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Job satisfaction of occupational health nurses at a private occupational health service provider in South Africa

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JOB SATISFACTION OF OCCUPATIONAL HEALTH NURSES AT A PRIVATE OCCUPATIONAL HEALTH SERVICE PROVIDER IN SOUTH AFRICA

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A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of

Master of Science in Nursing

Johannesburg, 2014

DECLARATION

I, Igna Alberts, declare that this research report is my own work. It is being submitted for the degree of Master in Nursing in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

Signature _____

Date _____

Ethical Clearance Number: M130523

DEDICATION

This work is dedicated to these very special people in my life:

My parents, Lewies and Muriel Alberts

Who has inspired me to be successful, and created the foundation to do the best that I can at all times, to be independent, to believe in myself. I always thrive to make them proud

My husband, Francois Coetzer

For all his love; and who has supported and encouraged me throughout this academic path

My brother, Henk Alberts

Being academically orientated, reinforced the importance to further my studies and qualifications

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I acknowledge my Heavenly Father, for the blessing brought upon me have been able to do this study, for His love, and carrying me in difficult times.

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My sincere gratitude is extended to several individuals who contributed tremendously to the successful realisation and completion of this research and I therefore wish to recognize the following persons to whom I am greatly indebted:

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- The Selected Private Occupational Health Service Provider, for granting me permission to conduct the research project and allowing access to the database of the occupational health nursing practitioners
- The Management Staff from the Regions, for the cooperation and assistance with facilitating access to the research participant for attaining the data
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- Dr Paula Stamps, the creator of the WSP job satisfaction questionnaire that was used for this study, for granting permission for the use of the instrument

ABSTRACT

Background: Job satisfaction is one determinant of employees' health and an important component in the retention of employees. It is evident from literature that job satisfaction is a factor in the retention of nurses and the prevention of a high turnover. Literature also revealed that job satisfaction is seen as an important component that can have an impact on several areas such as patient safety, quality care and performance as well as commitment to the organisation and dedication to the profession. However, limited literature is available on job satisfaction of occupational health nursing practitioners internationally or nationally.

Purpose: The overall purpose of this study is to determine the factors which contribute to the levels of job satisfaction and dissatisfaction among occupational health nursing practitioners working for a private occupational health service provider in South Africa.

Methodology: A cross sectional survey design, using a structured self-administered questionnaire with close-ended questions and items relating to demographic date, professional status, doctor-nurse relationships, administration, autonomy, task requirements and interaction, was used in this research. Data was collected in this research by means of a structured questionnaire namely, the Index of Work Satisfaction, part B (IWS-Part B), developed by Stamps to measure American hospital based nurses level of job satisfaction.A total sample of 183 participants, all occupational health-nursing practitioners employed by the private occupational health service provider in three regions, was used, namely Gauteng, Mpumalanga and Pretoria Northern region

Data Analysis: Data analysis was done through descriptive statistics using statistical assistance from a statistician from the University of the Witwatersrand Postgraduate Research Support Services.

Setting: The setting for this study was in three regions namely Mpumalanga, Pretoria North and Gauteng, in which the private occupational health service provider operates**.**

Findings: A total of a 180 questionnaires were completed and analysed, yielding a response rate of 97%. The findings relating to age distribution revealed that majority response presented an age group of 63% (n=114) between 30 and 49 years and predominantly female 88%, (n=159). The majority of the nurses, (78.3%: n=141) had one to four years occupational health nursing experience; 74.5% (n=134) of the participants were in possession of a general nursing qualification and 78.3% (n=41) had an additional diploma in occupational health nursing.

The findings revealed that nurses who held a diploma in occupational health nursing were more likely to have a higher level of work satisfaction than nurses with a general diploma in nursing. The level of work satisfaction was higher for nurses holding a degree in occupational health nursing than either the diploma or certificate in occupational health nursing. The level of work satisfaction was higher for nurses who held a Master's degree than a degree, diploma or certificate in occupational health nursing.

The second part of the research instrument intended to attain the level of job satisfaction. The questionnaire consisted of forty items divided into six main components.
The findings are reflected based on the majority responses from the different categories.

Remuneration was found to be a major area of dissatisfaction as 72% (n=130) of the participants indicated being less satisfied with remuneration and 89% (n=160) agreed a remuneration upgrade was required. Based on the overall findings, it was apparent the participants were more dissatisfied with their remuneration.
Professional status revealed 86% (155) of the participants were proud of their work and 88% (n=159) considered the profession to be important. From the general findings on professional status it was obvious OHN's have a strong satisfied view with their professional status.
The findings related to nurse-doctor relationship indicated occupational health nurses are more likely to be satisfied than dissatisfied with their doctor/nurse relations as validated by the response of 76% (n=136), who agreed occupational health doctors understand and appreciate OHNs and 70% (n=127) agreed that in general, the doctors cooperate with the nursing staff.
Another section which indicated more dissatisfaction than satisfaction, was on administrative work as 87% (n=157) of nurses agreed there was too much administrative work required from them.
The component on autonomy indicated the majority of nurses (74%; n=133) agreed that a great deal of independence was permitted, if not required of them, as well as 70% (n=125) agreeing to having freedom at work to make important decisions.
The final element of the questionnaire on task interaction and relationships reflected that 82% (n=148) agreed that nurses in their specialty help one another when things are uncertain and 72% (n=128) agreed they were satisfied with the different types of work activities. Based on the findings, it was evident that the OHNPs appeared to be more satisfied that dissatisfied with their task interaction and relationships.

Conclusion: The ideal work environment consists of staff satisfaction and continuity. Evident from literature, job satisfaction plays an important role in the preservation of workforce numbers, as well as a reduction in staff turn-over. This paper revealed that overall there are more areas of job satisfaction in comparison to job dissatisfaction. The findings of the present study increases the understanding of what contributes to satisfaction of occupational health nursing practitioners. Aspects such as nurse-doctor relationships, task interaction and relationships, professional status and autonomy contributed to OHN job satisfaction levels, whereas remuneration and administrative work created more job dissatisfaction.

Recommendations: It is the aspiration of the researcher that this study of job satisfaction levels of OHNP's contributes to a frame of information and that the data will create awareness of what contributes to the satisfaction and dissatisfaction levels within the profession of an occupational health nurse in South Africa. Within this study the researchers was able to present recommendation relating to nursing practice, management education as well as further research. It is the researcher's opinion that the information on job satisfaction of nursing staff must be disseminated to interested parties throughout the field of occupational health.

Key words: Job satisfaction, occupational health nurses, occupational health service provider, South-Africa

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ABBREVIATIONS

MRC	Medical Research Council
OH	Occupational Health
OHN	Occupational Health Nursing
OHMP	Occupational Health Medical Practitioner
OHNP	Occupational Health Nursing Practitioner
OHS	Occupational Health Services
OHSA	Occupational Health and Safety Act
SA	South Africa
SANC	South African Nursing Council
SASHON	South African Society for Occupational Health Nurses
WHO	World Health Organisation

CHAPTER ONE

ORIENTATION TO THE RESEARCH

1.1 INTRODUCTION

This chapter provides an orientation to research investigating job satisfaction of occupational health nursing practitioners (OHNPs) employed by a private occupational health service provider in three regions of South Africa.

Occupational health nursing practitioners form the backbone of the occupational health services in South Africa and are part of a multidisciplinary team responsible for the creation and the maintenance of a health and safe work environment. It is therefore important that OHNPs experience job satisfaction to enhance quality occupational nursing practice. In addition OHNPs are independent practitioners within their own nursing practice.

1.2 BACKGROUND TO THE RESEARCH

For almost one hundred years, employee job satisfaction has been researched; the origin of these studies date back to 1911 (Worrell, 2004). According to Pietersen (2005), the concept of job satisfaction is an outgrowth of the human relations movement which began with the classic Hawthorne studies in the late 1920s. The same author states that job satisfaction is a multidimensional, enduring, important and much researched concept within organisational behaviour structures.

Literature reveals it is very important for nurses to experience positive levels of job satisfaction in order to deliver quality nursing, stay in the profession and contribute to achieving health outcomes (Cown, 2011). In addition it is evident from literature that job satisfaction is a crucial factor in the retention of nurses and the prevention of a high turnover, which is linked to nursing shortages (Murrells, Robinson and Griffiths, 2008; McGlynn, Griffin, Donahue and Fitzpatrick, 2012; Malliarou, Sarafis, Moustaka, Kouvela and Constantniadis, 2010; Lu, While and Barriball, 2006; Vere-Jones, 2008). According to Murrells et.al (2008), job satisfaction is seen as an important component in nurses lives

that can have an impact on several areas such as patient safety, quality care, performance, productivity, staff turnover, commitment to the organisation as well as retention and dedication to the profession.

The Human Sciences Research Council (2009), as indicated by Hinks (2009), states that the general thought processes about work has changed; the existence and success of organisations relies on active involvement and satisfaction of employees, therefore workers' job satisfaction is placed at the centre stage. Hinks (2009) is also of the opinion that a substantial amount of economic evidence has indicated a satisfied workforce is beneficial to organisations and the wider society. The same author also stated, strongly supported by the researcher, that greater job satisfaction is associated with higher productivity, which in turn can improve a firm's competitiveness and profit. The researcher is also of the opinion that "a happy worker is a productive worker."

Job satisfaction plays an important role in the maintenance of workforce numbers in any organisation (Lephalala, 2006). A satisfied workforce is also less likely to suffer from absenteeism or leave to go to other jobs (Hinks, 2009), thus has a reduction in turnover costs. Conversely, job dissatisfaction could present with certain elements in the workplace such as absenteeism, turnover, poor health and complaints (Schmidt, 2007).

Statistics obtained from the selected private occupational health service provider indicate that from January 2013 to June 2013; there has been a turnover of 31% of OHNP's. In addition, the service provider reported an average of five OHNP vacancies per month nationally, due to a combination of reasons including staff resignation, internal transfers, and challenges in filling some positions due to urban geographic settings where some clinics are situated. This is a private occupational health service provider, therefore financial sustainability and growth of new business development is required through marketing and tender participation processes. A contributory factor for vacancies requiring filling is due to expansion of the business.

The researcher is of the opinion that a big competitive market exists in the occupational health industry, where specialised nurses are headhunted for their expertise. There are various institutions in South Africa, which render an occupational health service as a contracted service provider to the industrial workforce, meaning each industry has an

OHNP as part of their workforce. Business development and profit seeking forms part of promoting occupational health care services to try and get new business. The changed laws in the field of occupational health and safety, such as the Occupational Health and Safety Act of 1993 as amended and the recognition from business that health and safety in the working environment and healthy employees makes good business sense, has increased the demand for occupational health nursing practitioners.

The intention of obtaining information on job satisfaction levels of occupational health nursing practitioners (OHNP) employed by a private occupational health service provider in South-Africa is to assess methods that can be implemented in a workplace to create a work environment that is satisfying to OHNPs, to retain nurses and reduce turnover. The information obtained from the research findings can be used to improve organisational policies and practices where dissatisfaction is expressed. It is therefore important OHNPs experience job satisfaction to ensure better retention and lower turnover.

1.3 MOTIVATION AND RATIONALE FOR THIS RESEARCH

The International Council of Nurses (ICN) 2008, in association with other international organisations such as the International Pharmaceutical Federation, World Dental Federation, World Medical Association, International Hospital Federation and the World Confederation for Physical Therapy, has embarked on a campaign to create positive practice environments for health professionals, with a call to action to create "Quality Workplaces for Quality Care."

"Positive practice environments are health care settings that support excellence and decent work."http://www.ppecampaign.org/sites/ppecampaign.org/files/toolkit/en/Call-to-Action.pdf - Accessed on 8 January 2013

According to the call to action fact sheet from the same reference, the health care settings that are positive practice environments have the power to attract and retain staff, improve patient satisfaction, safety and health outcomes and deliver cost effective services.

The researcher, through personal experiences as a regional manager for a private occupational health service provider, realised from a human resources management and

quality of work life perspective that it is important to determine the levels of job satisfaction of OHNPs to address the areas of job dissatisfaction and promote a positive practice environment**.**

The researcher is motivated by the following considerations:

- The research can contribute to the body of knowledge of occupational health nursing and human resources management within the occupational health services industry.
- According to literature very little research has been done in South Africa, Africa and internationally with regard to job satisfaction of occupational health nursing practitioners. Therefore this study can be a motivator for similar and other very necessary research in this field.
- This study can support and facilitate organisational development in organisations. The information is aimed at adding value in determining methods to enhance the working environment and conditions of OHNPS.

1.4 RESEARCH PROBLEM AND RESEARCH QUESTIONS

It is evident from literature that job satisfaction has been researched in many diverse settings and disciplines, however very limited literature is available on job satisfaction of OHNPs internationally and nationally. In addition the level of job satisfaction of OHNPs working in private occupational health services in South Africa is unknown. Statistics from the selected private occupational health service provider, as discussed in section 1.2, indicate there is high turnover rate of OHNPs and vacancies per month nationally due to a combination of reasons including staff resignation, internal transfers and challenges in filling some positions due to urban geographic settings where some clinics are situated. A contributory factor for the vacancies is the expansion of the business.

The research is initiated to answer the following research questions:

- What are the OHNPs' levels of job satisfaction?
- What are the major causes of job dissatisfaction?
- What are the major factors that lead to job satisfaction?

1.5 PURPOSE AND OBJECTIVES OF THE RESEARCH

The overall purpose of this research was to determine factors that contribute to job satisfaction and job dissatisfaction levels of OHNPs, who are currently employed by selected private occupational health service providers in South Africa.

In order to achieve the purpose of the research the following research objectives motivated this research:

- To determine the OHNPs' level of job satisfaction
- To describe potential factors that could lead to job dissatisfaction
- To determine the most indicative factors for job satisfaction among OHNP in South Africa

1.6 LIMITATIONS OF THE RESEARCH

The research is limited in terms of the following criteria:

- **Research setting**: The research study is limited to occupational health nursing practitioners working for a private occupational health service provider in South Africa in only three regions namely Mpumalanga, Gauteng and Pretoria North.
- **Population**: The target population consists of occupational health nursing employees from a selected private occupational health service provider in South Africa.
- **Employee category**: The research was limited only to professional occupational health nursing practitioners.
- **Instrument**: The research tool was originally developed to determine American hospital based nurse's level of job satisfaction and was adjusted to measure South African occupational health nursing practitioners' level of job satisfaction.
- **Time:** The research was a cross-sectional survey study, which was executed at a particular time, namely between May and September 2013.

1.7 RESEARCH METHOD AND DESIGN

The research method was a quantitative cross-sectional survey using a questionnaire for data collection. A detailed description of the research methods is provided in Chapter 3

and includes an explanation of the research design used, the decision around the research setting and target population. As part of the research method the sampling methods, size and procedure will be discussed in full, as well as the criteria and specifications of the data collection instrument used for the particular research.

1.8 DEFINITIONS OF THE MAIN CONCEPTS

Occupational Health Nurses: Occupational health nurses are professional nurses who nurse a community of employees in the workplace in a holistic and comprehensive manner. By applying nursing principles to conserve the health of workers in any occupation, they focus on promotion and restoration of health, prevention of illness and injury, case management for cost-effective disability, workers' compensation programmes and protection from occupational and environmental hazards (WHO, 2002).

Job Satisfaction: Ho, Chang, Shih and Liang (2009) state that job satisfaction is about a positive or negative attitude an employee has towards his or her job, work environment or specific aspects within the job.

Private: For the purpose of this research private refers to not being in the public sector**.**

Occupational health: Occupational health is the science of designing, implementing and evaluating comprehensive health and safety programmes that maintain and enhance employee health, improve safety and increase productivity in the workplace. *(www.foh.dhhs.gov/Public/WhatWeDo/OH**Definition**.asp* - Accessed on 9 January 2013)

Occupational health service: According to the ILO (1959), an occupational health service means a service established in or near a place of employment for the purposes of:

- (a) protecting the workers against any health hazard which may arise out of their work or the conditions in which work carried out;
- (b) contributing towards the workers' physical and mental adjustment, in particular by the adaptation of the work to the workers and their assignment to jobs for which they are suited;

- (c) contributing to the establishment and maintenance of the highest possible degree of physical and mental well-being of the workers. (http://www.ilo.org/dyn/normlex/en/R112 - Accessed on 9 January 2013)

Service provider: An organisation or business, which offers service to others in exchange for payment. (http://www.businessdictionary.com/definition/service provider.html#ixzz2vS7hL6ca - Accessed on 9 January 2013)

Although the concept job dissatisfaction is not contained in the title of this study, it is considered important in giving direction and relevance to the study.

Job Dissatisfaction: Indicates individuals' negative feelings, being displeased or unsatisfied with jobs or facets of jobs (Pietersen 2005).

1.9 OUTLINE OF THE RESEARCH REPORT

This research report is represented in the following chapters:

Chapter 2: Literature Review

In this chapter the information pertaining to the relevant literature review, will be addressed. This will establish the theoretical framework for the research; explain the importance of obtaining information on job satisfaction levels thus justifying the topic. The literature review will verify the researchers understanding on the assessment of job satisfaction levels of OHNPs.

Chapter 3: Research Design and Method

A description of the research design and the method decided upon to explore and obtain the date of the job satisfaction levels of occupational health nursing practitioners working for a private occupational health service provider in South Africa are given in this chapter. The research design will explain the plan and structure followed to answer the research questions, the instrument used to measure constructs is described and the method of data collection, issues of validity and reliability and the sampling process explained and motivated. In addition, ethical considerations and measures taken to protect the rights of the research participants are presented.

Chapter 4: Analysis and Presentation of Research Finding

This chapter gives an explanation of the statistical procedures and methods used for data analyses. The characteristics of the sample are provided, including sample procedure, size and the reliability and validity of the research is explained.

The interpretation and analysis of the data obtained, as well as the findings, will be discussed in this chapter. The description will be done in line with the research objectives.

Chapter 5: Discussion of research findings, limitations, conclusions and recommendations

In this chapter we explore the findings of the results in detail. Results will be analysed and compared, data will be linked in answering the research questions and compared with the research assumptions made and conclusions will be presented. This chapter will also describe the limitations of the research and provide recommendations, in respect of OHNP work environment and aspects of job satisfaction, based on the findings.

1.10 SUMMARY

Chapter one has presented an introductory orientation and background to this research and explored the rational and significance of the problem on the unknown level of job satisfaction of occupational health nursing practitioners working in private occupational health services in South Africa. The aim and objectives of the research, the research questions and assumptions were clarified in this chapter.

The following chapter presents an explanation on the literature review done by the researcher that articulates the theoretical framework of this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The previous chapter provided an overview of the orientation to research, explaining the background of the research as to why the job satisfaction levels of occupational health nursing practitioners working for a private occupational health service provider in South Africa was investigated. This chapter provides information pertaining to the relevant literature consulted on the topic. In addition this chapter discusses the concept job satisfaction, the nature, importance and theories related to job satisfaction. In addition the chapter focuses on research done on job satisfaction of nurses.

For the researcher to be able to do this research project, an extensive literature review was undertaken to facilitate understanding and acquire knowledge pertaining to the topic. Textbooks, journal articles and Internet sources provided the literature review.

2.2 JOB SATISFACTION: A CONCEPTUAL ANALYSIS

It is evident from literature that job satisfaction is also referred to as work satisfaction or employee work satisfaction (Heathfield, 2010). According to Scholl (2003), job satisfaction, also known as employee satisfaction or morale, is one of the most widely used variables in organisational performance.

To arrive at a description of the concept job satisfaction, the two theories making up the concepts job satisfaction will be briefly examined.

2.2.1 What is a Job?

According to freedictionary.com, a job is regular activity performed in exchange for payment, especially as one's trade, occupation, or profession, or a position in which one is employed. (http://www.thefreedictionary.com/Jobs Accessed on 26 January 2014).

2.2.2 What is Satisfaction?

Satisfaction is defined as the fulfilment or gratification of a desire, need, or appetite. Pleasure or contentment derived from such gratification**.** Satisfaction is viewed as a source or means of gratification (.http://www.thefreedictionary.com/satisfaction Accessed on 26 January 2014).

2.2.3 What is Job Satisfaction?

According to Aziri (2011), job satisfaction has to do with the way people feel about their job and its various aspects, as well as the extent to which people like or dislike their jobs. De Milt, Fitzpatrick and McNulty (2009) state job satisfaction entails a sense of achievement and success in the job, doing the job one enjoys, a feeling of enthusiasm and happiness with one's work and the extent to which expectations are met. Ho, Chang, Shih and Liang (2009) state that job satisfaction is about the positive or negative attitude an employee has towards his or her job, work environment or specific aspects within the job. According to the same authors, the work environment includes aspects such as the job itself, supervisor, management and the organisation. Similarly McGlynn et al, (2012) state job satisfaction reflects a positive affective orientation towards work and the organisation, whereas job dissatisfaction reflects a negative affective orientation. Heathfield (2010) states job satisfaction is the extent to which an employee is happy, content and fulfilled in their desires and needs at work. The same author also explained many measures associate employee satisfaction with motivation, goal achievement and positive morale for the individual in the workplace.

2.3 THEORIES OF JOB SATISFACTION

A study done by Aamodt (2009) revealed there are several work motivation theories which represented the implied role of job satisfaction and in addition, many work motivation theories have tried to explain job satisfaction and its influence, such as Maslow's (1943) Hierarchy of Needs, Herzberg's (1968) Two-Factor (Motivator-Hygiene) Theory, Adam's (1965) Equity Theory, Porter and Lawler's (1968) modified version of Vroom's (1964) VIE Model, Locke's (1969) Discrepancy Theory, Hackman and Oldham's (1976) Job

Characteristics Model, Locke's (1976) Range of Affect Theory, Bandura's (1977) Social Learning Theory and Landy's (1978) Opponent Process Theory.

