An assessment of health and safety management in selected rural hospitals

By

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ABSTRACT

Health and safety is of the utmost importance for any company or institution to be successful. There is quite a negative perception regarding the health and safety of rural hospitals and clinics.

Rural hospitals are most of the time overcrowded due the large amount of patients that has no medical aid, thus increases the risk for health and safety issues. Patients sit in long queues for hours to receive medical attention and their medication and are therefore exposed to all kinds of diseases, which is a high risk for these patients's health.

The employees working in these rural areas are also exposed to life-threatening diseases on a daily basis and have a good chance of being infected. Employees leave the public sector because of these unsafe working conditions and find themselves either working in the private sector or may even immigrate to foreign countries for better and safer working conditions.

During this research done, there were a few shortcomings identified for the management to improvement on and to ensure a safe working environment. There are quite a lot of negativities surrounding the patients and employees in these rural hospitals, because patients get raped by nurses, babies get stolen from maternity wards, doctors are attacked by patients and much more horrific incidents happening in these hospitals.

Cultural differences are also a main concern for management, because there are a lot of different races working together in the same department and not everyone has the same beliefs and ways in doing tasks. These cultural differences may lead to clashes amongst employees and result in a negative working environment.

This quantitative research was done in selected rural hospitals, due to cost and time consumption. Only 80 employees (doctors, nurses and pharmacists) participated in the research done and the research was not an in-depth research, but enough evidence was compiled to make the necessary assumptions that all is not well in the public sector.

With the new National Health Insurance (NHI) to be implemented from 2012, there may a lot of changes in the rural hospitals for the better. Hospitals all over the country are being upgraded and the working conditions are being attended to by the government which may attract more health professional to rural hospitals and clinics.

Key terms: Health and safety, National Health Insurance, hospitals, NHI, clinics, safety, safe work place, unsafe working conditions.

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NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

Health and Safety is one of the most important and most difficult subjects for health workers today. Over the last two years doctors and patients were both victims of health and safety; for example, in Mbombela a doctor was stabbed to death by a patient in the Middelburg hospital (Gabashane, 2011), a baby was stolen from the Maternity ward in Tygerberg hospital (Johns, Samodien & Mabandla, 2009:1) and a female doctor was attacked and raped by three armed men in Pelonomi hospital in Bloemfontein (Steyn, 2010:1).

South Africa's health system consists of a large public sector (public hospitals and clinics) and a smaller but fast-growing private sector. Health care varies from the most basic primary health care (public sector), offered free by the state, to highly specialised hi-tech health services available in the private sector for those who can afford it (SA Info, 2010).

The public sector is under-resourced and over-used, while the mushrooming private sector, run largely on commercial lines, caters to middle- and high income earners who tend to be members of medical schemes (18% of the population), and to foreigners looking for top-quality surgical procedures at relatively affordable prices. The private sector also attracts most of the country's health professionals, due to a safer work environment (SA Info, 2010).

There are about 370 provincial hospitals listed in South Africa that holds 156 741 beds for patients. These hospitals are occupied fully at least 80% at any given time (Moodley & Bachmann, 2002:393).

Figure 1.1: Overpopulated clinic

Source: Lecia Horn

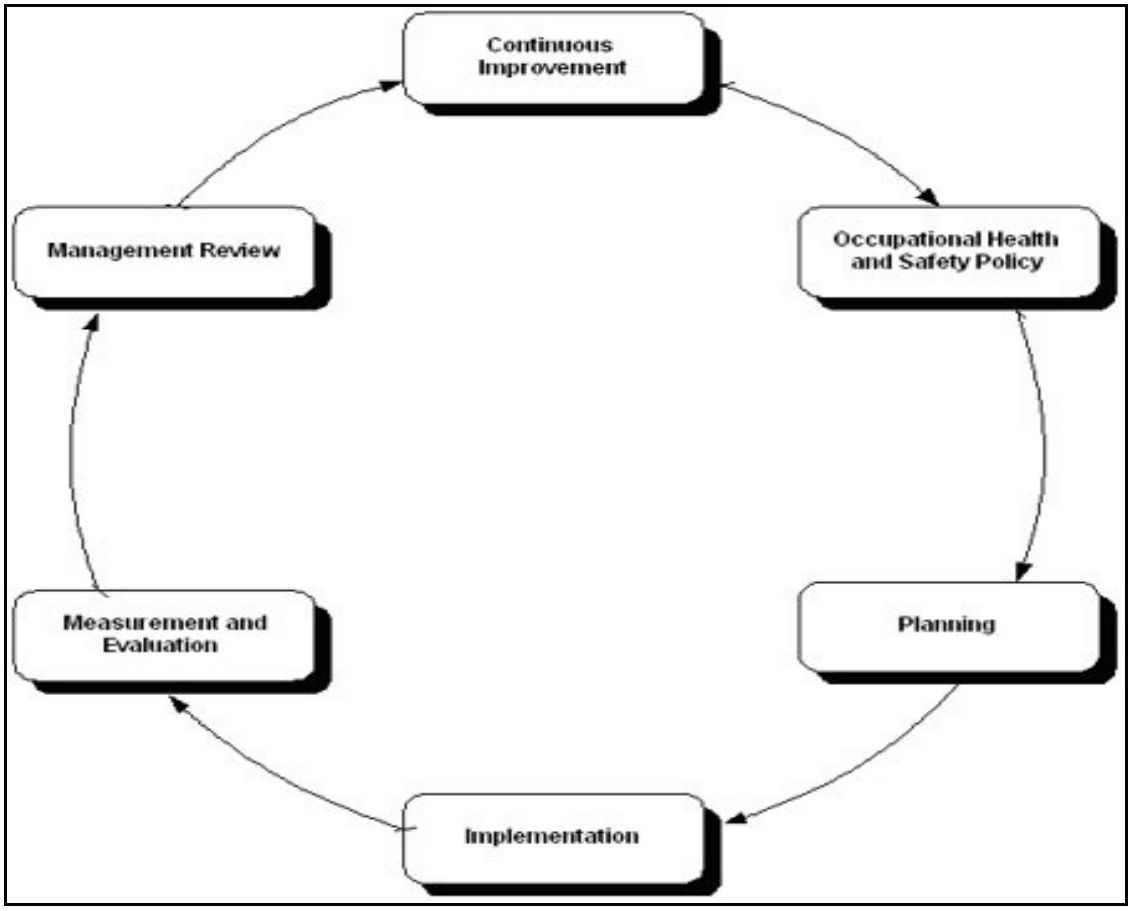
Most of the hospitals and clinics are overpopulated (Figure 1.1), caused by the overloaded public health system in South Africa. Many of the patients are waiting for medical evaluation by a doctor, but the clinics are overbooked with patients. The amount of patients making use of the public hospitals is increasing daily, because of the increasing price of medical aids, thus leading to the overcrowding of these hospitals and clinics. By these statistics one can assume that the health system cannot maintain the great amount of patients properly in South Africa.

Management of public hospitals have a great task in maintaining and constantly improving the health and safety, because the waiting times at clinics and the hospitals are getting very long, as a result of the increasing patients, which can lead to high risk situations for patients and the medical staff.

1.2 BACKGROUND

Working in a hospital may be hazardous for your health. There are potential risks such as injuries, spread of infection, exposure to hazardous substances and accidents. The hospitals are normally safe when the employees and management work together (HSSA, 2011). One stumbling block that may occur in any organisation is the differences in cultures. Organisational cultures can be the driver of the organisation's effectiveness, performance and the attitude of the employees (Kreitner & Kinicki, 2007:84). Most unfavourable job conditions usually affect the health and wellbeing of employees, thus leading to job stress.

Figure 1.2: Occupational health and safety management system model



Source: ACP Media

Figure 1.2 is just a plain framework for the health and safety system. This model can be used in any institution to identify hazards and improve health and safety policies. There are a few steps in following the correct procedures:

1. *Occupational Health and Safety Policy:* Every institution should have a health and safety policy which will act as a guideline for the employees to know how to follow the correct procedures in completing daily tasks at their workplace.
2. *Planning:* Management should do planning on the types of hazards that are present in the department and how to make the working environment a safe place for all.
3. *Implementation:* The health and safety policy will then be implemented after the planning has been done and a risk assessment on all the health and safety risks in the institution had been analysed.
4. *Measurement and Evaluation:* Risks identified should be measured and evaluated by the management to see if it holds a great hazard for employees and patients. After the measurement and evaluation have been done, the necessary steps will be followed in classifying the hazard.
5. *Management Review:* The management will do a risk assessment to predict the class and threat of the hazard. Risk assessment:
    - Identify the risk
    - Prioritize the risk
    - Make a prediction about the risk:
        - Who is at risk?
        - How?
        - When?
        - Why?
6. *Continuous Improvement:* After the risk assessment the management have to then find solutions on how to minimise the risk of the hazard identified and keep on improving the measurement steps of other hazards in the institution.

The ultimate responsibility for health and safety rests with the institution, employees need to be aware of their responsibilities and to comply with the health and safety policy of their institution. Employees need to take the necessary steps to ensure their own safety when they are at work, do nothing to harm themselves or their co-workers or any other person. All potential hazards should be identified and reported to their direct manager or a health and safety committee member.

Health and Safety Act No. 85 of 1993

"To provide for the health and safety of persons at work for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith in the Occupational Health and Safety Act No. 85 of 1993" (SA, 1993).

1.3 PROBLEM STATEMENT

Medical aid funds have become unaffordable to most South Africans, thus they have to go to a public hospital for treatment. With the high rise of living cost, medical aid funds have become a luxury and not a necessity for most South Africans.

This leads to a lot of problems, because patients sit for hours at the clinics waiting for treatment, because there is a shortage of resources. These resources include: doctors, nurses, pharmacists and the necessary equipment.

Parliament heard that the doctors, nurses and pharmacists refuse to work in South African public hospitals (Motsoaledi, 2009:2). The main reason for that is

the concern for the health and safety of these staff members. The pressing question now will be: where to from here for the ill patients?

- **Current situation:** The department of health cannot control the number of people that does not have a medical aid, thus overpopulation at clinics and hospitals is unavoidable. The government are looking at a solution to introduce the National Health Insurance (NHI), which will mean that patients earning less than a certain amount will be able to have access to good health, while the higher earning class will cover those expenses by paying more tax.

- **Cost-benefit:** The financial implications will be major on the budget, because of the huge number of patients and the ones that will try to misuse the system. If the system is implemented and obeyed, then the patients will be better off, because the patients get access to good medical care. The budget is also eroded by fraud that might incur.

- **Culture:** There are different races with different cultures all working together in these institutions, thus the different types of cultures needs to be understood and managed to keep all of the staff members positive, so that they can contribute to the institution.

- **System change:** With the introduction of the National Health Insurance (NHI) the whole health care system will change, maybe for the better, but time will tell. The hospitals and clinics will be upgraded and maybe government will revise the salary packages for heath care workers in these rural areas to attract more members to help with the shortage of staff.

