deception can be defined as the act of purposefully misleading others. The researcher did not deceive the participants in any way whatsoever. The research was conducted as described in the informed consent.
- **Medical institutional considerations:** The research was conducted at a level three public hospital. An ethics clearance process was followed with the ethics committee of the academic institution (ethics clearance number: NWU-00543-18-S4). There was no interaction with patients being treated at the hospital, nor were any data gathered relating to any individual receiving treatment at the hospital.
- **The principle of justice:** All participants were treated in such a manner that he/she is better off or no worse off than before the research was conducted. Justice in research according to the Health Professions Council of South Africa (HPCSA, 2018:3) is considered distributive justice as there should be equitable distribution of burdens and benefits among participants. Participants were not exploited and valid reasons were provided for the utilisation of the MSQ short-form. The sampling method, sample size and inclusion criteria were just and fair. No person was excluded based on race, language, gender, age, beliefs or religion, etc.

1.7 OUTLINE OF RESEARCH

The outline of the research adhered to prescriptions for partial fulfilment of the requirements for the degree Master's in Business Administration (MBA). The School of Business and Governance at the NWU provided guidelines and a template for the completion of a research proposal. This research paper consists of four chapters. First, the research study is introduced in Chapter 1. Chapter 2 presents the literature review relating to job satisfaction. Chapter 3 is a manuscript for publication, followed by Chapter 4, the evaluation, limitations and recommendations of the research.

1.8 SUMMARY

Job satisfaction among health care professionals in the public sector of South Africa is very important since it influences the quality of care provided to patients as well as the staff turnover rate and numerous other aspects of their job (Pillay, 2009:2). Most job satisfaction tools currently in use were developed for use in high-income countries, countries where the working environment differs drastically from the one experienced by health care professionals employed in the public sector of South Africa. Many other factors can influence the level of job satisfaction of the employees that are not addressed in the currently available MSQ. It thus becomes apparent that a new tool must be developed, one that is more applicable to the South African public health sector, culminating into the contextualisation of the currently available MSQ.

As mentioned by Martins and Proenca (2012:1), the MSQ is a widely used tool for the determination of the levels of job satisfaction of employees. However, it has not yet been validated in public hospitals in SA (Fields, 2002), making it the ideal tool for use in the research study.

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CHAPTER 2: AN OVERVIEW OF JOB SATISFACTION AND THE SOUTH AFRICAN HEALTH CARE SYSTEMS

2.1 INTRODUCTION

Chapter 1 introduced the nature of the research problem, provided background and informed the reader about the research methodology. Chapter 2 provides a literature review pertaining to the workplace attitude labelled job satisfaction. Numerous factors influence this attitude and many studies have been conducted to identify these factors and to measure the level of job satisfaction of healthcare workers. These studies measured the level of job satisfaction by means of making use of numerous research tools. This study focusses on the attitude of job satisfaction and the development of a tool specifically designed for the measurement of job satisfaction among healthcare workers in the public healthcare sector of South Africa.

2.2 JOB SATISFACTION

2.2.1 The concept of job satisfaction

The earliest attempts to explore job satisfaction systematically were in the 1930s with a study conducted by Hoppock (1935) in which he conducted interviews and distributed questionnaires to teachers (Agho *et al.*, 1993:1007). Buitendach and Rothmann (2009:1) describe job satisfaction as a very important topic in organisational and industrial psychology because it is an important contributor to an employee's happiness at work. Job satisfaction is also an important determinant of absenteeism, turnover and worker performance. Oshagbemi (1999:388) mentions the importance of the fact that it can be influenced by management in organisations.

Job satisfaction as described by Woods and West (2016:92) is the general feelings a person has about his/her job. It is either a positive or negative feeling with these positive and negative feelings being associated with moods. These moods can be described as general positive or negative feelings. Job satisfaction can be thought of as a general attitude providing a reflection of the overall feelings a person has about their job (Woods & West, 2016:92). Furthermore, as described by Tekell (2008:1-6) job satisfaction is the cognitive, affective and evaluative reaction of an individual towards his or her work, while Weiss *et al.* (1967:5) describes it as an evaluation an individual makes about their job environment, adding that employees will strive to find and maintain a correspondence with their environment. To substantiate this correspondence, Cook *et al.* (cited by Buitendach & Rothmann, 2009:1) say that the correspondence is achievable when employees fulfil the requirements expected from them by

the environment in which they find themselves, ultimately resulting in job satisfaction. Job satisfaction can furthermore be described as being subjective and that it differs between individuals, since two individuals may express the same level of job satisfaction, but for entirely different reasons (Weiss *et al.*, 1967:6). According to Caers *et al.* (2009: 524), employees with high levels of job satisfaction generally have positive attitudes towards their jobs.

Managers and policy makers must be aware of the current job satisfaction of their staff employed in these healthcare settings as this would enable them to take preventative action to address possible negative outcomes associated with dissatisfied employees, such as the intent to leave and absenteeism, while creating positive practice environments (Munyewende *et al.*, 2014:2).

2.2.2 Job satisfaction and motivation

The correlation between motivation and job satisfaction as stated by Locke (*cited* by Tietjen & Myers, 1998:227) is that when employees are highly motivated, whether due to intrinsic or extrinsic factors, they tend to be more satisfied with their jobs and show a positive correlation relating to worker performance. Motivation can now be defined as: “The process that accounts for an individual’s intensity, direction and persistence of effort toward attaining a goal” (Robbins & Judge, 2009:209). According to Delobelle *et al.* (2011:372), job satisfaction is a multi-layer of constructs with numerous theories having been proposed in an attempt to understand the concept of job satisfaction. Most noticeable are the theories of Maslow (1954) and Herzberg (1966). Delobelle *et al.* (2011:372) point out that these theories are focused on the concept of job satisfaction through the motivation of employees attempting to fulfil their needs for self-actualisation. These theories and some additional theories are discussed in more detail in the following text.

When motivation includes factors that promote actions over time, it can be assumed that these factors or motivators will promote job satisfaction (Tietjen & Myers, 1998:227). Herzberg (*cited* by Alshmemri *et al.*, 2017:12) groups these factors into two groups, called the extrinsic and intrinsic factors. The Minnesota Satisfaction Questionnaire (MSQ) and Herzberg’s two-factor motivational theory distinguish between the two groups. In the MSQ, these factors form the scales for the short-form MSQ as described by Wiess *et al.* (1967:2). In Herzberg’s two-factor motivational theory, it will be the intrinsic and extrinsic factors or motivators influencing motivation and job satisfaction (Pietersen, 2005:19). These two motivators or factors are briefly discussed below with examples of each.

2.2.2.1 Intrinsic motivation

Intrinsic motivators include job tasks and content such as variety, autonomy, skill utilisation, fulfilment and self-growth as was described by Buitendach and De Witte (2005: 29). These motivators all have a correlation with the level of satisfaction experienced by employees. Factors associated with intrinsic motivation in the public healthcare system of South Africa would include pay, promotion, job security, achievement, etc. (Delobelle *et al.*, 2011: 372).

2.2.2.2 Extrinsic motivation

Extrinsic motivators, also labelled hygiene factors, include factors such as pay, work environment, and company policies and procedures. When these factors do not meet employee expectations, it will result in employee dissatisfaction and de-motivation (Woods & West, 2016: 124). As mentioned previously, in the South African public healthcare sector the lack of motivation due to poor remuneration and working conditions are major influencers for employees being dissatisfied at work (Delobelle *et al.*, 2011:372).

2.2.3 Job satisfaction and attitudes

Job satisfaction can be classified as a workplace-related attitude, the same as with organisational commitment where Woods and West (2106:88) define attitudes as the representation of evaluative statements or beliefs about something or someone, always directed at a target and representative of the degree to which this target is regarded as favourable or unfavourable. According to Breckler (1985:1192) attitudes consist of three components, namely:

- **Cognitive component:** The verbal statements of beliefs about the target. This includes a person's belief/information about an attitude object. For instance: "I believe doctors are dangerous".
- **Affective component:** The emotions associated with an attitude such as being angry or frustrated about something. It is a person's sentiments/feelings about the attitude object. For example: "I am afraid of doctors".
- **Behavioural component:** The representation of the consequences and intentions resulting from said attitude. The manner in which the state of mind influences how we act or react. For instance: "I will stay away from doctors, but scream if I see one".

Attitudes are important when one takes into account the effect it will have on the behaviour of an employee, especially in the context of an organisation. Will it be positive or negative? The next section discusses the factors that influence the level of job satisfaction.

2.3 FACTORS INFLUENCING JOB SATISFACTION

According to Coetsee (2002:45), the biggest organisational variable affecting the level of job satisfaction is motivation. Factors of job satisfaction include, but are not limited to: recognition, workload, limited resources, remuneration, training, working conditions, etc. (Bester & Engelbrecht, 2009:110). According to Dreyer (2012:34), the variables effecting the level of job satisfaction can be associated with personal, inter-personal and or organisational factors, while Voster (2010:32) states that these factors can be measured in terms of demographic variables, variables associated with the working environment and variables relating to the specific work task itself. Demographic variables for instance can be age, gender and marital status. Work task variables include workload and job design with variables associated with organisational factors include remuneration, working environment and training/development, etc. Some of the variables, especially the ones relating to the data collection tool, the MSQ, are briefly discussed below:

- **Workload:** Workload is described as the amount of work allocated to an employee. It can sometimes be overwhelming for the employee and result in the employee experiencing work overload. This heavy workload, according to Siefert *et al.* (1991:194), can be predictive of lower levels of job satisfaction for social workers in the healthcare social sector. According to Greenglass *et al.* (2003:582), work overload can be defined as an acute stressor measuring one's perception that there are too many tasks to complete in a given time period. Stress is a result of work overload, when an employee is allocated a huge amount of work and is given a very restricted time frame within which to complete the tasks. Heavy workloads generally also lead to burnout of employees, where burnout is when an employee has exhausted his or her physical and emotional strengths. Burnout can be contributed to workload, as well as stress and a lack of support (Anon, 2009).
- **Work environment:** The work environment can be described as the area where an employee conducts his or her daily duties. Work environments can also include noise levels, access to fresh air and child care incentives and may have either a positive or negative effect on employee satisfaction (Masooma *et al.*, 2014:124). For example, if a work environment is constantly dirty with high levels of noise, an employee will experience dissatisfaction with their job.

On the other hand, if it is clean and free of noise and gives the previously mentioned child care and incentives, employees will more commonly experience an increase in satisfaction with regards to their job.

Remuneration: In layman's terms, remuneration can be described as the monetary payment an employee receives for the work conducted by the employee in an organisation. Poor remuneration is cited in numerous research papers as being a very influential factor for job satisfaction. As in the South African healthcare context, poor remuneration results in lower levels of job satisfaction and higher intentions to leave, resulting in higher levels of turnover for the sector and unwanted expenses (Delobelle *et al.*, 2011:372). Reinforcements such as salary increases, bonuses, incentives and numerous other monetary rewards will positively influence employee behaviour and satisfaction as described by Herselman (2003:1).

- **Lack of recognition:** Recognition, as described by Caligiuri *et al.* (2010) is "the acknowledgement, appreciation or approval of the positive accomplishments or behaviours of an individual or team". Herzberg's two-factor theory classifies recognition as a hygiene factor for motivation (Tietjen & Myers, 1998:226). Employee recognition was found to have a great influence on job satisfaction as concluded in the study by Tessema *et al.* (2013:1). Tessema *et al.* (2013:3) continued to describe why employees must be recognised and state that when this occurs then employees will have more positive perceptions about themselves and their abilities to contribute to the organisation, thus boosting organisational performance and job satisfaction.
- **Supervisor treatment:** Fletcher (*cited by* Ernst *et al.*, 2004:220) describes that the lack of immediate supervisor presence negatively influences the job satisfaction as experienced by nurses. Organisational justice as a concept in work and organisational psychology looks at fairness and the perceptions employees have about the treatment they are receiving from their superiors. Job satisfaction can to some degree be associated with the treatment one receives (Nemmaniwar & Deshpande, 2016:27). At the point when employees are under the impression that they are being treated unfairly, they will be demotivated and will display negative behavioural responses. These include exit, where an employee is willing to leave the organisation; voice, where an employee will protest and make the dissatisfaction known; and lastly loyalty, where the employee will accept the unfair treatment and will continue as normal (Hirschman, 1970:272).
- **Corruption:** Corruption as defined by Akcay (2006:29) is the misuse of power for the betterment of one's self-interest and can be deeply rooted in the political and economic

development of a country and its social and cultural history. Corruption in the South African health sector is extensive and is a problem not only in developing countries, but also in developed countries (Rispel *et al.*, 2015:1). According to Habibov (2016:119), corruption does influence a healthcare employee's level of job satisfaction in a negative manner.