Ahmed (2011) indicated for an organisation to be successful, employee motivation has to be done on an iterative basis and one of the ways to motivate employees is by satisfying their needs through different motivational theories, for example the need based theory, reinforcement theory and process theory.

- Need based theories: These theories explain the factors of the individual's desire to work. From these theories, two main theories are identified namely: Maslow's Hierarchy of Needs and Herzberg's Two-Factor theory.
- Reinforcement theories: Ryan and Deci (2007) states B.F Skinner, a behaviourist, pointed out that the reinforcement theory was seen as one of the oldest theories of motivation and is known as the Behaviourist theory. This theory, which stated an individual's behaviour is a function of its consequences, focuses on observable behaviour rather than personal states, such as in the case of needs theories
- Process theories: Emphasises the determining of the factors which motivate and satisfy the needs of employees.

In addition, Ahmed (2011) also mentioned that job satisfaction is one of the most frequently investigated variables and suggested job satisfaction was directly related to the status of the job. The same author concluded that the relationship between motivation and job satisfaction found a positive association in working conditions, compensation and recognition, with motivation as well as an affirmative connotation discovered between motivation and job satisfaction.

2.3.1 Herzberg's Two-Factor Theory of Job Satisfaction

This research used Herzberg's Two-Factor Theory of Job Satisfaction as a theoretical framework to facilitate an understanding of the OHNPs' levels of job satisfaction.

A literature review done by Stello (2011) on the Two-Factor Theory of Herzberg, states the theory was the result of a five-year research programme on job attitudes. A need was identified for improved insight about the attitudes of people towards their jobs due to the occurrence of job dissatisfaction such as strikes, slowdowns and increased grievance

submissions. This particular study was conducted over nine sites with 203 accountants and engineers selected. From the results of the study it was noticeable only a small number of factors were responsible for feeling good about a job and these influences were related to intrinsic factors and were predominantly long lasting. The short lasting factors on feeling good about the job, originated from instances such as specific achievements obtained and resulted in certain recognition. The only exception to both high and low ranges, with similar frequency, was salary - being primarily rated as dissatisfied. From the data obtained, the initial hypothesis by Herzberg was restated resulting in the Two-factor theory of job satisfaction being created. The factors that affected job satisfaction were divided into two categories namely, hygiene factors surrounding doing the job and motivation factors that lead to positive job attitudes, as they satisfy the need for self-actualisation.

- Hygiene factors included the following aspects: supervisor, interpersonal relations, physical work condition, salary, company policies, administration, benefits and job security.
- Motivation factors included achievement, recognition, the work itself, responsibility and advancement.

According to Herzberg's theory, if the hygiene needs are satisfied, job dissatisfaction and poor performance can be prevented; only satisfaction of the motivation factors will bring the type of productivity and improvement pursued by companies, Stello (2011).

Figure 2.1 below depicts Herzberg's Two-factor theory.

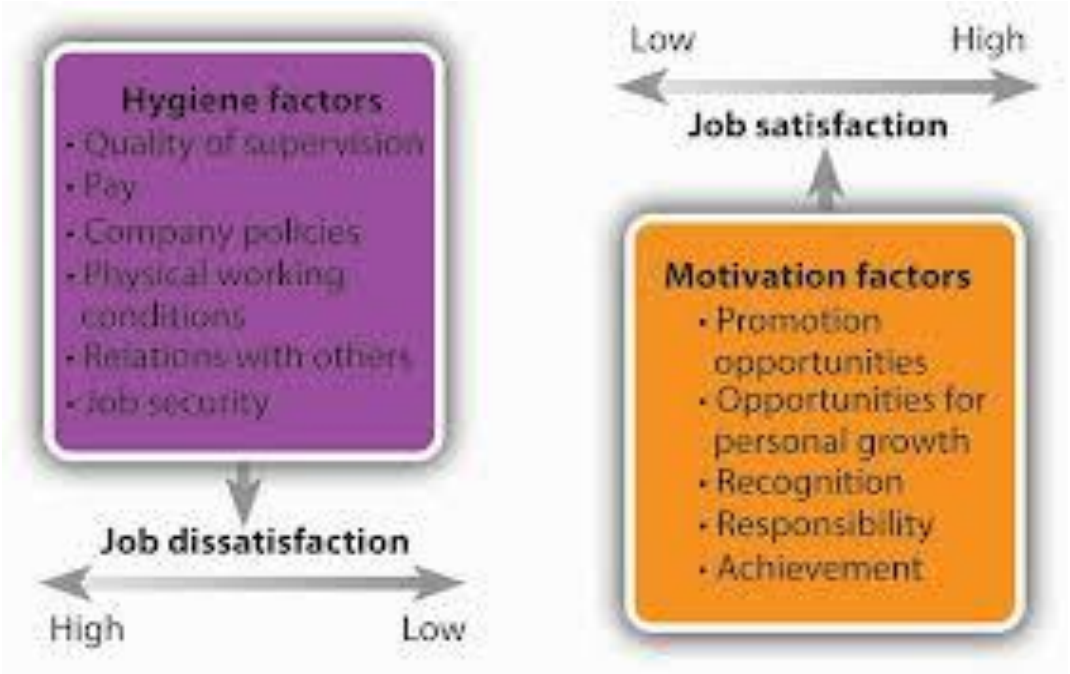


Figure 2.1 Herzberg's Two-Factor Theory on Job Satisfaction (https://www.google.co.za/search/herzberg.pdf accessed on 30 January 2014)

It is evident from the reviewed literature that some recent studies have used Herzberg's Motivation-Hygiene Theory, such as the study done by Tech-Hong and Waheed in 2011. The study specifically focused on what motivated employees in the Malaysian retail industry and used Herzberg's theory to monitor their levels of job satisfaction. The study of Tech-Hong and Waheed was conducted on 180 sales personnel from different retail environments by means of questionnaires. The conclusion revealed sales people in Malaysia place greater emphasis on hygiene factors, namely working conditions, salary and policies, than on motivators. The only element amongst motivator factors which showed significance was recognition. The study observed the mediating effect of love and money and found it has an effect on the relationship between money and job satisfaction

2.3.2 Other Theories Relevant to Job Satisfaction

2.3.2.1 Maslow's Hierarchy of Human Needs

A study by Wang, Ni and Xie in 2006, on the main factors influencing nurses' job satisfaction, incorporated Maslow's Hierarchy of Needs. Maslow identified "man" as a

being with different needs (Wang et.al: 2006) and the theory can be summarised as follows:

Humans are motivated by five basic needs being physiological, safety, love, esteem and self-actualisation. The basic needs are arranged in a hierarchy of importance which means when the lower level needs are satisfied; they can no longer be used as motivators and therefore will not drive people. As the lower needs of employees become satisfied, higher order needs take over and will then be the focus of the employee's attention. Maslow's Hierarchy of Needs indicates job satisfaction results from the satisfaction of the employee's needs and is seen as a useful framework in classifying reasons for work. Whang et al (2006) indicated in their study that job satisfaction is one subdivision of life satisfaction.

2.3.2.2 Synthesising theories of Job Satisfaction across the Cultural Dimensions

Saif, Nawaz, Jan and Khan (2012) conducted research in which theories of job satisfaction across attitudinal/cultural dimensions were included. This study mentioned a range of theories available for the explanation of motivational contents and cognitive processes regarding the issues of job satisfaction within an organisation. It was stipulated by Saif et.al (2012) that content and process theories have become established explanations for work motivation. According to the same authors, both content and process theories' purpose is to create understanding of work situations by suggesting human behaviour. Content theories included theories from Maslow Needs Hierarchy, Herzberg's Two-Factor Theory and McClelland's Theory of Needs. Irrespective of the theoretical approach in the study of job satisfaction, most researchers, according to Saif et.al (2012), have identified two groups of variables, namely environmental factors and personal characteristics of individuals. The same researchers' have identified more differences than similarities in the application of various job satisfaction theories and mentioned a common saying that 'theories are neither right nor wrong, but rather indicate different views of reality.'

2.4 NATURE AND IMPORTANCE OF JOB SATISFACTION

Kazi and Zadeh (2011) are of the opinion that job satisfaction is a multi-faceted concept, meaning a person can be satisfied in a certain area but not necessarily in all areas; therefore in the same context, dissatisfaction in one area does not mean complete job dissatisfaction.

Similarly job satisfaction, according to Schmidt (2007), can be examined from multiple viewpoints such as a person could be satisfied with certain elements of a job, feel neutral about some and dissatisfied with others. The same author also indicated that elements within a job could have different degrees of importance, which can cause those particular elements to be weighted differently in assessing overall job satisfaction.

Malliarou et al (2010) contend that job satisfaction is possibly the most significant yet elusive factor in understanding worker motivation, performance and effectiveness as well as recruitment and retention. Malliarou et al (2010) incorporated Maslow's and Herzberg's theories into their research project and are of the opinion that satisfied nurses' work is more attentive and could probably lead to improved patient satisfaction. The importance of job satisfaction amongst nurses is well illustrated in Malliarou et al's (2010) opinion.

According to Mueller and Kim (2008) there are two types of job satisfaction based on the level of employees' viewpoints regarding their work namely;

- The first and most studied, is global job satisfaction, which is the person's total feeling about the job,
- The second is job facet satisfaction, which refers to feelings about specific job aspects, such as salary, benefits and the quality of relationships with fellow employees.

Ho et al (2009) are of the opinion that the level of job satisfaction depends on the difference between what a person actually gains from their job and what they actually expect. As indicated by McGlynn et al, (2012) job satisfaction reflects a positive affective orientation towards work and the organisation, but contrarily job dissatisfaction reflects a negative affective orientation. Job satisfaction, as well as the retention of a registered nurse (RN), was shown to be of great concern for nurse administrators as the demand for RN's continues to exceed the supply. The major concern for this was that should job satisfaction levels amongst nurses decrease, the likelihood of them leaving their employment will increase. McGlynn et al, (2012) also assessed Herzberg's Two-way Hygiene and Motivation Theory on job satisfaction and indicated hospital administrations often try to solve the RN staffing issues and low satisfaction levels by only addressing hygiene needs. In addition, McGlynn et al (2012) are of the opinion that institutions will attempt to offer things such as higher salaries, sign-on bonuses, flexible staffing hours, tuition

reimbursement and increased benefit time, which will hopefully attract RN's, but in reality it will not produce long-term satisfaction with the job or retention. Furthermore McGlynn et al (2012) state employees will only be truly motivated by being able to reach for and satisfy the factors Herzberg identified as real motivators which are achievement, advancement, recognition, work itself, responsibility and growth.

Lephalala (2006) states work satisfaction has intrinsic and extrinsic factors with intrinsic factors internally derived and extrinsic factors seen from the practice environment. Lephalala (2006) is also of the opinion that job satisfaction forms a vital component of work force number preservation within an organisation; therefore if there is a lack of employee satisfaction, it could lead to high staff turnover as well as detrimental individual affects such as burnout. According to the same author, this has a snowball effect as high turnover rates lead to an organisation's inability to provide quality care and job satisfaction. The Herzberg Two-factor Theory, as well as Maslow's Needs Hierarchy, was also investigated by Lephalala (2006) in a study on Factors Influencing Nursing Turnover in selected private hospitals in England, which established both theorists attempted to identify the factors that motivate individuals to satisfy their needs. The same author concluded the presence of motivators enhances job satisfaction levels of nurses and through adequate management of hygiene factors, the level of dissatisfaction was reduced. In addressing intrinsic as well as extrinsic factors, the researcher hopes it might contribute to the reduction in turnover rate amongst nurses in the United Kingdom (UK), which will lead to reduced recruitment from other countries.

According to Dean (2011), job satisfaction is important and not just because it boosts work performance, but also because it increases the quality of life due to the time spent at work. In addition, Dean (2011) is of the opinion people become more satisfied with their jobs as they get older; this possibly is because the older people get, the more likely it is they have found the right work. Although the author indicated there is little evidence for this, he himself believed it to be true.

Aamodt (2009) indicated that as a result of extensive research on job satisfaction, work gratification has been associated with productivity, motivation, absenteeism, unpunctuality, accidents, mental/physical health and general life satisfaction.

Rognstad and Aasland (2007) state that job satisfaction is also experienced as the key ingredient that leads to recognition, income, promotion and achievement of other goals which lead to a feeling of fulfilment. Steinberg (2008) has indicated, with regards to differentiation between correlation and causation, that correlation indicates there is a relationship between variables, for instance that research has demonstrated correlation between job satisfaction and performance, turnover and absenteeism. Job satisfaction and job performance are positively correlated (e.g. when job satisfaction increases, job performance increases). However, Steinberg (2008) states it is not possible to tell whether job satisfaction causes increased job performance or vice versa, based on correlation alone. Van den Berghe investigated the relationship between job satisfaction and job performance in the workplace in 2011 and researched the Theory of Reasoned Action and the Theory of Planned Behaviour to justify the relationship between attitude and behaviour. This particular study was conducted on job satisfaction levels of 160 employees working for an international company which had offices in Finland, Sweden and Denmark. In addition, Van den Berghe (2011) explained the concept of job satisfaction has gained significance for two important reasons which are:

- Firstly: Job satisfaction can be used as an indicator for someone's general mental well-being.
- Secondly: The general assumption of happiness at work improves work motivation and as a result job performance too.

Furthermore Van den Berghe (2011) used three different approaches in explaining job satisfaction, namely:

- First approach turns the attention to the characteristics of the job and is called the information-processing model in which employees gather information about the job, the workplace and the organisation.
- Second approach looks at social information, which is information based on past behaviour and what others at work think and what others think and perceive about the workplace is called the social information processing model.
- The third approach indicated that job satisfaction is reliant on characteristics or personality of the employees, which can be based on experience or genetic origin.

Van den Berghe (2011) concluded that the two models used demonstrated the value of job features and job satisfaction and sufficient evidence was found in correlation between job

satisfaction and job performance.

Murrells et.al (2008) state that dissatisfied staff lead to increased levels of staff turnover, shortages in the respective fields, as well as higher absenteeism rates.

2.4 FACTORS THAT INFLUENCE AND DETERMINANTS OF JOB SATISFACTION

Ahmed (2011) stated the management of humans is an essential part of the management process and human resources is seen as one of the most vital assets. In addition, Ahmed (2011) is of the opinion that for an organisation to be successful it is important for employee motivation to be done on an iterative basis and one of the ways to motivate employees is by satisfying their needs. Ahmed (2011) also mentioned job satisfaction is one of the most frequently investigated variables and suggested it is directly related to the status of the job. The conclusion of this study in the relation between motivation and job satisfaction, found a positive association in working conditions, compensation and recognition, with motivation as well as an affirmative connotation discovered between motivation and job satisfaction. Scholl (2003) is of the opinion that an individual's perceptions, beliefs and expectations regarding the company are the motivation of his or her thoughts about the workplace.

According to Dean (2011), every person’s job is different, despite the fact there are ten factors psychologists regularly find to be important in how satisfied people are with their jobs namely:

- Little hassles: People tend to restrain day-to-day irritations, thinking there are more important things to focus on. In actual fact, people’s job satisfaction is surprisingly sensitive to daily hassles and although it might not seem like much, when it happens almost every day and it’s beyond control, it hits job satisfaction hard.
- Perception of fair pay: Regardless of the job, for an employee to be satisfied the pay should be fair. However, the bigger the difference between what someone thinks they should be earning and what they actually earn, the less satisfied they will be. For example; if a person perceives other people doing a similar job being paid the same, they are more likely to be satisfied with their job than if they think others are receiving more.

- Achievement: People feel more satisfied with their job if they've achieved something. In some jobs achievements are obvious, but for others they're not. For example achievement is easier recognised in smaller companies.
- Feedback sometimes goes hand-in hand with the above statement of achievement. According to Dean (2011), when it comes to job satisfaction, no news is bad news and getting negative feedback can be painful but at least it shows where improvements can be made. Conversely, positive feedback can make a significant difference to how satisfied people feel.
- Complexity and variety: Employees usually find jobs more satisfying if they are more complex and offer more selection. People appear to prefer complex (but not impossible) jobs, which could possibly be because it challenges them more, whereas jobs that are too easy can lead to boredom. To be satisfied, people need to be challenged and have some variety in the tasks being carried out.
- Control: Although an employee has certain tasks to do, it should be up to the person on how it is done. The more control people believe they have in how the job is done, the more likely they experience satisfaction. Psychologists, as stated by Dean (2011), have found that people working in jobs where they have little autonomy, regardless of the job level, find the work very stressful and consequently unsatisfying.
- Organizational support: Employees need to know the company cares about them and receive some returns for their input. This is mostly communicated by how bosses treat them, the types of benefits they get and other subtle messages. If people feel they receive more organisational support, they might experience higher job satisfaction levels. The appearance of support from a company also plays an important role which is why good managers need a 'politician's' touch.
- Work-home overflow: Low job satisfaction is not merely job related being either the boss' or organisation's fault, it could also come down to home-life.
- Job honeymoons and hangovers are well known to employees: People experience honeymoon periods during the first few months in a new job when their fulfilment increases, but this normally begins to wear off after about six months. Therefore job hangovers from the last job are inclined to create more intense "honeymoons" in the next job.
- Some people are more easily satisfied (or even dissatisfied) than others, no matter

how good (or bad) the job is. Certain professions seem better suited to certain types of people.

In addition, Ho et al (2009) suggested the level of job satisfaction depends on the difference between what a person actually gains from his or her job and what they expect.
A study done by Malliarou et al, in 2010, which had as its focus job satisfaction and job related work stress amongst civilian registered nurses and active duty army registered nurses in Greece, proposed a number of determinants of job satisfaction such as:

- Demographic characteristics including age, gender, educational level, race, marital status,
- Job characteristics which consisted of absolute and relative wages, number of hours worked, contract,
- Attitude towards work,
- Employer characteristics.

According to Malliarou et al (2010), job satisfaction depends on a number of factors and is subject to change. The same authors are of the opinion that satisfied nurses' work is more attentive, which could lead to improved patient satisfaction. Malliarou et al (2010) incorporated Maslow and Herzberg's theories into their research project making use of the Warr-Cook-Wall job satisfaction scale to measure the overall job satisfaction within the fifteen aspects of work. The sample consisted of 40 civilian and 77 army nurses. This study came to the following conclusions:

- Nurses hold the majority of positions in most health care settings and are allowed to practice independently, using self-regulating judgment and critical thinking skills, have a greater sense of job satisfaction.
- Military health organisations, educational preparation and personal characteristics of RN's affect their level of job satisfaction.
- A lack of co-worker support and social award of the profession contributed to dissatisfaction amongst civil nurses.
- It was suggested by Malliarou et al (2010) that issues concerning job satisfaction and potential risk for burnout, as well as the effect burnout can have on patients, needs to be expanded by knowledge and better understanding of productivity, as well as the sources of empowerment for RNs in the health care

setting should continue to be investigated.

2.5 RELATIONSHIP BETWEEN JOB SATISFACTION AND HEALTH

A meta-analysis and systematic review was conducted by Faragher, Cass and Cooper (2005) on the link between job satisfaction and health. The authors used 485 studies, with a combined sample size of 267 995 individuals, from which the research evidence was evaluated and linked to a self-report on measurement of job satisfaction and physical and mental well-being. Faragher et al (2005) state that the overall result indicated job satisfaction is strongly connected with health. The same authors concluded that job satisfaction is seen as an important factor influencing the health of workers and an increase in job satisfaction would associate with improved health. In addition, a distinct outcome of the study revealed the relationships were particularly notable on aspects of mental health, specifically with regards to burnout, lowered self-esteem, anxiety and depression. In conclusion, it can be confirmed that dissatisfaction at work can be hazardous to an employee's mental health and well-being. Furthermore Faragher, Cass and Cooper (2005) recommend that Occupational Health Practitioners should consider counselling employees who have been diagnosed with stress related health problems and critically evaluate their work to explore ways of gaining better satisfaction from this important and time consuming aspect of their lives.

Fisher and Sousa-Poza (2007) conducted a study on whether job satisfaction improves the health of workers. This specific study also evaluated the relationship between job satisfaction and the measurement of health of workers by using the German Socio-Economic Panel. The study revealed that research indicated a decline in job satisfaction over the past decade and suggested it could be due to the following reasons namely: globalisation, flexible employment, technological advancement, higher mobility and the 1990 recession. The underlined concern in this study appears to be the effect that job dissatisfaction has on an individual's health, not only medically but also from an economic perspective. Fischer et al (2007) states job satisfaction plays an important role at employee level and is a determinant factor of individual well-being, at aggregate level, In addition, the same author is of the opinion that job satisfaction equally affects worker productivity and retirement decisions and ultimately has an influence on a society's economic prosperity. The results of the study also demonstrated a strong relationship between job

satisfaction and satisfaction people experience with their own health status and contact with health care providers.

2.6 ORGANISATIONAL MEASURES TO ENHANCE JOB SATISFACTION

Malliarou et al (2010) conducted a study on Greek Registered Nurses' Job Satisfaction in Relation to Work-related Stress and the following organisational recommendations were proposed as initiatives to increase job satisfaction levels:

- The placement of a suitable professional in the right position to increase the probabilities of output but also benefit of qualitative care;
- The clarification of the professional's role and their duties, as well as to include professional's in the decision-making process;
- The consideration of breaks and special authorisations given by administration;
- The increase of possibilities for professional development;
- The operation of teams for psychological support;
- Opportunities for further training and education;

Powell (2012) investigated ways to improve job satisfaction and came up with the following six steps for organisations:

- Determine the current employee satisfaction levels through survey; during the survey process assure anonymity and commit to take action on the survey result.
- Address concerns on job security.
- Provide developmental opportunities.
- Provide opportunities for employee involvement.
- Ongoing feedback and recognition.
- Regular hands-on meetings to keep employees informed.