The problem statement can be formulated as:

- Ensuring a safe working environment for the medical practitioners and to minimize and streamlining the waiting time for patients visiting the hospitals and clinics which will result in a decrease in health and safety issues.

Due to the shortage of medical professionals (limited resources) all around the world, these limited resources should be managed very carefully in achieving the maximum benefits.

The government has policies and procedures in place to achieve these streamlining goals, but it may be assumed that these policies are not implemented at all the institutions, which may lead to a bottleneck effect of patients at clinics and hospitals, ensuring prolonged waiting times.

The scope of this study will focus mainly on managing these limited resources and the increasing number of patients to ensure that the waiting time will be shorter for patients and visits to clinics and hospitals to be more effective and be more streamlined.

1.4 STUDY OBJECTIVES

The objectives can be divided into *primary* and *secondary* objectives.

1.4.1 Primary objective

The primary objective of the research was to understand and to gain background insight on the health care system in selected rural hospitals to effectively achieve streamlining of patient care in the health care system.

1.4.2 Secondary objectives

By doing the necessary research on the health system in selected rural hospitals the primary objective of the study will be achieved. The secondary objective can be evaluated as follow:

Theory evaluation:

- Literature study will be done to gain insight on the health care system
- To determine the different aspects of hazards in the hospital departments
- Provide an overview on the different policies to be implemented in the different departments and institutions
- Do an assessment on the current status in the different institutions and departments

Empirical research:

- Gain data on the employees' opinions on certain aspects in the different departments through questionnaires
- Research will be done on only on a certain population and area. Through this research, assumptions can be made for improvements as a whole.

The objectives above will ensure that the necessary data will be collected through questionnaires to make the appropriate conclusions and recommendations. The recommendations made will only be relevant to the certain area of research done, but it may be useful in improving the health care system as a whole.

1.5 CONSTRAINTS

The biggest constraint will be to find enough nurses, doctors and pharmacists to participate in the survey, because of the limited resources, time and the small region.

Information on the total budget received and the expenditure of the money can be very difficult to obtain, because of the confidentiality. Assumptions have to be made about the figures, because the right amounts will not be available to the public.

The literature researched is the latest available on the Internet and in journals.

1.6 METHODOLOGY AND LAYOUT

To achieve the objectives of this study the approach will be as follows:

1.6.1 Literature review

Information will be obtained from a number of resources namely:

- Internet
- Books/Newspapers
- Journals
- Previous Studies

Subject matter that will also be taken into consideration will be:

- Economics
- Statistics
- Labour Relations

All the information obtained will be gathered to make the necessary conclusions.

1.6.2 Empirical study

There was a stratified assessment done on hospitals in the Eastern Free State region. The data collected will be processed and analysed to come to the necessary conclusions. Data collected will be from resources such as questionnaires, books, journals, Internet and statistics from previous studies.

1.6.3 Analysis of data

Previous studies' data will be collected and compared to the more recent data. This will give a clear indication if the situation at these hospitals has improved or weakened.

Tables and graphics will be used to possibly find some kind of pattern of the situation in the hospitals; perhaps a good and easy system can be modified to be implemented in the health system.

1.6.4 Recommendations and conclusions

The data analysis will give a clear indication on the shortcomings of the whole system. This may help to make the recommendations necessary to ease the workload on the whole health care system in saving clinic waiting times and in preventing overpopulation in the hospitals and clinics.

1.7 RESEARCH DESIGN

There are usually two different instruments used in collecting data, a *qualitative* and *quantitative* research. During this assessment a quantitative approach will be followed, due to the time consumption. Data will be collected through

questionnaires that will be handed out to a selective population, consisting of doctors, nurses and pharmacists.

The aim of the research design is to collect and evaluate data from previous studies and compare it to the latest data, to determine if there is any improvement in the health care system in the public sector.

1.8 CHAPTER DIVISION

Chapter 1: Nature and Scope of the Study

This chapter consists of the *Problem Statement, Study Objectives and Constraints.*

Chapter 2: Literature Review

This chapter contains the literature review regarding the Health and Safety issues that most rural hospitals struggle with on a daily basis. The systems in place are discussed and the current situation in the institutions is also dealt with in this chapter.

Chapter 3: Empirical Study

The data collected from the questionnaires are analysed and interpreted for further discussion. Because of the stratified study only four hospitals were researched, thus the population of the study consists of one hundred participants.

Chapter 4: Conclusions and Recommendations

After the data were analysed and discussed, the necessary conclusions could be made. Some recommendations were also made to possibly apply to help

managing the limited resources to achieve the maximum health care in rural hospitals.

1.9 SUMMARY

Patients are dying unnecessarily because South Africa's public hospitals are over-burdened, under-staffed and poorly managed. Over 80% of South Africans have no medical aid, and have no choice but to seek treatment at the government hospitals and clinics that many patients interviewed felt were uncaring institutions (Cullinan, 2006).

Health and Safety plays a major role in rural hospitals and clinics, with limited resources (doctors, nurses and pharmacists), the management of health and safety is even more important to create a safe working environment for these health workers. Patients and health workers' health and safety are a major concern, because the clinics and hospitals are overcrowded and disease spreading is highly likely to happen, because the patient and health worker gets exposure to life-threatening diseases for long periods on a daily basis.

In Chapter 2, the literature review will indicate that policies should be in place to achieve the maximum health care with the limited resources. The second part of the chapter will discuss the current situation in the rural hospitals to identify where the shortcomings may be and the necessary improvements need to be identified.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

South Africa was the global leader in conceptualisation and development of the primary health care approach throughout the twentieth century. Despite being a leader, there were a few obstacles that limited the full implementation of the primary health care. These obstacles are: the HIV and AIDS epidemic, shortages of health workers and the misdistribution of limited resources (doctors, nurses and pharmacists). There was a major shortcoming in political, public and health care leadership that made it difficult in progressing forward with the primary health care in public hospitals (Kautzky & Tollman, 2006:17).

Hospitals in South Africa are equipped to treat virtually any condition and the hospitals are situated all over the country. There are two types of hospitals in South Africa: *private hospitals* and *public hospitals*. Public (State) hospitals are reported to be of a lower standard than those of the private sector. Despite the lower standard, most people in South Africa cannot afford a medical aid, thus they have no choice but to go to a public hospital. The health care in a public hospital is basically free, but you may have to wait hours in a queue, because of the high number of patients (Cooper & Cartwright, 1994:455).

With the limited resources (doctors, nurses, pharmacists and equipment) in rural hospitals, to achieve the maximum health care these limited resources should be managed extremely carefully. With the smaller salary packages and the increase

in crime statistics, government cannot compare to the private sector and other countries because of the shortage of health care professionals all over the world.

President Jacob Zuma said during his state of the nation address in parliament that rural hospitals and clinics will be upgraded and the working conditions in rural areas should be improved drastically. Government and the Development Bank of South Africa will finance these upgrades to attract more health professionals to rural areas (Zuma, 2010). The upgrades of the buildings are necessary, but the security at these rural areas also needs attention desperately.

2.2 RURAL HOSPITALS OVERVIEW

Rural areas can be defined as: areas that currently have limited access to health services because they are outside of cities and towns, farming and other communities with very low population density and areas that are poorly served with basic services like water, electricity, sanitation, schools and supermarkets (South African Demographic and Health Surveys, 2008).

The main goal of the national health plan was to create a unitary, comprehensive, equitable and integrated health system. The main statement and hope for this health plan was: “a better life for all”. There are huge inequities in the quality of care between hospitals in formerly black areas and rural areas, and hospitals in urban areas to serve white patients. These still exist today (African National Congress, 1994:1), but the inequity is getting smaller, because even white people cannot afford a medical aid anymore, thus find themselves in the rural areas seeking medical attention.

According to the White Paper (SA, 1997:667), quality has become a focus in the health services. A number of initiatives at the national and provincial level to improve quality have concentrated on the development of standards. In order to improve hospital services, most provinces have enrolled some of their hospitals

in the Council for Health Services Accreditation of Southern Africa (COHSASA) process of accreditation. COHSASA is a non-profit, independent organisation that aims to "develop and implement standards that define what is needed to provide quality service in all types of South African healthcare facilities and accredit those that substantially comply with standards".

2.2.1 Categories of public hospitals

There are three categories of hospitals in South Africa: district, regional and tertiary hospitals, although government is now replacing these with the level 1, 2 and 3 hospitals. The names imply that they offer different types of services. Of the 388 hospitals:

- 64% are district hospitals
- 16% are secondary or specialised hospitals
- 4% are made out of provincial and national hospitals

The doctor-to-population ratio for district hospitals is very low and the hospitals are under-resourced, because of the small number of medical professionals and the basic equipment that is not in a satisfying working condition. Improvements on these low ratios should be attended to urgently, because that may be the reason for the huge shortage of skilled professionals and why they leave these rural areas and cause large shortages in the public health sector (Gaunt, 2010:2).

In South Africa, the chances are more likely for a black person to apply for work in these rural areas, because these graduates are normally of rural origin and return to their roots to go and support their communities (Stearns, Stearns, Glasser & Londo, 2000:17). The shortage of professional skilled people makes it difficult for rural areas to attract these people. Because of the shortage of skilled professionals all over the world, the private sector and overseas packages are

much more attractive than those of government and the working environment is also much safer in the private sector and abroad.

To use scarce resources (doctors, nurses and pharmacists) more efficiently, government has introduced a hierarchy of health services. Patients using the public health system are now only able to access higher levels of care (public hospitals) once they have been assessed and referred upwards by health workers at a lower level (clinics). The exception to this is medical emergencies like diabetes and hypertension.

The Department of Health has developed a list for core norms and standards for hospitals and clinics (Department of Health, 2006):

- The clinic renders comprehensive, integrated primary health care services for at least eight hours a day, five days a week.
- Doctors and other specialised professionals are accessible for consultation, support and referral and provide periodic visits.
- The clinic receives a supportive monitoring visit at least once a month to support personnel, monitor the quality of service and identify needs and priorities.
- There is an annual evaluation of the provision of the PHC services to reduce the gap between needs and service provision using a situation analysis of the community's health needs and the regular health information data collected at the clinic.
- The clinic has a mechanism for monitoring services and quality assurance and at least one annual service audit.
- Community perception of services is tested at least twice a year through patient interviews or anonymous patient questionnaires.

There is a legal framework in which to implement these norms and standards. The norms and standards should correlate with the Occupational Health and Safety Act to ensure the legal side of these norms and standards are in place.

The Occupational Health and Safety Act of 1993 will be overviewed in the following section, which will be a guideline in setting up and implementing these norms and standards.

2.3 ON THE LEGAL SIDE

The Occupational Health and Safety Act of 1993 is very important, because the act will be used as a guideline in setting up future policies and procedures and create a safe working environment in the institution. The Occupational Health and Safety Act is implemented to make the working environment as safe as possible for the medical staff as well as for their patients. This will require teamwork from both employees and the management.