- **Nepotism:** Bauer (2000:218) defines nepotism as the bestowment of support (giving one person more privileges than others) to a person known to the other based on a prescriptive relationship rather than merit. Nepotism in essence means that relatives and friends are preferred candidates for vacancies based on the perceived relationship rather than on education, skills and experience (Nadeem *et al.*, 2015:225). Nadeem *et al.* (2015:225) continue to state that nepotism influences the performance and effectiveness of other employees in completing their work tasks, an indication of low job satisfaction.

The variables described above and numerous other variables can either individually or in combination influence the attitude, which is job satisfaction, experienced by an individual. As mentioned previously, job satisfaction is subjective and can be experienced differently by different individuals, thus resulting in differing behavioural responses at work. Numerous theories exist that attempt to describe job satisfaction (Delobelle *et al.*, 2011:372), some of which are discussed below.

2.4 JOB SATISFACTION MODELS AND THEORIES

The study field of job satisfaction is multi-dimensional (Theron, 2014:i) and as such, emphasis must be placed on research based on the most relevant dimensions in an effort to generate the best possible levels of job satisfaction among employees in their work environment. In substantiating the statement of Theron (2014) and as previously mentioned, job satisfaction is a multi-layer construct with numerous theories being proposed in an attempt to understand the concept of job satisfaction (Delobelle *et al.*, 2011:372). With that said, when employees are motivated and able to satisfy their needs there will generally be a positive correlation with job satisfaction. Also, the characteristics of an individual's job will influence how satisfied they are, with employees being more satisfied when job goals provide employees with a level of challenge in the pursuit of the tasks and goals (Locke & Latham, 2006:265). Job satisfaction and the aspects relating to job satisfaction are discussed in more detail below in terms of by considering numerous theories and models:

2.4.1 Maslow's hierarchy of needs

Need theories are based on the needs of employees as having an effect on the level of motivation they are experiencing. Maslow's hierarchy of needs theory (Figure 2.1, below) is the most well-known needs theory in organisational psychology (Woods & West, 2016:122).

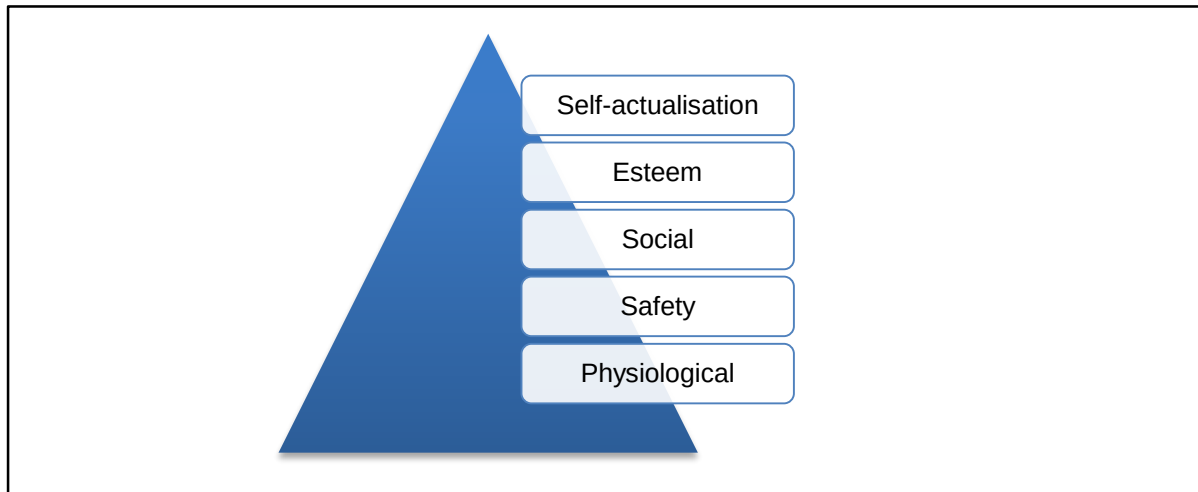


Figure 2.1: Maslow's hierarchy of needs (adopted by Poston, 2009:348)

Maslow began his studies by observing and studying monkeys. During this time he noticed an unusual pattern where priorities were addressed based on individual needs. He later transferred his studies to humans, weighing physiological needs over safety needs, safety needs over social needs, social needs over esteem needs and esteem needs taking priority over self-actualisation. A physiological need can be something tangible, such as water and food, a basic need in essence, something one requires to survive. Safety needs provide security. One such need can include insurance or pension funds. Furthermore, social needs can also be characterised as “love and belongingness”, which translates into friendships and relationships (Poston, 2009:348). An example of esteem needs could be classified as receiving recognition for work done. The final, lowest priority need, self-actualisation, the need to reach one's full potential.

Needs that are satisfied are no longer seen as motivators and only those needs that are not met will influence the behaviour of an individual (Greene & Burke, 2007:116). The behaviour of an employee is especially important in the healthcare environment as it will influence the way in which the healthcare staff interact with the patients they are treating.

2.4.2 Job characteristics model

Job characteristics can be defined as features that are included in a job to motivate an employee, influencing job outcomes such as satisfaction, performance and motivation. An

employee may not be totally satisfied with his or her pay, but other characteristics of the job, say for instance proper healthcare and pension fund contributions, make up for the low pay. Thus, other characteristics of the job could influence the level of job satisfaction of an employee. A model exists for this and was developed by Hackman and Oldman in 1980, labelled the job characteristics model (JCM). Since job motivation has an influence on the level of job satisfaction of an employee, the JCM is very helpful in examining factors that influence intrinsic work motivation. The purpose of the JCM is to foster psychological states relating to work. These states are related to motivation and are discussed briefly below (Woods & West, 2016:137–138):

- Personal responsibility – The extent to which an employee feels personally responsible for the outcomes of their work, a job must provide such opportunities to an employee.
- Meaningfulness – When an employee asks: “How purposeful is the work I do?”
- Knowledge of results – This relates to an employee’s subjective self-evaluation. If an employee knows how they are performing at work, it will allow them to assess how effective they are.

The job characteristics model identifies five characteristics of a job that will influence the above-mentioned three physiological states. These characteristics are (Fried & Ferris, 1987:287):

- Autonomy – The extent to which employees are allowed to express themselves in their jobs. It provides them with freedom and independence. For instance, the manager has a similar level of enthusiasm about the result of a venture as a chief who is more included, yet gives the representatives a chance to work all the more autonomously and at a time they schedule themselves (Martin, 2017).
- Skills variety – Skills variety can be described as the range of abilities required to complete a task. Jobs requiring special skills or a job that has difficult attainable goals will in most instances result in higher levels of job performance and job satisfaction (Gadot & Angert, 2007:120). An example would be two people working two distinct jobs, one being more difficult than the other, a specialist field. Occupation one is rudimentary, with the undertakings being performed in a standard and dull way. It doesn't require much aptitude or capacity. Occupation two is complex, forcing the specialist to be in control of a few aptitudes or capacities. Between the two labourers, occupation two will have more noteworthy odds of encountering seriousness in their employment since it requires variety in skills (Martin, 2017).

- Task identity – This is where an employee is allowed to complete an entire identifiable piece of work, allowing the employee to perceive the outcome of their work (Woods & West, 2016:139). For example: Two labourers are associated with a similar work process. Worker A has the least amount of responsibility, likely in the first stage. Worker B is included throughout the entire process of the work being conducted. Between the two, Worker B will probably consider his activities as being important in light of the fact that he can see an obvious result (Martin, 2017).
- Feedback – Feedback allows an employee to assess his or her own effectiveness when participating in completing a job. It relates to employee performance. For example, if employees are told by their supervisors that they are doing a great job, they will feel propelled to proceed with how they are getting along. Conversely, on the off chance that they are informed that they are not doing well, they will react by improving their execution (Martin, 2017).
- Task significance – This refers to the effect of the outcomes of a job on others, such as colleagues or customers. For example, employees will be spurred on to improve the situation when they realise that their activity and the execution thereof could positively affect others (Martin, 2017).

One can then conclude that in the presence of the above-mentioned job characteristics, job performance, motivation and job satisfaction will increase.

2.4.3 Herzberg's two-factor theory

Herzberg's two-factor theory, also labelled the motivation-hygiene theory differs from other motivational theories in the sense that it looks at factors that influence satisfaction and dissatisfaction at work. Other theories such as Maslow's hierarchy of needs and Alderfer's ERG theory describe how employees are motivated by the fulfilment of needs through life and situational experiences. Herzberg studied why employees had positive or negative feelings about their jobs. He asked employees to describe why they are experiencing these feelings and in his analysis he was able to distinguish between factors that contributed to satisfaction and factors that caused dissatisfaction. He coined them hygiene factors and motivators (Alshmemri *et al.*, 2017:12). Section 2.2.2 provides examples of these factors.

2.4.4 Equity theory

Whenever an employee is treated unfairly, demoted, moved to a different department or just plainly treated without respect and dignity for no reason, disappointment will surface. The

researcher's personal experience corresponds with this theory as being disrespected and treated unfairly yielded very low levels of job satisfaction. The equity theory describes that employees decide on how fairly they are being treated by comparing their inputs and outputs with those of other employees (Eslami & Gharakhani, 2012:85). The basic equity equation is provided below (Woods & West, 2016:134):

$$\frac{\text{Self outcomes}}{\text{Self inputs}} = \frac{\text{Others outcomes}}{\text{Others Inputs}}, \text{ results in equity.}$$

$$\frac{\text{Self outcomes}}{\text{Self inputs}} < \frac{\text{Others outcomes}}{\text{Others Inputs}}, \text{ results in inequity due to under-reward.}$$

$$\frac{\text{Self outcomes}}{\text{Self inputs}} > \frac{\text{Others outcomes}}{\text{Others Inputs}}, \text{ results in inequity due to over-reward.}$$

From the above equations one can conclude that employees perceive to be treated equally when their inputs and outputs equal those of their colleagues. Also, an employee experiences inequity when their inputs and outputs either exceed or does not equal those of their colleagues. When employees experience inequity they are exposed to inequity tension: over-reward resulting in guilt and under-reward resulting in anger or disappointment. When this happens, employees will attempt to restore equity (Huseman, 1987:222).

Given the range of factors that contribute to job satisfaction, there is currently a large number of job satisfaction measurements available (Pietersen, 2005:20), some of which are described below.

2.5 COMMON JOB SATISFACTION SURVEY TOOLS

2.5.1 Measure of job satisfaction (MJS)

The MJS shows a high level of reliability and validity as described by Munyewende (2014:2). The MJS makes use of a 5-point Likert scale, the same used by the MSQ with 1 = very dissatisfied and 5 = very satisfied. The MJS consists of seven subscales, listed below:

- Personal satisfaction.
- Workload satisfaction.
- Professional support satisfaction.
- Training satisfaction.

- Pay satisfaction.
- Prospect satisfaction.
- Standard of care satisfaction.

2.5.2 Job Satisfaction Survey (JSS) Questionnaire

The JSS was developed by Paul. E. Spector in 1985 at the University of Florida (Spector, 1985:693). It evaluates nine dimensions of job satisfaction which are specifically applicable to the human service - , public - and non-government organisation (NGO) sectors. The JSS consists of a final 36-item scale (Spector, 1985:693). According to Lani (2010:1) the JSS is well established among other satisfaction scales. It has been evaluated for its reliability and validity numerous times (Lani, 2010:1).

2.5.3 Warr-Cook-Wall (WCW) Questionnaire

The WCW was developed by Warr *et al.* in 1979 while at the University of Sheffield. It uses a 5-point Likert scale with 1 = extreme dissatisfaction and 5 = extreme satisfaction (Goetz *et al.*, 2013:95). The WCW measures job satisfaction by making use of the following eight scales relevant to work life quality: work involvement, intrinsic job motivation, higher order needs strength, perceived intrinsic job characteristics, life- and job satisfaction, happiness and anxiety (Warr *et al.*, 1979:129).