Pietersen's (2005) study on Job Satisfaction of Hospital Nursing staff in Limpopo Province suggested the following proactive interventions to decrease the influence of intrinsic job factors:

(a) Hospital managers could enhance the commitment of and empower nursing staff, by obtaining their input on possible actions to be taken to create opportunities for more creativity in their jobs and to counteract the impact of repeated routine.
(b) Hospital administrators should create opportunities for promotion in situations where staff advancement is identified as a problem to increase the intrinsic job satisfaction of their nursing staff, instead of recruiting staff from outside sources.
(c) Hospital administrators need to take active steps to reduce the negative impact of extrinsic job factors on job satisfaction of nursing staff.
(d) Steps need to be taken to make the hospital environment a more pleasant place to work.
(e) Supervisors need to improve on interpersonal skills.
(f) Implement ways and means to actively support nursing staff and develop a caring organisational climate.
(g) The pay package of nursing staff to be amended.
These are just some measures as indicated in studies to enhance the job satisfaction level for the employee. It is the opinion of the researcher, that there are numerous research studies indicating ways to improve job satisfaction levels in the workplace**.**

2.7 JOB SATISFACTION IN NURSING AND OCCUPATIONAL HEALTH NURSING

Literature revealed that job satisfaction studies have been conducted amongst nurses from various specialties. However, only one study, done in 1985, was found on job satisfaction of occupational health nursing practitioners.

According to Cown (2011) it is important for nurses to experience positive levels of job satisfaction in order to deliver quality nursing, stay in the profession and contribute to achieving healthy outcomes.

2.7.1 Internationally

2.7.1.1 United States of America and the United Kingdom

Bare (2004) conducted a study on the factors which most influence job satisfaction amongst cardiac nurses (n=32) in an acute medical setting in West Virginia. The foundation

of the study was based on Herzberg's Two-factor Theory of Motivation on job satisfaction. The specific aims of the study were firstly, to assess the overall level of job satisfaction of the respondents and secondly, to examine the relationship between motivation and hygiene factors in job satisfaction. The outcome of the study revealed that overall, nurses were moderately satisfied with their jobs and the results from Herzberg's Theory indicated the motivation as well as hygiene factors had a strong, positive and almost equal correlation with job satisfaction. Furthermore, Bare (2004) found overall job satisfaction was the most important reason nurses chose to stay in a particular job. Bare (2004) is of the opinion that very little has been done to promote job satisfaction in most healthcare facilities. In addition, Bare (2004) acknowledged that the concept of job satisfaction among nurses is of exceptional importance taking the current job market in consideration and the significant shortage in nursing, retention of nursing staff should be of extreme importance to the healthcare industry. This particular research also demonstrated nurse's satisfaction has a direct relation to patient satisfaction. Bare (2004) also suggested one of the primary issues contributing and aggravating the shortage amongst nursing staff, is that many nurses are dissatisfied with their jobs and are consequently leaving the profession. Bare (2004) mentioned that financial gain is not normally the most important factor in relation to job satisfaction and that many healthcare organisations have only offered 'band-aid' type fixes, such as salary raises to attract and retain nurses.

A study by Kalisch, Lee and Rochman (2010), on nursing staff teamwork and job satisfaction, aimed at exploring what influence, unit characteristics and teamwork had on job satisfaction within the current workplace and role. The study was a cross sectional, conducted with 3675 nursing staff members employed by four different Midwestern and one Southern hospital and 80 different patient care units. Kalisch, Lee and Rochman (2010) revealed nursing shortages to be an extensive problem in health care, the demand continues to rise and the current supply is unable to meet the demands of society; a worldwide phenomenon. The study revealed that job dissatisfaction is strongly associated with nurse's turnover and that nurses in Acute Care Units have a higher sense of teamwork which resulted in higher job satisfaction levels and this was reflected in the Emergency Care Unit. The higher levels of teamwork and perception of adequate staffing led to greater job satisfaction within the profession. The same authors are of the opinion that improvement and enhancement of teamwork can have a positive impact on staff satisfaction. Furthermore, Kalisch et al (2010) are of the opinion that an increase in job

satisfaction could result in cost saving, as this is linked to lower turnover rates and an increase in teamwork could result in safer and higher quality of care. McGlynn et.al (2012) state job satisfaction has been linked to the shortages in nursing, as well as being of the opinion that job satisfaction reflects a positive orientation towards not only the work, but the organisation as well, in contrast to job dissatisfaction which has a negative impact. McGlynn et.al (2012) indicate nursing managers and employers must recognise that job satisfaction consists of many dimensions including autonomy, shared governance, positive nurse-physician relationships, task requirement and interaction. Each of these dimensions plays an important factor to retain nursing staff.

Mrayyan (2005) states nurses who experience job satisfaction have higher levels of productivity, increased organisational commitment, show higher retention rates and deliver a better quality service.

A study done by Lephalala (2006) on factors influencing nurse turnover in selected private hospitals in England, revealed nurses in the private sector, who experienced intrinsic job satisfaction, had less turnover rates. In addition, the author indicates the nursing turnover rate amongst satisfied nurses was 33%, in contrast to dissatisfied nurses who had a turnover rate of 94%. Within this same study, nursing shortages rated as a 5.32% reason for job turnover. These findings are supported by McGlynn et.al (2012), Stacciarini (2003) and Sakowsi, (2012) in studies on job satisfaction.

Gould and Fontenla, (2006) conducted a study in London on commitment and job satisfaction amongst qualified nurses and revealed that flexible, social hours were the more influential deciding factor in why a career in industrial nursing was pursued.

In the study by Nunnellee and Jimmerson (2005) on the US Nursing Shortage, they determined 41% of nurses, during the time of this study, indicated they were dissatisfied with their jobs, 22% indicated they were planning to leave the profession and more concerning, 55% of the nurses would not recommend their profession to family or friends.

A study by Nakakis and Ouzouni (2008) on factors influencing stress and job satisfaction of nurses working in psychiatric units found poor relationships between nurses and doctors, the relationship between nurses and other health care professionals, demanding

communication and relationships with patients, high work load and understaffing are some of the identified factors influencing job satisfaction levels in the workplace. This study was conducted with an extensive literature search to identify and review research studies which had already investigated the variables that stress has on the job satisfaction of nurses working in a mental health institution. This finding is supported by Ho, Chang, Shih and Liang (2009), who did a similar study on the effects job satisfaction has on job rotation, the role, stress and organisational commitment shown by nurses.

McHugh, Kutney-Lee, Cimiotti, Sloane and Aiken (2011) researched nurses' widespread job satisfaction, burn-out and frustration which could signal problems for patient care. The authors came to the conclusion there is much higher job dissatisfaction and burnout amongst nurses who care for patients in hospitals and nursing homes than in other settings, as well as the fact patients in these settings are less satisfied with their care. Thus, the authors conclude, improving nurses' working conditions may improve the experiences of both nurses and patients.

2.7.1.2 Europe and Asia

Chen (2008) did a cross sectional survey on nurses work environments and job satisfaction in European hospitals, also known as Magnet hospitals, which included countries such as Belgium and Germany in 2008. The study had two main purposes namely to explore the influence of the Magnet hospital qualities and psychosocial work environment models specifically on nurses' job satisfaction and the second purpose to identify the potential control effects of occupational health models. The study was motivated by a concern on transforming nurses work environments and promoting them positively to support quality patient care and nurse satisfaction with the purpose of the research to better understand the work-related factors that influence nurses' job satisfaction in a multi-level perspective. Chen (2008) reports about 70% of the European hospitals' nurses reported high job demand and 40% indicated high job strain levels. In addition, Chen (2008) is of the opinion that job satisfaction was influenced by policies on a personal level and management styles at hospital level.

A study conducted by Panagiotis et al (2012) with a sample of 271 nurses working in Greek hospitals measured the degree to which stressors such as conflict, workload,

interpersonal relationships, career development, information access and feedback influence job satisfaction aspects such as physical environment, career opportunities, management style, job enrichment, rewards and job security. The outcomes of the study showed that conflict, heavy workload and lack of job autonomy are negatively associated with all job satisfaction dimensions; in contrary to the negative aspects, from the information received, the participants responded positively on facets of rewards and job security. Panagiotis and Charalambos (2013) are of the opinion that job related stress has a direct effect on job satisfaction. Job stress, according to Panagiotes et.al (2013), is one of the most important workplace health risks for employees, with job satisfaction considered as a crucial factor in the delivery of high quality services and good performance at hospitals.

Sarmiento, Spense Laschinger and Iwasiw (2003), in a literature review, found job satisfaction of nurse educators was influenced by continual budget cuts and the increase in class sizes which influenced their ability to meet their role expectations. This led to exhaustion from enlarged teaching assignments and perceived lack of support, ultimately causing a decrease in job satisfaction levels.

Job satisfaction is recognised as the point to which employees gain enjoyment from their efforts in the workplace (Ciarniene, Kumpikaite and Vienazindine: 2010). These researchers conducted a study on Expectations and Job Satisfaction by means of a Theoretical and Empirical approach. The leading question of this study was to determine to what extent is job satisfaction influenced by external and internal factors. Ciarniene et al (2010) tabled the main external and internal factors affecting job satisfaction, as depicted in the table below:

Table 2.1 Factors affecting job satisfaction

External factors	Internal factors
Company's name	Self-expression demand
Privacy of employees	Educational qualifications
The company's situation	Age
Work itself	Gender
Possibility to realise one's potential	Seniority
Supervision and management processes	Race
Evaluation and promotion policies practices	
Favourable work conditions	
Organisational climate	
Supportive co-workers	
Organisational policies	

The same authors cited job satisfaction as an important indicator of how employees feel about their work and a predictor of work behaviours such as organisational citizenship, absenteeism and staff turnover. Within this study the academics made use of Maslow's Needs Hierarchy as a base for their empirical study on job satisfaction

The study of the scientific literature presented strong links between individuals' expectations and their job satisfaction and that each individual has different sets of objectives, which can be motivated if that person believes in positive correlation between efforts, performance and desirable reward, which will satisfy an important need and if the desire to satisfy the need is strong enough, to make the effort worthwhile.

Nakakis and Ouzouni (2008), in research on factors influencing stress and job satisfaction of nurses working in psychiatric units, found poor relationships between nurses and doctors, the relationship between nurses and other health care professionals, demanding communication and relationships with patients, high work load and understaffing are some of the identified factors influencing job satisfaction levels in the workplace. These findings are supported by Ho, Chang, Shih and Liang (2009), who did a similar study on the effects job satisfaction has on job rotation, the role stress and organisational commitment shown by nurses.

Gould and Fontenla, (2006) did a study in London on nurse's commitment and job satisfaction amongst qualified nurses and revealed that flexible, social hours were the more influential deciding factor in why a career in industrial nursing was pursued. . Sakowski, 2012, indicated job satisfaction of occupational medicine nurses in Poland has been a forgotten area in Polish research for a long time.

Nizami, Rafique, Aslam, Minhas and Najam did a study in 2006 on occupational stress and job satisfaction among nurses at a tertiary care hospital, the Rawalpindi General Hospital, using a sample size of 50 female nurses working in different departments. Through the use of a Pressure Management Indicator, a 120 self-report measurement tool, occupational stress and job satisfaction was measured. The research tool measured job satisfaction, organisation, mental well-being and physical well-being. The findings indicated that the nurses working in the tertiary care hospital had a high index of occupational stress that mainly originated from administrative disorganisation of the company and monetary factors. According to Nizami et al (2006), these stressors have an impact on the employees' job satisfaction as well as professional capabilities and that foundations of job satisfaction included organisational security and commitment.

Wang et al (2006) researched the factors influencing job satisfaction in a study conducted in China and Sweden. The purpose of this particular study was to investigate the perception of nurses on job satisfaction characteristics and how this varies with educational level and the age of the nurse. The data was obtained from regional hospitals in China and Sweden by means of questionnaires with 196 respondents. The results of this study indicated both age and educational level were related to the job satisfaction levels. Intrinsic factors rated higher than extrinsic job satisfaction factors. The research also revealed a significant difference in the job satisfaction levels between the two countries, namely China and Sweden, in that the nurses in China showed higher job satisfaction levels than the nurses in Sweden.

- The only literature found on the job satisfaction of occupational health nurses was a study done in 1985 by Conrad, Conrad and Parker. The study compromised 97 randomly selected occupational health nurses and the Minnesota Satisfaction questionnaire was used. There was however a comparison done between the occupational health nurses' responses and that of a normative group of hospital

nurses. The study findings revealed that in general, the occupational health nurses did not reflect higher job satisfaction levels than the normative hospital group of nurses. However, within the different dimensions of the study on job satisfaction differences were reflected between the two groups. The occupational health nurses showed high levels of satisfaction in compensation, creativity and independence, whereas hospital nurses' satisfaction levels reflected more on advancement, authority, co-workers, responsibility and security. The aspects that occupational health nurses were the least satisfied with was advancement opportunities, company policies, technical supervision and recognition. These results confirmed that intrinsic as well as extrinsic rewards can contribute to the satisfaction as well as the dissatisfaction of occupational health nurses.

2.7.2 Africa and South Africa

Chirwa, Greeff and Kohi (2009), conducted a study in five (5) African countries on the relationship between perceived Human Immunodepressant Virus (HIV) stigma and job satisfaction amongst nurses. The findings revealed, nurses in South Africa and Tanzania obtained higher mean job satisfaction scores in comparison to the other three countries with Lesotho reportedly having the lowest scores among nurses' job satisfaction levels. The other two countries involved were Malawi and Swaziland. The five demographic factors measured in this job study on job satisfaction were divided into the following categories namely, mental and physical quality of life, marital status, educational level and work location. The outcome of this full study, in the five African countries, showed consistently low levels of job satisfaction and these levels within literature related to the perceived HIV stigma.

Pietersen conducted a study in 2005 on hospital staff's job satisfaction in Limpopo Province. The study was motivated by the realisation from hospital management that job satisfaction has an impact on nursing staff retention. Within this study, the importance as to why it is necessary to examine the job satisfaction of nurses was mentioned and this included: research findings which indicated job satisfaction of employees in general and more specifically, those of nursing staff, showed a decline worldwide.

Critical nursing staff shortages are growing worldwide and there are many explanations for this such as job related factors for example low pay, abuse by demanding patients, lack of appreciation from doctors, work pressure, work environment-related factors and lack of opportunities. These are just some of the most important reasons leading to nursing skill losses, with emigration also contributing to the losses in South Africa. Job satisfaction can have an impact on patient care, therefore nursing staff with low job satisfaction levels may find it difficult to provide quality patient care and create a friendly and supportive atmosphere within the healthcare setting. Nurses with low levels of job satisfaction may also avoid work responsibilities and this is identified through absenteeism and by taking shortcuts in the performance of their duties. The overall finding of the research on hospital nursing staff in Limpopo by Pietersen (2005) yielded the following results:

- There was no clear difference between general levels of job satisfaction and dissatisfaction, although more of the respondents were dissatisfied (56%) than those who indicated to be more satisfied (44%) in their work.
- It was revealed that the respondents were somewhat more dissatisfied with extrinsic work factors (58%), in comparison to intrinsic factors (52%).

From literature, Pietersen discovered the low levels of job satisfaction were associated with high turn-over rates. The researcher concluded this study by indicating that nursing shortages will continue to increase in the future and that one of the significant reasons for this statement is that staff retention is associated with job satisfaction. The researcher has recommended that hospital administrators should be more pro-active in retention of nursing staff and include more hands-on interventions to ensure job satisfaction of nursing staff in the hospitals where similar problems are being experienced.

It is evident from literature that job satisfaction is a crucial factor in the retention of nurses and the prevention of high turnover. Job satisfaction is even linked to nursing shortages (Murrells, Robinson and Griffiths, 2008; McGlynn, Griffin, Donahue and Fitzpatrick, 2012; Malliarou, Sarafis, Moustaka, Kouvela and Constantniadis, 2010; Lu, While and Barriball, 2006; Daehlen 2007). However, limited literature is available on job satisfaction of occupational health nursing practitioners internationally and nationally, in comparison to job satisfaction levels of nurses in hospital settings. According to Murrells et.al (2008), job satisfaction is seen as an important component in nurses' lives which can have an impact on several areas such as patient safety, quality care, performance, productivity, staff

turnover, commitment to the organisation, retention and dedication to the profession.

In summary, the literature reviews demonstrate that job satisfaction plays an important role in the maintenance of workforce numbers in any organisation (Lephalala, 2006). Hinks (2009) states a satisfied workforce is also less likely to suffer from absenteeism and quit to go to other jobs, which in turn can reduce turnover costs. Contrary to above statement, job dissatisfaction could present with certain elements in the workplace such as absenteeism, turnover, poor health and complaints (Schmidt, 2007).

2.8 OCCUPATIONAL HEALTH NURSING

The main purpose of the study was to determine the job satisfaction levels of occupational health nurses. Occupational health nursing is classified as a specialised field of nursing (Parker-Conrad 2002) which requires additional training over and above basic nursing training to be registered at the South African Council as a registered nurse. According to Hatting and Acutt (2009), Occupational Health Nurses (OHN's) are registered nurses who independently observe and assess the worker's health status with respect to job tasks and hazards. Using their specialised experience and education, these registered nurses' recognise and prevent health effects from hazardous exposure and treat workers' injuries/illnesses. Alis (2010) states occupational health nurses may work in hospitals, government, educational or industrial environments. In some organisations, they are the only health and safety professionals on staff. They usually work standard weekday office hours, although they may be required to work evening or weekend shifts in industrial environments. Some travel may be required in organisations that have multiple locations (Alis, 2010)

OHNPs are the largest groups of health care providers serving the worksite (Neira, World Health Organization [WHO], 2001). As indicated by Hatting and Acutt (2009), occupational health nursing is seen as a specialty providing healthcare to workers, in the workplace itself. The same authors also indicate the OHNP is an independent practitioner, who makes autonomous nursing judgments, within his/her practice, around occupational health aspects.

Within the WHOs European Member States, the discipline of occupational health is

undergoing rapid development (WHO, 2007). This development is due to the new demands and expectations from employers, employees and their representative bodies as they recognise the economic, social and health benefits achieved by providing these services at the workplace. This is also evident within the South African context.

A study conducted in the United States of America by Thomson (2010) on occupational health nurse data from a national sample survey of registered nurses, found that OHNPs compromise less than 1% of the US nursing population. Recent data indicated there are approximately 19,000 occupational health nurses practicing in the US and other countries, providing care to workers. In South Africa, the South African Society of Occupational Health Nursing Practitioners (SASOHN), a professional society committed to the development of the Occupational Health Nursing Practitioner (OHNP) and the field of occupational health nursing, takes care of the health of more than eight million workers in in all types of industry.

From provided information, occupational health nurses appear to be a significant component within the healthcare industry in the view of the researcher.

2.9 SUMMARY

The literature reviewed in this chapter has identified the need to explore the levels of job satisfaction of occupational health nursing practitioners. The chapter gave meaning to and interpretation of the concept job satisfaction, the nature and importance of job satisfaction and the research conducted on job satisfaction of nurses. In addition Herzberg's Two Factor Theory of Motivation was also discussed as an underpinning for this research. According to literature, it is evident more studies were done on job satisfaction of nurses in general, in comparison to job satisfaction of occupational health nurses.

In the following chapter, the research design and method are described.

CHAPTER THREE

RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

This chapter gives an overview of the research design and method used in this study, which clarifies the plan and structure followed by the researcher to facilitate the attainment of the research objectives, which were:

- To determine occupational health nursing practitioners' level of job satisfaction
- To determine potential factors that could lead to job dissatisfaction
- To determine the most indicative factors for job satisfaction among OHNP in South-Africa

3.2 RESEARCH DESIGN

According to Nicholson (2011), a research design is defined as a blue print or outline during the conduct of a study to have maximum control over factors which could influence the validity of the study. Research design assists the researcher to plan and implement the study in such a way to obtain the desired results (Burns and Grove: 2005). De Vos, Strydom, Fouche and Delport (2011), state a research design forms an integrated statement and justification of more technical decisions involved in the planning of a research project.

The construction of the research design was based upon the research problem and purpose of the study, which was to study the level of job satisfaction of occupational health nursing practitioners working in private occupational health services in South Africa

3.2.1 Selected Research Design

This study adopted a quantitative, non-experimental, cross sectional survey research design.

3.2.2 Quantitative Research

Sibanda (2009) has explained quantitative research to be the gathering of numerical data and generalising it across a group of people. This is supported by Babbie (2010), who explains quantitative research deals with numbers, logic and the objective and translates rather than separates reasoning. Babbie (2010) also indicates the goal of quantitative research is to determine the relationship between independent and outcome variables.

According to de Vos et.al (2011), a quantitative research category includes experiments, surveys and content analysis. Within this specific research study, a survey method was used.

3.2.3 Non-Experimental Design

Non-experimental design means there is no manipulation of the independent variable and the setting is not controlled (Brink et al. 2005), as the research is conducted in a natural setting.

3.2.4 Cross-Sectional Survey

According to Brink et al (2005), research uses a cross-sectional design at one point in time and for this specific study the researcher used the period between May and September 2013 to collect data from the different subjects based on the availability and operational convenience from the regions.

3.3 RESEARCH METHOD

Research method, according to de Vos et.al (2011), is understood to be the researcher's plan which will be used to answer the research questions, as well as proving the justification for the choice on the research design.

The survey method was used in this specific study. The purpose of this method for the researcher was to find the prevalence of the outcome of interest for the sub-groups within

the population at the given time point (de Vos: 2011). The survey method allowed the researcher to collect data systematically.