2.3.1 The Occupational Health and Safety Act of 1993

The Occupational Health and Safety Act, 1993, requires the employer to bring about and maintain a work environment that is safe and without risk to the health of the workers. The employer (management) must ensure that the workplace is free of hazardous substances such as benzene, chlorine, micro-organisms (bacteria: *Helicobacter pylori*), articles (boxes), equipment (needles) and processes (chemotherapy mixtures) that may cause injury, damage or diseases. If it is not possible, the employer must inform workers of these dangers, how they may be prevented and how to work safely and provide other protective measures for a safe workplace (Boshoff, 2010).

In every workplace, the employees have certain rights. Employees should feel safe at their workplace, and to do so, the employees should have guidelines in making their workplace safe for themselves and those around them. The employer must make sure that all employees know the safety procedures of the workplace.

The employee has the right and must have access to:

- The Occupational Health and Safety Act No 85 of 1993 and regulations
- Health and safety rules and procedures of the workplace
- Health and safety standards which the employer must keep at the workplace

Otherwise the employee may request the employer to be informed about (Boshoff, 2010):

- Health and safety hazards in the workplace
- The precautionary measures which must be taken
- The procedures that must be followed if a worker is exposed to substances hazardous to health.

This Act overview pointed-out the legal side of a safe working environment. If the employees and management work together as a team and obey these legal aspects, the workplace will be a safe environment for both employees and patients. The management should identify any hazards that may cause harm to the employees and patients; and classify these hazards according to the danger it brings. During the next section, the typical hazards will be identified and put in different categories according to the type of hazard.

2.4 HAZARDS THAT MAY CAUSE OCCUPATIONAL HARM TO EMPLOYEES

Hazards that may cause harm should be identified by management and brought under the employee's attention to prevent injuries or any unsafe situations. An occupational hazard is the potential of a chemical, biological or physical agent at the workplace to cause harm to the body. It is important to distinguish a hazard from a risk.

Risk is defined as the probability or likelihood that injury or damage will occur under the actual circumstances of exposure. Risk fluctuates according to the conditions of work (Butterworths, 2005:5).

Hazard: The conditions that determine a hazard are the worker, the machine or process, the material and the environment. We can therefore say that a hazard remains the same under all conditions (Butterworths, 2005:5).

2.4.1 TYPES OF HARMFULL OCCUPATIONAL HAZARDS

2.4.1.1 Chemical hazards and their routes of entry

Chemical hazards are those that are posed by chemicals in the workplace. These chemicals can enter the body through the respiratory tract by inhalation, through the gastrointestinal tract by ingestion and percutaneously by absorption. The Regulations for Hazardous Chemical Substances (Regulation No. 1179 of 1995) list a number of chemical substances which are or thought to be hazardous to human health.

1. Inhalation.

Less than seven micron is a respirable fraction that is those particles that can reach the alveoli. Some particles, however, may be inhaled but not reach the alveoli. The total amount of contaminant that can be inhaled is known as the inhalable fraction. The inhalable fraction enters the nose or mouth but does not reach the respiratory system.

2. Ingestion.

In the case of ingestion, a contaminant enters via the mouth, mostly along with food. Amylase (an enzyme in the saliva) begins the process of digestion. Once in

the stomach, many substances are inactivated or broken down by the acidity in the stomach. Chemicals that are insoluble in the stomach (e.g., lead or cadmium sulphides) are excreted unchanged in the faeces.

***3. Skin absorption*.**

A variety of damage types may occur, depending on the nature of the contaminant and its ability to penetrate the skin. Minor cuts and abrasions, extremes of heat and cold may produce physical harm to the skin. Irritant dermatitis characterised by redness, scaling and fissuring of the affected parts may result if the skin insult is repeated. Chemicals can dissolve the natural fats in the skin and provoke dermatitis (Scheepers, 2007).

Policy: Annexure 1

There are policies in place to protect the hospital/institution as well as the employees and patients. The policy states that the employee (nurse, doctor or pharmacist) should wear protective clothing at all times, to protect them from ingestion, absorption and inhalation of any hazardous substances. The employees should obey these policies which will lead to fewer incidents of safety risks.

2.4.1.2 Biological hazards

Biological hazards mainly occur where germs can be passed from one person to another or from animal to people. Hepatitis B is a virus which is highly infectious, more infectious than the AIDS virus. It is associated with jaundice and an enlarged liver. The Human Immunodeficiency Virus (HIV) is also a threat to the workforce, especially to health care workers. Health Care workers are exposed to the HIV-virus daily through needle sticks, blood during operations, etcetera (Scheepers, 2007).

Policy: Annexure 2

The outcome of this policy is to ensure the correct procedure in reporting and management of all injuries/incidents/occupational disease, which may occur on the premises and or in the building. The employee needs to fill in an Injury on Duty (IOD) form, explaining exactly how, where and when the injury occurred. It is also necessary for an eyewitness if possible who can explain the situation from a different point-of-view. The form needs to be filled in and handed to a health and safety representative within seven days.

The representative will present the incident to the health and safety committee for further investigation, if necessary. Record should to be kept of all the reported cases.

Policy: Annexure 3

The purpose of this policy is to ensure reporting of all needle pricks for monitoring and to improve precautionary measures in the future. All cases should also be recorded and presented to the health and safety committee. Discussions will be made to find ways in minimising the number of needle pricks.

2.4.1.3 Physical Hazards

Physical hazards include noise, vibration, heat and cold, lighting, non-ionising radiation as well as ionising radiation. These hazards, on top of damaging the body, can affect workers' concentration and make them more likely to have an accident at work. Noise can cause hearing loss, tinnitus (ringing, buzzing or swishing noise heard in the ear), irritation and annoyance. Whole body vibration occurs when the whole body is shaken and hand-arm vibration occurs when holding vibrating tools or work pieces. Heat stress results from failure to maintain thermal balance. Heat stress may include heat oedema, prickly heat, heat syncope, heat cramps, heat exhaustion and heat stroke. Ultraviolet radiation, infra-red, microwaves and radio-frequency as well as extremely low frequency

fields all fall under non-ionising radiation. Alpha particles, beta particles, gamma rays and the X-rays all fall under the ionising radiation. Ionising rays may collide with biological cells, releasing energy into the cell and initiating chemical and biological changes on a small scale (Scheepers, 2007).

Policy: Annexure 4
To provide appropriate and effective medical surveillance and screening services for all employees, exposed to hazardous agents or conditions, which forms part of their daily work activities.

Screening for Hepatitis A and B should also be done on a regular basis and the employee's HIV status should also be done on a regular basis. New employees get an immunisation for Hepatitis A and B and for Tetanus during the first two weeks of starting at the hospital, by the occupational health practitioner.

2.4.1.4 Ergonomic Hazards

Ergonomic hazards often occur when people work in cramped places or positions, have poor lighting and stand for long periods of time. Such conditions may result in eye strain, backache and sore shoulders. This is normally the pharmacists who dispense medication for eight hours daily.

2.4.1.5 Psychological Hazards

Poor workplace organisation e.g., speed-up and just in-time process may result in stress which manifests as mental ill-health.

2.4.2 Classification of hazards in hospital departments

If there is an accident, like a slip and a fall, the incident should be reported to the different parties, depending on the class of the hazard. Different classes brings

along different procedures to follow. These incidents should be reported to the Health and Safety Committee or to a Health and Safety Representative according to the different classes.

Class A hazard: Has potential for fatal or permanent injury.
Report immediately and fix it within 24 hours.

Class B hazard: Potential for serious injury or loss.
Report immediately and fix within 7 days.

Class C hazard: Potential for minor injury or loss or even no loss or injury.
Report immediately and fix it within 7 – 14 days.

These different classes should be reported within the given time space, because the investigation takes time and the correct procedures should be followed to speed-up the investigation.

2.4.3 Some examples of hazards that can cause accidents

Different departments have their different and own hazards, thus it is important for management to identify all the different hazards. These hazards should be brought to the employee's attention to ensure that there is a safe working environment.

Maintenance department:

- *Chemical hazards* – solvents, asbestos
- *Physical hazards* – electricity, temperature, noise
- *Ergonomic hazards* – cleaning of boilers

Housekeeping:

- *Chemical hazards* – chemicals

- *Biological hazards* – hepatitis, AIDS
- *Mechanical hazards* – sharp injuries, sprains and stains

Food handlers:

- *Physical hazards* – temperature, noise, radiation
- *Chemical hazards* – some chemicals
- *Ergonomic hazards* – standing
- *Mechanical hazards* – cuts, burns, slippery floors

Nursing staff:

- *Physical hazards* – radiation
- *Chemical hazards* – cytotoxic medication
- *Biological hazards* – infections
- *Ergonomic hazards* – back injuries
- *Psychological hazards* – stress, shift work

Radiology

- *Physical hazards* – radiation
- *Chemical hazards* – chemicals used
- *Biological hazards* – infections
- *Ergonomic hazards* – back injuries

Operating rooms

- *Biological hazards* – infections
- *Chemical hazards* – waste anaesthetic gases
- *Mechanical hazards* – cuts

Risks: A risk fluctuates according to the condition of work and the risk determines the actions to be taken:

- Handling of materials or blood specimens

- Duration of exposure
- Work rate (Bever, 1996:448).

Every department in the hospital has its own health and safety risks and that is why there are policies and procedures in place to act as guidelines for the staff and patients to create and work in a safe environment. The policy act as guideline and contains general safety regulations for the employees to be safe and clear from danger, for example wearing the correct protective clothing to protect them from disease spreading.

Every department has its own policies to ensure a safe environment and all the employees must obey these policies.

2.5 GENERAL SAFETY REGULATIONS

Different departments require different safety regulations. In the case of visiting the theatre in a hospital, specific scrub suites that prevent bacteria from entering the theatre should be worn, or wearing a hard hat when entering an area under construction. These are just a few examples, but if obeyed it can reduce the risk in the institution or company and therefore ensure a safe working environment.

Personnel Protective Equipment (PPE)

- Signs to be posted where it must be worn
- Employees must wear it
- Must be in good and clean condition

First Aid

- Know who the first aid person is
- His/her name must be on the box and he/she must be readily available. Make arrangements if not available
- Check the content of the box regularly

Flammable Liquid Store

- A sign must be affixed stating “FLAMMABLE LIQUID STORE”.
- Ventilated into the atmosphere – fan to be switched on
- The store must be able to contain 110% of liquid stored therein
- Fire fighting equipment must be of the correct type and strategically placed

Stacking

- Under supervision of an experienced person
- Unbroken pallets and whatever is stacked must be stable
- Access to and from stacks must be safe

Welding and Flame-cutting

- Activity must be screened off
- Electric leads must be insulated
- Protective equipment must be worn
- No welding on closed containers (explosive, ignite)
- Stand-by person for welding inside metal vessels

Intoxication

- No person is allowed to be intoxicated at work
- Partake of or offer intoxicating substances to other persons

Ladder

- It must have non-skid devices and be in good condition
- It can only be used if the following is in place:
    1. hooks at upper end to ensure stability
    2. held by a person
    3. lashed or secured by any other means
    4. ladders are not allowed to be lashed together

- inspect the ladder registers

Wooden ladders

- Not to be painted (Butterworths, 2005:17).