2.5.4 Minnesota Satisfaction Questionnaire (MSQ)

The MSQ, as mentioned in Chapter 1, has been widely used in the literature and is viewed as a well-known and understood measuring tool (Martins & Proenca, 2012:1). The twenty items listed in the short-form of the questionnaire makes it easy to use. According to Martins and Proenca (2012:4), the MSQ adopts an approach of determining job satisfaction based on different aspects of the job. Overall job satisfaction is based on the degree of satisfaction with the cumulative sum of the number of facets related to the job. Three versions of the MSQ are available for use, two long versions and one short version. According to the Vocational Psychology Research Unit based at the University of Minnesota (VPR, 2018:1), the MSQ provides more information on the aspects of a job an employee finds rewarding than do more general job satisfaction tools. It also provides vocational needs, such as when counselling follow-ups are conducted and provides information on the reinforcements of a particular job (VPR, 2018:1).

The MSQ can be administered to individuals with minimal educational background. The questionnaire is gender neutral and the short-form MSQ will take roughly five minutes to complete. The MSQ short-form consists of 20 questions. Factor analysis yielded two factors for the short-form MSQ, namely intrinsic and extrinsic satisfaction with scores from these two factors plus a general satisfaction score yielding the overall level of satisfaction (VPR, 2018:3).

The MSQ has been widely used for research related to determining the job satisfaction of healthcare employees. In most of these studies, the MSQ was not adapted in any manner. In 2006, Feng-Hua Yang and Chen-Chieh Chang, conducted a study on clinical nurses in Taiwan making use of the long version MSQ without it being adapted in any way. Another study was conducted in 2001 by Bodur. The study was focused on job satisfaction among health staff employed at health centres across Turkey. Bodur made use of the short-form MSQ, also without adapting it in any way. A third example of a study making use of the American developed MSQ, is that of Helena Martins and Teresa Proença in 2012. The study was conducted in Portugal based on a population of Portuguese hospital workers, also with no adjustments being made to the original questionnaire. However, they did use a Portuguese version of the MSQ developed by Martins in 2008 (Martins & Proenca, 2012:8). The MSQ is clearly often not adjusted for the specific environments in which the job satisfaction research is conducted.

2.6 JOB SATISFACTION, ORGANISATIONAL COMMITMENT AND THEIR CONSEQUENCES

Early research focused on job satisfaction as an attitude and key factor relating to employee behaviours such as job performance and turnover (Shore & Martin, 1989:625). Organisational commitment as a work-related attitude can be described as being the framework of an individual regarding his or her feelings of a positive relationship between themselves and their organisation (Woods & West, 2016:92). The most effective model currently available in describing the concept of organisational commitment (OC) is the one that was created by Meyer and Allen in 1991. They identified three different forms of organisational commitment. These are briefly described below (Eslami & Gharakhani, 2012:85):

- **Affective commitment:** This form of commitment relates to the emotional connection an individual has to their organisation. This can be because goals and values of the organisation coincide with these of the employee.
- **Continuance commitment:** Commitment of this form occurs when an employee comes to the conclusion that the monetary risk will be too great when attempting to leave the

organisation. Commitment of this sort is not desirable to foster amongst employees in organisations.

- **Normative commitment:** An employee displays normative commitment when employees feel obliged to stay with the organisation even when they are dissatisfied with their jobs.

Job satisfaction and organisational commitment both have various consequences related to an employee's behaviour at work. These behaviours relate to job performance, turnover and absenteeism. These three are discussed in more detail below.

2.6.1 Job Performance

For many years since the publication of the Hawthorne Studies in the 1930s, the relationship between job satisfaction and job performance has puzzled researchers, managers and work psychologists alike (Obrenović, 2014). According to Landy (*cited by Judge et al.*, 2001:376), the relationship has been labelled by many as the “Holy Grail” of industrial psychology. The level of job satisfaction can be directly related to the productivity or performance of an employee as well as the amount or level of organisational commitment portrayed by these individuals or groups. Employee job performance as defined by AbuAlRub (2004:75) is the effectiveness of a person in carrying out his or her roles and responsibilities.

According to Judge *et al.* (2001:377), making the assumption that people will perform better if they are happy, is not necessarily true. They propose seven models, namely:

- Job satisfaction results in improved job performance.
- Job performance results in improved job satisfaction.
- Satisfaction and performance influence each other.
- No link exists between the two, “with any observed correlation reflecting the overlap with an un-measurable variable” (Woods & West, 2016:95).
- No link between job satisfaction and job performance exists.
- Other variables may be able to moderate job satisfaction and job performance.
- The re-conceptualisation of both could provide a better understanding of the relationship.

Judge *et al.* (2001:393) managed to conclude that a correlation between job satisfaction and job performance does exist. Satisfied employees do tend to perform better in the work

environment. Their work was supported by the fact that longitudinal studies (where job satisfaction and job performance were measured at different times) yielded a poorer relationship than when they were measured at the same time by making use of cross-sectional studies.

2.6.2 Turnover

Job satisfaction can be viewed as the most widely used job-related attitude influencing turnover rates as discussed by Hom and Kinicki (2001:975). Turnover can be described as the general feeling of an employee's intention to leave an organisation. A decline in the levels of job satisfaction and organisational commitment tend to be associated with increased intentions to leave an organisation, thus increasing the rate of turnover and negatively affecting an organisation, especially in organisations that provide intense on-the-job training and higher education training, as described by Harrison (*cited by* Woods & West, 2016:95) and Cascio (*cited by* Van Dick *et al.*, 2004:351).

2.6.3 Absenteeism

Absenteeism can be defined in laymen's terms as the conscious decision of an employee to deliberately abstain from reporting to work. As mentioned above, a decline in the levels of job satisfaction and job commitment will result in an increased rate of absenteeism in organisations.

2.7 THE SOUTH AFRICAN HEALTH CARE SYSTEM AND JOB SATISFACTION

In 2017 a study was conducted by a Dutch technology company named Phillips. This study resulted in the development of The Future Health Index, giving a glimpse into the efficiency of healthcare systems in 19 different countries (Groenewald, 2017). South Africa unfortunately ranked last in this index as per the report published by Fin24 on 9 June 2017. According to the article, this could be partially attributed to the relatively low percentage (8.8%) of the gross domestic product (GDP) spent on healthcare compared to the other 19 countries, with the USA spending 19.1% of their GDP on healthcare (Groenewald, 2017).

South Africa has a dual healthcare system, consisting of a public and private sector. According to Young (2016:3), this system is divided among South African citizens along socio-economic lines: those who can afford private healthcare and those who cannot. In South Africa the public healthcare environment includes government health institutions while the private healthcare environment includes privately owned institutions (Pillay, 2009:1). South Africa has a three-level hospital approach with primary-, secondary- and tertiary level hospitals (Young, 2016:3).

Primary hospitals offer internal medicine, obstetrics, gynaecology, paediatrics, general surgery, and general practice (GP) consultations. No referrals are required and they have limited laboratory services (Young, 2016:3). Secondary hospitals are more specialised and usually have five to ten clinical specialities to which patients are referred for the specialised expertise. A rehabilitation centre can be one example of a specialised service at such a hospital (Young, 2016:3). According to Jamison *et al.* (cited by Young, 2016:4), tertiary hospitals are even more specialised than secondary hospitals and provide specialist care in areas such as renal, neurosurgical and severe burn treatment. In South Africa, the general feeling is that healthcare employees are not totally dissatisfied. Some factors, such as patient interaction, contribute to employees feeling satisfied with their jobs, while one mayor influencer in the public sector is usually the lack of appropriate resources, safety in the workplace and general workplace conditions (Pillay, 2009:2).

As mentioned above by Groenewald, Pillay (2009:2) reiterates that the public health care system is under-resourced and underfunded and makes the same conclusion as Philips, namely that the South African healthcare system is inefficient and ineffective, not being able to provide the care the South African public so longs for. According to Pillay (2009:2), job satisfaction is one of the main reasons for the high staff turnover rate of South African nurses and high levels of absenteeism also influences the effectiveness of the system. These two factors further result in low morale for the remaining nurses due to higher workloads and pressure, lowering the level of job satisfaction and productivity, again influencing the effectiveness and level of care provided by the South African healthcare system (Pillay, 2009:2). Corruption as mentioned above also plays a major role in the satisfaction of healthcare employees (Habibov, 2016:119). In recent times the North West Province of South Africa experienced numerous industrial actions, some in courts and others not, all due to the level of corruption and the work environment employees are exposed to on a daily basis (Khoza, 2018).

South Africa has also introduced the South African National Health Insurance (NHI) system. The NHI aims to provide quality health care for all the citizens of South Africa. The NHI will work as a financing system, ensuring that all citizens of South Africa and legal long-term residents receive proper healthcare, regardless of any monetary contribution towards the NHI Fund (Department of Health, 2018). This fund was established due to the lack of access regarding good quality health care due to socio-economic differences. The fund correlates with the constitution as it is regarded as a basic human right to receive healthcare treatment.

2.8 CONCLUDING STATEMENTS

Job satisfaction as discussed above can have a variety of definitions. The one used in this study is that of Woods and West (2016:92), namely that job satisfaction is the general feelings a person has towards to their job, either positive or negative and associated with moods. Job satisfaction is influenced by numerous factors such as work environment, remuneration and supervisor treatment, to name but a few. Numerous models and theories exist to describe and allow for a better understanding of job satisfaction in the work environment. These include Maslow's hierarchy of needs, the job characteristics model, Herzberg's two-factor theory and the equity theory. The Warr-Cook-Wall (WCW) Questionnaire, Minnesota Satisfaction Questionnaire (MSQ), Job Satisfaction Survey Questionnaire (JSS) and Measure of Job Satisfaction (MJS) are all research tools available, enabling researches and other persons to determine job satisfaction in a variety of environments and circumstances. Job satisfaction is closely related to organisational commitment in the sense that it will have an influence on the levels of turnover (employee retention), absenteeism and job performance, having a positive correlation with the previously mentioned.

South Africa has a dual healthcare system as mentioned above in Section 2.8. The system consists of a public service and private service with a huge gap separating the two in terms of effectiveness, efficiency and quality of care. The public health system is severely under-resourced, affecting the quality of care and efficiency of the work being performed. This ultimately has an effect on the level of job satisfaction experienced by the public healthcare professionals.

2.9 SUMMARY

Chapter 2 provides an in-depth literature review on what job satisfaction entails and what tools can be used to determine the level of job satisfaction. It also highlights numerous factors that influence the level of job satisfaction of employees. Job satisfaction and its measurement in the South African health sector with an applicable tool can be viewed as an important and viable research project as it will assist in identifying the main factors influencing the level of job satisfaction of South African health care professionals. This would enable management to address these and to make positive changes. Chapter 3 presents the results on the face and construct validity of the newly developed contextualised MSQ short-form.

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CHAPTER 3: RESEARCH ARTICLE

3.1 INTRODUCTION

Chapter 2 provided an in-depth literature review of the available research on job satisfaction. The concept of the work related attitude was described in detail. Numerous factors affect the level of job satisfaction of employees. Some of these differ from industry sector to industry sector and country to country, with a study conducted in 2015 by TINYpulse indicating that employees in the healthcare environment ranked fifth out of the 12 industries analysed (TINYpulse, 2015). Job satisfaction models were described and Job Satisfaction research tools such as the Minnesota and Warr-Cook-Wall Satisfaction tools were described. The manuscript, *Contextualisation of the Minnesota Satisfaction Questionnaire short-form to determine job satisfaction of healthcare workers in a South African public hospital*, was prepared for publication in the South African journal of public health (SAJPH), previously known as the Strengthening health systems journal (SHS). The journal makes use of the Vancouver referencing style and publishes bi-annually.

3.2 AUTHORSHIP

According to SHS, all the authors must provide consent for publication with the authorship being based on three conditions, all of which must be met as outlined below:

- The authors should all make a substantial contribution in relation to the conceptualisation, design, analysis and interpretation of the data.
- The article should offer critical revision and/or drafting of important scientific content.
- Approval must be given for the version to be published.