3.3.1 Motivation for the use of the Survey Method

According to Brink (2005), survey studies gather information from a sample of the population, pertaining to the topic being researched.

The survey method was chosen and used in this study to facilitate the collection of data from South African occupational health nursing practitioners, employed by a private occupational health service provider.

There are certain benefits of using the survey for this study, with Brink (2005) indicating it has the ability to reach a large number of respondents and numerous questions can be asked about a subject, giving extensive flexibility in data analysis.

Within this particular study, the researcher was interested in determining the extent to which the participants hold a particular attitude or perspective around job satisfaction. De Vos et.al (2011) indicated the basic objective of a questionnaire, is gathering of facts and opinions about the phenomenon from the informed people who participated in the study. The questionnaire forms part of the survey process, as a survey also includes population sampling, pre-testing of the instrument, decision on delivery method, ensuring validity and data analysis. The survey method is less complicated and requires one contact session with the participant (de Vos et al: 2011).

Keough and Tanabe (2011) maintain survey research ranks low in the hierarchy of research methodologies because they use self-reported data.

3.4 THE CONTEXT AND SETTING OF THE RESEARCH

3.4.1 Context of the Research

The research was conducted in the Gauteng, Mpumalanga and Pretoria North-West regions of the private occupational health service provider in South Africa. These regions were

chosen for the study because of their accessibility to the researcher, being economical and having an identifiable and sufficient population of OHNP's employed in diverse occupational settings. The selected regions comprised the whole of Mpumalanga and Gauteng, with 52% of all employed OHNP's by the private service provider economically active in these regions**.**

3.4.2 Research Setting

Kimberlin and Winterstain (2008) states the research setting can be seen as the physical, social or cultural site in which the researcher conducts the study. The setting is thus more specific; within this research study the physical setting was the regional offices of the private OH service provider where general meetings with the OHNP's are held.

3.5 POPULATION

Dale (2006) states a research population is viewed generally as a large group of individuals who are the main focus of a scientific query or have similar characteristics.

Target population, as explained by Samkange (2009), is the entire accumulation of respondents meeting the selected set of criteria. The target population in this study consisted of all occupational health nursing practitioners employed by the private occupational health service provider in all regions of South Africa. However, this was not a realistic task and the accessible population became all the registered occupational health nursing practitioners employed by the private service provider in the three (3) selected regions namely Inland (Gauteng), Pretoria Northern and Mpumalanga**.**

Criteria for the inclusion in the accessible population, as indicated by Robgers (2010) were attributes of subjects essential for their selection to participate. It is further explained by Robgers (2010) that the function of inclusion criteria removes the influence of specific confounding variables. The exclusion criteria, according to Robgers (2010), will be the subject's responses, which require their removal as participants.

The criteria for inclusion in this study were:

Professional occupational health nursing practitioners employed for longer than six months by the selected private occupational health care service provider.

3.6 THE SAMPLE AND SAMPLE SIZE

Within this section the actual sample, method of sampling used as well as the procedure followed is described.

Brink et.al (2006) has described the sampling frame to be a comprehensive list of all sampling elements in the decided population, a process which can be time-consuming. In addition the same authors define a sample as a part, or a fraction, of a complete or a subset of a larger set selected by the researcher to participate in the research project.

The sample consisted of a selected group, namely professional occupational health nurses employed by the selected private occupational health care service provider in the selected regions.

According to Brink (2005), the measurement or numerical value of a sample is referred to as sample statistics and a population parameter is the numerical value collected form a population.

For this research study the sample size was 183 occupational health nursing professionals, as a total population sampling method was used.

3.6.1 Sampling method

Sampling is defined by de Vos et.al (2011) as a small presentation of a whole. The researcher made use of a total sampling method, as all 183 employees of the service provider were sampled.

Total population sampling, according to Lund Research Ltd (2012), is a type of purposive sampling technique where the researcher chooses to survey the entire population which has

a particular set of characteristics. From the same dissertation, two aspects are indicated when total sampling may be appropriate namely:

- When the population size is relatively small, such as in this particular study the population size consists of 183 OHNP's.
- The population shares an uncommon characteristic, thus being OHNP's employed by a selected private occupational health service provider.

According to the Lund Research of 2012, the advantages of total population sampling are:

- The researcher is able to get a profound insight into the phenomenon of job satisfaction levels of OHNP, since the population involves all the members within the participants of interest.
- In the coverage of such a wide variety of the population of interest there is a reduced risk in missing potential insight from members not included.
- It is not possible to make statistical generalisation about the sample being studied, as it consists of total population sampling and by using this method analytical generalisation of the population being studied is possible.

Disadvantages of total population sampling are:

- A list of the total population is required for the study, just as in the case of probability sampling techniques, which can be a time consuming exercise for the researcher.
- If the list of the population is incomplete, or a portion of the members choose not to take part in the research, this can compromise, the researcher into making analytical generalisation.

3.6 2. Sampling Procedure

As indicated by Burns and Grove (2010), the sampling procedure consists of certain main categories, namely:

- Identification of an accessible sample population
- Confirming eligibility criteria and attaining consent
- Facilitate for the selected population to participate in the study

Based on the above categories, the researcher will elaborate as to how this was achieved.

The accessible population was identified as follows:

A list of all the names and contact details of the occupational health-nursing practitioners working for the private occupational health care service provider in the selected regions as reflected in **Table 3.1** was obtained from the human resource assistant of each selected region.

Table 3.1 Number of OHNP's per region

Region	Total number of OHNP's
Inland (Gauteng)	81
Pretoria Northern region	37
Mpumalanga	65
Total	183

Confirming eligibility criteria and obtaining consent:

A names list, which also reflected the date of employment, was obtained of permanently employed OHNP's in the selected private OH service provider from the human resources department from head office.

The lists were matched to identify the candidates as per the set inclusion criteria for this particular study.

Initial consent was obtained from each regional manager to conduct the research study within their respective region by attending the regional OHNP's meeting and explaining the procedure personally to the candidates.

A time slot was inserted into the agenda for this particular research study to be conducted.

The agenda was sent to candidates before the actual meeting by their operations manager.

Each region has compulsory bi-monthly meetings within the selected private service provider, in which all the OHN's gather for information and in-service training sessions.

The cooperation of the operations managers from each region was required to assist in arranging full attendance of the occupational health nurses at the scheduled meeting. The researcher personally attended the regional meetings and explained the reason for the study and the questionnaire

3.6.3 Problems encountered in the sampling process

The following challenges were encountered during the sampling process:

- Discrepancies found on the name lists between head office and the regions.
- The regions had additional staff appointed on fix-term contract and agency staff used on recurrent bases.

3.7 ETHICAL CONSIDERATIONS

Polonski (2005) explained that ethics in research and even in general business is of growing importance and it is imperative to understand the basics of ethical research and how it might affect a research project. This according to Polonski, is especially important if the research involves interaction with any person who voluntarily serves as a participant within the research project. Different ways of interaction were identified by Polonski (2005) such as interviews, focus groups, surveys and observation of people's behaviour. Polonski also explained the types of harm that could occur during interaction with participants' namely, psychological, social and financial harm.

Ethics are also seen as morals and people's thoughts, according to Resnik (2011), are that ethics are seen as rules distinguishing right from wrong. Resnik (2011), in his Article, also remarked on what ethics is in research and why is it important; that although people acquire their sense of what is right and wrong, during childhood years, the development of moral values occurs throughout life and the different stages of growth and maturity.

Approval to conduct research was obtained from: (refer to appendices list for referencing)

- Human Research Ethics Committee (HREC) (Medical) of the University of The Witwatersrand (Protocol number: M1305230) (See Appendix A)
- The private occupational health service provider (See Appendix B)
- Permission from the respective regional managers of the selected regions to conduct the study by attending the regional OHNP'S meeting – on agenda (See Appendix C)

- Permission to use the data collection instrument was sought (and granted) through electronic communication with Paula Stamps (See Appendix D & E)
- Informed consent from participants (See Appendix F)

According to de Vos et.al (2011), informed consent is described as where a person has been given the opportunity to choose what shall and shall not happen to them and therefore, to obtain informed consent means all adequate information on the purpose of the study, the expected duration, the procedures which will be followed, all the possible advantages and disadvantages, as well as the credibility of the researcher, needs to be provided to the participant.

The researcher explained to the eligible participants what the purpose of the research was, the selection of the research participants, the nature and scope of the research, the steps to ensure anonymity and confidentiality, that they were under no obligation to complete the questionnaire and their right and freedom to withdraw from the research at any time without suffering any negative consequences. The completion and return of the completed questionnaire was considered be taken as informed consent.

No discomfort or harm was anticipated, as was stated in the participants' information letter.

The right to anonymity and confidentiality of participants was ensured by the following measures:

- The researcher, with his or her individual responses, could not link the participants' identity.
- The questionnaire did not identify a name or number.
- All data is kept in a safe and secure place to ensure nobody except the researcher has access to the information.
- Only grouped data is stated in the research report and subsequent published articles.
- No names of participants or the private service provider is stated in the research report and published articles.

- Participants were asked to put the completed questionnaires in a provided unmarked sealed box.
- Right to self-determination of the participant's was respected by means of having the freedom to choose to participate in the study or not.

3.8 THE STEPS WHICH WERE FOLLOWED IN THIS RESEARCH

Scientific research involves a systematic process, according to Blankenship (2011), which focuses on being objective and collecting a multitude of information for analysis to be able to conclude a research project. This process is used irrespective of the research methods. For this study on determining the job satisfaction and dissatisfaction levels of OHNP's, the researcher made use of the following steps in the research process.

3.9 DATA COLLECTION

In this research, data was collected by means of a self-administered questionnaire.

3.9.1 Choice of Measurement Instrument

According to Brink et al (2006), research instruments include aspects such as interviews, questionnaires, observations and reading and researchers' need to ensure the validity and reliability of the instrument.
The appropriateness of a data collection instrument, according to Brink, affects the validity and the reliability of the research project.
Brink (2005) states that a questionnaire is referred to as self-report instrument.
A well-designed questionnaire will be easy for the participant to complete and for the researcher to administer and analyse (Brink: 2005).

The research instrument is seen as one of the most important components of the research design, because of the gathering of information and data collection (Sobrepena: 2011). Questionnaires are the most commonly used research instrument for data collection according to Sobrepena (2011).

De Vos et.al (2011) are of the opinion that it is important to choose the right data collection method, as this will allow data collection to meet the objectives of the research. Data was collected in this research by means of a structured questionnaire namely, the Index of Work Satisfaction, part B (IWS-Part B), developed by Stamps to measure American hospital based nurses level of job satisfaction.

In case of self-administered questionnaires by de Vos (2011), the questionnaires are handed to participants to complete on their own, with the exception of the researcher being available for any queries. The researcher keeps his/her contribution during the completion of the questionnaire to the minimum. Within this particular study, the researcher handed out the questionnaires during the regional professional occupational health nursing practitioners' meetings.

3.9.2 Structure of the Self-Administered Questionnaire

The instrument consisted of six components. McGlynn et al (2012) used the same research instrument and described the components as follows:

- Remuneration: This is the compensation the OHNP receives in exchange for the work or services performed, including monetary (salary), bonuses as well as other rewards and recognition.
- Professional status: The professional status of nurses is primarily based on solidarity, accountability, proficiency, maintenance of a code of ethics and the well-being of their patients and OCHNP's form the backbone of occupational health services within the industries and organisations.
- Doctor – nurse relationship: Doctors and nurses not only evaluate their inter-professional co-operation differently; they also appear to define the concept in different ways. The two professions look at co-operation from different perspectives of patient care, different levels in the status hierarchy and different sides of the gender gap.
- Administration: Over and above nursing function, OHNP are responsible for the day-to-day functions concerning the clinic including reports, statistics, ordering supplies, stock management, meeting attendance, etc.

- Autonomy: Is a state of personal independence or the condition of freedom. Professional autonomy means having the authority to make decisions and the freedom to act in accordance with one's professional knowledge foundation.
- Task requirement and interaction: Original interaction techniques required for particular work areas that may interfere with the functional or task-oriented requirements a system is intended to support.

A section for demographic data was introduced to the questionnaire assessing age, gender, highest nursing qualification, highest occupational health qualification and years of occupational health nursing experience.

The items were measured on a Likert-type attitude scale; ranging from 1 to 5 and a total possible score ranging from 40 to 304.

3.9.3 Changes Made to the Original Instrument

The instrument was developed for a USA perspective on job satisfaction for nurses in a hospital setting and therefore certain adjustments were made to suit the South African occupational health-nursing context.
Permission was obtained from Stamps to use the questionnaire and to make changes as required (See Appendix E).

The following changes were introduced to suit a South African occupational health nursing survey:

- Initial 7 point Likert scale adjusted to a 5 point Likert scale for easier understanding and completion of job satisfaction questionnaire.
- Term “nursing” made specific to occupational health nursing.
- Clerical and paper work summarised as administrative work.
- Term physicians changed to occupational health doctors.
- The term hospital was adjusted to clinic.
- The original 44 questions were changed to 40 questions to be completed.
- A section for demographic data was included.

3.10 DATA COLLECTION PROCEDURE

In this section the data collection procedure and techniques used during this research are explained.

Brink (2005) states a researcher can be guided by five (5) important questions in the data collection process namely:

- What - questionnaires
- How - self-administered
- Who - the researcher
- Where - regional offices of Gauteng, Mpumalanga and Pretoria & North-West
- When - scheduled regional occupational health nursing practitioners meeting

The researcher obtained permission from the regional managers of the respective regions to attend the regional sisters' meeting and conduct the research study by handing out the surveys to the OHNP's based on the information received from the regional office on the information of their staff.

A slot for research was put into the agenda for the meeting.

The researcher attended all three regional meetings personally.

For this specific study, the data collection procedure was divided into two sections namely pre-notification and distribution and collection of the research questionnaire.

3.10.1 Pre-Notification

The researcher communicated with all prospective participants telephonically or via electronic mail before the meetings to inform them about the study and to invite them to participate.

3.10.2 Administering of the Data Collection Instrument

The questionnaires were handed out to the occupational health-nursing practitioners who met the inclusion criteria during the scheduled regional occupational health nursing practitioners' meeting for each selected region namely Inland (Gauteng), Mpumalanga and Pretoria North-West by the researcher.

The researcher explained the study and procedure and handed out the package containing the questionnaire and information letter.

All participants were asked to deposit either the blank or completed questionnaires into an unmarked sealed box provided at the venue.

The researcher left the venue whilst the participants completed the questionnaires, but remained close enough for any questions.

3.11 PILOT STUDY

De Vos (2011) defines a pilot study as a pre-testing of an instrument consisting of all aspects of the data collection process on a small scale. Brink (2005) states a pilot study is a small-scale study, conducted before the main research on a limited number of subjects, from the same population as selected for the actual study. According to Brink et al (2006), the purpose of the pilot study will be to investigate the feasibility of the planned study and to detect any errors in the data collection instrument.

For this research, the questionnaire was pre-tested on a pilot group of five (5) occupational health nursing practitioners not included in the study based on the eligibility criteria. The occupational health-nursing practitioners had an opportunity to discuss the problem areas in terms of clarity of questions, length of time needed to complete the questionnaire and the effectiveness of the instructions with the researcher. The researcher had discussions with a statistician from Wits University, who was available in the afternoons and situated in the post-grad hub, for matters relating to the ability of the tool to capture information appropriate for data analysis and to answer the objectives of the study. The results obtained during the pilot study were not used in the main study.

3.12 VALIDITY AND RELIABILITY OF THE RESEARCH INSTRUMENT

Reliability and validity is of great importance in all studies, as generally indicated in research literature. As described by Golafshani in 2003, reliability and validity was more commonly used in quantitative research, but is now also considered in qualitative research models. Handley (2008), mentioned that where a research project is being planned or findings been interpreted, the impact of the results is still dependent upon the two concepts of validity and reliability.

Brink et al (2006) clearly defines the difference between validity and reliability:
Validity is concerned about the accuracy and the truthfulness of the scientific findings in the research study. Validity is established by determining the extent to which conclusions affectively represent investigational reality and the assessment of hypotheses formulated by the researcher represents or measures the categories of the human experience that occur.

Reliability is concerned with the consistency, stability and repeatability of the instrument and whether the process of the study is consistent, reasonably stable over time and produces the same results on repeated trial (Miller: 2009).

As indicated in section 3.8 of the instrument used, appropriateness of a data collection instrument affects the validity and the reliability of the research project.

The reliability of the scale for the research instrument was determined by the use of the Cronbach alpha coefficient (Stamps, 1978 as referenced in Mc Glynn et al 2012); reliability for the 44-item tool was 0.91. The questionnaire was also checked for content validity by the supervisor, two lecturers in OHN in RSA and an experienced objective OHNP who was not included in the main study. The specialists have provided feedback on the content, relevance of questions and any ambiguities in the wording of the items.

The internal consistency of the questionnaire was established through calculation of the Cronbach's alpha.

3.13 DATA ANALYSIS

Burns et al (2010) defines data analysis as a process of inspecting, cleaning, transforming and modelling data with the goal of discovering useful info, suggesting conclusions and supporting decision making. This definition is supported by Brink (2005), who elaborated that data analyses also categorise, order, manipulate and summarise data in and describing them into significant rapports.

For this specific research, the statistical analysis was conducted by using STATA version 12. The biostatistics unit at the Medical Research Council (MRC) assisted with the analysis of the data.

Statistical analyses include descriptive statistics (frequencies, means, ranges and standard deviations).
Descriptive statistics are subdivided into five groups namely:

- Frequency distributions and counts
- Simple descriptive statistics
- Measures of central tendency
- Measures of scattering or variability
- Measures of relationships

3.14 SUMMARY

This chapter provided and overview of the research design and method used in answering the research questions. A description of the target and accessible population and the sampling process used was given. The planning of the empirical research, pilot study, design of the data collection instrument and the data collection procedure, methods to ensure reliability and validity of the instrument were discussed. The chapter also presented and discussed the ethical procedures followed to ensure protection of the human rights of the research participants in this study.

The following chapter presents an analysis of the findings of the data collected through the questionnaire method.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

Data files were set within the computer statistical package 'STATA' version 12, entered once and then verified during the second direct data entry. Descriptive and inferential statistics were used to achieve the study objectives. The descriptive tests were used to synthesise participant's biographical data and questionnaire schedule, whereas inferential statistics described and synthesised questionnaire scores to compare the biographical data of participants with obtained levels of measurements to test for statistical significance. Statistical tests included the Cronbach's alpha coefficient, Kruskal-Wallis Test, analysis of variances (ANOVA) and two sampled t-test. Testing was done at the 0.05 level of significance ($p<0.05$) and insured a power of at least 95% accuracy in findings. Findings will be discussed on construct, scale and item levels.

This chapter describes the analysis of data using descriptive and inferential statistical tests and interpretation of findings.

4.2 APPROACH TO DATA ANALYSIS

Descriptive statistics were used to interpret the biographic data: age, gender and highest level of qualification in nursing, occupational health nursing qualification and years of experience and distribution of participant's response, inclusive of the six major constructs (remuneration, professional status, nurse-doctor relationship, administration, autonomy, task requirements and interaction). Frequency distributions and cross tables were used to provide an overall coherent presentation and description of the data. Percentages in these findings were taken to the nearest whole number.

Cronbach's reliability coefficient alpha assessed the reliability of the summative rating scale (Likert scale) composed of the construct variables specified. It is a measure of internal consistency reliability and determines the degree of relatedness or strength of association between the construct variables (De Vos et al. 2011). The standard Cronbach's

alpha is the higher the alpha, the more reliable the test, however modest reliability is accepted at 0.70 (Nunnally, 1978).

The **Kruskall-Wallis** Equality of Populations Rank Test was used to compare the level of agreement with respect to selected variables (demographic data) and distribution of item scores inclusive of the six major constructs (remuneration, professional status, nurse-doctor relationship, administration, autonomy, task requirements and interaction). It is a non-parametric method for testing the hypothesis that several samples are from the same population.

A one-way analysis of variance **(ANOVA)** was used to analyse the difference between group means (i.e. age, highest qualification in nursing, occupational health nursing and years of experience) and their associated procedures (such as 'variation' amongst and between groups) (Glantz, 2013). When testing for the difference in mean scores for gender, a **two sample t-test** was applied. A t-test statistically determines whether the mean scores of the two groups (i.e. male and female) are statistically different (De Vos et al. 2005). Based on the results of these tests, a **linear adjustment** by a two-way analysis of variance **(ANOVA)** was applied to model the relationship between a scalar dependent variable and one explanatory variable. Tables were used as graphic representation of the paired scores between variables.

Data were analysed to determine the level of work satisfaction using frequency responses for item scores after collapsing the categories of the Likert scale, where 1, 2 and 3 were used as disagree, and 4 and 5 as agree. Collapsing of the Likert scale, following advice from the statistician in consultation with the researcher's supervisor, was to ease discussion of the data, however, it was noted a larger percentage of participants answered either disagree or agree in the itemised analysis.

The level of statistical significance was set at $p<0.05$. A senior biomedical statistician from the Medical Research Council (MRC) analysed the data using the statistical package 'STATA' version 12.

4.3 RESULTS AND FINDINGS

4.3.1 Questionnaire Section A: Demographic Data

This section related to the participant's biographic data, which comprised five (5) items. Items included highest nursing qualification, occupational health nursing qualification and years of experience, age and gender. The sample size was a 180 (n=180) participants, which is a response rate of 97% and is summarised in **Table 4.1.** Items were grouped together to facilitate discussion of data.