The different departments should all have the necessary documents and policies in place for if there are accidents, the correct procedures should be followed to make the whole process and investigation go according to the rules and handled quickly. The departments all have the correct policies that will consist of different sections which will include safe working habits that will guide the employees in doing different tasks while minimising health and safety risks and accidents.

2.6 SAFE WORKING HABITS

Safe working habits are implemented in all the different departments to ensure that injuries are prevented and to secure the safety of employees. All the departments should have wall charts and policies that explain the correct procedures in doing different tasks. These tasks vary from department-to-department, from picking up boxes to picking up patients. The correct procedures need to be followed to prevent any unnecessary injuries to the employee.

2.6.1 How to prevent back injuries:

Back injuries can be seen as one of the major types of injuries in hospitals. The injury can be prevented by learning how to use your body correctly by maintaining your back in its three natural curves.

Many back injuries are caused by daily tasks at work which include prolonged standing, bending, reaching, pushing and pulling.

- *Lifting* – Make use of assistance if the load is too heavy or too large. Stand with feet slightly apart; bend your knees, not your waist. Lift with your legs and keep the load close to your body.
- *Standing* – Keep your one foot on a stool to help balancing your spine. Keep your knees slightly bent; pelvis tilted forward. Slouching should be avoided which can put strain on your vertebrae.
- *Bending* – Kneeling down on one knee will help to bend safely. The knees and hips should be bent and not the back. When leaning forward, move the whole body, not just the arms.
- *Reaching* – Reach only as high as is comfortable, do not stretch. Use a ladder or a stool if needed.
- *Pushing/Pulling* – Stay close to the load, do not lean forward. You can push twice as much as you can pull, so rather push than pull where possible (HSSA, 2011).

2.6.2 Prevention of disease spreading:

Infection can be seen as a risk to yourself, co-workers and the patients. By following the infection control techniques such as hand washing and wearing of appropriate protective clothing (PPE), disease spreading can be prevented and by following the correct procedures and needle pricks can also be avoided.

- *Use infection control procedures* – Follow the specific infection control policies of the hospital to prevent the spread of infectious diseases. There are three fundamental safeguards: wash your hands, wear protective clothing and avoid needle pricks.
- *Wash hands properly* – Hand washing is 99% of the battle in infection control. Wash hands before and after each patient contact. Work up a good lather, scrub thoroughly and wash at least 8 centimetres above the wrist. Rinse dry with a paper towel and use the same paper towel to close the tap.

- *Wear protective clothing* – Most hospitals should provide the employees working with patients with gloves, gowns, goggles, masks or other protective clothing. The most important is that you know the hospital policies and know when to use these protective clothing.
- *Avoid needle pricks* – Avoid being pricked by a used needle which may contain blood contaminated with organisms that cause HIV. Never recap the used needle; in the process, you may miss the cap and prick yourself (HSSA, 2011).

2.6.3 Exposure to hazardous substances

Safety of patients is better taken care of in the modern hospitals, but most of the public hospitals are old buildings with old equipment and air ventilation, thus making it difficult to control in these infections public hospitals. Procedures and substances that can help save a patient's life can also be dangerous.

- *Ethylene Oxide* – Used to sterilise equipment. It can affect the skin, respiratory system and nervous system; and may cause sterility, birth defects and cancer. Exposure occurs when the gas remains on the equipment after sterility and the employees inhale it or gets in skin contact with the gas.

  Prevent exposure: Follow the correct procedures to make sure the all the gas is dissipate completely. Wear protective clothing at all times and wash hands on a regular basis.

- *Waste Anaesthetic Gas* – Causes headaches, nausea, decreased mental alertness and motor co-ordination and cancer in operating room or recovery room workers.

Prevent exposure: The hospital is required to make sure their scavenger system is collecting waste gas and ventilating it and that the tubes are not leaking.

- *Anticancer Drugs* – Drugs that kill cancer cells can affect normal cells too. Accidental exposure by pharmacists who mix the chemotherapy for the cancer are exposed to the dangers of anticancer drugs, thus it is very important to wear protective clothing.

  Prevent exposure: Avoid contact with liquids or inhalation of vapours. Use a cotton alcohol prep to protect from accidental splash and wear protective clothing during preparation.

- *Radiation* – Can affect skin and eyes and cause sterility genetic damage, cancer and a smaller life expectancy. Nurses and x-ray technicians are at risk for excess exposure.

  Prevent exposure: Wear film badges and monitor them regularly. Use lead aprons, gloves or shields when appropriate. Identify and manage radiation therapy patients and their secretions (HSSA, 2011).

2.6.4 Accidents may be prevented

Safety in hospitals is more than a matter of watching out for back injuries, needle pricks, spreading of diseases and exposure to hazardous substances. It is a matter of attitude and the awareness of safe conditions and behaviour. Accidents may lead to slips, falls, trips, fires and electrical hazards.

Report the following hazards to the supervisor/health and safety representatives:

- Report defective electrical outlets, so they can be replaced

- Report floors with defective tiles, boards or carpeting
- Watch out for wet floors
- Clean up and report spills and obstructions
- Practice “good housekeeping” – keep the work area free from clutter
- Do not reach into refuse containers – they may contain needles or broken glass
- Know where fire extinguishers are located and how to use them
- Wear non-skid shoes that fit
- Store heavy objects on lower shelves
- If you smoke, do so only in designated areas and never in the presence of oxygen
- Use only electrical appliances that have three-wire, grounded plugs and unfrayed wires
- Close all drawers after use
- Know the hospital’s fire evacuation plans
- Use a safe ladder to reach high storage places
- Handle hazardous and contaminated materials safely
- Wear protective clothing such as aprons and gloves when recommended (HSSA, 2011).

It is the responsibility of the management to ensure that policies and procedures are followed by all the employees, but the other side of the coin is that employees also have responsibilities in the working environment. The main responsibility is to make sure that they do not injure or harm themselves or those around them. In the next section, the duties that rely on the employee will be discussed and overviewed, just to give an idea of what is expected from the employee in the workplace.

2.7 GENERAL GUIDELINES FOR EMPLOYEES FOR A SAFE WORKING ENVIRONMENT

For a safe working environment, the responsibility relies secondarily on management, but the primary task of an employee is to ensure a safe working environment for him or herself and their colleagues.

Every employee shall at work:

- Take reasonable care for the health and safety of him and of other persons who may be affected by his acts or omissions.
- Carry out any lawful order given to him, and obey the health and safety rules and procedures laid down by his employer or by any authorised person, in the interest of health and safety.
- If any situation which is unsafe or unhealthy comes to his attention, as soon as practicably possible report such situation to his employer or to the health and safety representative for his workplace or section, who shall report it to the employer.
- If he or she is involved in any incident which may affect his health or which has caused an injury to himself, report such incident to his employer or to anyone authorised thereto by the employer, or to his health and safety representative, as soon as practicable but not later than the end of the particular shift during which the incident occurred, unless the circumstances were such that the reporting of the incident was not possible, in which case he shall report the incident as soon as practicable thereafter (Butterworths, 2005:7).

If these duties are followed and the necessary teamwork from management is there, then the department can expect to create and maintain a safe working environment. To ensure that the employees and management obey all these

policies and procedures, there are health and safety committees that do inspections on a quarterly basis in the different departments.

2.8 FUNCTIONS OF THE HEALTH AND SAFETY COMMITTEE

To ensure that all these acts, wall charts, etcetera are in place and policies are followed, the institution must have a health and safety committee that will hold meetings on a regular basis (monthly or three monthly) to ensure that these safety regulations are in place. Section 19 of the Occupational Health and Safety Act (No 85, 1993) stipulate that management of a hospital shall in respect of each workplace where two or more health and safety representatives have been designated, establish one or more health and safety committees.

2.8.1 Primary functions

The primary function of the health and safety committee is to ensure optimal health and safety of employees and other persons in the workplace. Functions which have to be performed are the following:

- Discuss certain incidents:
  Only those in the case of death, injury or illness
- Perform functions as described in the General Administration Regulations
- Keep record of recommendations made to the employer (if any were made) and of any reports made to an inspector (if any were made) (Darlow & Louw, 1997:292).

2.8.2 Secondary functions

- Health and safety committee shall hold meetings as often as may be necessary, but at least every three months.
- The health and safety committee shall determine a time and place for the regular meetings.

- The employer shall make a suitable place available for the meetings.
- Health and safety committee shall have a meeting if directed by an Inspector in writing.
- The health and safety committee shall determine the procedures at the meetings.
- Minutes of meetings shall be kept and sent to the employer for endorsement.
- The employer shall cause every incident, which must be recorded, to be investigated within three months. The health and safety committee should evaluate such report.
- The chairperson of the health and safety committee shall endorse the above-mentioned record to the effect that it has been seen and that the necessary actions have been implemented and followed up.
- The health and safety committee may co-opt one or more persons as advisory member/s (Darlow & Louw, 1997:292).

Functions performed by health and safety committees could be achieved through the following functions:

- ✓ Initiate health and safety measures
- ✓ Develop health and safety measures
- ✓ Promote health and safety measures
- ✓ Maintain health and safety measures
- ✓ Review health and safety measures

2.8.3 Duties that *health and safety representatives* should perform

- Health and safety audits
- Identify potential dangers
- Investigate incidents
- Make representations

- Inspections
- Attend committee meetings

Health and safety committees are very important in any institution, because the committee are responsible for the safety measures in all the departments. The committee should be informed of any risks or hazards in the institutions, so that the committee can discuss it on the meeting and implement the necessary precautionary measures. Environmental health inspectors do quarterly inspections in the institutions, to ensure that the institution is a safe working environment.

2.9 DUTIES OF HEALTH AND SAFETY INSPECTORS

In order to ensure the health and safety of workers, the environmental health offices have been established in all the provinces. Quarterly inspections are done to evaluate and ensure that all the government institutions are on the same core standards and use the same policies as guidelines. The Occupational Health and Safety Act No 85 of 1993, is administered by the chief directorate of occupational health and safety of the department of labour.

2.9.1 Inspections

Inspections are usually planned on the basis of accident statistics, the presence of hazardous substances such as the use of benzene in laundries or the use of dangerous machinery in the workplace. Unplanned inspections, on the other hand, usually arise from requests or complaints by workers, employers or members of the public. These complaints or requests are treated confidentially (Butterworths, 2005:10).