The above conditions and contributions by the authors are acknowledged below:

Table 3.1: Acknowledgement of conditions of authorship

	Signature – Acknowledgment of above conditions
Mr Henri Jordaan – Author	
Prof. Petra Bester – Supervisor	
Dr Christi Niesing – Co-supervisor	
Ms Doret Kruger – Assistant supervisor	

3.3 SOUTH AFRICAN JOURNAL OF PUBLIC HEALTH FOCUS AND SCOPE

The content of the South African Journal of Public Health is principally based on scientific reports and discussion papers highlighting the successes and failures of strengthening systems in the health systems on an international basis. The journal focuses on the identification of lessons that have been learned from these successes and failures so that future programme and policy makers can learn and identify gaps that can be filled through academic study (SAJPH, 2014).

Analysis of the interventions of the political, social, cultural and economic environments in the health system will be published by the SAJPH in an effort to further understand what will lead to success and failure in specific contexts. The SAJPH also welcomes shorter comment articles relating to issues of controversy or debate in the health systems science (SAJPH, 2014). The editorial team with the guidance from the International Advisory Board will commission educational articles with an emphasis on trends in impact analysis and evaluations as well as where health system strengthening with appropriate indicators are discussed.

The SAJPH also intends to be a forum for debate about how best to apply the agreements of scientific investigation relating to health and developmental challenges, reporting about health system interventions in such a manner that it will be useful for all, as well as establishing a consensus among practitioners about which tools and techniques to use to improve the rigor of the field (SAJPH, 2014).

Submissions that:

- Promote a greater understanding of health systems
- Highlight interventions that are successful and others that fail

- Allow policy makers and programme designers to highlight and identify lessons that can be learnt from
- Identify knowledge gaps that can be rectified by scientific research strengthening health system research
- Are all invited by the South African Journal of Public Health for submission.

3.4 AUTHOR GUIDELINES

In accordance with all the requirements for publishing in the South African Journal of Public Health (SAJPH), guidelines for the author will be discussed in below sections. The guidelines and policies are electronically available at the following URL'S:

<http://www.shsjournal.org/index.php/shsjHealth>

<http://www.shsjournal.org/index.php/shsj/about/submissions#authorGuidelines>

Conflict of interest

When the opinions of authors' or reviewers' are influenced in any way, relationship or association, relating to the subject matter of any research paper, a conflict of interest is present. According to the South African Journal of Public Health, when a conflict of interest exists, may it be actual, perceived or potential, it will not exclude a paper from publication, authors and reviewers however must ensure that the reader has available all information allowing said reader to make an informed assessment about the research conducted.

The SAJPH requires that both, authors' and reviewers' declare any sources of interest, may it be personal or financial relationships with a direct connection to the topic of the paper, an association with a subject or product that may results in a real, potential or perceived conflict of interest coming to existence. The editorial team of the SAJPH can be contacted when uncertainty exists in relation to the existence of a conflict with non-disclosure possible leading to a paper not being published as it will be considered a serious offence.

Protection of rights to privacy

The protection of rights to privacy policy of the SAPHJ distinguishes between the "patient" and "other individuals". It states that any information (images, descriptions, etc.) that will identify the identity of any patients/ other individuals should not be published, unless it is of significant scientific importance and the patients has given his/her informed written consent. It is also emphasised that the research be distributed not only to researchers that were involved in the

study, but also to the participants. A signed consent form was attached to all questionnaires distributed.

Copyright notice

The copyright will remain in the name of the author with the research being licensed under a Creative Commons Attribution - Non-commercial Works License. An agreement must be signed by the Authors', this agreement outlines the terms of publication and the Author-Publisher rights. The aforementioned agreement must be submitted with other required submissions, if not, the submission will be considered as incomplete. Research will only be accepted for publication accepted that it has not been submitted for publication at another journal. The editorial team must be informed if the findings were presented at a conference and published in abstract form to avoid copyright infringements with the SAJPH not accepting any responsibility for statements made by the authors.

The use of previously published images and or figures must be accompanied with permission from the original authors allowing the use of the image/figure. A legend must give full credit to the original author and publisher. The letter granting the permission must be submitted as a supplementary file when submitting the article.

Privacy statement

The SAJPH is determined and committed in protecting the privacy of its submission system and its website, whilst the names, email addresses and personal particulars used as input on the website and the submission system will not be made available to others without the consent of the user. Consent is provided to receive communication from the SHSor and its publisher, HMPG on issues pertaining to the journal when registering to the use the website and submission system.

Ethnic/race classification

Numerous problems are associated with the use of racial and ethnical classifications, as per the ethical policies of the journal, when a research design does make use of participants being classified based on race, culture, background, gender, etc., a detailed explanation must be provided for doing so. The categories being used must be clearly defined, the control of perceived racial disparities that may be underlined by socioeconomic, cultural and other related variables must be adhered to. One must also clearly stated whether the race or ethnicity was classified by the researcher or by the participant while also taking note that it is

not appropriate in genetic studies to make use of self-reported or researcher-assigned racial or ethnical categories.

Types of research manuscripts accepted

Original articles: Guided word limit: 3000 words

The bulk of the journal consists out of original articles, based on scientific reports and papers discussing the practices of public health, communal and preventative medicine that would enhance health systems whilst also capturing the significant field-based innovations to build a community of interactive cohesiveness of academics and service providers. To further understand what works and what does not work, relating to many different factors outside of the research design, the journal will publish research analysis based on political, cultural, social and economic environment of health systems interventions as well. Original research articles usually provide information relating to the progress or outcomes of original research (Koesnell, 2017: 66). Figures and tables must be used sparingly and must not replicate data already mentioned.

Comment articles: Guided word limit: 1 500 words

Arguments and discussions of topical development in the field based on editorial-style pieces are labelled as Comment Articles. These articles must be to the point with links to publications, conferences and events being encouraged with a pre-admission enquiry being strongly advised. This platform provides Masters and Doctoral thesis findings to be presented.

Forum articles: Guided word limit: 1 200 words

The journal also provides a platform for debate relating to arguments of how best to apply resolutions of scientific investigation pertaining to developmental and health challenges, debate on how to report interventions of health systems that will be purposeful to all audiences, and how to facilitate the building of a consensus relating to the research tools and techniques that research practitioners can use with the aim of improving health outcomes. This format may include 1 figure or table with a maximum of 10 references.

Educational articles: Guided word limit: 1 500 words

Articles will focus on problems associated with the use of programmatic and operational data. This format will also provide masters and doctoral student with a platform for the creation of a forum that addresses training and educational challenges. This format may also only include 1 figure or table with a maximum of 10 references.

Correspondence (Letter to Editor): Guided word limit: 500 words

Letters must relate to articles or papers published in the Strengthening Health Systems (SHS) or relate to a particular issue with relevance to the journals' readership. These letters may include only one table/figure, must include a correspondence address with a maximum reference amount of 10.

Manuscript preparation

Preparing an article for anonymous review

An anonymous review allows for a fair and unbiased review process, most submissions must include an anonymous version except for correspondence articles being exempted from such a review.

The below guidelines regarding the anonymous review must be adhered to ensuring that there is no additional blinding required which might slow down the review process:

- All details such as an affiliation or institutional details and author should not be within the anonymous article.
- The title page, acknowledgements, contact details, names of funding grants if referring to a specific person and headers containing the authors name must be removed.
- Refer to own work in the third person, masking self-citations.

General manuscript format/layout

Publication will be detailed if any manuscripts are not according to the correct format as stipulated below, manuscripts will be returned to authors' for correction:

- All manuscripts must be written in UK English
- RTF and Microsoft Word formats will be accepted
- Text must be single spaced, 12-point Times New Roman font
- Articles must be concise, even if it is below the word limit.
- Contact details of all the authors, qualifications, affiliations (institution, school, faculty, etc.) must be provided in the manuscript and in the submission made online

- The consistent use of abbreviations after being spelled out in full is permissible, e.g. Commerce Research Committee (ECRC).
- All scientific measures must be expressed in SI units, except: haemoglobin (g/dL) and blood pressure (mmHg).
- Litres must be denoted with a capital letter L, e.g. mL for millilitres).
- Measurements must be followed by a space before giving the SI unit (except for % and °C), e.g. 35 Kg, 30 L.
- The use of correct symbols is advocated, don't use "a" for alpha or u for micro, etc.
- Numbers must be grouped as per thousand-units, i.e. 5000, 25 000.
- All direct quotes must be placed within single quotation marks, i.e. Pieter said that: '.....'
- Squared brackets are reserved for use only when denoting concentrations or insertions in direct quotes, round brackets (parentheses) should be used.
- Do not use fill, format lines, etc., when material is placed within a box, indicate this only in the text. Only the table format may be used.

Illustrations, photos and scans

- Consent must be provided when already published illustrations are being used
- All figures must be numbered making use of Arabic numbering and in-text references must be as follows: Fig. 1
- Figures must be accompanied with a caption
- Images must be of a high quality/ resolution suitable for printing
- PDF format must be used for all illustrations
- All graph axes must be labelled accordingly, do not use decimals if not necessary
- Photos and scans showing specific features, these features must be indicated using an arrow.

- All images must be submitted individually as a “supplementary file” on submission

Tables

- Tables must be simple and carefully designed for clear data representation. The use of complicated tables are discouraged.
- Tables are not required to be submitted individually upon submission as is required for images and illustrations mentioned above.
- Tables must be number by making use of Arabic numerals (Table 1, table 2)
- Tables must be designed out of cells, not text-boxes, etc.
- A concise title and column headings is strongly advocated
- The consecutive use of the following symbols: * † ‡ § ¶ || then ** †† ‡‡ etc., is required for footnotes.
- The “enter” key must not be used to create new rows, each new row must be inserted separately
- Separate columns must not be used for *n* and %, they must be combined
- Overlapping categories must not be used, e.g.: , use symbols that do not overlap , < >

References

Important: All references must be made using the Vancouver style. Reference lists must be made manually, without the use of reference software. Endnotes may not be used.

- References must be verified by the author/s.
- All citations must be inserted as superscript numbers between square brackets example.
- References must be listed in numerical order and not alphabetical order.
- Only approved abbreviations of journal titles may be used, a list is available at the following link: List of Journals in Index Medicus.
- All the names and initials of the authors must be provided, in the case that there is more than six, only the first three must be named followed by *et al.*

- Issue and volume numbers must be provided.
- The number of pages must be given as the full first and last page number, e.g. 1216 - 1225 and not 1216 – 25.
- A Digital Object Identifier (DOI) link, If possible, must accompany the references
 - A DOI lookup service is provided at CrossRef.
 - The article title can be paste on the CrossRef homepage into the “Metadata search” box.
 - Find the matching article title.
 - Then click Actions and choose Cite.
 - Paste the copied URL alongside url = ‘ between { },
e.g.: <https://doi.org/10.7196/07294.937.98x>

Peer review and submission

In order to submit an article the following must be adhered to:

- The manuscript must have been prepared in accordance to the SAJPH requirement.
- All submissions must be made via the Editorial Manager.
- For a submission to be complete, the following is required:
 - An anonymous manuscript must be provided.
 - The Author Agreement must be included.
 - The manuscript itself
 - Figures, illustrations datasets, consent forms, permissions: all supplementary files must be included
- After the successful processing of the submission, a technical check will be conducted by the Editorial Office before an editor will be assigned to handle the review process. The manuscript may be sent back if all the author guidelines were not followed for correction.

Processing Charges

According to the SAJPH, there are currently no processing charges, per page fees, for the publication of manuscripts.

Production Process

The Managing Editor will assign a copyeditor (CE) for an accepted manuscript. The functions of the CE are as follows:

- The CE will perform editing tasks on the Word document, such as on the style, format, grammar, spelling, etc.
- The CE will make contact with the author/s if any queries arise, the edited doc will be sent to author/s for corrections to be made
- After the CE has finalised the manuscript, it will be typeset
- After the completion of the typeset, the CE will send a PDF format of the manuscript to the author/s for a final check, whilst also sending it to the second proof-reader
- Authors must complete their final check and sign-off within 2 days, with no major additional changes that can be accommodated
- The CE will implement the authors' and proof-readers' final re-marks, finalising the manuscript and prepares it for the next journal issue.

Change in authorship or contact details

The Editorial Department at the SAJPH must be informed of any changes pertaining to any contact details, including emails, in order to manage proper communication.