Table 4.1 Biographic data for nurse participants for the total sample (n=180)

Item	Demographic data	Frequency	Percentage
Q1	Highest nursing qualification		
	No response	3	1.7
	General nursing	66	36.7
	Comprehensive nursing	68	**37.8**
	Degree	37	20.6
	Master's degree	6	3.3
Q2	Occupational health nursing Qualification		
	No response	14	7.8
	Certificate	65	36.1
	Diploma	76	**42.2**
	degree	22	12.2
	Master's degree	3	1.7
Q3	Years of experience		
	No response	1	0.6
	6 months to 1 year	22	12.2
	1 to 4 years	81	**45.0**
	5 to 9 years	52	28.9
	10 to 14 years	10	5.6
	Above 14 years	14	7.8

Table 4.1 provides an overview of biographic data of participants. Of the total sample (n=180), the most prevalent nursing qualification amongst participants was in the category of comprehensive nursing (37.8%; n=68), followed closely by 36.7% (n=66) in the general nursing category, 20.6% (n=37) held a degree in nursing and only 3.3% (n=6) had a master's degree. It can be extrapolated from these findings that the majority (74.5%; n=134) of nurses held a diploma level qualification in nursing.

- Occupational health nursing qualification

An analysis of occupational health nursing qualification indicated a higher (42.2%; n=76) frequency response in the category of diploma, followed by 36.1% (n=65) and 12.2% (n=22) in certificate and degree categories, respectively. Findings indicated that the majority (78.3%; n=141) of nurses held either a diploma or certificate in occupational health nursing. Findings are displayed in **Figure 4.1**.

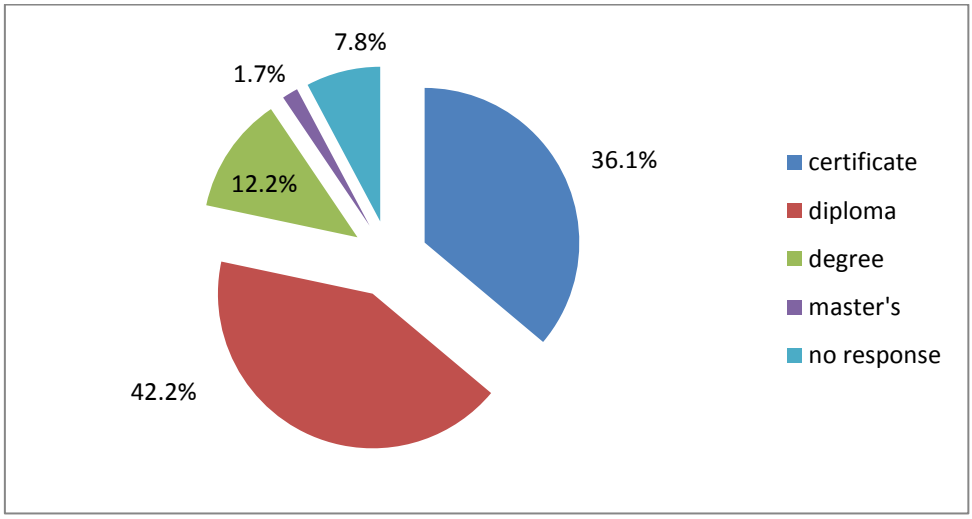


Figure 4.1 Distribution of occupational health nursing qualification (n=180)

- Years of experience

In this study, years of experience of participants indicated a higher (45.0%; n=81) frequency response of one to four years of experience, followed by 28.9% (n=52) in five to nine years of experience, 12.2% (n=22) in the less than six months to one year categories. Only 7.8% (n=14) and 5.6% (n=10) of participants indicated a frequency response in the categories of 10 to 14 years and more than 15 years of experience, respectively. From these

findings it can be extrapolated that most (57.2%; n=103) nurses had less than four years of experience in occupational health nursing. Findings are displayed in **Figure 4.2.**

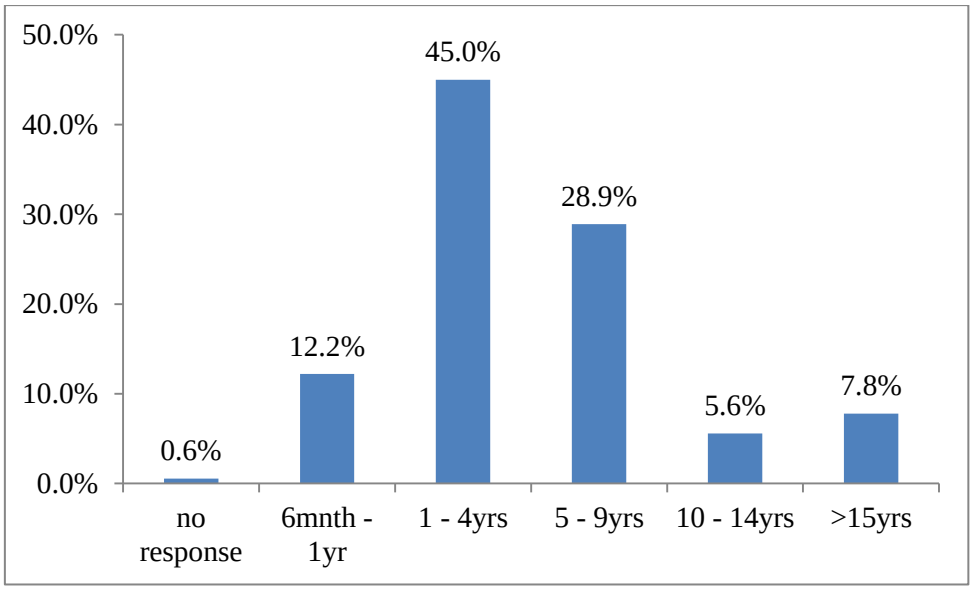


Figure 4.2 Distribution of years of experience as occupational health care nurse (n=180)

- Age in years

The majority (63.0%; n=114) of responses were between the ages of 30 to 49 years, followed by 19.0% (n=34) in 50 to 59 age categories and 8.0% (n=14) in 20 to 29 years. It can be extrapolated from these findings that the majority of participants were between the ages of 30 to 49 years. Findings are displayed in **Figure 4.3.**

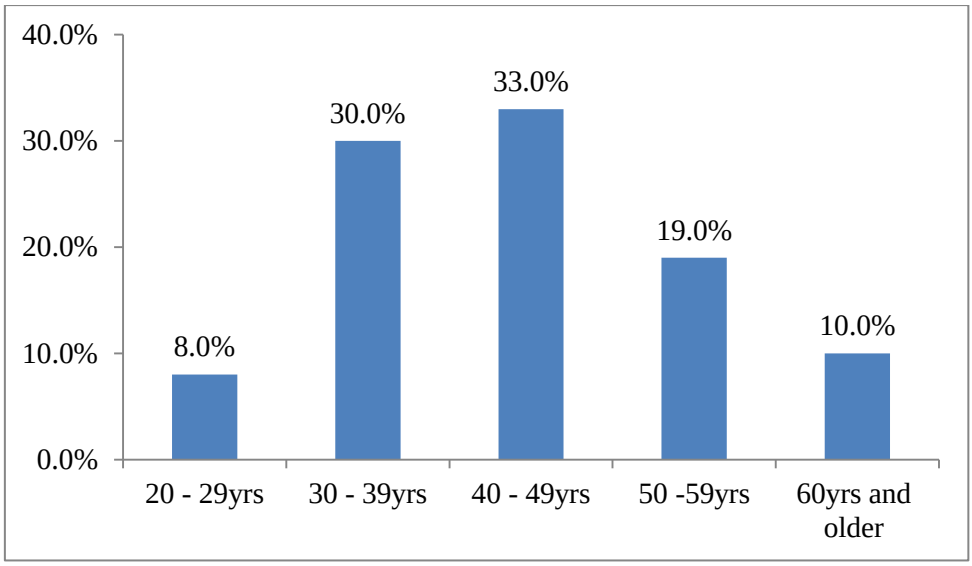


Figure 4.3 Age distribution of nurse participants (n=180)

- Gender

Females accounted for 88.3% (n=159) and males 11.7% (n=21) of the total sample (n=180). It can be extrapolated from the findings that female nurses predominate the sample (n=180). **Figure 4.4** presents the findings.

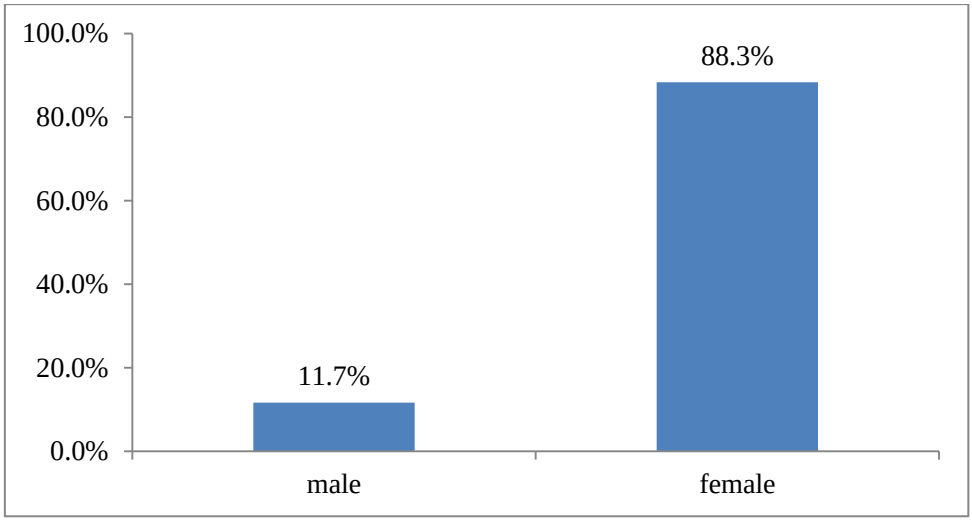


Figure 4.4 Gender distributions of nurse participants (n=180)

4.3.2 Questionnaire Section B: Level of Work Satisfaction

This section comprised 40 items to which responses were obtained from the participants by the researcher through a structured self-administered process, to determine participant's current level of work satisfaction. Descriptive and inferential statistics were used to analyse the data on scale, construct and item levels. Items were combined to form coherent groups to facilitate discussion of data.

4.3.2.1 Remuneration

Satisfaction with remuneration formed the first major construct of the questionnaire, which comprised six questions (Q6, Q13, Q19, Q25, Q34 and Q45). Items were combined to form coherent groups to facilitate discussion of data. **Table 4.2** displays the findings.

Table 4.2 Frequencies obtained from nurse participants for remuneration

Item	Statement	Total	Disagree 1, 2 & 3		Agree 4 & 5	
			n	%	n	**%**
Q6	My present salary is satisfactory.	180	144	**80%**	36	20%
Q13	It is my impression that a lot of occupational health nurses at the clinics are dissatisfied with their pay.	180	18	10%	162	**79%**
Q19	Considering what is expected of occupational health nursing service personnel at this clinic, the pay we get is reasonable.	177	157	**87%**	20	11%
Q25	The present rate of increase in pay for occupational nurses is not satisfactory.	180	50	27%	130	**72%**
Q34	From what I hear about occupational nursing staff at other clinics, at this clinic the pay is fair.	180	143	**80%**	37	20%
Q45	An upgrading of remuneration for occupational nurses in this company is needed.	180	20	11%	160	**89%**

Table 4.2 provides an overview of the findings for current level of satisfaction with remuneration. Of the total sample (n=180) the highest level of agreement by the majority (89%; n=160) of participants was related to item **Q45**, which stated that *'an upgrading of remuneration for occupational health nurses in this company is needed,'* followed by 79% (n=162) of participants in agreement with *'a lot of occupational health nurses at the clinics are dissatisfied with their pay'* **(item Q13).** Similarly, 72% (n=130) of the participants agreed *'the present rate of increase in pay for occupational health nurses is not satisfactory'* **(item Q25).**

The highest level of disagreement by the majority (87%; n=157) of participants was related to **item Q19**, which stated *'considering what is expected of occupational health nursing*

personnel at this clinic, the pay is not satisfactory,' followed by 80% (n=144) who were in disagreement with *'the present salary is satisfactory'* **(item Q6)**. Similarly, the majority (80%; n=143) of participants disagreed with **item Q34**, which stated *'from what I had heard about occupational health nursing at other clinics, pay at this clinic is fair.'* **Table 4.2** displays the findings.

4.3.2.2 Professional status

Satisfaction with level of professional status formed the next major construct of the questionnaire, which comprised eight items (Q7, Q14, Q16, Q22, Q30, Q36, Q40 and Q43) on the data collection instrument. Items were grouped together to facilitate discussion of data. **Table 4.3** displays the findings.

Table 4.3 Frequencies obtained from nurse participants for professional status

Item	Statement	Total	Disagree 1, 2 & 3		Agree 4 & 5	
			n	%	n	**%**
Q7	Occupational nursing is not widely recognised as being an important profession.	171	71	42%	100	55%
Q14	Most people appreciate the importance of occupational nursing care to industrial employees.	173	89	525	84	47%
Q16	There is no doubt whatever in my mind, that what I do on my work is really important.	180	21	12%	159	**88%**
Q22	There are not enough opportunities for advancement of nursing personnel at occupational health level.	180	110	61%	70	39%
Q30	What I do in my work does not add up to anything really significant.	174	149	**82%**	25	15%
Q36	It makes me proud to talk to other people about what I do on my work.	180	25	14%	155	**86%**
Q40	If I had the decision to make all over again, I would still go into occupational health nursing.	178	26	14%	152	**84%**
Q43	My particular work really doesn't require much skill or "know-how".	180	162	**90%**	18	10%

Table 4.3 provides an overview of the findings for level of satisfaction with professional status. Of the total sample, the highest level of agreement by the majority (88%; n=159) of participants was related to **item Q16**, which stated *'there is no doubt whatever in my mind, that what I do on my work is really important.'* The majority (86%; n=155) of participants agreed *'it makes me proud to talk to other people about what I do on my work'* (**item Q36**)

and 84% (n=155) agreed with **item Q40**, which stated *'if I had the decision to make all over again, I would still go into occupational health nursing.'*

However, the highest level of disagreement by the majority (90%; n=162) of participants was related to **item Q43**, which stated '*my particular work really doesn't require much skill or know-how,'* followed by 82% (n=149) who disagreed with the statement *'what I do in my workplace does not add up to anything really significant'* **(item Q30). Table 4.3** displays the findings.

4.3.2.3 Nurse-doctor relationships

Satisfaction with the level of nurse-doctor relationships formed the next major construct of the questionnaire, which comprised of five items (Q11, Q23, Q37, Q39 and Q41) on the data collection instrument. Items were grouped together to facilitate discussion of data. **Table 4.4** displays the findings.

Table 4.4 Frequencies obtained from nurse participants for nurse-doctor relationships

Item	Statement	Total	Disagree 1, 2 & 3		Agree 4 & 5	
			n	%	n	**%**
Q11	Occupational health doctors' in general cooperate with nursing staff in the clinic.	180	53	29%	127	70%
Q23	There is a lot of teamwork between nurses and doctors at the clinic.	178	52	29%	126	70%
Q37	I wish the occupational health doctor's here would show more respect for the skill and knowledge of the occupational health nurse.	180	100	**56%**	80	44%
Q39	Occupational health doctors at this clinic generally understand and appreciate what the occupational health nursing staff do.	180	55	24%	136	**76%**
Q41	The occupational health doctors at this clinic look down too much on the occupational health nursing staff.	180	155	**86%**	25	14%

Table 4.4 provides an overview of the findings for level of satisfaction with nurse – doctor relationships. Of the total sample (n=180), the majority (76%; n=80) of participants were in agreement that *'occupational health doctors at this clinic generally understand and appreciate what the occupational health nursing staff does'* (**item Q39**). This was followed by 70% (n=127) of participants in agreement with the statements related to **item Q11** and **item Q23,** which stated *'occupational health doctors in general cooperate with nursing staff in the clinic'* and *'there is a lot of teamwork between nurses and doctors at the clinic,'* respectively.

However, the majority (86%; n=155) of participants were in disagreement with **item Q41**, which stated *'occupational health doctors at this clinic look down too much on the*

occupational health nursing staff' and only 56% (n=100) disagreed with *'occupational health doctors should show more respect for the skill and knowledge of the occupational health nurse'* (**item Q37**). **Table 4.4** displays the findings.

4.3.2.4 Administration

Satisfaction with level of administration formed the next construct on the questionnaire, which comprised three items (Q9, Q17 and Q35) on the data collection instrument. Items were grouped together to facilitate discussion of data. **Table 4.5** displays the findings.

Table 4.5 Frequencies obtained from nurse participants for administration

Item	Statement	Total	Disagree 1, 2 & 3		Agree 4 & 5	
			n	%	n	**%**
Q9	There is too much administrative work required of an occupational health nurse in a clinic.	178	21	12%	157	**87%**
Q17	There is a great gap between the management of this clinic and the daily problems of the occupational nursing service.	148	112	**63%**	36	35%
Q35	Administrative decisions at this clinic interfere too much with client care.	174	93	52%	81	45%

Table 4.5 provides an overview of the findings for satisfaction with level of administration. Of the total sample (n=180), the majority (87%; n=157) of participants were in agreement with **item Q9**, which stated *'there is too much administrative work required of an occupational health nurse in a clinic'*.

The highest level of disagreement by 63% (n=112) of participants was related to item Q17, which stated *'There is a great gap between the management of the clinic and the daily problems of the occupational nursing service'*, whereas 52% (n=93) of the participants

disagreed with the statement *'administrative decisions at this clinic interfere too much with client care'* (item Q35). Findings are displayed in **Table 4.7.**

4.3.2.5 Autonomy

Satisfaction with level of autonomy formed the next major construct on the questionnaire, which comprised ten items (Q10, Q12, Q18, Q21, Q24, Q28, Q29, Q32, Q42 and Q44) on the data collection instrument. **Table 4.6** displays the findings.

Table 4.6 Frequencies obtained from nurse participants for autonomy

Item	Statement	Total	Disagree 1, 2 & 3		Agree 4 & 5	
			n	%	n	**%**
Q10	The nursing staff has sufficient control over scheduling their own shifts in the clinic.	175	84	47%	91	51%
Q12	I feel that I am supervised more closely than is necessary.	180	151	**84%**	29	16%
Q18	I feel I have sufficient input into the programme of care for each of my clients/patients.	180	63	34%	117	66%
Q21	I have too much responsibility and not enough authority.	178	91	51%	87	48%
Q24	My present area where my clinic is situated is satisfactory.	180	68	38%	112	**62%**
Q28	There is ample opportunity for occupational nursing staff to participate in the operational decision-making process.	180	129	**71%**	51	29%
Q29	A great deal of independence is permitted, if not required, of me.	179	46	25%	133	**74%**
Q32	I am sometimes frustrated because all of my activities seem programmed for me.	176	114	**63%**	62	35%
Q42	I have all the voice in planning and managing the medical surveillances and other related processes and procedures for this clinic.	180	77	42%	103	**58%**
Q44	I have the freedom in my work to make important decisions as I see fit, and can count on my operations managers to back me up.	180	55	31%	125	**70%**

Table 4.6 provides an overview of the findings for autonomy. Of the total sample (n=180), the highest level of agreement, by the majority (74%; n=133) of participants related to **item Q29**, which stated *'a great deal of independence is permitted, if not required, of me,'* followed by 70% (n=125) in agreement with the statement '*I have all the freedom in my work to make important decisions as I see fit, and can count on my operations managers to back me up*' (**item Q44**). Similarly, the majority (62%; n=112) of participants were in agreement with the statement *'my present area where my clinic is situated is satisfactory'* (**item Q24**), whereas a close majority (58%; n=103) agreed with the statement of **item Q42**, which stated *'I have all the voice in planning and managing the medical surveillances and other related processes and procedures for this clinic.'*

The highest level of disagreement by 84% (n=151) of participants was related to **item Q12,** which stated *'I feel that I am supervised more closely than is necessary'*, and followed by 71% (n=129) of participants who disagreed with the statement *'there is ample opportunity for occupational nursing staff to participate in the operational decision-making process'* (**item Q26**), whereas 63% (n=114) of participants disagreed with **item Q32**, which stated *'I am sometimes frustrated because all of my activities seem programmed for me'*. **Table 4.6** displays the findings.

4.3.2.6 Task requirements and interaction

Satisfaction of level of task requirements and interaction formed the final construct on the questionnaire, which comprised eight items (Q8, Q15, Q20, Q26, Q27, Q31, Q33 and Q38) on the data collection instrument. Items were grouped together to facilitate discussion of data. Findings are displayed in **Table 4.7.**

Table 4.7 Frequencies obtained from nurse participants for task requirement and interaction

Item	Statement	Total	Disagree 1, 2 & 3		Agree 4 & 5	
			n	%	n	**%**
Q8	The nursing personnel in my specialty help one another out when things are uncertain.	180	32	18%	148	**82%**
Q15	It is hard for new nurses to feel 'at home' in a clinic.	180	99	**55%**	81	45%
Q20	I think I could do a better job if I did not have so much to do all the time.	180	74	41%	106	59%
Q26	I am satisfied with the different types of activities that I do in my work.	180	52	28%	128	**72%**
Q27	I have plenty of time and opportunity to discuss client care problems with the client and operations manager.	180	109	**60%**	71	40%
Q31	I have sufficient time for direct client care.	180	81	45%	96	53%
Q33	I am sometimes required to do things in my work that are against my better professional nursing judgment.	180	133	**76%**	45	25%
Q38	I could deliver much better care if I had more time with each client.	180	66	37%	113	**63%**

Table 4.7 provides an overview of the findings for level of satisfaction for task requirement and interaction. Of the total sample (n=180), the highest level of agreement by the majority (82.0%; n=148) of participants related to **item Q8**, which stated that *'nursing personnel in the speciality help one another out when things are uncertain,'* followed by 72% (n=128) who agreed with the statement *'I am satisfied with the different types of activities that I do in my work'* (**item Q26).** Similarly, the majority (63%; n=113) of

participants were in agreement with **item Q38**, which stated *'I could deliver much better care if I had more time with each client.'*

Further, the highest level of disagreement by a close majority (76%; n=133) of participants was related to **item Q33**, which stated *'I am sometimes required to do things in my work that are against my better professional nursing judgment,'* followed by 60% (n=109) who disagreed with the statement *'I have plenty of time and opportunity to discuss client care problems with the client and operations manager'* **(item Q27).** Whereas, 55% (n=99) of the participants disagreed with **item Q15**, which stated *'It is hard for new nurses to feel at home in a clinic'*. Findings are displayed in **Table 4.7**.