2.9.2 Powers of inspectors

If an inspector finds dangerous or adverse conditions at the workplace, he or she may set requirements to the employer in the following ways:

2.9.2.1 Prohibition notice

In the case of threatening danger, an inspector may prohibit a particular action, process or the use of a machine or equipment, by means of a prohibition notice. No person may disregard the contents of such a notice and compliance must take place with immediate effect (Butterworths, 2005:10).

2.9.2.2 Contravention Notice

If a provision of a regulation is contravened, the inspector may serve a contravention notice on the workers or the employer. A contravention of the act can result in immediate prosecution, but in the case of a contravention of a regulation, the employer may be given the opportunity to correct the contravention within a time limit specified in the notice which is usually sixty days (Butterworths, 2005:10).

2.9.2.3 Improvement Notice

Where the health and safety measures which the employer has instituted, do not satisfactory protect the health and safety of the workers, the inspector may require the employer to bring about more effective measures. An improvement notice which prescribes the corrective measures is then served on the employer (Butterworths, 2005:10).

2.9.2.4 Other Powers

To enable the inspector to carry out his or duties, he or she may enter any workplace or premises where machinery or hazardous substances are being used and question or serve a summons on persons to appear before him or her. The inspector may request that any documents be submitted to him or her investigates and makes copies of the documents and demands an explanation about any entries in such documents. The inspector may also inspect any condition or article and take samples of it and seize any article that may serve as evidence (Butterworths, 2005:10).

All these committees and acts are in place and employees and management are aware of all the hazards in their working environment. It sounds like a good and well oiled system, but in reality those policies and acts are not being followed as guidelines to ensure the safety of employees and patients.

In the next section, some examples of what is really going on in rural hospitals will be discussed and pointed out. This will not show how bad public hospitals are but it will just point out where improvements prolonged and need urgent attention (Butterworths, 2005:10)

2.10 POTENTIAL RISKS

2.10.1. Poor hygiene and poor infection control

In 2005, Mahatma Gandhi hospital in Durban, 26 babies died in the *intensive care unit* due to poor hygiene and infection control, because these deaths were caused by the *Klebsiella* bacteria. The bacteria defeated the babies' immune system and caused severe diarrhoea (Chelemu & Evans, 2010:1).

The bacteria entered the babies through formula feeding through the drips. The source that produced these bacteria to enter and contaminate the formulas were inadequate hand washing, thus the batch were contaminated and issued to these babies. No one was blamed for these deaths, but it came down to poor hygiene and infection control (Chelemu & Evans, 2010:1).

After further inspection the cleaning methods in the Maternity areas and the Intensive Care Units were not up to the core standards, thus the chances of infections may be much higher for staff members and patients in the future (Chelemu & Evans, 2010:1).

2.10.2. Abuse and neglect of patients

Press reports came out in 2005 claiming that patients in the Townhill Psychiatric Hospital in Pietermaritzburg were abused and even raped by staff. The investigation that followed brought forward some shocking discoveries:

- Evidence of neglect of patients by the staff
- Evidence of sexual, verbal, physical and emotional abuse by the staff
- Evidence of the staff stealing the patient's food and belongings
- Patients sleeping on the floor
- Female patients not allowed access to underwear
- Abuse of staff members by patients
- Staff reporting on duty under the influence of alcohol
- High rate of staff absenteeism (Waka-Zamisa, 2007:2).

On October 15 a fifty year old white female patient was raped and assaulted by a male and a female nurse in the Universitas provincial hospital. The patient had back cancer and she is paralysed from the waist down. The case was bought to police attention by the son of the raped victim. The case is under investigation (Kok, 2011:2).

These mentally unstable patients or the elder patients are fighting a losing battle, because of their illnesses people do not take them serious if they lay a complaint. There is also a shortage of staff, thus patients do not get the correct medical care that they should (Kok, 2011:2).

2.10.3. Indicators of poor level of care

There are a few indicators that can determine the quality of care in hospitals. There are two good indicators:

- The number of stillbirths per 1000 births
- The number of caesareans (District health barometer, 2005:94).

In December 2005, the district health barometer published that the number of stillbirths in a developed world hospital was 10 to 1000 (1%), but the average for South African district hospital was 26 to 1000 (2.6%). Some district hospital even had figures of 40 to 1000 (4%), but HIV is also known to increase the stillbirth rate, thus it is difficult to collect accurate data for assumptions and conclusions (District Health Barometer, 2005:94).

2.10.4. Crowding out of patients

Reverse-discrimination is happening in public hospitals, because patients with less serious illnesses get referred to their local clinics to wait for hours to see a doctor. The main reason for this is because of crowding of patients due to the high rate of HIV related diseases; the wards are too small to maintain all the patients.

A patient that is HIV-negative gets crowded out by patients that have AIDS related infections. The main reason for this according to previous studies done is because the HIV patient spends on average of sixteen days in the hospital and needs more medical attention than those with minor illnesses (Mocroft *et al*., 1999:1255). The main targeted group is the elderly and small children. On

another study done previously the main HIV infected group ranges from fifteen years to forty nine years old, thus leaving the children and the elderly in the minority and they are then crowded out (Shisana & Simbayi, 2002).

Figure 2.1: HIV positive patient

Source: Kerry Cullinan

On the other hand, patients that are very ill due to AIDS (Figure 2.1) are sent home to "die". Patients are dumped in rural homes in the townships that are not equipped for medical care, thus leaving the patients on their own and in the hands of family members (Cullinan, 2007:38).

Figure 2.2: Overcrowded wards

Photo: Reuters

The wards in most hospitals are too small for the great number of patients, thus the wards are overpopulated (Figure 2.2) which may lead to disease spreading. Patients and the medical staff's health and safety are in danger because of the chance of disease spreading in the wards are more likely to occur. The other risk is that "super bugs" may develop between these different illnesses and will make it very difficult or maybe impossible to cure. For instance, the development of the life-threatening MRTB (Multi-Resistant Tuberculosis) may have started in this manner.

The South African public hospitals are poorly resourced, overcrowded, under staffed and underfunded contributing to the high pressure that emergency departments operate under. The trauma units in South Africa are one of the busiest in the world (Gaunt, 2010:2).

Many hospitals' emergency rooms are flooded with patients with relatively minor ailments because they do not want to queue for hours at poorly managed rural clinics where basic medicines are often out of stock, or there is usually a shortage of staff, so these patients are easily dismissed without any medication.

Figure 2.3: Patients in casualty

Photo: Reuters

The overpopulated hospitals are causing a major problem to medical staff and the patients itself. Patients have to wait for hours to be attended to and the occupied beds are also a major concern, because patients need to wait on hard, worn out beds or stretchers (Figure 2.3). Doctors and nurses do not have the time to attend to all the patients, thus the right and necessary procedures in diagnosing patients are not always possible.

2.10.5 Understaffing and poor working conditions of workers

In South Africa the health system faces a variety of problems, such as an overall shortage of healthcare workers. The department of health has attempted to address these rural professionals by introducing an increase in salaries, introducing scare skills and rural allowance, the deployment of foreign doctors and the upgrade of hospitals and clinics and the equipment. Despite all the efforts, the distribution of health professionals has not improved significantly (Padarath, Chamberlain, McCoy, Ntuli, Rawson & Loewenson, 2003:16).

Previous studies have shown that most health care professionals leave their jobs due to dissatisfaction at their working environment. By creating a positive working environment, these health professionals may stay on or even attract new health professionals, because of the advantages government provide and the working hours (Fletcher, 2001:324; Oosthuizen, 2005:117).

The health system is being hit hard by the shortage of staff along with the AIDS epidemic. It is estimated that about 42% of all health posts are vacant and with the shortage of skilled health professionals all over the world, it is going to be tough for the state to fill these vacant posts.

The working environments are unsafe and the lack of resources threaten the health and safety of nurses, doctors, pharmacists and patients and lead to high turnover rates. Managers need to identify shortcomings and use their managerial

skills to implement changes in these challenging times and working environments (Mokoka, Oosthuizen & Ehlers, 2010:474).

Medical professionals' turnover rates in South Africa influence the shortage of medical staff members. It is a global phenomenon. The internal migration within the South African health care sector, from public to the private sector, and emigration to other countries can be seen as the two major reasons for the health sector's problems. The reason for these migration and emigration is competitive incentives, better working conditions and resources, safety and a lower prevalence of HIV/AIDS (Barney, 2002:153).

The hospitals will need to find the reasons why their employees leave and do something about it. The reasons will differ from hospital-to-hospital, but the influence from individuals or group characteristics, culture of the hospital and the nature of that hospital's core business (Maxwell, 2005:86). A previous literature review showed that better remuneration, better living and working conditions, lack of facilities or resources, lack of promotion, heavy workloads and unsafe working and living conditions contribute to medical professionals leaving South Africa or these rural hospitals (Xaba & Phillips, 2001; Oosthuizen, 2005:117).

The health care industry relating to staff shortages are facing a lot of challenges, because of the working hours, increased workloads, poor salaries and work conditions, that makes retention of staff members more challenging than in any other industry. Health authorities are faced with a challenge to come up with strategies, policies and legislation that will retain medical professionals (Keastner, 2005:470).

According to Phalane (Steyn, 2010:1) the lack or shortage of staff holds a great risk for employees, especially females, because they work night shift and have to move between the wards and the security cannot patrol the whole hospital, thus the employees might find themselves in the wrong place at the wrong time.

Example of such a case is where a female doctor from Pelonomi hospital in Bloemfontein were attacked and raped by three armed men while on her way to the neonatal ward.

An investigation in eight hospitals in Gauteng, Kwazulu-Natal and the North West commissioned in 2005 by the department of public service and administration describes the health system as “a function in crisis” due to staff shortages. The investigation, conducted by Karl von Holdt and Mike Murphy for the National Labour and Economic Development Institution (Naledi), describes public hospitals as “highly stressed” institutions due to staff shortages, unmanageable workloads and management failures”. The investigators report that there is a dysfunctional relationship between hospitals and provincial head offices, which “have centralised control over strategic, operational and detailed processes but are unable to deliver on these” (Cullinan, 2006).

2.10.6 Malfunctioning equipment

In case of emergencies, the equipment used are usually not in proper working condition, or the resuscitation trolleys are not properly equipped or the staff does not always know how to use the equipment. The major concern is that the patient’s life rests in the hands of the untrained doctor/nurse.

The hospital equipment is very important, because people’s lives depend on this equipment during operations, resuscitation or in any emergency. Many lives might have been saved if the equipment was in a better working condition or the person (doctor or nurse) working with the equipment was incompetent due to a lack of training.

Figure 2.4: Condition of equipment

Photo: Reuters

The wheelchair in Figure 2.4 holds a great risk for patients, because the plastic chair used are not meant for this purpose and if the chair breaks, the patient will then hurt him/her self even more. The equipment used in these rural hospitals are not always in a good working condition, because the government does not budget for new equipment, as seen in Figure 2.4, annually and in some of these rural institutions the maintenance on the equipment are absent most of the time. The public health service is essentially running on the commitment of nurses, pharmacists and doctors to serve their communities, despite pathetic pay packages, enormous workloads and horrible working conditions.