Errata and retractions

Errata: In the event that the authors' become aware of any error or inaccuracy in their own or someone else's contribution towards an already published article, the SAJPH must be informed immediately by means of email at publishing@hmpg.co.za, also including the following details:

- The journal, volume, issue that was published
- The article title and names of authors
- Details regarding the error and where it is located within the article
- Details regarding a proposed correction and reasoning

If required, an investigation will follow with feedback. An immediate correction will be made to the web version and an erratum will be published in the next issue. All guidelines as provided by the Committee on Publication Ethics (COPE) will be adhered to during such an investigation.

Retractions: The retraction of an article is at the discretion of the authors or editorial team of HMPG. A signed statement from all the authors must be provided before an article is retracted before publishing. An email can be sent to: publishing@hmpg.co.za, including the following details:

- The journal, volume, issue that was published
- The article title and names of authors
- Description of why the article must be withdrawn/ retracted

Decisions will be made based on international best practices and on a case-by-case basis when reviewed by the editorial committee with feedback being provided to the authors. When fraud or professional misconduct is suspected, due process as per the Committee on Publication Ethics (COPE) will be followed. Retractions will be linked to the original article.

Preparation checklist before submission

Submissions will be returned to authors whom do not comply with the author guidelines. Authors must acknowledge their compliance regarding the following 10 points as part of the submission process:

- Meet the requirements of authorship as set out by the journal, named authors consent to publication.
- The submission is not before any other journal for consideration, nor has it been published anywhere else.
- According to the Author Guidelines, the text complies with all the stylistic and referencing requirements.
- Microsoft Word (.doc or .docx) format was used for the manuscript. Text is 12 point Times New Roman font and single-spaced.
- Supplementary files (illustrations/figures) must be of high quality (not compressed) and in a jpeg format and must be submitted individually.

- Written consent must be obtained from the copyright holder for illustrations/figures published somewhere else.
- References must be accompanied by a digital object identifier (DOI) where possible.
- Where applicable, an abstract must be included.
- Approval from a research ethics committee must be provided.
- Any form of a conflict of interest must be indicated by the author(s).

Article Structure

The article structure employed in this research study will consist out of an original article structure. As stated above, original articles usually provide information relating to the progress or outcomes of original research (Koesnell, 2017:66). Since this research is original, something that has not been done in the selected setting such as the public healthcare system of South Africa, this article type would be acceptable by the journal. The guided word limit for such an article is 3 000 words. Outlined below is a detailed description of the article must be structured as adapted from the SAJHP:

The following sections must be contained within the article:

- Structured abstract – See below heading “Detailed description of each heading”.
- Introduction/Background – Concise and no more than three paragraphs. Background must be to the research question, references to other studies must be included laying out the rational for conducting the study.
- Methods – Use as much detail as possible enabling others to replicate the study if they wish to do so.
- Results – The findings from the study must be described as well as the study sample with all interpretations kept for the discussion section, considering primary outcomes before any secondary or tertiary outcomes.
- Discussion and conclusion – Interpretations must be discussed with the conclusions briefly summarising the main message from the manuscript whilst also providing recommendations.

Detailed description of each heading:

Structured abstract

- Word count: 250 – 400 words with the following headings:
 - Background – Why was the study conducted and how does it relate to other studies that have been conducted.
 - Objectives – What the study intended to find
 - Methods – Study design, number of participants (sample), analysis that was conducted on data.
 - Results – Population and sample description with results outlined as per the methods described. Primary objectives must be described first.
 - Conclusion – Must include recommendations for further studies, and must support the data.
- References must not be included in the abstract.

Main article

The main body of the article must contain the heading as mentioned above in point 3.11. Additional headings may include the following:

- Objectives within the Introduction/Background providing a clear statement of the aim of the study.
- Design within the Methods heading.
- Setting within the Methods heading which can include the level of care e.g. primary, secondary, etc.
- Participants within the Methods heading, instead of using patients or subjects relating to their age, sex, numbers used and other biographical data. Inclusion and exclusion criteria can be described.
- Interventions within the Methods heading, such as the what, when and how.

Results

Results must have confidence intervals of 95% for quantitative studies and must start with a description of the sample and population. Where appropriate, the level of statistical significance and number required to treat/harm. Data must not be replicated in tables and in the text with mean and standard deviations being specified clearly when making use of them. Interpretation of the results must be left of the Discussion. The results section must just provide the results as per the Methods section.

Discussion

The discussion must be precise and concise and must follow the below structured layout:

- Statement of the principal findings must be provided as well as a brief discussion of the strength and weaknesses of the study.
- There must be a contribution to the body of knowledge with strengths and weaknesses discussed in relation to other studies.
- What impact will the study have on clinicians and policy makers with recommendations being provided for future studies?

Conclusion

Readers might only look at this section, it must this be written very carefully. Implications associated with primary conclusions must be included with areas of further research being suggested.

TITLE PAGE

Contextualisation of the Minnesota Satisfaction Questionnaire short-form to determine job satisfaction of healthcare workers in a South African public hospital

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Disclosures:

The authors report no real or perceived vested interest that relate to this article that could be construed as a conflict of interest. Any opinion, finding, conclusion or recommendation expressed in this material is that of the author(s) with the author(s) not accepting any liability in this regard.

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ABSTRACT

Background: In South African public hospitals, managers can benefit from valid empirical evidence on the job satisfaction of healthcare workers. This research proposes a generic healthcare worker job satisfaction measuring tool contextualised to South African public hospitals. This might support management to explore levels of satisfaction and specific factors for job dissatisfaction. Job satisfaction of healthcare workers affect the quality and safety of care, including patient and organisational outcomes. Research has been conducted globally on job satisfaction in the healthcare environment using research tools designed in high-income countries, but these contexts differ from the typical South African public healthcare context. The Minnesota Satisfaction Questionnaire (MSQ) short-form is a 20-item questionnaire used globally to measure job satisfaction with over four decades of evidence on validity and reliability. This research proposes the contextualisation of the MSQ short-form for healthcare workers in South African public hospitals.

Objectives: To contextualise the MSQ short-form to a typical public hospital in the Dr Kenneth Kaunda district, North West province, South Africa, by establishing face and construct validity.

Methods: A quantitative, cross-sectional design with the MSQ short-form as structured questionnaire was presented to a panel of experts ($4n$) for face validity. The contextualised MSQ short-form was completed by healthcare workers ($62n$) for construct validity. An all-inclusive sampling technique was used subject to inclusion criteria. Severe staff shortages and a failing health system at the time of data collection led to a small sample size. Completed questionnaires were captured in the Research Electronic Data Capture (RedCAP) system and imported into R. McDonald's omega coefficient was calculated to determine the reliability of the contextualised MSQ short-form as the sample was too small for a Cronbach's alpha coefficient. The McDonald's omega coefficient is an alternative to the traditional Cronbach's alpha, acknowledging that one sometimes has to work with the data at hand. This entailed first an inter-item correlation matrix using Holm's application, followed by an explorative factor analysis, and then the calculation of the omega coefficient.

Results: A McDonald's omega coefficient of 0.98 was attained, which implies a good internal consistency. The primary objective of contextualising the short-form MSQ was accomplished.

Conclusion: The newly contextualised MSQ short-form may assist hospital management to determine the job satisfaction of all healthcare workers with a relatively fast and short instrument. The MSQ short-form may also enable hospital management to identify reasons for job dissatisfaction, providing empirical evidence for corrective measures.

(Word count: 396)

INTRODUCTION

This manuscript agrees that a considerable amount of research has been conducted on job satisfaction, especially in the healthcare domain.^[1,2] Job satisfaction is also regarded as one of the most widely researched subjects in organisational behaviour and human resources in general, while also being described as multifaceted with numerous definitions and concepts.^[3,4] It can be argued that one of the most difficult aspects of determining job satisfaction is the fact that a person could be satisfied with some factors of a job while at the same time being dissatisfied with others.^[5] The authors are of the opinion that it is imperative to assess an employee's job satisfaction based on the most prevalent factors in their specific environment, in this case the public health system of South Africa. In recent times the South African public health system has been facing devastating revelations as the South African health ombudsman warned on 3 June 2018. The South African health system is on the verge of collapse^[6], affecting the job satisfaction of healthcare workers.

Job satisfaction is regarded as essential in organisational and industrial psychology because it is an important contributor to employee's happiness and productivity at work. Job satisfaction also affects staff turnover and employee performance. According to Oshagbemi,^[7] job satisfaction can be influenced by management in organisations in general. Furthermore, Oshagbemi^[7] states that much of the research on job satisfaction is based on the assumption that it is a determinant of turnover rates, absenteeism, worker performance, etc., with changes to job related attitudes falling within the purview of management.^[8] There is a relationship between quality care, patient satisfaction and healthcare workers' job satisfaction. Martins and Proenca^[9] argue that good human resource management can and will result in increased quality care and reduced mortality rates.

Research on the job satisfaction levels of healthcare workers has been conducted using numerous research measurement tools, including, but not limited to the Minnesota Satisfaction Questionnaire (MSQ), Measure of Job Satisfaction (MJS) and Warr-Cook-Wall Questionnaire (WCW).^[10] Despite the variety of tools available to measure job satisfaction in health systems, only a few of these tools indicate a high degree of reliability and validity.^[11] Research on job satisfaction in the healthcare environment has mostly addressed different professions, such as nurses, doctors, etc., being very specific and not catering for the broader South African health system. Three different studies utilised the MSQ without any adjustment. These were studies by Feng-Hua Yang and Chen-Chieh Chang, conducted in 2006 on clinical nurses in Taiwan, utilising the long version MSQ in its original format. In 2001, Bodur focused on the job satisfaction of healthcare workers employed at health centres across Turkey, making use of the MSQ short version, again in its original format. In 2012, Martins and Proença used the MSQ with hospital workers in Portugal and translated the original questionnaire into Portuguese.

The MSQ is a useful job satisfaction measurement tool for application to various practice environments globally. Given the need for efficient, fast and accurate assessments of the job satisfaction of healthcare workers in South African public health systems for use by hospital management and the opportunity to identify the reasons for job dissatisfaction, the MSQ short-form seems suitable. The **primary research question** was: How can the MSQ short form be contextualised to measure job satisfaction among healthcare workers in the public hospitals of South Africa? By making use of a contextualised MSQ short-form to determine the job satisfaction of healthcare workers, management can identify and rectify contributors to low levels of satisfaction. This is especially necessary in the North West province where the healthcare system faced public collapse in 2018.

Research objective

The objective was to validate a MSQ short-form contextualised to a typical public hospital in the Dr Kenneth Kaunda district, North West province.

METHODOLOGY

A quantitative research approach was adopted. The setting was a typical public hospital in the Dr Kenneth Kaunda district, North West province. The hospital complex has 776 beds and is managed as two separate premises that function as one complex. The hospital is a regional hospital serving the Matlosana region, the Southern region and the Bophirima region.^[12] There are 1 036 employees who work at the hospital complex, serving on average of 22 688 patients on a monthly basis.

The MSQ can be administered to individuals with minimal educational background. The questionnaire is gender neutral and the short-form MSQ will take roughly five minutes to complete. The MSQ short-form includes 20 questions, and factor analysis yielded two factors for the short-form MSQ, namely intrinsic and extrinsic satisfaction, with scores from these two factors plus a general satisfaction score yielding the overall level of satisfaction.^[13] A 5-point Likert scale is used with the MSQ, ranging from very satisfied, satisfied, “N” (neither satisfied nor dissatisfied), dissatisfied to very dissatisfied. Demographic information was gathered with questions pertaining to their age, years of employment, marital status, education, gender, shifts being worked and employment position (lower, middle or upper management). This was contained in Section A of the questionnaire. Section B consisted of the contextualised MSQ with its twenty questions, correlating with the twenty scales contained in the longer version of the MSQ. These twenty scales are as follows: B1. Activity, B2. Resource availability, B3. Variety, B4. Social status, B5. Supervisor human relations, B6. Supervisor technical, B7. Moral values, B8. Security (job), B9. Social service, B10. Authority, B11. Ability utilisation, B12. Company policies and practices, B13. Compensation, B14. Advancement, B15. Responsibility, B16. Creativity, B17. Working conditions, B18. Co-workers, B19. Recognition, B20. Achievement. In the demographic data section of the MSQ short form, upper management referred to healthcare workers in the executive management team who report directly to the hospital board, middle management referred to the subordinates of executive management and lower levels of managers referred those employees who oversee specific line tasks.