4.3.3 Comparative and Inferential Statistics

Construct (remuneration, professional status, nurse-doctor relationships, administration, autonomy, task requirement and interaction) scores and total item scores were of interest for further analysis to compare results with the categorical (highest qualification in nursing, occupational health nursing, age, gender, and years of work experience) variables. Cronbach's alpha summative rating scale was used and the sum of the construct scores was used.

Table 4.8 Summary Cronbach's reliability coefficient for the questionnaire

Alpha qualification	Average interim correlation	Reliability coefficient
45 item tool	0.063	0.76

Findings were based solely on the reliability coefficient with some items omitted to maximise reliability of the coefficient alphas. Findings yielded the Cronbach's alpha coefficient for the 45- item tool was 0.76 and for each of the subscales: remuneration 0.80, professional status 0.73, nurse-doctor relationship 0.69, administration 0.74, autonomy 0.76 and task requirement and interaction 0.71. These findings meet the standard for moderate reliability (Nunnally, 1978) and suggest a positive relationship exists between the variables of the total item scores. Results of the process are summarised in **Table 4 8**.

Based on the observed difference in the frequency responses in the categorical variables for highest level of nursing qualification, occupational health nursing qualification, years of experience, age and gender, the item scores were then tested to determine whether they were significant or not. Collapsing of the categories of the Likert scale was done to facilitate presentation of the data, where disagree and neutral = 1 and agree = 2. The Kruskal Wallis Rank Test was applied to test the equality of the population distribution across the six major construct scores.

- Higher qualification in nursing

An overview of the process for higher qualification in nursing is provided in **Tables 4.9 to 4.10** for significant findings of the Kruskal Wallis Test for selected categorical variables.

Table 4.9 Summary of significant findings for Kruskal Wallis Test statistics by construct scores (remuneration, professional status, doctor-nurse interaction and administration) by selected categorical variables for higher qualification in nursing

Construct	Item	Statement	Responses				Rank Sum				Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		General nursing	Comprehensive nursing	Degree	Master's degree	
			n	%	n	%					
Remuneration	Q6	My present salary is satisfactory.	144	80.0	36	20.0	6135.00	5481.50	3265.50	871.50	0.002*
	Q19	Considering what is expected of occupational health nursing service personnel at this clinic, the pay we get is reasonable.	157	87.2	20	11.1	6072.00	5385.50	3041.50	726.00	0.004*
	Q25	The present rate of increase in pay for occupational nurses is not satisfactory.	50	27.8	130	72.2	6019.50	6159.00	3333.00	241.50	0.026*
Professional status	Q16	There is no doubt whatever in my mind, that what I do in my work is really important.	21	11.7	159	88.3	5682.00	5792.50	3681.50	597.00	0.054*
Doctor-nurse interaction	Q11	Occupational health doctors' in general cooperate with nursing staff in the clinic.	53	29.4	127	70.6	5941.50	6349.50	2769.00	693.00	0.048*
	Q37	I wish the occupational health doctor's here would show more respect for the skill and knowledge of the occupational health nurse.	100	55.5	88	44.4	5568.00	6640.50	3247.50	297.00	0.042*
Administration	Q9	There is too much administrative work required of an occupational health nurse in a clinic.	21	11.7	157	87.2	5538.50	6523.00	2747.50	591.00	0.010*
	Q17	There is a great gap between the management of this clinic and the daily problems of the occupational nursing service.	112	62.2	63	35.0	5304.00	6564.00	2416.00	594.00	0.003*

Table 4.10 Summary of significant findings for Kruskal Wallis Test statistics by construct scores (autonomy and task requirement and interaction) for selected categorical variables for higher qualification in nursing

Construct	Item	Statement	Responses				Rank Sum				Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		General nursing	Comprehensive nursing	Degree	Master's degree	
			n	%	n	%					
Autonomy	Q10	The nursing staff has sufficient control over scheduling their own shifts in the clinic.	84	46.7	91	50.6	6060.00	4389.50	4182.00	246.00	0.001*
	Q18	I feel I have sufficient input into the programme of care for each of my clients/patients.	63	35.0	117	65.0	5707.50	5151.00	4174.50	720.00	0.003*
	Q21	I have too much responsibility and not enough authority.	91	50.6	87	48.3	6011.00	6273.50	2752.00	363.00	0.047*
	Q24	My present area where my clinic is situated is satisfactory.	68	37.8	112	62.3	6525.00	5178.00	3489.00	561.00	0.017*
	Q29	A great deal of independence is permitted, if not required, of me.	46	25.6	133	73.8	5191.00	5876.00	3843.00	666.00	0.009*
	Q32	I am sometimes frustrated because all of my activities seem programmed	114	63.3	62	34.4	4800.00	6610.00	3042.00	598.50	0.036*
Task requirement and interaction	Q8	The nursing personnel in my specialty help one another out when things are uncertain.	32	17.8	148	82.3	5392.50	6044.00	3689.50	627.50	0.042*
	Q31	I have sufficient time for direct client care.	81	45.0	96	54.3	4845.00	5833.00	3779.00	768.00	0.004*

Tables 4.9 and 4.10 present the summary of significant findings of Kruskall-Wallis Equality of Populations Rank Test for selected categorical variables for **higher qualification in nursing**. The Kruskal-Wallis Test was employed to proportionate the data by categories (general nursing, comprehensive nursing, degree and master's degree) for highest qualification in nursing. Findings indicated that of the forty questionnaire items, only fifteen items were statistically significant ($p<0.05$). No significant difference was observed in the remaining items by categorical variables for highest qualification in nursing.

- Occupational health nursing

Data were then analysed to determine whether the difference in time scores were statistically significant for selected categorical variables for occupational health nursing qualification. The Kruskal Wallis Rank Test was applied to test the equality of the population distribution across the six major construct scores. An overview of the process for occupational health nursing qualification is provided in **Table 4.11** for significant findings of the Kruskal Wallis Test for selected categorical variables.

Table 4.11 Summary of significant findings for Kruskal Wallis Test statistics by construct scores for selected categorical variables for occupational health nursing

Construct	Item	Statement	Responses				Rank Sum			Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		Certificate	Diploma	Degree	
			n	%	n	%				
Remuneration	Q45	An upgrading of remuneration for occupational nurses in this company is needed.	20	11.1	160	88.9	5081.50	6342.00	2337.50	0.048*
Professional status	Q22	There are not enough opportunities for advancement of nursing personnel at occupational health level.	110	61.1	70	38.9	4823.50	6729.00	2308.50	0.054*
	Q30	What I do in my work does not add up to anything really significant.	169	82.8	25	13.9	4719.50	5783.00	2377.50	0.016*
Doctor-nurse relationships	-	-	-	-	-	-	-	-	-	-
Administration	Q9	There is too much administrative work required of an occupational health nurse in a clinic.	21	11.7	157	87.2	4730.00	6582.00	2218.00	0.016*
Autonomy	Q21	I have too much responsibility and not enough authority.	91	50.6	87	48.3	4090.50	7582.00	1857.50	0.000*
	Q32	I am sometimes frustrated because all of my activities seem programmed	114	63.3	62	34.4	5542.00	5395.00	2266.00	0.004*
Task requirement and interaction	-	-	-	-	-	-	-	-	-	-

Table 4.11 presents the summary of significant findings of Kruskall-Wallis Equality of Populations Rank Test for selected categorical variables for **occupational health nursing qualification**. The Kruskal-Wallis Test was employed to proportionate the data by categories (certificate, diploma and degree) for occupational health nursing qualification. Findings indicated that of the forty questionnaire items, only **six items** were statistically significant ($p<0.05$). No significant difference was observed in the remaining items by categorical (doctor-nurse relationships and administration) variables for qualification in occupational health nursing.

- Age in years

Data were then analysed to determine whether the difference in item scores were statistically significant for selected categorical variables for age. The Kruskal Wallis Rank Test was applied to test the equality of the population distribution across the six major construct scores. An overview of the process for age is provided in **Tables 12 to 14**.

Table 4.12 Summary of significant findings for Kruskal Wallis Test statistics by construct scores (remuneration and professional status) for selected categorical variables for age

Construct	Item	Statement	Responses				Rank Sum					Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		20 to 29 yrs	30 to 39 yrs	40 to 49 yrs	50 to 59 yrs	60 & above	
			n	%	n	%						
Remuneration	Q19	Considering what is expected of occupational health nursing service personnel at this clinic, the pay we get is reasonable.	157	87.2	20	11.1	869.00	4797.00	5271.00	2774.50	2041.50	0.002*
	Q34	From what I hear about occupational nursing staff at other clinics, at this clinic the pay is fair.	143	79.3	37	20.6	1008.00	4878.00	5760.00	2628.00	2016.00	0.005*
Professional status	Q7	Occupational nursing is not widely recognized as being an important profession.	76	42.2	100	55.6	979.00	4455.00	5577.00	3432.00	1133.00	0.002*
	Q14	Most people appreciate the importance of occupational nursing care to industrial employees.	95	52.2	84	46.7	932.00	4167.00	6499.00	2499.00	1834.00	0.002*
	Q22	There are not enough opportunities for advancement of nursing personnel at occupational health level.	110	61.1	70	38.9	777.00	5517.00	5580.00	3237.00	1179.00	0.008*
	Q36	It makes me proud to talk to other people about what I do on my work.	25	13.9	155	86.11	1442.00	5022.00	5370.00	2602.00	1854.00	0.015*

Table 4.13 Summary of significant findings for Kruskal Wallis Test statistics by construct scores (doctor-nurse relationships and autonomy) for selected categorical variables for age

Construct	Item	Statement	Responses				Rank Sum					Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		20 to 29 yrs	30 to 39 yrs	40 to 49 yrs	50 to 59 yrs	60 & above	
			n	%	n	%						
Doctor-nurse relationships	Q23	There is a lot of teamwork between nurses and doctors at the clinic.	52	28.9	126	70.0	1439.00	4457.00	5542.00	2592.00	1901.00	0.028*
	Q37	I wish the occupational health doctor's here would show more respect for the skill and knowledge of the occupational health nurse.	100	55.5	88	44.4	1787.00	4977.00	4830.00	3337.00	1359.00	0.004*
	Q41	The occupational health doctors at this clinic look down too much on the occupational health nursing staff.	155	86.1	25	13.9	1272.00	5382.00	5580.00	2652.00	1404.00	0.010*
Autonomy	Q21	I have too much responsibility and not enough authority.	91	50.6	87	48.3	1178.00	5065.00	5872.00	2721.00	1095.00	0.008*
	Q28	There is ample opportunity for nursing staff to participate in the operational decision-making process.	129	71.6	51	28.3	910.00	4590.00	6240.00	3380.00	1170.00	0.000*
	Q21	I have too much responsibility and not enough authority.	91	50.6	87	48.3	1178.00	5065.00	5872.00	2721.00	1095.00	0.008*

Table 4.14 Summary of significant findings for Kruskal Wallis Test statistics by construct scores (task requirement) for selected categorical variables for age

Construct	Item	Statement	Responses				Rank Sum					Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		20 to 29 yrs	30 to 39 yrs	40 to 49 yrs	50 to 59 yrs	60 & above	
			n	%	n	%						
Task requirement and interaction	Q8	The nursing personnel in my specialty help one another out when things are uncertain.	32	17.8	148	82.3	1311.00	5481.00	4500.00	3531.00	1467.00	0.000*
	Q27	I have plenty of time and opportunity to discuss client care problems with the client and operations manager.	109	60.5	71	39.4	1130.00	4500.00	6450.00	2680.00	1530.00	0.008*
	Q33	I am sometimes required to do things in my work that are against my better professional nursing judgment.	133	73.8	45	25.0	1739.00	4330.00	5622.00	2723.00	1517.00	0.002*

Tables 12 to 14 presents the summary of significant findings of Kruskall-Wallis Equality of Populations Rank Test for selected categorical variables for **age**. The Kruskal-Wallis Test was employed to proportionate the data by categories (20 to 29yrs, 30 to 39yrs, 40 to 49yrs, 50 to 59yrs, and >60yrs) for occupational health nursing qualification. Findings indicated that of the forty questionnaire items, only **fourteen items** were statistically significant ($p<0.05$). No significant difference was observed in the remaining items by categorical variables for age.

- Years of work experience

Data were analysed to determine whether the difference in item scores were statistically significant for selected categorical variables for years of experience. The Kruskal Wallis Rank Test was applied to test the equality of the population distribution across the six major construct scores. An overview of the process for years of experience is provided in **Tables 4.15 to 4.17** of significant findings of Kruskal Wallis Test for selected categorical variables.

Table 4.15 Summary of significant findings for Kruskal Wallis Test statistics by construct scores (remuneration) for selected categorical variables for years of work experience

Construct	Item	Statement	Responses				Rank Sum					Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		>6mnths to < 1 yr	1 to 4 yrs	5 to 9yrs	10 to 14yrs	>15yrs	
			n	%	n	%						
Remuneration	Q19	Considering what is expected of occupational health nursing service personnel at this clinic, the pay we get is reasonable.	157	87.2	20	11.1	1491.50	6886.50	4874.00	785.00	1539.00	0.005*
	Q25	The present rate of increase in pay for occupational nurses is not satisfactory.	50	27.8	130	72.2	1834.50	8021.50	4343.00	876.50	1334.50	0.022*
	Q34	From what I hear about occupational nursing staff at other clinics, at this clinic the pay is fair.	143	79.3	37	20.6	1841.50	7581.50	4165.50	715.00	1806.50	0.000*

Table 4.16 Summary of significant findings for Kruskal Wallis Test statistics by construct scores (professional status and doctor-nurse relationships) for selected categorical variables for years of work experience

Construct	Item	Statement	Responses				Rank Sum					Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		>6mnths to < 1 yr	1 to 4 yrs	5 to 9yrs	10 to 14yrs	>15yrs	
			n	%	n	%						
Professional status	Q7	Occupational nursing is not widely recognised as being an important profession.	76	42.2	100	55.6	1722.00	6377.00	5852.00	735.00	714.00	0.000*
	Q14	Most people appreciate the importance of occupational nursing care to industrial employees.	95	52.2	84	46.7	2018.50	7204.00	4240.00	652.00	1638.50	0.036*
	Q16	There is no doubt whatever in my mind, that what I do on my work is really important.	21	11.7	159	88.3	1405.50	7961.50	4420.50	1005.00	1317.50	0.000*
	Q22	There are not enough opportunities for advancement of nursing personnel at occupational health level.	110	61.1	70	38.9	1926.00	7498.00	5008.00	908.00	770.00	0.035*
	Q36	It makes me proud to talk to other people about what I do on my work.	25	13.9	155	86.11	2255.00	7407.50	3987.50	1025.00	1435.00	0.002*
Doctor-nurse relationships	Q11	Occupational health doctors' in general cooperate with nursing staff in the clinic.	53	29.4	127	70.6	1757.50	8094.00	4178.50	807.00	1273.00	0.050*
	Q23	There is a lot of teamwork between nurses and doctors at the clinic.	52	28.9	126	70.0	2076.50	7629.50	3741.50	879.50	1426.00	0.007*
	Q39	Occupational health doctors at this clinic generally understand and appreciate what the occupational health nursing staff does.	44	24.4	136	75.6	1837.50	8266.50	3855.00	8515.00	1299.50	0.002*

Table 4.17 Summary of significant findings for Kruskal Wallis Test statistics by construct (administration, autonomy and task requirement and interaction) scores for selected categorical variables for years of work experience

Construct	Item	Statement	Responses				Rank Sum					Kruskal-Wallis Test: p-value
			Disagree & neutral		Agree		>6mnths to < 1 yr	1 to 4 yrs	5 to 9yrs	10 to 14yrs	>15yrs	
			n	%	n	%						
Administration	Q35	Administrative decisions at this clinic interfere too much with client care.	93	51.7	81	45.0	1628.50	7293.50	4667.00	638.00	824.00	0.004*
Autonomy	Q10	The nursing staff has sufficient control over scheduling their own shifts in the clinic.	84	46.7	91	50.6	2103.00	6624.00	4620.00	1029.00	849.00	0.014*
	Q18	I feel I have sufficient input into the programme of care for each of my clients/patients.	63	35.0	117	65.0	1330.50	7693.50	4975.50	946.50	1164.00	0.012*
	Q21	I have too much responsibility and not enough authority.	91	50.6	87	48.3	1620.50	7754.00	4755.50	632.00	991.00	0.018*
	Q24	My present area where my clinic is situated is satisfactory.	68	37.8	112	62.3	1643.00	8124.00	4274.00	7875.00	1281.50	0.047*
Task requirement and interaction	Q15	It is hard for new nurses to feel ‘at home’ in a clinic.	99	55.0	81	45.0	2521.00	7052.50	4274.50	1121.50	1140.50	0.021*
	Q20	I think I could do a better job if I did not have so much to do all the time.	74	41.1	106	58.9	1630.50	8407.50	3919.00	1001.50	1151.50	0.002*
	Q27	I have plenty of time and opportunity to discuss client care problems with the client and operations manager.	109	60.5	71	39.4	1915.00	7905.00	4713.50	724.00	852.50	0.036*
	Q38	I could deliver much better care if I had more time with each client.	67	37.2	113	60.8	1990.00	8262.50	4069.00	514.00	1274.50	0.001*

Tables 15 to 17 present the summary of significant findings of Kruskall-Wallis Equality of Populations Rank Test for selected categorical variables for **years of work experience**. The Kruskal-Wallis Test was employed to proportionate the data by categories (>6mnths to <1yr, 1 to 4yrs, 5 to 9yrs, 10 to 14yrs, >15yrs) for years of work experience. Findings indicated that of the forty questionnaire items, only **twenty two items** were statistically significant ($p<0.05$). No significant difference was observed in the remaining items by categorical variables for years of work experience.

Measurement of central tendency and variation (mean and standard deviation) were used to summarise the data. Findings for selected participant biographical categorical variables, namely gender, age, highest qualification in nursing, occupational health qualification and years of work experience are discussed in the next section. Summary of mean scores for comparison of current level of satisfaction by selected categorical variables are provided in **Tables 4.18 to 4.20.**

Table 4.18 Summary mean total scores obtained for selected categorical variables

Category	MS	df	F-test	Prob > F
Highest qualification in nursing	3.6	3	0.04	0.989
Occupational health nursing	91.3	3	0.98	0.404
Gender	57.9	1	0.62	0.431
Age	152.6	4	1.64	0.167
Years of work experience	366.7	4	3.94	0.004*

Key: *=statistical significance

Data were analysed to determine whether there was a statistical difference in the mean total scores for selected categorical variables. A one-way analysis of variance (ANOVA) was employed to proportionate the data by categories (highest qualification in nursing, occupational health nursing, gender, age and years of work experience) in order to provide the test statistic. Findings indicated that of the five categories, **one category (years of work experience)** was found to be statistically significant ($p<0.05$). No significant difference was observed in the remaining categories. Results of this process are summarised in **Table 4.18.**

Table 4.19 Summary of mean total scores for gender categorical variables

Group	n	Mean (SD)	CI	p-value
Female	159	52.98 (10.24)	51.38 - 54.49	0.072
Male	21	48.80 (7.48)	45.40 – 52.21	

Data were then analysed to determine whether there was a statistical significant difference in the mean scores between selected categorical variables. A two-sample t-test was applied to proportionate the data by gender categorical variables (female and male) in order to provide the test statistics. No significant difference ($p>0.05$) was observed in the mean total scores between females and males. Results of this process are summarised in **Table 4.19.**

Table 4.20 Summary of mean total scores for highest qualification in nursing by occupational health nursing qualification categorical variables

Highest qualification in nursing	Occupational health nursing qualification								
	Certificate			Diploma			Degree		
	M	SD	CI	M	SD	CI	M	SD	CI
Diploma in general	41.59	3.59	34.49-48.69	45.62	4.21	37.14-53.78	-	-	-
Diploma in comprehensive nursing	**46.39**	4.13	38.23-54.44	**46.06**	3.81	38.52-53.60	**47.92**	3.84	40.32-55.53
Degree in nursing	46.01	4.53	37.03-54.97	45.67	4.28	37.20-54.15	**47.53**	4.19	39.24-55.83
Master degree in nursing	57.00	7.09	43.68-71.71	52.29	7.09	38.28-66.31	**70.0**	5.57	58.98-81.01

Data were analysed to determine whether there was a statistical significant difference in the mean scores between selected categorical variables. A two way analysis of variance (ANOVA) test for linear adjustment of data was employed to proportionate the probability

of data by selected categorical variables (highest qualification in nursing and occupational health nursing). Confidence intervals were determined.

Results indicated the mean score for diploma in occupational health nursing was higher (45.62; CI 37.14-53.78) than the score for diploma in general nursing (41.59; CI 34.49-48.69), implying the current level of satisfaction is higher for diploma in occupational health nursing than diploma in general nursing.

Furthermore, results indicated the mean score for degree in occupational health nursing was higher (47.92; CI 40.32-55.53) than the diploma (46.06; CI 38.52-53.60) and certificate in occupational health nursing (46.39; CI 38.23-54.44), implying the current level of satisfaction is higher for degree in occupational health nursing than either diploma and certificate.