2.10.7. Theft of medicine, linen and other stock

Stock control in most of the district hospitals are more being attended to, but still there are some institutes that cannot take responsibility for the medicine. Two of the Eastern Cape provincial depots, pharmaceutical, failed to submit records for

Fig. 2.5: Correct segregation of various waste streams

Illustration: Psychem

the last past nine years, thus making it easy for drugs to be “misallocated” and not delivered to the institutions at all.

Patients are placed in dirty beds, because the linen is stolen or there are problems in transporting the linen. In Helen Joseph Hospital patients are admitted and placed in dirty beds, due to the lack of linen (Vorster, 2011:10).

2.10.8 Medical waste disposal

There are different types of bags and containers for the different medical waste. As seen in Figure 2.5, specific colours represents specific medical waste, namely the red bags should contain bandages, swabs, gloves and nappies, while the yellow bins are used to dispose all sharp objects for example needles, blades, scalpels, syringes and vials. This colour coding makes it much easier for the disposal companies to dispose the waste.

That is a really good system, but the only problem about this system is that the waste companies (Phambili Wasteman) cannot collect the medical waste on a regular basis, thus leaving the hospitals with a lot of medical waste to store. Most of the hospitals were built long ago when there were not that many patients, but these days the hospitals are getting too small, thus there is a lack of storage space.

The end result for this is that hospitals start disposing this medical waste on their own, which holds a great risk for the environment and the people. In Welkom in the Free State there is a case where medical waste was dumped in a brick yard. Police received a tip-off about the illegal dumping of medical waste that includes used syringes, scalpels, used bandages, discarded medications as well as amputated limbs, placentas and foetuses in the Maximus Brick’s yard (Swart, Laganparsad & Evans, 2009:1).

Figure 2.6: Dumped medical waste

Photo: Simphiwe Nkwali

Figure 2.6 is a photo taken by Simphiwe Nkwali that forms part of the three hundred ton stash of medical waste that was discovered by the Green Scorpions in the brick yard which included the bloody swabs, syringes, amputated limbs, and etcetera. This is the biggest medical waste discovery to date by the Green Scorpions (Swart, Laganparsad & Evans, 2009:1).

This illegal dumping contravenes all the waste management laws and holds a great public health risk, such as ground water and borehole contamination and the spread of diseases such as hepatitis and HIV (Swart, Laganprasad & Evans, 2009:1).

There are several cases that include illegal dumping of medical waste, including (Swart, Laganprasad & Evans, 2009:1):

- Manenberg, Cape Town, 2008: waste dumped in an area close to where children play
- Ibika, Eastern Cape, 2008: waste illegally stored in a warehouse
- Springfield, Gauteng, February 2009: used needles, bloodied bandages and body parts found
- Barkly West, Northern Cape, February 2009: waste dumped in the field

- Tongaat, KwaZulu-Natal, June 2009: waste dumped at a beach parking lot.

The second largest waste management company, Phambili Wasteman, has multimillion-rand contracts with more than hundred and fifty hospitals and clinics, but still the medical waste gets dumped at illegal sites, because the waste company takes too long to collect and destroy the waste, so the hospitals and clinics use illegal dumping sites, because the waste holds a great health risk for the institution itself (Swart, Laganprasad & Evans, 2009:1).

Figure 2.7: Medical waste

Photo: Lecia Horn

The end-result of these inconsistent medical waste disposals means that a few institutions dump medical waste in normal dustbins, which may end up in the wrong hands. In figure 2.7 there is medical waste disposed in a normal dustbin, this leads to serious health and safety issues. The medical waste contains contaminated needles and they maybe cause needle pricks to the people handling the garbage bags and may get infected. Bacteria *(E. Coli)* may develop at these sites and cause diseases that may be life threatening.

Figure 2.8: Medical waist disposal

Photo: Lecia Horn

Figure 2.8 shows that there are medical waste (red bags) mixed with the normal trash like papers and the empty boxes. The red bags contain contaminated items such as bandages, swabs and used gloves. This holds a great health risk for the hospital, because these red bags should be stored to be picked up by a medical disposal company (Phambili Wasteman). The problem with these companies is that they have too little transport to get to each hospital on a regular basis, thus the hospitals do not have any space to store these medical waste until it can be collected by these companies.

Figure 2.9: Used syringe

Photo: Stanley Scott

Medical waste like used syringes and needles should be disposed in a yellow bin, which is equipped for the disposal of contaminated sharps. These bins are sometimes out of stock, thus these contaminated sharps are not then controlled properly, as in Figure 2.9; then it ends up in the wrong hands and accidents can occur, like young children that play with these needles and may prick each other and cause the HIV disease to spread. These yellow bins are also disposed by the same company that disposes the medical waste, thus the contaminated sharps also needs to be stored in a safe storeroom, but with the lack of inconsistent pick ups from the company, this may lead to syringes and other medical waste lying around all over the hospital. This has a great health and safety issue, because the contaminated needles may end up in the wrong hands and cause danger for the people outside the hospital, because people on drugs may sell it or give it to people outside the hospital to inject themselves.

The medical waste, red bags and yellow bins, are disposed by these companies, taken to a certain location where the medical waste are burnt, but with these inconsistency of the pick ups, the hospitals run out of space to store the waste and they either burn it themselves (high safety risk), or the medical waste gets dumped at certain sites (high health risk). So either way, the disposal of the medical waste holds a great risk for the employees of the hospitals or for the community where the waste is dumped. *See annexure 5 (Waste Management Policy).*

2.10.9. Risks regarding the health workers

On the 31st October 2010, a female doctor of Pelonomi hospital in Bloemfontein was attacked and raped by three armed men. This left a bitter, shocked and angry taste in most of the medical professionals' mouths. The outcome of this catastrophe is that doctors and nurses are too scared to work night shift, because the safety of the staff members cannot be guaranteed. Most of the female

employees were too scared to work at night, because the security who is suppose to guard the premises were not up to standard (Steyn, 2010:1).

Figure 2.10: Attack scene at Pelonomi hospital

Photo: Volksblad

Figure 2.10 shows the scene where the attack and rape took place at Pelonomi hospital. The most concerning about the scene is that it happened in the hospital itself while the doctor was on her way to the neonatal unit. This creates an even bigger fear for females to come to work at night, but they do not really have a choice, because they need to take care of the patients. The security was still absent the next morning when the police arrived at the hospital after the attack and rape took place (Steyn, 2010:1).

Phalane said that the rape case of the Bloemfontein doctor on 31st October 2010 might have been prevented if there were no lack of staff, because the doctor had to take a blood specimen for testing to the pathology lab all on her own. If there were more staff members on duty, she would not have had to walk on her own with the specimen (News24, 2010).

But every hospital, no matter how well run, is under stress. Each day, health workers face huge workloads and increased patient deaths. They also face daily exposure to deadly infectious diseases such as Multi Drug Resistant Tuberculosis (MDRT) as infection control in many hospitals is poor or out dated. This holds a major risk for the health and safety of the staff members.
The “night shift” workers face more challenges than the day shift workers, because the chances of being attacked or even raped are more likely to happen.

Figure 2.11: Unsafe working conditions

Photo: Reuters

As seen in the photo (Figure 2.11), this hospital has health and safety problems. In the background there is maintenance being done in the hospital, but no protective clothing is worn or any health and safety measures are taken. This situation puts the staff and patients’ life in danger, because there is an open flame which is not protected in any manner, that can lead to serious health and safety problems and injuries (Dihlabeng Regional Hospital Policy Index, HS:11). The maintenance done can be harmful to the employees and the patients; because of the open flame the chances of burn wounds are very high and any spillage on the floor can cause anyone to slip and fall that may cause serious

injuries. It is very unhygienic to just repair the floor and not cover it, because hazardous gases may be inhaled by patients and medical staff.

2.10.10 Closing of nurse colleges

In the Helen Joseph hospital (Johannesburg) patients are almost dying, because of the incompetence of nurses in this institution. They are incompetent, because:

- Wrong medication are issued to patients
- Patients are admitted and put into dirty beds
- The same needles are used when drips are replaced, which may lead to contamination (Vorster, 2010:10).

Ironically, a number of nursing colleges were closed down in the late 1990s as part of government's cost-cutting measures, but government used R5,7 billion of the budget for the health department on overseas trips, fraud, and other unnecessary expenses (Vorster, 2011:10).

According to the Department of Health (2005:7), only forty percent of the nurses that are employed at primary health care actually trained in primary health care institutions, thus leaving a large amount of nurses' training at other institutions, which may not be on standard. Nurses work 12 hour shifts, dayshift (7am – 7pm) and the nightshift (7pm – 7am), and have to treat a large number of patients during these shifts. These long shifts may also lead to nurses to be overworked and lose concentration that may lead to mistakes. Many patients in the trauma wards may be drunk, which can lead to abusive behaviour and hold a safety concern for the doctors and nurses. A shortage of support staff such as nursing assistants, cleaners and porters makes it difficult for nurses to provide total medical care to each patient.

2.10.11 Organisational Culture Climate

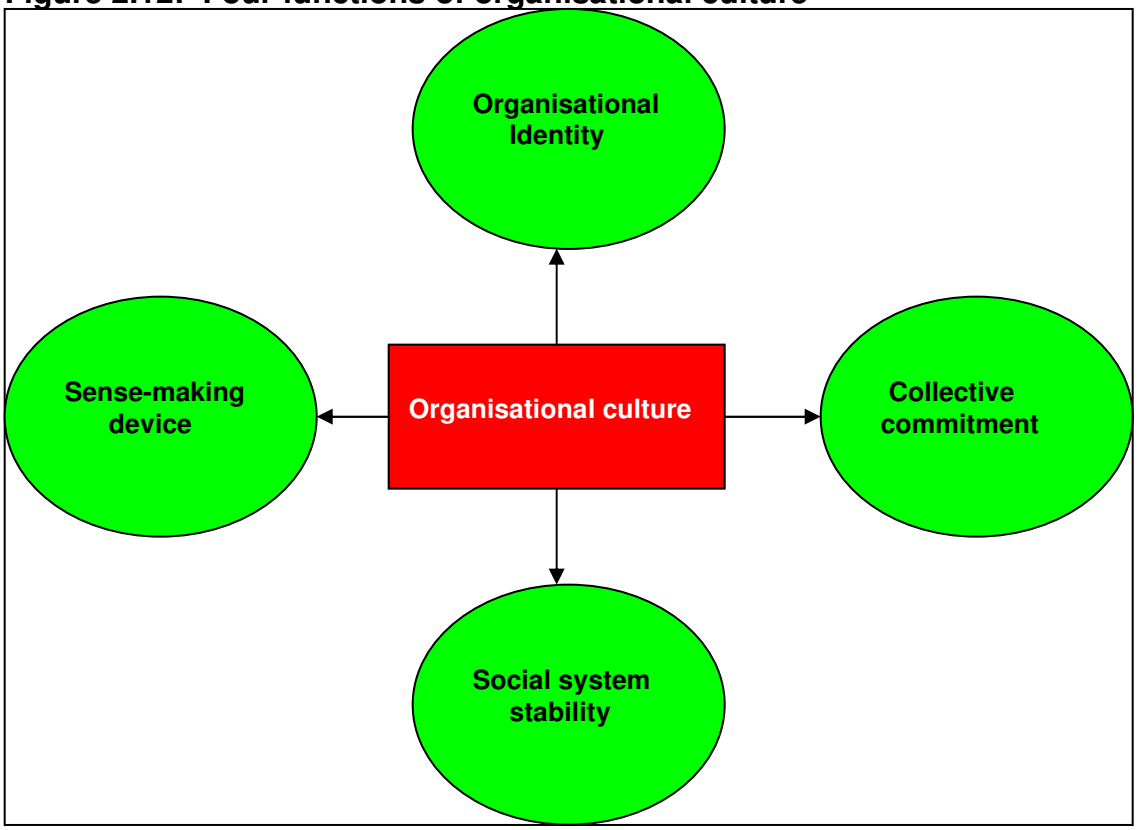
Climate: This refers to the emotional state of an organisation's members, it is very important, because people are the most valuable assets in any institution (Silbiger, 2005:149).