The sample was selected using an all-inclusive sampling method that adhered to the following inclusion criteria: contractually employed for six months or more; qualified as a healthcare worker with statutory registration; available and willing to participate voluntarily. After obtaining permission to use the MSQ short-form from the University of Minnesota’s Vocational Psychology Research (VPR) Department, which indicated that the MSQ can be used free of charge for research purposes under a Creative Commons Attribution-Non-commercial 4.0 International License, the original MSQ short-form underwent face validity testing by four experts (one medical specialist, three advanced nurse practitioners with more than ten years’ experience in public health systems). The questions adjusted in the original MSQ include the following: B1, B2, B6, B14, B16 and B19.

Ethics approval was granted by the North-West University’s Economic and Management Sciences Research Ethics Committee (EMS-REC, ethics clearance number NWU-00543-18-S4), with the North West Provincial Department of Health (NWPDoh) providing permission to conduct the research at the hospital. An informed consent letter accompanied the contextualised MSQ-short form. It provided the respondents with information on why the

research was being conducted and asked for the consent of the respondents. The CEO of the hospital acted as the gatekeeper, appointing mediators and ensuring that the all respondents were made aware of the research being conducted and ensuring that the questionnaires are completed by his personnel. The hospital was visited on three separate occasions to collect completed questionnaires. However, the hospital was understaffed and there was a small number of responses. The completed questionnaires were captured into RedCap by two field workers from the North-West University.

Analyses were conducted using R statistics' Psychometric Package, inter-item correlation matrix using Holm's application, an exploratory factor analysis and McDonald's omega coefficient.

3.5 RESULTS

A sample size of 300 was initially anticipated. A total of 350 questionnaires were distributed, but only 62(*n*) respondents completed the survey. The response rate of 18% is attributable to the unfolding strikes and unrest that crippled healthcare in the North West province at the time of data collection. This is one of the debilitating outcomes of the alleged corruption in the North West Provincial Department of Health, culminating in protests against low pay and severe shortages of health professionals.^[14] During the course of 2018 the premier of the North West province was forced to resign.^[15] Despite the Minister of Health reporting that 223 vacancies in the North West Department of Health had been filled at a cost of R150 million, the severe staff shortages were tangible to the research team.^[15, 16]

Table 1: Demographical characteristics of the participants (n=62)

<i>Gender</i>	<i>Total (N)</i>	<i>%</i>
<i>Male</i>	9	14.51
<i>Female</i>	51	82.25
<i>Age</i>		
<i><20</i>	0	0
<i>21-30</i>	16	25.80
<i>31-40</i>	19	30.64
<i>>40</i>	23	37.09
<i>Marital status</i>		
<i>Single</i>	35	56.45
<i>Married</i>	17	27.41
<i>Divorced</i>	4	4.83

<i>Widow/ Widower</i>	3	6.45
<i>Work shift</i>		
<i>Day</i>	51	82.25
<i>Night</i>	7	11.29
<i>Years employed</i>		
<i><0-5</i>	23	37.09
<i>6-10</i>	13	20.96
<i>11-15</i>	5	8.06
<i>>15</i>	13	20.96
<i>Level of management</i>		
<i>Upper</i>	1	1.61
<i>Middle</i>	15	24.19
<i>Lower</i>	25	40.32

Table 1 summarises the participants' demographic profile. 82.25% of the participants were female and 37.09% were aged 40 years or older. The participants predominantly worked day duty (82.25%), had been employed for 0–5 years (37.09%) and represented lower levels of management (40.32%).

Due to the small sample size (62n) Cronbach's alpha coefficient could not be calculated to determine the reliability of the contextualised MSQ short form. The coefficient of omega by McDonald was conducted.^[17] The omega coefficient is an alternative mechanism to establish reliability when the reality led to a small sample size. The data at hand challenges the Classical Test Theory (CTT)^[18] practice related to the traditional alpha coefficient. The advantages of omega include that it makes more realistic but also fewer assumptions than alpha; it is less likely to associate challenges with inflation and attenuation of internal consistency estimation and an omega with a confidence interval provides a supplementary precise degree of confidence in the consistency of the administration of a scale.^[18] Omega considers the strength of association between items.^[19]

First, a correlation matrix adjusted using Holm's application^[20, 21] by means of utilising the R statistics Psychometric Package^[22] confirmed a high inter-item correlation. This is evident from Figure 1. High correlations are presented in strong colours. In figure 1 the strong correlation between the factors are visible except for B13 (compensation).

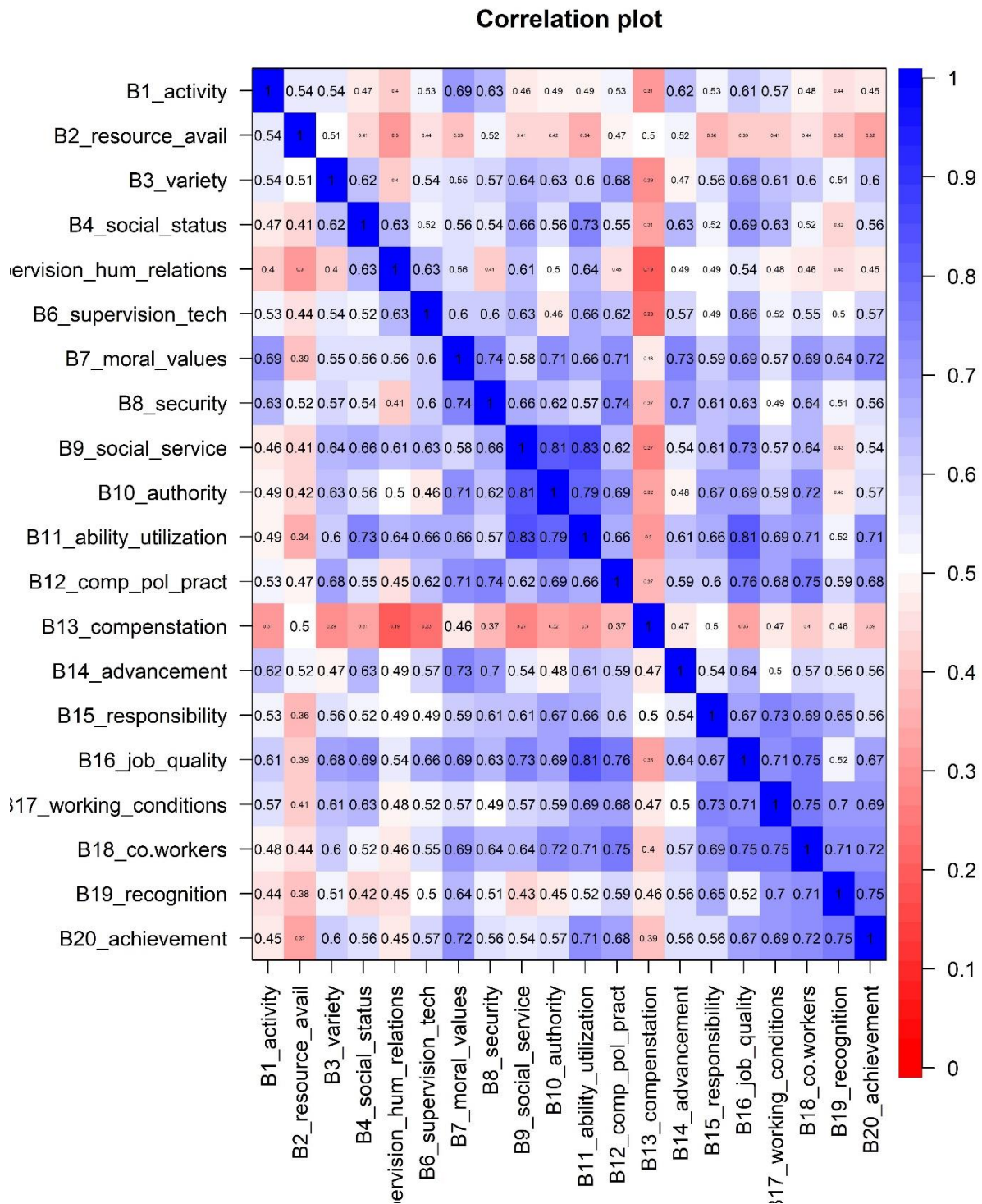


Figure 1: Inter-item correlation matrix

Second, an exploratory factor analysis (EFA)^[23] revealed that the contextualised MSQ short form had three factors present, similar to the original MSQ. An EFA enabled the researchers to investigate the number of underlying dimensions in the data by grouping associated variables together.^[24] These factors were generated from the 20 items contained in each of the 20 questions of the contextualized MSQ short form, each individually relating to either an Intrinsic, Extrinsic or an Overall Satisfaction score. These factors weren't similar to the original

MSQ short-form because B5 (supervision and human relations) and B6 (supervision technology) were both in the 1967 factor analysis of the original MSQ short-form as part of extrinsic motivation^[25] but in this study grouped as intrinsic motivation. In addition, B20 (achievement) was an intrinsic motivation in the original MSQ short-form but grouped as an extrinsic motivation in this study. Figure 2 gives a graphic presentation of the general factor values for the 20 items and the three identified dimensions. B1 to B20 refer to the twenty questions contained in the contextualised MSQ short-form, with F1, F2 and F3 representing the three factors (F1: Intrinsic motivation, F2: Extrinsic motivation, F3: Overall satisfaction). The dimensions in the exploratory factor analysis of the original MSQ short-form included a large population, originated within the USA and presented a diverse spectrum of occupations.

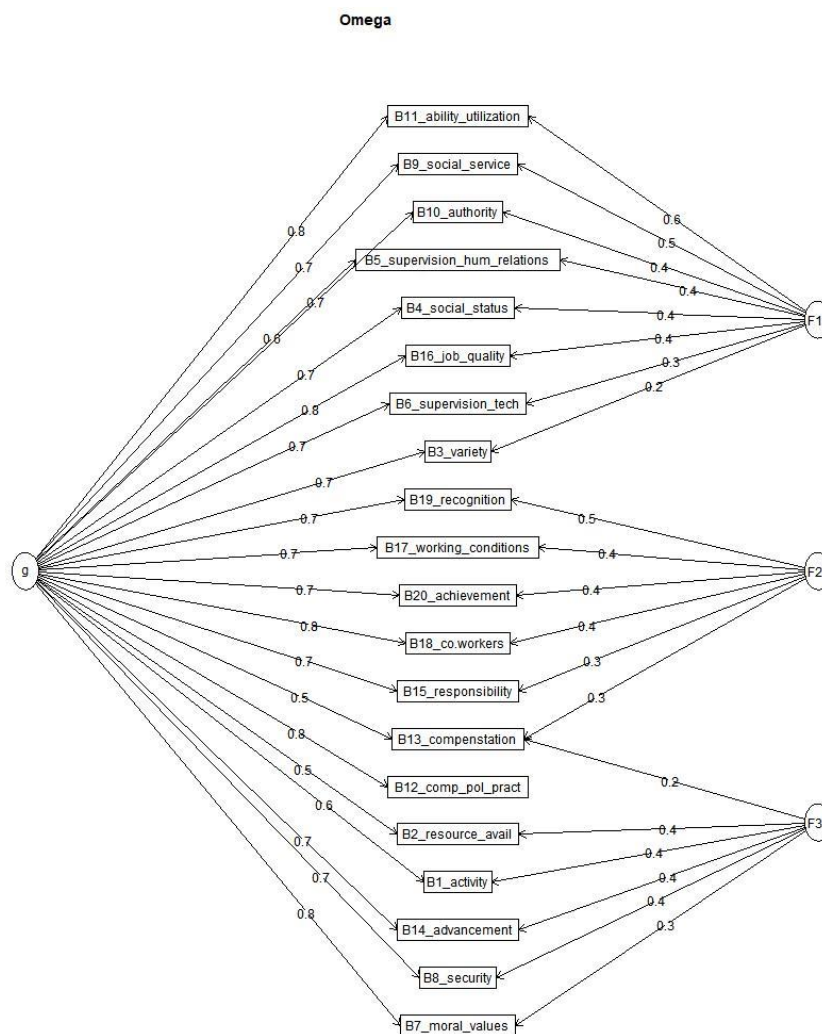


Figure 2: Correlations between the factors (20 questions) and the three dimensions in the contextualised MSQ short-form presented as an omega graph

The exploratory factor analysis of the contextualised MSQ short-form is presented in the pattern matrix in Figure 3.