Results also indicated the mean total score for Master's degree in occupational health nursing was higher (70.00; CI 58.98-81.01) than the diploma (52.29; CI 38.28-66.31) and certificate (57.00; 43.68-71.71) in occupational health nursing, implying the current level of satisfaction is higher for Master's degree in occupational health nursing than either diploma and certificate in occupational health nursing. Results of this process are summarised in **Table 4.20**.

4.3.3.4 Responses from open ended questions

Item Q46 on the data collection instrument enquired whether the participants wished to make additional comments or recommendations for aspects that contribute to job satisfaction or dissatisfaction in occupational health nursing. Findings in **item Q46** indicated 9% (n=17) of participants (see **Figure 4.5)** suggested better support and enhanced communication between management and occupational health nurses would improve the level of job satisfaction for occupational health care nurse practitioners. Related to specific findings participants suggested the following:

- Excessive emphasis on administrative tasks for seven (n=7) participants was an aspect that contributed to job dissatisfaction, suggesting that less time is spent with clients.

- Requirement for professional development for five (n=5) participants, suggesting the need to attend professional society updates regularly and development in time management activities and formulation of policies.
- Salary does not match the salary of a professional nurse specialist for two (n=2) participants, suggesting salary scales need to be reviewed for excellence in performance.

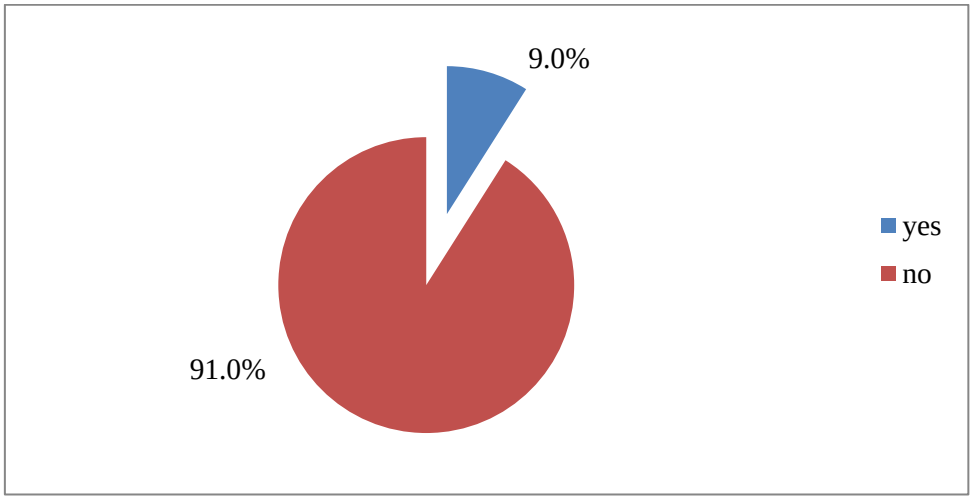


Figure 4.5 Frequencies for responses to an open-ended question

The above-mentioned findings are already incorporated into the items of the Index of Work Satisfaction (IWS Part-B) questionnaire and were not subjected to further analysis. However, the findings in this study are not unique and have been reported in similar recent studies (Bai, Zhang, Wang, Yu, Pei, Cheng & Hsu, 2014; Cheung & Ching, 2014). It is the intention of the researcher to incorporate these findings into the recommendations arising from the study.

4.5 SUMMARY

This chapter discussed the descriptive and comparative statistics used to describe and analyse the data collected and presented the interpretation of the findings. The following chapter will discuss the limitations of the study, summary of research findings, conclusions and recommendations for further research.

CHAPTER FIVE

SUMMARY, DISCUSSION OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In the previous chapter, the analysis of the completed questionnaire by the selected candidates for the study on job satisfaction levels of occupational health nurses was explained. The data of each question in the two different sections was statistically analysed and presented in written, graph and tubular formats.

This final chapter will provide a discussion of the research findings based on the research results obtained from the previous chapter. Within this section, the response rate will be discussed, the demographic profile of the participants will be elaborated on, the reliability of the questionnaire will be confirmed, the research questions answered, the limitations and recommendations presented and the conclusion to this study proposed.

5.2 SUMMARY OF THE STUDY

5.2.1 Purpose of the study

The overall purpose of this study was to determine the factors that contribute to job satisfaction and job dissatisfaction levels of occupational health care nurse practitioners (OHNPs), who are currently employed by selected private occupational health service providers in South Africa.

5.2.2 Objectives of the study

The objectives of the study were to:

- determine the occupational health nurse practitioners (OHNPs) level of job satisfaction
- determine potential factors that could lead to job dissatisfaction
- determine what factors are mostly indicative to cause job satisfaction

5.2.3 Methodology

The Committee for Research on Human Subjects (Medical) of the University of the Witwatersrand (Protocol M130732) (Appendix A) granted ethical clearance before commencement of the study. Permission was further obtained prior to commencement of the study from relevant authorities; Department Chief Executive officer (Appendix C). Three regions from the selected private occupational health care sector tertiary public sector were used to conduct the study; Gauteng, Mpumalanga and Pretoria North-West region.

This study adopted a quantitative, non-experimental, cross sectional survey research design.
Stage I involved testing the instrument for content validity using by a panel of expert members, following a pilot study that was conducted
Stage II determined the level of job satisfaction and contributory factors of job dissatisfaction of occupational health nursing practitioners employed by a selected private occupational health service provider with a South-African context

In this study, *Stage I* procedures were completed prior to commencing *Stage II* analysis.
In *Stage I* of the study, the sample size comprised a panel of four (n=4) specialist expert members form the University of the Witwatersrand, Faculty of Health Sciences and the Private Occupational Health sector. The questionnaire was pre-tested on a pilot group of five (5) occupational health nursing practitioners who were not included in the study based on the eligibility criteria; for the pre- testing of the data collection instrument.

In stage II of the study, the sample size comprised of a hundred and eighty-three (n=183) occupational health nurse practitioners form three different regions. A total sampling method was used between the periods of 1.03.2013 to 21.08.2013.

In *Stage 1* data was collected by means of a data collection instrument developed by Stamps et al. (1978) and adjusted by the researcher comprising 46 items relevant to occupational health nursing practice. Expert panel member from MRC were asked to rate all the items independently using a 5-point Likert scale. Questions were in the form of

closed ended questions and Likert scales (agree/disagree). Different categories included: demographic data (age, experience etc); factors predicting levels of satisfaction included remuneration, nurse-doctor relationships, autonomy, administrative requirements, professional status and task requirement and interaction

In *Stage II* data was collected by means of a data collection instrument. Data analysis using descriptive and inferential statistics was used to determine the job satisfaction levels of occupational health nursing practitioners. Statistical assistance was obtained from a statistician from the Medical Research Council (MRC). A statistician from Medical Research Centre was consulted prior to data collection and a sample size of (n=183) was decided upon. This was to ensure a confidence interval (CI) of 95% accuracy to achieve ($p<0.05$) testing.

5.3 DISCUSSION OF RESEARCH FINDINGS

The purpose of this study was to determine the factors that contribute to job satisfaction and job dissatisfaction levels of occupational health care nurse practitioners (OHNPs), who are currently employed by selected private occupational health service providers in South Africa. A total response rate of 97% (n=183) was obtained for this study, which is a high percentage for self-administered questionnaires according to literature. The researcher, for this study distributed and collected the questionnaires at the regional meetings of the selected private service provider.

5.3.1 Demographic Profile of the Participants

The demographic profile of the participants' for this specific research study comprised the following components: highest nursing and occupational health nursing qualifications, gender, age category and years of occupational health nursing experience.
The analysis on each of these categories will be discussed and summarised.

- Highest nursing qualification

The majority of the respondents (38%) held a four year nursing diploma (qualification in general, psychiatric, community nursing and midwifery), only 6% had a Master's degree in

nursing, 37% held a general diploma in nursing, 21% of the respondents had a degree in nursing and none held a doctoral degree in nursing. All participants, meeting the inclusion criteria of the study by having the pre-requirement of working in an occupational health environment, answered this specific question. In summary, the majority of the OHNP's have a diploma qualification, in comparison to having a degree in nursing.

This particular research had occupational health nursing practitioners as participants. Occupational Health Nursing, according to South African Nursing Council (SANC R212), is an advanced qualification in occupational health nursing and so a pre-requirement to be able to do this course is a diploma or degree in nursing registered with the SANC.

Within South-Africa, the nursing qualifications are approved by the South-African Nursing Council, as specified on their web-site: www.sanc.co.za/education/training.pdf; (Accessed on the 5 February 2014) on approved qualifications for inclusion in the National Qualification Framework (NQF).

- Occupational health nursing qualification

SANC recognises occupational health nursing as a specialised field providing and delivering health and safety programmes and services to workers and worker populations in their place of employment. In South Africa, occupational health nursing practitioners can obtain the qualification through either a diploma or degree. Historically, it was a six months certificate programme however the short course was phased out in 1993 and no longer exists, or is registered with SANC as an additional qualification.

This question was answered by only 166 of respondents. A possible reason for this could have resulted from the additional category of 'other' which was incorporated into the question and could have caused some misunderstanding.

The majority of participants (42%) held a diploma in occupational health nursing (n=76; 42%) followed by 36% having a certificate in occupational health nursing (n=65), 22 participants (12%) held a degree in occupational health nursing and three had a Master's degree (2%). A relatively high percentage of occupational health nursing practitioners (36%) held a certificate, which is an indication they have not furthered their occupational

health nursing education beyond this qualification. However it is possible that these practitioners did obtain other short course qualifications in the health and safety field.

Occupational Health Nursing, according to SANC, originates its theoretical and conceptual framework from a multidisciplinary base which, amongst others, includes: nursing science, medical science and public health sciences such as epidemiology, environmental health, occupational health sciences such as toxicology, safety, industrial hygiene and ergonomics, social and behavioural sciences and business management and administration principles (www.sanc.co.za/competancies.pdf Assed on 5 February 2014).

Irrespective of the type of occupational health nursing qualification obtained, a professional nurse becomes registered at SANC for the additional qualification. According to information from the South-African Council on additional qualifications, the amount of registered occupational health nursing practitioners at the end of 2012 was 308 versus 319 in 2011 (www.sanc.co.za/stats.pdf Accessed on 5 February 2014).

In this study 56% (n= 101) of the participants indicated having a diploma or degree in occupational health nursing, yet the statistics from SANC for 2012 states only 308 registered nationally for the additional qualification in occupational health nursing.

- Gender

It is evident form the data analysis that nursing, in this particular study, even occupational health nursing is still predominantly a female work environment. This section was answered by all the participants and the statistics revealed 88% of the population was female and only 12 % male.

The same statistical information from SANC, on registered occupational health nurses by end of 2012, revealed there were 293 registered OH females and only 15 registered OH males, forming a total of 308 OHNPs.

In a Health Science Journal, an article was published by Ozdemir, Akansel and Tunk (2008) on Gender and Career: Female and Male Nursing Students Perception of Male Nursing Role in Turkey. It was indicated that nursing is still seen as a position for females.

Within this article it was mentioned that many female dominant positions, including nursing, have failed to attract male workforces and this could be attributed to issues such as status and pay, but also as a result of the gender role stereotyping of the profession. As previously mentioned, Florence Nightingale was recognised for the foundation she set in nursing, with Ozdemir et al (2008) stating she considered nursing as a suitable job for women as it was an extension of their domestic roles. Nightingale's image of a nurse was as a subordinate, nurturing, domestic, humble, self-sacrificing person, as well as not being too educated and that became prevalent in society.

- Age category

The data revealed the majority of the participants (63% n=114) were in the 30 to 49-age range, with 19% (n=34) in the 50 to 59 year age range. Relatively few young adults (8%) are employed in the regions where this study was conducted.

Mutava (2012) reported similar findings, namely that 2.2 % of participants were in the 20 to 29 years age group in a study done in Central Gauteng. The lower rating can be attributed to the fact that professional nurses usually are employed in hospital or clinic settings after qualifying, before entering the occupational health nursing field or further education in the discipline. In addition, a requirement for furthering study in occupational health nursing is a general nursing qualification. In this research 10% (n=18) of participants were over 60 years of age, whereas in the study by Mutava (2012), on Perception of Central Gauteng Occupational Health Nurses and their traditional and expanded roles, reported no OHNPs in this age group.

Data from SANC in 2013 reveals the majority of RN's are between the ages of 50 to 59 years followed by 40 to 49 years. The minority age group amongst registered nurses is below the age of 25, mostly related to study reasons not yet completed or registered (www.sanc.co.za/stats/stats2013/Age.pdf Accessed on 5 February 2014).

- Years of occupational health nursing experience

A total of 33%, making it the majority of the nurses, had five and more, but less than 10 years of OH experience followed by 30% of members having four years' experience in the

industry. The minority was amongst the candidates with less than a year but more than six months experience, which calculated to 8% of the participants. Of the remaining group, 19% had 10 to 14 years of experience and 10% had more than 15 years of occupational health experience.

Investigating the age category, on years of experience, a connection can be made to the age category, rating 19% between 50 and 59 with a possible 10 to 14 years work experience and 10% above the age of 60 having 15 years and longer working experience. If the years of experience are compared to the average age of OHNP's, the hypothesis can be made that nurses only enter occupational health at a later stage in their career.

According to McHugh et al (2011), clinical nursing experience is fundamental for quality patient care. The same researchers claim experience and expertise are two different concepts, although related. They have defined experience as both time in practice and self-reflection which allows preconceived ideas and expectation to be established and developed in real circumstances

The years of experience was measured on being in an occupational health position and not the employment period at the selective private occupational health service provider as occupational health nursing practitioner.

5.3.2 Factors for Job Satisfaction and Dissatisfaction

5.3.2.1 Remuneration

Remuneration rates are a big area of concern as evidenced from the findings. More than 70% of the participants indicated being dissatisfied with their salary and as established from the analysis on their views on remuneration of occupational health nurses in general, it was indicated their salary was not up to standard. From the study, 89% strongly believed the remuneration from the specific company of employment needs to improve.

Scholl (2003) stated that individuals develop expectations regarding their salary through negotiations with their employer, comparison to others and promises made. The satisfaction level is therefore implicated when these expectations are either met or not. In

research by Lephalala (2006), on Factors Influencing Nursing Turnover in Selected Private Hospitals in England, the study revealed nurses in Australia were dissatisfied with their salary and nurses in England were unhappy with reward payment structures and the conclusion from this study was that improvement in nurses' salaries is required to achieve retention of nurses.

The dissatisfaction of pay is also supported in a study by Pietersen (2005) on Job Satisfaction of Hospital Nursing Staff. This study was conducted in Limpopo Province of South Africa and indicated 61% of respondents were dissatisfied with their salaries.

5.3.2.2 Professional status

Every member of the nursing profession, according to Searle and Pera (1995), from the newly entering to the most senior member of the profession, has a duty to protect and enhance the image of this occupation. There are unfortunate arguments against the professional status of nursing, as revealed by Searle et al. (1995), which are that not all nurses are educated at university, the majority of nurses are not self-employed or independent service practitioners, a small percentage of nurses have attained high intellectual status through research and other indicators of leadership, compared to other professions and nursing is mostly dependant on the doctors for their practices. Professional recognition has its origins in features such as professional solidarity, competence, accountability and strict adherence to a professional code of ethics (Searle et.al. 1995).

The researcher decided to use Searle et al. (1995) as a reference in the aspect of professional status, as they contributed to the foundation during the initial nursing study. The component in obtaining the participants view on their current professional status as occupational health had the following outcome:

- Based on the response, it was enlightening to see the participants had a strong view of their professional status. Most of the answers reflected that the delegates feel their work is of importance and has significant value.
- In contrast to one of the arguments of the professional status of nurses, 87% of the participants disagreed on the statement that their particular work really doesn't require much skill or "know-how"

- More than 84% agreed their work is of importance, they are proud in what they do and if they had a second chance, would again choose to enter OH.
- There was a balanced response on the views of not having enough opportunities for advancement at occupational health level: 39% agreed, 38% disagreed and 23% of were neutral.

5.3.2.3 Doctor- nurse relationship

The nursing environment, as mentioned throughout this study, is part of a multi-disciplinary team. In most cases with the occupational health clinic environment, this team is mostly limited to the OHNP and the OHMP. It is therefore of importance to assess the occupational health nurses' view on their doctor/nurse work relationship, as it has a direct impact on job satisfaction levels. The overall value of the cooperation, teamwork and appreciation between these multi-disciplinary members rated 70% and above.

The only concern on the analysis was the medial rating of the OHNP's that doctors should show more respect for their skill and knowledge. Of the questionnaires analysed, 44% agreed with this statement, 40% disagreed and 16% remained neutral. Searle et al (1995) mentioned that nursing practitioners had an ethical responsibility in the interest and welfare of the patient, which means to be a loyal and competent colleague to the doctor and the two, must be able to rely on one another.

5.3.2.4 Administration

Part of the daily clinic management is administrative requirements that can be time consuming. The first priority of nurses, as explained by Acutt et al. (2009), is for OHNP's to focus on health promotion and protection within a safe and healthy work environment, and work mostly as an independent practitioner. An OHN requires a wide range of skills including interpersonal, leadership, management and advanced clinical abilities.

From the above, it is clear the role and responsibilities of an occupational health nurse is diverse and of great value and importance. Part of the study therefore was to assess the opinions of the OHN participants of the administrative role within the clinic environment.

The majority (87%) felt the administrative work was too much, although only 45% agreed the administrative decisions were interfering with client care.

Administration forms part of clinic management and only 35% of the respondents agreed that there was a gap between clinic management and daily problems with occupational health service.

5.3.2.5 Autonomy

Miller (2009) explained the term autonomy derived from the Greek words ‘autos’ which means ‘self’ and ‘nomos’ which means ‘rule’ combine to mean self-governance. The same author stated that autonomy refers to a human being’s right to self-determination and implying that a person has the right to choices and decision making.

As already mentioned above, occupational health nurses work mostly as independent practitioners, creating the ideal environment for personal independence.

During exploration of the data on the related questions around autonomy, it was generally found, the occupational health nurses feel empowered within their working environment. Evaluating the statistics more closely, 51% agreed to have sufficient control over scheduling of work shifts. A big indicator on the feeling of independence is the level of supervision and 69% disagreed with they were supervised more closely than necessary. As indicated throughout this study, patient care plays a key role and 66% of the participants had sufficient input to the programme of care for the patients and 56% agreed to have a voice in planning and managing medical surveillances and other related processes and procedures. It is the opinion of the researcher that the last statement figure is influenced by the on-site reporting structure to the person who is responsible for safety, health, risk quality and environmental affairs.

An important aspect of autonomy, which noticeably came through from the questionnaires, was decision making; 70% indicated having the freedom at work to make important decisions and having the support of the line manager for back-up. Working independently and looking where the clinic is situated, could be a daunting feeling, although 62% were satisfied as to where the clinic was based.

The researcher identified a mix response on how the participants felt about too much responsibility and not enough authority; 48% agreed to this statement, 35% disagreed, with the remaining 16% neutral. As well the input on whether they felt they participate in operational decision making, only 29% agreed. The question on level of frustration due to the sense that activities seemed to be pre-programmed, a low 41% disagreed with this statement. In conclusion it was discovered the only undesirable response, with a rating of 48%, was the agreement that OHNP's feel their responsibility outweighs their authority. Ideally, they should feel they have more than enough authority to manage the responsibility.

5.3.2.6 Task requirements and interaction

The final key component assessed to determine the level of job satisfaction of OHN's was task requirement and interaction. This section looked at the response of the participants with regards to how they felt about interaction techniques that may interfere with general operations.

Even though, most of the OHNP's work independently as sole nurses in the clinic, 82% agreed that nurses assist one another when things are uncertain. On evaluation of the responses on time versus task and the fact other obligations interfered with the main focus which is patient care, 54% agreed there is too much task interference that takes them away from patient care.

It is of concern that 45% of the participants agreed it is hard for a new nurse to feel "at home" in the clinic, whilst 37% disagreed and 18% remained neutral. This indicates the working environment is unique in the sense that the professional relationship between the independent nursing practitioner and workforce are very close and good trust relationships are formed. Based on these results, the researcher is of the opinion that continuity of the clinic plays an important factor for the organisation where occupational health services are being rendered.

One of the questions posed was if OHNP's felt they are sometimes required to do things against their better professional nursing judgement and although the ideal would be that none of them felt that way, a 25% agreement was an acceptable figure.

From information gathered so far, it is clear occupational health nursing can be viewed as a diverse role with many facets. This statement was verified by 72% of the participants who agreed to being satisfied with the different types of activities at work.

5.3.3 Open-ended response

As indicated, the last question on the instrument provided an opportunity for the delegates to comment on any other aspects they thought appropriate. Only 9% (n=16) of the participants made use of the opportunity to provide additional remarks.
The following information was obtained from the completed questionnaires:

- Insufficient patient time due to excessive admin work received most of the comments, including there is too much repetitiveness amongst admin work, which is time consuming.
- Concern about leave policies, although the participant did not specify as to what he/she had an issue with.
- One participant mentioned time management and legal compliance by companies was a major challenge to nurses.
- Salary concern was mentioned, in the sense that if occupational health is a speciality, the salary does not match that of a professional nurse specialist

5.4 LIMITATIONS OF THE STUDY

Limitation, as described by Burns and Grove (2005), is theoretical and/or methodological restriction of a research project, which may decrease the credibility and the general idea of the findings. The limitations can be described as the section of the study proposal that describes the situations and circumstances which might have affected or restricted the methods and analysis of research data (Polit and Hungler, 2001). The same authors also explained limitations can be seen as shortcomings, conditions or influences that cannot be controlled by the researcher. According to Simon (2011), limitations are potential weakness found in almost everything one does.