Culture: It is the mix of behaviours, thoughts, beliefs, symbols and artefacts that are conveyed between people in the organisation. The culture may include an unwritten rule that does not fit in with a certain culture group's beliefs, which may cause clashes and arguments (Silbiger, 2005:149).

The organisational culture has three major characteristics, namely:

- It is passed on to new employees through socialising
- The organisational culture determines the behaviour of employees at the work
- The organisational culture operates at different levels (Kreitner & Kinicki, 2007:76).

Figure 2.12: Four functions of organisational culture



Source: Smircich (1983:339)

Figure 2.12 is just an overview of the four major functions of an organisational culture and what every employee and manager should know in the organisation:

1. *Give employees an organisational identity:* The institution should care for their employee's satisfaction and do their best in keeping all the employees satisfied and make them feel wanted in the institution.
2. *Facilitate collective commitment:* to achieve the goals set for any institution, the commitment of the employees and management should be positive.
3. *Promote social system stability:* positive reinforcing in the working environment should be of the utmost importance, thus conflicts and organisational change should be managed properly and very carefully.
4. *Shape behaviour by helping members make sense of their surroundings:* this section is very important, because the employees should be kept up-to-date by management in the goals set and how the goals will be met (Kreitner & Kinicki, 2007:81).

The management of any institution has a great task at hand, because they have to ensure that there is a positive culture climate in the institution. If there is a department that has a negative working environment, it will jeopardise the whole system, because there will be unforeseen delays. For example: in a public hospital, the patients will wait longer for their files if the administration department is negative; and thus the whole system in the hospital will be delayed and may lead to a bottleneck-effect.

2.10.12 Waiting Time

There was a fifty year old female patient with terminal cancer lying in a hall way from three in the afternoon until eight-o-clock unattended by any doctor or nurse. The patient went to the hospital because of severe pain caused by her back cancer. She was notified in the hospital that she had to sleep in the hall way,

because there were not enough beds to accommodate her (Van Der Merwe, 2011:2).

The waiting time indicator that is used for the median waiting time for surgery (or 50 percentile) are used to determine the actual waiting time in rural hospitals. The median waiting time is the time taken for 50 percent of the people admitted to hospital to be admitted in a specified timeframe. A median waiting time of 20 days for surgery, for example, means that half the patients admitted had their admission within 20 days (SA Health, 2011).

The waiting time may be influenced by many factors such as absenteeism, a negative organisational culture, and employees with a no-care attitude and in some cases the workload. That is why there is a referral system in place to try and take the huge workload of the hospitals and refer the patients to their clinics.

2.11 AUSTRALIAN HEALTH SYSTEM OVERVIEW

In Australia, the responsibilities in the health system are divided into two departments namely: the commonwealth government (private) and the state and tertiary government (public).

The responsibility of the commonwealth government is:

- Two national subsidy schemes, Medicare, which subsides payments for services provided by private doctors and the Pharmaceutical Benefits Scheme (PBS), which subsides prescription medicines
- Shared responsibility for funding for public hospitals services through the Australian Health Care Agreements (AHCA) with the state and tertiary government

- Funding for a range of other health and health-related services, including public health programs, residential aged care and programs targeted at specific populations
- Regulation of various aspects of the health system, including the safety and quality of pharmaceuticals and other therapeutic goods and the private health insurance industry

The responsibility of the state and tertiary government is:

- Management and shared responsibility for funding public hospitals
- Funding for and management of a range of community health services
- Management of ambulance services and regulation of various aspects of the health system, including licensing and registration of private hospitals, medical practitioners and other health professionals

South Africa is busy implementing the same system as Australia, because the department of health introduced the National Health Insurance (NHI). The NHI will ensure good quality health for everyone in the country. The lower income group will be funded by the government, through the taxpayers, where the middle- to high income group will pay more tax and their respective medical aids to fund the NHI (Burger, 2011). This system is good, because now everyone has access to good health care, but South Africa may go through the same troubles as Australia, where one party (government or private sector) will have to cover for the other one.

The system works well in Australia, but there is a twist, because the blame-shifting and the under-funding by one party make it difficult for the other party to function properly (Buckmaster & Pratt, 2005).

- The commonwealth may under-fund their responsibilities, while the Australian taxpayer needs to pay $580 million extra annually to cover all the public health expenses (Steketee, 2004).
- Patients get discharged earlier from the public hospitals than previous years, so that the responsibility would move from the hospital (state government) to the pharmaceuticals (commonwealth government) to get well at home and save the state government money (Harvey, 2005).
- Patients are urged to seek specialist treatment outside of the public hospitals under medicare; thus the treatment will then be funded by the commonwealth government (Dwyer, 2004:11).
- The commonwealth government are under-funding the private sector, so this means that patients cannot afford the private doctors; thus they come to the public hospitals and have to wait in long queues for treatment (Menadue, 2004).

2.12 CONCLUSION

There is an impressive constitutional, legal and policy framework that guarantees the right access to healthcare to all people in South Africa, but the difficulty in this lies in the implementation of these frameworks.

The responsibility lies on government and the management of institutions to make sure that these policies, etcetera are implemented and followed. Management and employees need to work together as a team to achieve a safe working environment to ensure that employees stay on in the public sector.

For any institution to gain maximum profit, or to achieve their goals, the resources available should be managed and controlled. With the limited resources of doctors, nurses and pharmacists the government should start thinking of upgrading both salary packages and the buildings for a better work

environment. Professional employees leave the public sector, because of the unsafe working environment.

Rebuilding the public health system is more complicated as it seems, because there are a few role-players namely: government, professional associations, trade unions, academic institutions, hospital boards and patients.

Government are working on a few ideas to allocate more health professionals to rural areas:

- Recruitment of foreign doctors (Cuban) in rural areas
- Extend the community service year of the health professionals from one year to two years
- Select medical students from a rural background
- Present positive training opportunities during medical training
- Improve the salaries for rural health professional to make the package attractive for the health professionals to stay on after community service

The HIV and Aids epidemic together with the rise in violence has crowded out the health gains made since democracy. There is a need in strengthening the cooperative governance between provincial and local parties as well as between the private and public sectors, to ensure the reform of the public health system.

2.13 CHAPTER SUMMARY

In this chapter an overview was given about how rural hospitals operate in general and how the health system works in these public hospitals. The different categories of hospitals and examples of hazards were identified and discussed in short.

There was a quick glance at the Occupational Health and Safety Act No 85 of 1993 and what is expected from the employer and the employee to make the working environment a health and safety friendly place. Some of the occupational hazards in the different departments were also mentioned with some examples.

The health and safety committee were discussed as well as their duties and the necessary qualifications needed to serve on the committee. The inspection process and consequences were also discussed to ensure that all the institutions operate under the same norms and standards.

The most important part of this chapter was discussing the potential risks with practical examples, because there are standard operating procedures and policies in place, but what actually happens in the institutions are what matters. The potential risks tell the story of what is really going on in the institutions. Government should urgently shift their attention to these issues, because the public health sector still loses medical professionals on a daily basis.

In chapter 3 the empirical study is handed by distributing questionnaires to doctors, nurses and pharmacists in the Eastern Free State region. From the data captured, conclusions will be possible to make some conclusions and the necessary recommendations will be made for further discussions in chapter 4.

CHAPTER 3

RESULTS OF THE EMPIRICAL STUDY

3.1 BACKGROUND IN COLLECTING DATA FOR THE EMPIRICAL STUDY

This chapter entails the presentation of the empirical study, apprehended from the questionnaire constructed from chapter 2.

The literature study in chapter 2 serves as guideline for health and safety management in selected rural hospitals. Specific statements with relevant significance to effective control for the department of health were diagnosed and retrieved from chapter 2. These statements were formulated into a questionnaire where the participants of the study had to indicate their department is relevant adherence to the set criteria and guidelines.

The data was retrospectively obtained from employees within the department of health in the Eastern Free State region. Respondents provided information on a variety of health and safety issues. This information proves to be valuable in assessing effective health and safety management in these selected rural hospitals.

The Eastern Free State has only a few rural hospitals, thus the participant population consisted of only eighty participants. The questionnaire's scope was mainly focused on doctors, nurses and pharmacists.

The data collected were statistically analysed with the South African Statistical Institute Incorporate (SAS, 2005). Descriptive statistics (frequencies and percentages) were used to analyse the data. The data were analysed

according to the frequency of participants agreeing and not agreeing to the relevant statements. The frequencies were then represented as a percentage of the agreeing participants out of the population studied.