	Component		
	1	2	3
B1 activity			0.42
B2 resources available			0.44
B3 variety	0.24		
B4 social status	0.38		
B5 supervision hum relations	0.38		
B6 supervision tech	0.30		0.20
B7 moral values			0.28
B8 security			0.41
B9 social services	0.55		
B10 authority	0.39		
B11 ability utilisation	0.55		
B12 company policies and practices			
B13 compensation	-0.20	0.25	0.24
B14 advancement			0.41
B15 responsibility		0.29	
B16 job quality	0.38		
B17 working conditions		0.40	
B18 co-workers		0.36	
B19 recognition		0.50	
B20 achievement		0.38	

Figure 3: Pattern matrix

The differences between the pattern matrix of the contextualised MSQ short-form against the original MSQ short-form are as follows: Intrinsic motivation factors within the original MSQ short-form now grouped as extrinsic: B5 and B6; extrinsic motivation factor within the original

MSQ short-form now grouped as intrinsic: B20. The value of McDonald's omega coefficient is similar to Cronbach's alpha, with ≥ 0.9 indicating an excellent value. ^[23] The analysis resulted in a McDonald's omega coefficient of 0.98, implying that the MSQ short-form has good internal consistency.

The descriptive statistics on job satisfaction based on measures of the central tendency and variability of the 62 participants are presented in Table 2.

Table 2: Descriptive statistics on the job satisfaction of healthcare workers

	n(62)	mean	SD	median
B1_activity	62	2.87	1.27	3
B2_resource_available	62	2.23	1.17	2
B3_variety	60	2.95	1.20	3
B4_social_status	62	3.10	1.31	3
B5_supervision_human_relations	61	3.46	1.32	4
B6_supervision_technology	59	3.49	1.33	4
B7_moral_values	55	3.04	1.25	3
B8_security	59	3.07	1.20	3
B9_social_service	61	3.39	1.32	4
B10_authority	61	3.16	1.11	3
B11_ability_utilization	61	3.36	1.23	3
B12_company_policy_practice	59	2.97	1.47	3
B13_compenstation	62	2.06	1.25	2
B14_advancement	62	2.84	1.31	3
B15_responsibility	61	2.70	1.20	3
B16_job_quality	61	3.39	1.33	4
B17_working_conditions	60	2.78	1.25	3
B18_co-workers	61	3.16	1.28	3
B19_recognition	61	2.80	1.41	3
B20_achievement	62	3.19	1.19	3

Participants seemed satisfied with supervision and human relations (mean 3.49, SD 1.32) and supervision and technology (mean 3.49, SD 1.33), followed by job quality (mean 3.39, SD 1.33). Compensation remained the dominant reason for job dissatisfaction among healthcare workers. It was interesting to view the high standard deviation of job satisfaction related to company policies and practices (item B12) and job satisfaction related to recognition. The lowest deviation was related to job satisfaction and authority (item B11) and availability of resources (item B2). Overall, job satisfaction was stronger related to extrinsic motivators than intrinsic.

DISCUSSION

The contextualised MSQ short-form did show good internal consistency as it remains one of the most frequently used surveying tools in job satisfaction research. Weiss *et al.* ^[25] conclude that the MSQ's overall job satisfaction scale had commendable construct validity. The original MSQ's internal consistency fluctuated from 0.84–0.91 for the intrinsic motivation subscale;

0.77–0.82 for the extrinsic motivation subscale.^[26] However, Cook *et al.*^[26]; Rothmann *et al.*^[27] and Janseen^[28] all utilised Cronbach's alpha. The contextualised MSQ short-form did not follow the same construct validation process as the original MSQ short-form. The original MSQ short-form was validated within the context of multiple occupations, such as engineers, buyers and janitors; stretched over a larger population; were conducted over four decades ago; and was conducted in the USA.

The low correlation of compensation in the contextualised MSQ short-form was not confirmed in literature. In 2016, Khunou and Davhana-Maselesele^[29] reported that salaries and work conditions were two major reasons for job dissatisfaction among professional nurses in the North West province. Makam^[30] reported on strikes among healthcare workers in the North West province, demanding a salary increase among other grievances. Roodt^[31] reported that the looming National Health Insurance (NHI) system in South Africa may also be a cascade for a health professional's brain drain.

Job satisfaction among healthcare employees is important when considering the wider community and especially the patients being treated by these employees. Job satisfaction in the healthcare system is an integral part of the commitment and retention of employees. It reduces staff turnover rates and provides improved, high quality care to patients, yielding numerous positive outcomes for the hospitals themselves. Managers at these hospitals must take note of the importance of job satisfaction and how it can be managed by means of employee interaction and discussions, incentives, growth and developmental strategies, as well as intervention activities.^[32]

Pietersen^[32] confirmed that extrinsic factors such as management styles, salaries and supervision all related to working conditions impact on healthcare workers' job satisfaction within a study in South African public hospitals. In addition, Bonenberger, Aikins, Akweongo and Wyss^[33] highlighted the positive effect of supportive supervision on healthcare workers' experiences of job satisfaction in public health facilities in Ghana. Mohase and Khumalo^[34] reiterated that technology and the optimisation therefore including the quality of care provided in a public hospital in the North West province cannot equal effective and efficient healthcare workers.

The limitations of this research include the limited timeframe available for data collection, combined with the current overburdened and under-resources healthcare environment in public hospitals in the North West province. Secondly, only 1% of the participants represented upper management, and meaning that this study did not represent all levels of healthcare workers.

CONCLUSION

With a McDonald's omega coefficient of 0.98, the MSQ short-form has good internal consistency and could be utilised to measure job satisfaction among healthcare workers in South African public health systems. There might be a stronger tendency towards extrinsic motivators for job satisfaction than intrinsic. Further research to establish the construct validity is suggested.

RECOMMENDATIONS

The job satisfaction of healthcare workers is multidimensional and complex, including both intrinsic and extrinsic factors. In the context of severe staff shortages and low healthcare worker retention rates in the over-burdened and under-resourced public hospitals in South Africa, the

contextualised MSQ short-form can serve as a quick and simple mechanism to explore both levels of job satisfaction and the reasons for dissatisfaction.

Hospital management can utilise the contextualised MSQ short-form on a regular basis to inform managerial decisions to build an organisational culture of high engagement. Management could consider also measuring healthcare workers' intrinsic and extrinsic motivation. Intrinsic motivation towards a culture of high employee engagement can start with management. Intrinsic motivation may be enhanced by a self-awareness and management process whereby healthcare workers are guided to understand their meaning and purpose in the health system, being competent in their work and receive feedback on progress. Managers are again reminded of the essential role of financial rewards as a very dominant extrinsic motivator. Invest in smaller but regular opportunities for healthcare workers to convey management's appreciation and motivation. Management should understand the importance of consequences and appropriate sanction in the workplace as basic mechanisms to strengthen extrinsic motivation. Management should make advancement and promotions an organisational priority.

Follow-up research to explore and establish the construct validity of the contextualised MSQ short-form is suggested.

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CHAPTER 4: EVALUATION, LIMITATIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

This chapter serves as the conclusion to the research. It includes an evaluation of the research. This is followed by recommendations for the management at the complex, allowing them to improve the job satisfaction of their employees.

4.2 EVALUATION

The section below offers a discussion of the self-evaluation of the specific aspects of the research.

4.2.1 Research methodology

The research used a cross-sectional design, a design often associated with social surveys (Bryman & Bell, 2016:106). This design was deemed suitable as data were sampled in one specific environment and only once, as is required by a cross-sectional design. The quantitative research approach was employed as the data were obtained by means of closed-ended questionnaires. Data saturation was reached with the closed-ended questionnaires with a total of 62 out of a possible 350. The context of the study was a typical public hospital. The hospital is a regional hospital with a diverse employee pool in terms of cultural backgrounds as is evident from the demographic data. An all-inclusive sample was used with specific inclusion criteria.

4.2.2 Aim and objectives

The research aim was to investigate the validity of the MSQ short-form contextualised to a public hospital in the North West province of South Africa with the objective of contextualising the MSQ short-form for use in the South African public healthcare system. The research achieved this aim. The objectives of the study were to get feedback from a panel of experts pertaining to the current MSQ short form for face validity and to conduct a statistical analysis for construct validity in an effort to contextualise the MSQ for use in the South African public health care system.

The MSQ short-form was validated by a panel of experts who provided feedback. This allowed the researcher to contextualise the current MSQ short-form for use in the South African public healthcare system by adapting it as guided by the expert feedback. Construct validity was

achieved by distributing the newly adapted questionnaire to the identified sample group. The low response rate meant that the Cronbach's alpha coefficient could not be determined. The omega coefficient was determined and it confirmed the reliability of the contextualised MSQ short-form with an omega value of 0.98.

4.2.3 Research problem

The research results coincide with the findings from numerous other studies pertaining to the job satisfaction of South African public healthcare workers. According to Pillay (2009:8), the South African public healthcare workers are generally dissatisfied with numerous factors such as the lack of autonomy, safety and remuneration. Numerous survey tools have been used to determine job satisfaction, with the tools mostly constructed in European countries or North America. The majority of job satisfaction questionnaires used in the public health environment are generic. The researcher identified this gap and embarked on contextualising the MSQ short-form for use in the South African public healthcare system, allowing for a more accurate representation of the major factors affecting job satisfaction in this environment. Factors contributing to this dissatisfaction can be successfully identified by making use of the contextualised MSQ short-form.

LIMITATIONS

This research aimed originally to utilise Cronbach's alpha coefficient to establish internal consistency in addition to face validity. A traditional rule in is that for each five (5) variables in an instrument, it equates to ideally 20 items of which at least five (5) participants should complete in order to have at least 100 responses. Therefore the original sample size for a powerful calculation was established as 300 participants by the statistician from the Statistical Consultation Services. Over the course of 2018 the North West province, and more specific the public health systems, experienced a crisis and in some events health systems came to a full stand-still and required emergency intervention by the South African National Defence Force. This reality unfolded over the course of the completion of this mini-dissertation. It led the researchers to return three times to the participating hospital, from whom the researchers had complete support and buy-in, to obtain more completed questionnaires. This was the first action but after the third visit, the decision was made to acknowledge the sample size, to work with the data at hand and to explore alternative mechanisms for statistical analysis.

This led to the identification of the McDonald's omega coefficient and opened a world of alternative analysis to internal consistency. It was interesting to note from the 1967 publication of the MSQ (long- and short-forms) that even smaller samples were used (in some studies $n=38$) followed Hoyt's analysis of variance procedure which estimated reliability. Although the

McDonald's omega coefficient necessitated a longer route with complex analysis, internal consistency was established.

As stipulated in the article, the sample included only one (1) participant from upper management and therefore the sample was not representing all three levels of management.

4.3 RECOMMENDATIONS

The study offers numerous recommendations below for hospital management and future researchers. This would allow hospital management to improve the job satisfaction of their employees, which could be beneficial to the hospital, the employees' themselves and the patients they are treating and taking care off. The recommendations for researchers could enrich future studies.

4.3.1 Job satisfaction recommendations

Hospital managers have a responsibility to both staff and patients, so it is essential for managers to make sure that the employees working at the hospital is satisfied. Having a satisfied staff contingent can only lead to happy patients (Bhatnager & Srivastava, 2012:75). Taking the above-mentioned into consideration, hospital management may consider the following:

- Regularly determine the level of job satisfaction of employees by using the MSQ short-form.
- Identify the main factors affecting job satisfaction based on the results of the completed MSQ short-form.
- Focus on what motivates employees and contribute towards this as management. Locke (*cited* by Tietjen & Myers, 1998:227) states a correlation between motivation and job satisfaction. When employees are highly motivated, whether by intrinsic or extrinsic factors, they tend to be more satisfied with their jobs and this has a positive correlation with worker performance as well.
- Make work more interesting for employees (Bhatnager & Srivastava, 2012:78).
- Let employees know that they are acknowledged and appreciated by management (Bhatnager & Srivastava, 2012:78).