The limitations of this particular study were the following:

- The study was only conducted in three regions of the selected national private occupational health service provider although a total sampling method was used.
- The study was only conducted on a target group of occupational health nursing practitioners employed by one selected private occupational health service provider, whereas, within South-Africa there are several OH service providers as well as industries that appoint their own OHNP's.

5.5 CONCLUSION

This study is based on Hertzberg's two-factor theory of job satisfaction, which comprises of two categories namely, hygiene factors that include aspects such as supervisor, interpersonal relations, physical work condition, salary, policies, administration, benefits and job security, and motivation factors, which includes achievement, recognition, the work itself, responsibility and achievement.

The purpose of this study was to determine factors that contribute to job satisfaction and job dissatisfaction levels of OHNPs, who are currently employed by selected private occupational health service providers in South Africa.

The results of this study showed that from six key component areas within a job satisfaction survey, four of the six aspects were rated as mostly satisfactory by the respondents and through analysis of all the questions, 55% (n=22/40) answered an improved level of job satisfaction versus two distinct components rates as dissatisfied and of all the questions 45% (n=18/40) reflected dissatisfaction.

Based on an analysis of the data specifically on the area of dissatisfaction, the matter of remuneration, as well as in the opportunity for additional comment, it was clear the participants felt strongly about the salary, not only as individuals, but also the financial recognition of the specialised profession as OHNPs.

Within the questionnaire, from the key components, two specific areas were of strong value for the participants: autonomy and professional status. Analysing the percentage ratio, only 60% of the participants had a high sense of autonomy, whereas 88% indicated a strong significance for professional status.

This study highlights that overall there are more areas of job satisfaction compared to job dissatisfaction. The findings of the present study increases the understanding of what contributes to satisfaction of OHNPs.

Management could use these findings as a basis for staff consultation, retention strategies and interventions. Future research should focus on understanding what the role is.

5.6 RECOMMENDATIONS OF THE STUDY

The following recommendations are made relating to nursing practice, management, education and further research.

5.6.1 Recommendations for Nursing Practice

- Based on the findings of this study it is recommended that organization investigate the concerns around administrative duties and requirements that contribute to job dissatisfaction; as (87%; n=157) of the participants agreed to have too much administrative work
- Within the comments received from the open ended questions, an excessive emphasis on administrative task was indicated by the participants (n=7); which indicated by them to have less time with patients, it is there for suggested to standardise and simplify administration to allow adequate patient time
- Only 29% (n=51) of participants agreed to have sufficient opportunity for occupational nursing staff to participate in the operational decision-making process; it is there for recommended to identify opportunities to involve the OHNP more in operational decision makings they do practice independently most of the time
- In general, OHNP indicated to be satisfied with the variety of activities within the profession, it is thus suggested to enhance and promote this to keep the staff interested within the profession
- From this study it was concerning that 25% (n=45) of the participants agreed that it is sometimes required from them to do things in their work that are against their better professional nursing judgment; the researcher feels that further investigation within this matter is needed to identify and rectify any possible unethical practice

5.6.2 Recommendations for Nursing Management

The following recommendations for nursing management are made:

- It is important for nurse managers and leaders to be tuned into the specific components of job satisfaction that are important to nurses working in an occupational health clinic environment
- The results of this study indicate that particular attention should be paid to the dissatisfaction on remuneration
- In light of the present occupational health nursing shortages and increasing demand predictions of the number of available nursing positions increasing attention needs to focus on maximizing the desirability of the work environment to satisfy OHNP's
- A broader understanding of nurses desired practice environments, and those characteristics that presently are associated with increased satisfaction such a professional status, autonomy , nurse-doctor relationship and task requirement and interaction may aid in development of organizational change necessary to retain and attract nurses
- The increase of possibilities for professional development based on the in the response rate that 39% (n=70) of the participants indicated there are not enough opportunities for advancement of nursing personnel at occupational health level, only 38% (n=68) disagreed and 23% (n=42) chose the neutral option

5.6.3 Recommendations for Nursing Education

The following recommendations are made for nursing education:

- The researcher suggest to investigate opportunities for further training and education as this particular study did not assess the needs for further training and redevelopment
- It is advised that satisfaction with job training should be considered as an aspect of overall job satisfaction for future research to be incorporated into the research instrument
- When looking to investigate job training satisfaction, it may more efficient, to address specific training components related to occupational health and the occupational health clinic environment rather than an entire training program

- Evaluation of the education for OHNPs to see if it meets international trends as well as strategies to implement educational support hat prepare OHNPs for an expanded role, along with accreditation
- Within this particular study an open –ended question was posed in which participants had the opportunity to provide additional comments; it was suggested by (n=5) participants that they require professional developments and the need to attend professional society updates on a regular basis and to develop in management activities

5.6.4 Recommendations for Further Research

The following recommendations are made for nursing research:

- From literature review it was evident that there was limited studies done on job satisfaction of OHNP's and more so within an South-African context, to do further research of this topic on a broader sample range
- It is also recommended that research be conducted in collaboration with The South-African Society of Occupational Health Nurses (SASHON); who is a Professional Society committed to the development of the Occupational Health Nursing Practitioner , also to assist in defining what constitutes to the job satisfaction and dissatisfaction of OHN's and also to identify strategies to retain and increase the awareness of the profession
- The current selected private OH service provider has a national geographic setting, and for this particular study only three regions was used, therefore it is recommended that a full national survey of the job satisfaction levels within the OH industry be conducted with possible regional comparison of the survey results

This chapter concludes the research report. This study reveals that overall there are more areas of job satisfaction compared to job dissatisfaction. The findings of the present study increases the understanding of what contributes to satisfaction of OHNPs. Management could make use these findings as a basis for staff consultation, retention strategies and interventions. Future research should focus on understanding what role is contributed by management and the organisation of an occupational health environment, on the maintenance and sustainability of employee satisfaction levels.

It is hoped the findings of this study will be used to inform further studies on job satisfaction levels of occupational health nursing practitioners within a national South African context. It is the aspiration of the researcher that this study on job satisfaction levels of OHNPs contributed to a platform of information and that the data will create awareness of what contributes to the satisfaction and dissatisfaction levels within the profession in South-Africa.

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APPENDIX A

M130523

R14/49 Mrs Igna Alberts

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M130523

NAME: (Principal Investigator)	Mrs Igna Alberts
DEPARTMENT:	Deprtment of Nursing Education CM Johannesburg Academic Hospital
PROJECT TITLE:	Job Satisfaction of Occupational Health at a Private Occupational Health Service Provider in South Africa (Resubmission M130220)
DATE CONSIDERED:	31/05/2013
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Ms Agnes Huiskamp
APPROVED BY:	Professor PE Cleaton-Jones, Chairperson, HREC (Medical)

DATE OF APPROVAL: 14/06/2013

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX B

To whom it may concern:

I am Igna Alberts, Operations Manager LOH Inland region
I have commenced my Master's degree in Occupational Health Nursing through Wits Medical School, January 2011.

The topic of my proposal: **JOB SATISFACTION OF OCCUPATIONAL HEALTH NURSES A PRIVATE OCCUPATIONAL HEALTH SERVICES PROVIDER IN SOUTH-AFRICA**

Job satisfaction is seen as an important component in nurses lives that can have an impact on several areas such as patient safety, quality care, performance, productivity, staff turnover, commitment to the organization and (important to this study) retention and dedication to the profession.

The aim of this study is to explore the job satisfaction that Occupational Health Nurses experience working for a Private Occupational Health Service Provider in South-Africa. By obtaining and analyzing this information, means of sustainability of OHN recruiting to the Occupational industry can be determined, as well, methods of staff retention

Research Objectives

To determine the OHNPs' level of job satisfaction

To determine potential factors that could lead to job dissatisfaction

To determine what factors are mostly indicative to cause job satisfaction

In my initial proposal, I have indicated Occupational Health Nurses working for a Private Occupational Health Service Provider in South-Africa. May I be specific within my research to indicate [redacted]

Hereby I also want to ask for your permission to exclusively use our current permanent Occupational Health Nursing Practitioners employed by [redacted], from all regions, to complete the research questionnaire.
A sample of at least 250 participants will be drawn from a list of Occupational Health Nursing Practitioners employed by a Private Occupational Health Service Provider in South-Africa [redacted]
A random simple sampling method will be used. This will include all the regions

Ethical Considerations

The proposal will be presented to the Committee for research Ethics on Human Subjects (Medical) of the University of the Witwatersrand. Participation in the study is voluntary and completion and return of the questionnaires will be taken as expressed, informed consent to participate in the study.
To ensure confidentiality and anonymity of the respondents and the information, data collection will only be handled and managed by the researcher, through secure on line / direct communication methods.
The report of data will be in aggregate form with identity not traceable to specific nurses in any manner.
No site allocation names are required in the questionnaire

The researcher will incur all costs generated in conducting and completing the proposed study

Your consideration and attention in this matter is greatly appreciated

Should you require any more information to make an informative decision, please feel free to contact me.

Yours truly

Igna Alberts
[redacted]

APPENDIX C

[redacted]

[redacted]

25 April 2013

ATTENTION: IGNA ALBERTS

APPROVAL FOR RESEARCH STUDY
TITLE: Job satisfaction of occupational health nurses in a private occupational health services provider in South Africa.

Our previous correspondence refers.

The Research Committee of the [redacted] has granted permission for your study to take place in our institution.

Please send the ethical consent from the University of the Witwatersrand when you have received it for filing purposes.

We look forward to hearing from you soon.

Yours sincerely

Anne Roodt
Nursing Education Specialist

[redacted]

[redacted]

APPENDIX D

AGENDA FOR REGIONAL SISTER'S MEETING

DATE: 8 May 2013

TIME: 09H00

VENUE: REGIONAL OFFICE, 91 NEWTON ROAD, MEADOWDALE, BOARDROOM.

TIME:	AGENDA ITEM:	RESPONSIBLE PERSON:
09H00-10h00	MACSTEEL PRESENTATION/DISCUSSION. REST OF THE GROUP: ATTENDANCE AND WELCOME. VISUAL ORGANOGRAM.	C. GOOSEN, T. KNOESEN I.ALBERTS
10h00-11h00	TIME MANAGEMENT	I.ALBERTS
11H00-11H30	TEA BREAK	
11H30-12H30	CLIENT SERVICE	T. KNOESEN
12H30-13H30	JOB SATISFACTION – RESEACH PROJECT	I.ALBERTS
13h30-14H00	LUNCH BREAK	
14H00-14H30	ICAS PRESENTATION	J. STARK
14H30-15H000	NURSES' DAY GENERAL	ALL

APPENDIX E

FW: Research proposal

From: Alberts,Igna [redacted]
To: 'stamps@schoolph.umass.edu'

Good day Dr. Stamps

I am Igna Alberts, a Registered Professional Nurse in South-Africa
I am currently doing my master's degree in Occupational Health Nursing through With University (2nd Year)
My research topic is about:
JOB SATISFACTION OF OCCUPATIONAL HEALTH NURSES A PRIVATE OCCUPATIONAL HEALTH SERVICES PROVIDER IN SOUTH-AFRICA

As part of my literature review I read a publication in the Journal of Nursing Management, 2012, 20, 260–265 on Registered nurse job satisfaction and satisfaction with the professional practice model brought great valued input.
My I kindly request permission from you to use the tool on Work Satisfaction, Part B (IWS-Part B) that has been used during this, for my study.
I would be happy to share the outcome of my full research with you
Attached is a baseline of my research proposal. I would gladly send you more information if required
I had the honour to view the tool
My study is specifically related to Occupational Health nursing practitioners
The research tool makes provision for hospital nurses:
With your permission, if granted that I am allowed to use the tool, may I kindly request just to replace the following words for purpose of my study:

- Occupational Health Nurses in place of nurses
- Clinic in the place of hospital
- Occupational Health Medical Practitioner in the place of physician
- Site/ industrial employees in the place of hospital patients

I truly appreciated your attention and feedback in this matter

Kind regards

Igna Alberts
[redacted]

APPENDIX F

June 15, 2012

Igna Alberts
Operations Manager
[redacted]

Dear Igna Alberts:

I appreciate receiving your request for permission to use the Index of Work Satisfaction (IWS) in the research project described in your recent email. I am very happy for you to use the IWS in your study, and modify it in the way you described. You may be familiar with my book, but if you are not, the second edition of *Nurses and Work Satisfaction: An Index of Measurement, 2nd. Edition* (1997) gives the most recent version of the IWS, along with the statistical description of the scale itself. Also included in this volume are results from over 80 studies that have used the IWS. Several investigators write about their experiences using this measurement tool.

If you have any questions about the IWS or any of the support services available for users of the IWS, please call either myself or Market Street Research. Market Street Research does not need a separate letter from you.

Good luck with your dissertation project.

Sincerely,

Paula Stamps, Ph.D.
Department of Public Health
University of Massachusetts
Phone: (413) 545-6880
Fax: (413) 545-6536
Email: stamps@schoolph.umass.edu

APPENDIX G

Letter requesting to participate in research study on job satisfaction among occupational health nursing practitioners employed by a private occupational health service provider in South Africa

Dear colleague

My name is Igna Alberts. I am currently doing my Master's degree in Occupational Health Nursing through the University of Witwatersrand Medical School.

Job satisfaction is seen as an important component in nurses lives that can have an impact on several areas such as patient safety, quality care, performance, productivity, staff turnover, commitment to the organization and (important to this study) retention and dedication to the profession.

Your work satisfaction is important; as you spend so much time at the clinic.

There are possible circumstances and conditions that might have an impact on your current job satisfaction level. This could have an effect on you as an occupational health professional to work to your full performance and render a quality service within your clinic.

As researcher, I would like to make use of this opportunity to do a study on the job satisfaction among occupational health nursing practitioners employed by a private occupational health service provider, and issues which impact on this level of job satisfaction.

May I invite you to consider participating in this research study? This only requires of you to complete questionnaire on work satisfaction.

The questionnaire that will be used is known as the Index of Work Satisfaction. There will be a total of 40 questions to complete. The questions are all close ended; you only need to indicate your level of agreement. The questionnaire also explains on how to answer. The instrument consists of six components namely remuneration, professional status, doctor – nurse relationship, administration, autonomy, task requirement and interaction.

A field worker will be used to provide you with the information and questionnaire. The field worker will also be collecting the completed survey from you.

All information will be dealt with in a confidential matter. There will be no disclosure on your name or the area of work. The questionnaire also does not make provision for any personal information. Access to the information would only be by me as the researcher.

The information of all participants will be statistically analysed. The information received from the data analysis will be summarised and concluded. The aim is to determine possible

outcome for measures to be considered to improve job satisfaction levels among occupational health staff in the workplace.

As this is a project focussing on job satisfaction levels of occupational health nursing practitioners, there will be no additional benefits or remuneration for participating.

Please view this as a step forward to promote work satisfaction.

Your input would be of great value.

Please feel free to contact the field worker at any time during this research study, should you have any questions.

You may withdraw at any time with no consequences

You indicate your voluntary agreement to participate by completing and returning this survey

Thank you for your time in reading this letter and taking this matter into consideration, it is sincerely appreciated

Your's truly

Igna Alberts
[redacted]
[redacted]
[redacted]

APPENDIX H

The Index of Work Satisfaction Questionnaire

Dear colleague

The researcher needs your response to determine the level of job/work satisfaction

Job/work satisfaction is seen as way people feel about their job and its various aspects as well as the extent in which people like or dislike their jobs. It entails a sense of achievement and success in the job, doing the job one enjoys, a feeling of enthusiasm and happiness with one's work and the extent to which expectations are met.

It is estimated that it will take you ± 20 minutes to complete this questionnaire.

All information is **confidential and anonymous**.

Please return the completed questionnaire by placing it in the provided sealed box?

Your time and co-operation is greatly appreciated.

Thank you.

_____

Igna Alberts

SECTION 1: BIOGRAPHICAL INFORMATION

Please mark your answer with a cross(x) at the relevant statement

1. Please indicate your highest nursing qualification.	**Mark (x)**	
Diploma in general nursing		
Diploma in medical and surgical, psychiatric, midwifery and community nursing (4D diploma)		
Degree in nursing		
Master's degree in nursing		
Doctoral degree in nursing		
2. Please indicate your occupational health nursing qualification		
Certificate in occupational health nursing		
Diploma in occupational health nursing		
Degree in occupational health nursing		
Master's degree in occupational health nursing (course work)		
Master's degree in occupational health nursing (dissertation)		
Other – please specify:		
3. Gender		
Female		
Male		
4. Which age category do you belong to?		
20 to 29 years		
30 to 39 years		
40 to 49 years		
50 to 59 years		
60 and older		
5. How many years of occupational health nursing experience do you have?		
Less than one year but more than 6 months		
1 to 4 years		
5 to 9 years		
10 to 14 years		
More than 15 years		

SECTION 2: LEVEL OF SATISFACTION AND DISSATISFACTION

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The more strongly you feel about the statement; the further from the centre you should circle, with agreement to the right and disagreement to the left. Use 3 for neutral or undecided if needed, but please try to use this number as little as possible.

		Disagree				**Agree**
6.	My present salary is satisfactory.	1	2	3	4	5
7.	Occupational nursing is not widely recognized as being an important profession.	1	2	3	4	5
8.	The nursing personnel in my specialty help one another out when things are uncertain.	1	2	3	4	5
9.	There is too much administrative work required of an occupational health nurse in a clinic.	1	2	3	4	5

10.	The nursing staff has sufficient control over scheduling their own shifts in the clinic.	1	2	3	4	5
11.	Occupational health doctors' in general cooperate with nursing staff in the clinic.	1	2	3	4	5
12.	I feel that I am supervised more closely than is necessary.	1	2	3	4	5
13.	It is my impression that a lot of occupational health nurses at the clinics are dissatisfied with their pay.	1	2	3	4	5
14.	Most people appreciate the importance of occupational nursing care to industrial employees.	1	2	3	4	5
15.	It is hard for new nurses to feel 'at home' in a clinic.	1	2	3	4	5
16.	There is no doubt whatever in my mind, that what I do on my work is really important.	1	2	3	4	5
17.	There is a great gap between the management of this clinic and the daily problems of the occupational nursing service.	1	2	3	4	5
18.	I feel I have sufficient input into the program of care for each of my clients/patients.	1	2	3	4	5
19.	Considering what is expected of occupational health nursing service personnel at this clinic, the pay we get is reasonable.	1	2	3	4	5
20.	I think I could do a better job if I did not have so much to do all the time.	1	2	3	4	5
21.	I have too much responsibility and not enough authority.	1	2	3	4	5
22.	There are not enough opportunities for advancement of nursing personnel at occupational health level.	1	2	3	4	5
23.	There is a lot of teamwork between nurses and doctors at the clinic.	1	2	3	4	5
24.	My present area where my clinic is situated, is satisfactory	1	2	3	4	5
25.	The present rate of increase in pay for occupational nurses is not satisfactory.	1	2	3	4	5
26.	I am satisfied with the different types of activities that I do in my work.	1	2	3	4	5
27.	I have plenty of time and opportunity to discuss client care problems with the client and operations manager.	1	2	3	4	5
28.	There is ample opportunity for occupational nursing staff to participate in the operational decision-making process.	1	2	3	4	5
29.	A great deal of independence is permitted, if not required, of me.	1	2	3	4	5
30.	What I do in my work does not add up to anything really significant.	1	2	3	4	5
31.	I have sufficient time for direct client care.	1	2	3	4	5
32.	I am sometimes frustrated because all of my activities seem programmed for me.	1	2	3	4	5
33.	I am sometimes required to do things in my work that are against my better professional nursing judgment	1	2	3	4	5
34.	From what I hear about occupational nursing staff at other clinics, at this clinic the pay is fair.	1	2	3	4	5

35.	Administrative decisions at this clinic interfere too much with client care.	1	2	3	4	5
36.	It makes me proud to talk to other people about what I do on my work.	1	2	3	4	5
37.	I wish the occupational health doctor's here would show more respect for the skill and knowledge of the occupational health nurse.	1	2	3	4	5
38.	I could deliver much better care if I had more time with each client.	1	2	3	4	5
39.	Occupational health doctors at this clinic generally understand and appreciate what the occupational health nursing staff does.	1	2	3	4	5
40.	If I had the decision to make all over again, I would still go into occupational health nursing.	1	2	3	4	5
41.	The occupational health doctors at this clinic look down too much on the occupational health nursing staff.	1	2	3	4	5
42.	I have all the voice in planning and managing the medical surveillances and other related processes and procedures for this clinic	1	2	3	4	5
43.	My particular work really doesn't require much skill or "know-how".	1	2	3	4	5
44.	I have the freedom in my work to make important decisions as I see fit, and can count on my operations managers to back me up.	1	2	3	4	5
45.	An upgrading of remuneration for occupational nurses in this company is needed.	1	2	3	4	5
46.	Other aspects you want to comment on (please specify)					

APPENDIX I

Gill Smithies

Proofreading & Language Editing Services

59, Lewis Drive, Amanzimtoti, 4126, Kwazulu Natal

Cell: 071 352 5410 E-mail: moramist@vodamail.co.za

To	Igna Alberts
Address	Wits Dept of Nursing Education
Date	21/03/2014
Subject	Job satisfaction of Occupational Health Nursing Practitioners employed by a private occupational health service provider. Igna Alberts
Ref	SS/gs/011

I, Gill Smithies, certify that I have proofed and language edited:

Job satisfaction of Occupational Health Nursing Practitioners employed by a private occupational health service provider, by Igna Alberts

to the standard as required by Wits Dept. of Nursing Education.

Gill Smithies

21/3/2014