- Include employees in decision-making and problem-solving processes (Bhatnager & Srivastava, 2012:78).
- Utilise strengths-based coaching to energise and enable employees to reach their full potential and to identify areas of personal and professional growth and set corresponding goals (TES, 2013).
- Align employee and organisational goals by setting a clear goal of how the employee's work supports the organisation's vision. When managers utilise goals to keep employees on track and motivated to reach their goals. This will help employees feel important in public hospitals, improving on their performance and improving employee performance and employee satisfaction (TES, 2013).
- Recognise employee achievements to create an environment that encourages managers to keep track of their employee's varied accomplishments to better recognise them and to give them recognition for a job well done. This keeps the employees more motivated to succeed (TES, 2013).

4.3.2 Recommendations for future research

Provided below are recommendations for future research:

- Adopt the MSQ short-form in all public hospitals in all provinces in South Africa as the National Health Insurance system is implemented to strengthen the human resources for health focus.
- Contextualise and test the MSQ short-form within private health systems in South Africa.

4.3.3 Recommendations for the curriculum for Master's in Business Administration

Below are recommendations for job satisfaction in health systems for the Master's in Business Administration qualification:

- MBA students should be more willing to adopt research studies to the health system of South Africa as there are many unexplored topics.
- MBA students can provide a great deal of knowledge that can be shared among a variety of professionals in the health system and other industries to enhance the quality and effectiveness of health systems everywhere.

4.4 SUMMARY

Chapter 4 presented the reader with an evaluation of the research and the limitations of the process. Recommendations were provided for hospital management allowing them to proactively mediate the principle factors that contribute to a certain undesirable level of job satisfaction among the employees in their institutions.

The research with the accompanying results was formulated as a manuscript adhering to the set requirements. The manuscript was prepared for the *South African Journal of Public Health*.

In conclusion, this chapter marks the end of research titled: Contextualisation of the Minnesota Satisfaction Questionnaire to determine job satisfaction in the South African public health systems.

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ADDENDUM A: DATA COLLECTION INSTRUMENT (CONTEXTUALISED MSQ)

Part A: Demographic Information

Please complete the below demographical questions (Mark correct boxes with an X):

Participant Age:	<20	21-30	31-40	>40
Participant Marital Status:	Single	Married	Divorced	Widow/Widower
Participant Gender:	Male	Female		
Current shift being worked by participant:	Day	Night		
Years employed	<0-5	6-10	11-15	>15
Current profession (Nurse, Doctor, etc.)				
Level of management	Upper	Middle	Lower	

Part B: Minnesota Satisfaction Questionnaire

IMPORTANT: Ask yourself: How **satisfied** am I with the below listed aspects of my job?

- 1: I am **not satisfied** (this aspect of my job is much poorer than I would like it to be).
- 2: I am **only slightly satisfied** (this aspect of my job is not quite what I would like it to be).
- 3: I am **satisfied** (this aspect of my job is what I would like it to be).
- 4: I am **very satisfied** (this aspect of my job is even better than I expected it to be).
- 5: I am **extremely satisfied** (this aspect of my job is much better than I hoped it could be).

On my present job, this is how I feel about...		For each statement circle a number				
B1	The amount of work that must be done	1	2	3	4	5
B2	The resources available to conduct work (Equipment, staff shortages, etc.)	1	2	3	4	5
B3	The chance to do different things from time to time	1	2	3	4	5
B4	The chance to be "somebody" in the community	1	2	3	4	5
B5	The way my boss handles his/her employees	1	2	3	4	5
B6	The availability of my supervisor to assist in making competent decisions	1	2	3	4	5
B7	Being able to do things that don't go against my conscience	1	2	3	4	5
B8	The way my job provides for steady employment	1	2	3	4	5
B9	The chance to do things for other people	1	2	3	4	5
B10	The chance to tell people what to do	1	2	3	4	5
B11	The chance to do something that makes use of my abilities	1	2	3	4	5
B12	The way company policies are put into practice	1	2	3	4	5
B13	My pay	1	2	3	4	5
B14	The chances for advancement on this job (based on experience, work ethic, education, etc.)	1	2	3	4	5
B15	The freedom to use my own judgment	1	2	3	4	5
B16	The quality of care being provided to patients	1	2	3	4	5
B17	The working conditions	1	2	3	4	5
B18	The way my co-workers get along with each other	1	2	3	4	5
B19	The praise and feedback I get for doing a good job	1	2	3	4	5
B20	The feeling of accomplishment I get from the job	1	2	3	4	5

Source: Adopted from The Minnesota Satisfaction Questionnaire (Weiss *et al.*, 1967:4).

ADDENDUM B: DATA COLLECTION INSTRUMENT (ORIGINAL MSQ)

Part A: Demographic Information

Please complete the below demographical questions (Mark correct boxes with an X):

Participant Age:	<20	21-30	31-40	>40
Participant Marital Status:	Single	Married	Divorced	Widow/Widower
Participant Gender:	Male	Female		
Current shift being worked by	Day	Night		
Years employed	<0-5	6-10	11-15	>15
Current profession (Nurse, Doctor,				
Are you currently in a managerial	Yes		No	

Part B: Minnesota Satisfaction Questionnaire

IMPORTANT: Ask yourself: How **satisfied** am I with this aspect of my job?

- 1: I am **not satisfied** (this aspect of my job is much poorer than I would like it to be).
- 2: I am **only slightly satisfied** (this aspect of my job is not quite what I would like it to be).
- 3: I am **satisfied** (this aspect of my job is what I would like it to be).
- 4: I am **very satisfied** (this aspect of my job is even better than I expected it to be).
- 5: I am **extremely satisfied** (this aspect of my job is much better than I hoped it could be).

On my present job, this is how I feel about...		For each statement circle a number				
B1	Being able to keep busy all the time	1	2	3	4	5
B2	The chance to work alone on the job	1	2	3	4	5
B3	The chance to do different things from time to time	1	2	3	4	5
B4	The chance to be "somebody" in the community	1	2	3	4	5
B5	The way my boss handles his/her employees	1	2	3	4	5
B6	The competence of my supervisor in making decisions	1	2	3	4	5
B7	Being able to do things that don't go against my conscience	1	2	3	4	5
B8	The way my job provides for steady employment	1	2	3	4	5
B9	The chance to do things for other people	1	2	3	4	5
B10	The chance to tell people what to do	1	2	3	4	5
B11	The chance to do something that makes use of my abilities	1	2	3	4	5
B12	The way company policies are put into practice	1	2	3	4	5
B13	My pay	1	2	3	4	5
B14	The chances for advancement on this job	1	2	3	4	5
B15	The freedom to use my own judgment	1	2	3	4	5
B16	The chance to try my own methods of doing the job	1	2	3	4	5
B17	The working conditions	1	2	3	4	5
B18	The way my co-workers get along with each other	1	2	3	4	5
B19	The praise I get for doing a good job	1	2	3	4	5
B20	The feeling of accomplishment I get from the job	1	2	3	4	5

Source: Adopted from The Minnesota Satisfaction Questionnaire (Weiss, *et al.*, 1967:4).

ADDENDUM C: INFORMED CONSENT FORM

Title: Contextualisation of the Minnesota Satisfaction Questionnaire to determine job satisfaction in the South African public health systems.

Institution: North-West University, Potchefstroom

Course: Masters in Business Administration, MBA

Field of study: Human Resources

Researcher: Henri Jordaan (9103215032080)

Tel: 079 886 9887

Email: henrijordaan13@gmail.com

Dear Participant

This **Informed Statement of Consent** serves to provide information and to obtain consent regarding the research pertaining to the MBA Mini-dissertation relating to the contextualisation of the MSQ Short-form job satisfaction questionnaire for use within the public healthcare system of South Africa.

1. The objective of this research is to contextualise the MSQ short-form satisfaction questionnaire providing a more representative satisfaction tool to be used within the public healthcare sector.
2. This research design is based on a quantitative approach, consisting out of the circulation and self-completion closed-ended questionnaires. The questionnaire in question will be based on a contextualised Minnesota Satisfaction Questionnaire. Basic demographic information such as age, gender, ethnicity, marital status, etc. will also be included in the questionnaire.
3. A specific amount of time will be allocated to the distribution, completion and collection of the questionnaires and interviews.
4. Participation is on a voluntary basis, however every person identified within the sample group is encouraged to participate.
5. The confidentiality, privacy and anonymity of each participant is guaranteed by means of this statement. No names will be used in the process of writing up the research.
6. An electronic copy of the final dissertation will be made available to the participants if they wish to obtain one.
7. The information obtained by this statement will also be kept confidential.

I _____ (Initials & Surname), acknowledge that I have read and understand all the information contained within this Informed Statement of Consent. I hereby give Mr. Henri Jordaan my full consent in regards to participating in the completion of the administered questionnaire.

Name & designation	Date	Signature
Prof. P. Bester (Supervisor)		
Mr. H Jordaan (Researcher)		
Participant		

Acknowledged by Hospital CEO (Name & Signature)

ADDENDUM D: ETHICS CLEARANCE



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Economic and Management Sciences Research
Ethics Committee (EMS-REC)
Tel: 018 299-1427
Email: Bennie.Linde@nwu.ac.za

20 September 2018

Mr J Jordaan
Per e-mail

Dear Mr Jordaan,

FEEDBACK – ETHICS APPLICATION: H JORDAAN (22281223) – MBA

Your application for ethical clearance – Contextualisation of the Minnesota Satisfaction Questionnaire to determine job satisfaction in South African public systems – has been evaluated on the 14th of September 2018.

Outcome:

Ethics number: NWU-00543-18-S4

The questionnaire has been corrected and approved.

The ethics committee accepts that the demographic information is applicable in order to determine the composition of the sample. If so, it should be indicated as such on the questionnaire.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'B Linde'.

Prof B Linde

Chairperson: Economic and Management Sciences Research Ethics Committee (EMS-REC)

Original details: (11153431) C:\Fakulteit\Bestuur\Kwaliteitsbestuur\Elek\ 14 September 2018\H Jordaan\14 September 2018

File reference: 9.1.5.3

ADDENDUM E: APPROVAL LETTER FROM DEPARTMENT OF HEALTH

	health Department of Health North West Province REPUBLIC OF SOUTH AFRICA	3801 First Street New Office Park MAHKENG, 2735	Enq. Nthabiseng Mapogo Tel: 018 391 4504 NMapogo@nwps.gov.za www.nwhealth.gov.za
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POLICY, PLANNING, RESEARCH, MONITORING AND EVALUATION

Name of researcher : Mr. J. Jordaan
North West University

Physical Address _____
(Work/ Institution) _____

Subject : Research Approval Letter- Contextualisation of the Minnesota
Satisfaction Questionnaire to determine job satisfaction in South
African public systems.

This letter serves to inform the Researcher that permission to undertake the above mentioned study has been granted by the North West Department of Health. The Researcher is expected to arrange in advance with the chosen facilities, and issue this letter as proof that permission has been granted by the Provincial office.

This letter of permission should be signed and a copy returned to the department. By signing, the Researcher agrees, binds him/herself and undertakes to furnish the Department with an electronic copy of the final research report. Alternatively, the Researcher can also provide the Department with electronic summary highlighting recommendations that will assist the department in its planning to improve some of its services where possible. Through this the Researcher will not only contribute to the academic body of knowledge but also contributes towards the bettering of health care services and thus the overall health of citizens in the North West Province.

Kindest regards


Dr. F.R.M. Reichel
Director: PPRM&E



LEPAPHA LA BOITEKANELO
DEPARTMENT OF HEALTH
Kgotsone P.O. Box 10016 Mog X2008
Mmabatho, 2715
17 OCT 2018
NORTH WEST PROVINCE
REPUBLIC OF SOUTH AFRICA

Date 15/10/2018

Researcher _____ Date _____


Healthy Living for All

1

ADDENDUM F: CERTIFICATE FROM LANGUAGE EDITOR



Director: CME Terblanche - BA (Pol Sc), BA Hons (Eng), MA (Eng), TEFL
22 Strydom Street
Baillie Park, 2531
Tel 082 821 3083
cumlaudelanguage@gmail.com

DECLARATION OF LANGUAGE EDITING

I, Christina Maria Etrechia Terblanche, hereby declare that I edited the research study titled:

Contextualisation of the Minnesota Satisfaction Questionnaire to determine job satisfaction in South African public health systems

for H Jordaan for the purpose of submission as a postgraduate study for examination. Changes were indicated in track changes and implementation was left up to the author.

Regards,

CME Terblanche
Cum Laude Language Practitioners (CC)
SATI accr nr: 1001066
Registered with PEG

ADDENDUM G: turnitin digital receipt



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