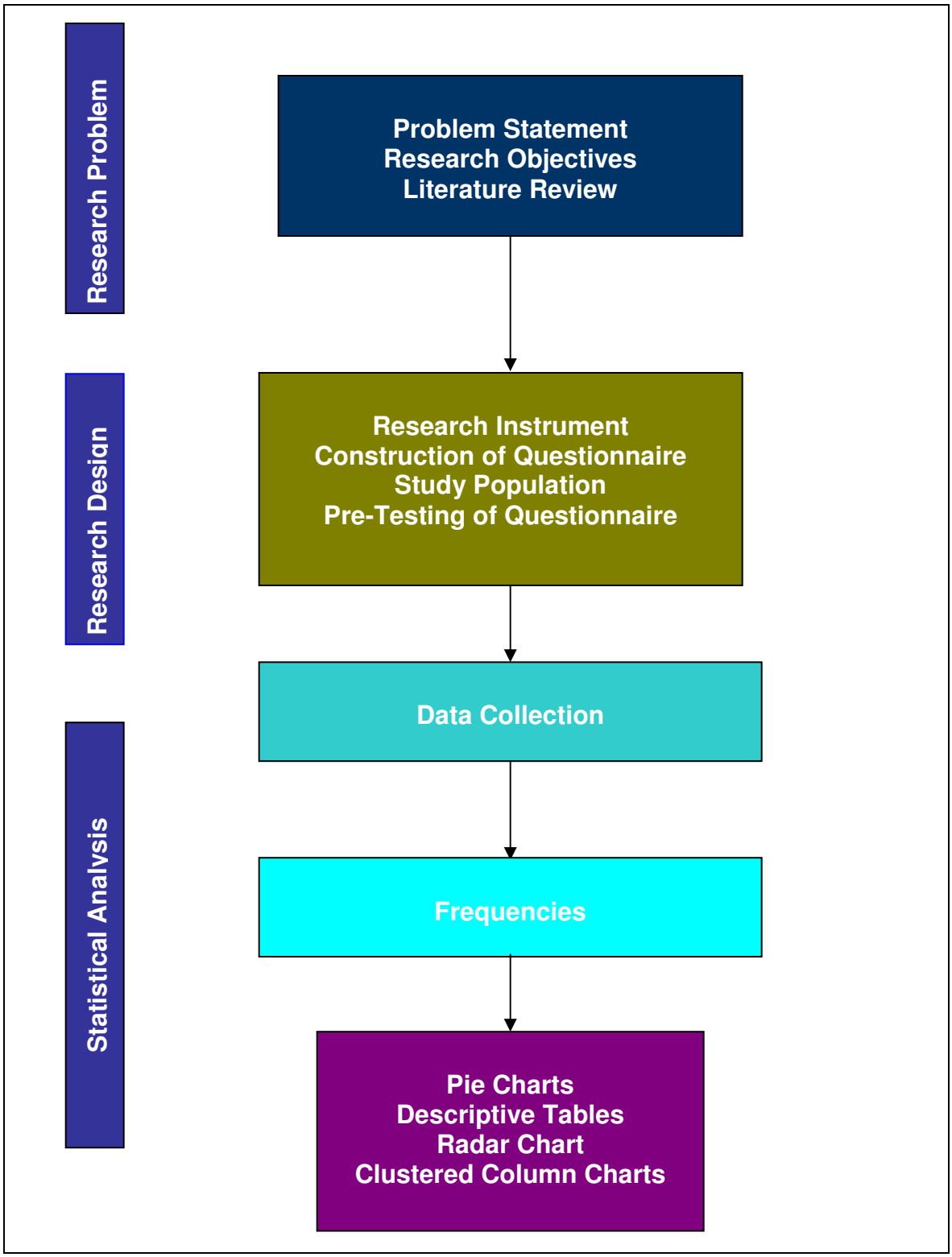
The valid percentage indicates the percentage obtained from only the respondents that completed the questionnaires.

3.2 RESEARCH PROCESS

The research problem was the first step in the research on health and safety management in selected rural hospitals. In chapter 1, the *problem statement* and *research objectives* (primary and secondary) were discussed and the issues were raised and discussed further in chapter 2, *literature review.*

The research process is schematically shown in Figure 1. *Research* and the *Methodology* used during the empirical study were used to identify any shortcomings in health and safety management in selected rural hospitals. This chapter contains the *research instrument, construction of the questionnaire, study population and pre-testing of questionnaire.*

Figure 3.1: Research process



During the empirical study, data were collected and analysed for conclusions and recommendations are discussed in chapter 4.

3.3 RESEARCH DESIGN

3.3.1 Research Methodology

There are mainly two types of investigation processes. The first type is quantitative research which is numerical indicators to ascertain the relative size of a particular communication phenomenon. The second type is the qualitative research, which uses words and symbols indicating the presence or absence of phenomena or categorizes them into different parts (Matveev, Rao & Miller, 2001).

Quantitative methods will provide a high level of measurement precision and statistical power, while the qualitative methods supply greater in-depth information of the communication process and the nature in a particular setting (Matveev *et al,* 2001). Quantitative methods achieve high levels of reliability of data gathered due to controlled observations (Balsey, 1970). The only downside of the quantitative method is the inability to control the environment where the participants provide answers to the questions in the survey (Matveev *et al.,* 2001).

For the purpose of this study, the quantitative method suited the best, because the data collected and analysed were only basic findings and not an in-depth research.

3.3.2 Construction of questionnaire

The questionnaire was developed and mainly focused on the adherence of policies on health and safety for doctors, nurses and pharmacists. The *literature*

review gave the background in compiling the questionnaire. The questionnaire consisted of 43 questions with a Likert-scaling of 4 options for each question. The questionnaire consisted of two parts:

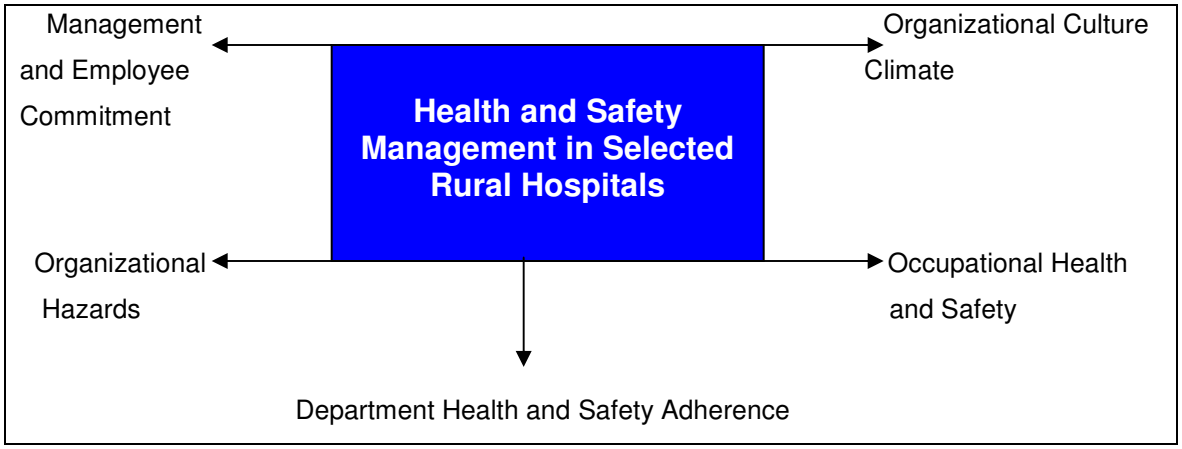
Part 1: Demographical information

Participants had to indicate their gender (male or female), occupation (doctor, nurse or pharmacist), the amount of patients treated daily (1 to 10, 11 to 20, 21 to 30 and 31 or more), experience at the institution (< 1 year, 1 to 5 years, 6 to 10 years and > 11 years) and their age (20-30 years, 31-40 years, 41-50 years or over 51 years).

Part 2: Assessment of the Health and Safety Management

Part 2 contained questions mainly on the health and safety management of rural hospitals and focused specifically on doctors, nurses and pharmacists. The questionnaire consisted of forty-three questions and focused on five different components in the management of health and safety in selected rural hospitals. There was a four point Likert-scale (1 = Totally Disagree, 2 = Disagree, 3 = Agree, 4 = Totally Agree) where the participants could give their insight on certain areas of questions concerning the health and safety.

Figure 3.2: Health and Safety components used in the questionnaire



The different components that are identified will help in assessing and identify which component of the institutions needs urgent attention to secure the health and safety in the working environment.

3.3.3 Study population

The population for the empirical study consisted of mainly doctors, nurses and pharmacists all working in different departments. The specific departments were chosen, because these participants (doctors, nurses and pharmacists) are exposed to these specific health and safety risks. These risks may include needle pricks, Tuberculosis, HIV exposure and many other diseases.

The department of health in South Africa is large and keeps on growing annually, but only the Eastern Free State region where used in the study, because the policies and procedures are basically the same for all the government institutions in the entire Free State province. The sample of 80 employees was chosen for the empirical study, making the test valid.

3.3.4 Sample strategy

Sampling refers to the process of identifying a relatively small number of elements from a larger defined group of elements known as a population so that the information gathered from the smaller group allows the researcher to make judgments about the larger population (Levine, Stephan, Krehbiel & Berenson, 2008:252). Sample analysis is less time consuming, less costly and less cumbersome compared to the analysis of the entire population.

There are a number of ways to select the sample, depending on what the goal of the study is. From the employee database, only 80 employees were chosen which consisted out of 29 doctors, 43 nurses and 8 pharmacists. These three groups present the employees most exposed to health and safety risks.

A stratified sampling procedure was followed, because the health and safety issue can then be discussed for all the different departments, but it will be a too long discussion. That is why only a few departments were used in the research. Due to the small area used during the research, the number of employees was not equally distributed, because in the Eastern Free State the number of doctors and nurses far outnumbers the pharmacists.

Equation 3.1 Sample size

$$n = \frac{Z^2 \pi (1 - \pi)}{e^2}$$

Where: n = sample size required for given parameters

Z = number of standard deviations for given accuracy (1.64 for 90% confidence level)

π = proportion of sample of interest (a value of 0.5 maximises the sample size, thus minimising the error)

e = error allowable, in this case 10%

Source: Levine, Stephan, Krebhiel and Berenson (2008:303)

The questionnaires were distributed to the nurses and the doctors in the wards and in the clinics. All of the 80 employees handed back their questionnaires before the cut-off date, so there was a 100% response rate. The reason for the high response rate is because all the participants are permanently appointed and had time during their shifts to complete the questionnaire.

All the questionnaires were confidential and the participants could not be identified in any of the information asked. The assumption may be made that the

participants answered the questions honestly and the questionnaires can be seen as reliable, because of the confidentiality issue.

3.3.5 Pre-testing of questionnaire

The pre-testing is only to let the participant feel at ease to fill in the questionnaire, because most participants are concerned about the confidentiality of the questionnaire and that may influence them in answering the questions as honestly as possible.

By using the pre-testing, the researcher can determine:

- The instructions on the questionnaire are clear
- The respondents understand the statements/questions
- The wording is understandable and written in plain English

Four employees did the pre-testing and understood everything in the questionnaire and could easily comment on the statements/questions. The section that follows contains all the data that was collected and analysed, including the demographic information for the 80 participants of the questionnaires.

3.3.6 Assessment of margin of error and internal consistency of the questionnaire

3.3.6.1 The margin of error of answers

The calculations for the margin of error were calculated at a 95% confidence level. Equation 3.2 calculated the margin of error on the questions (Siegle, 2007).

Equation 3.2 Calculation for margin of error

$$L = 2\sqrt{\frac{p(100-p)}{n}}$$

Where:

L = the margin of error

p = the percentage of answers received back per question

η = the number of questionnaires received back

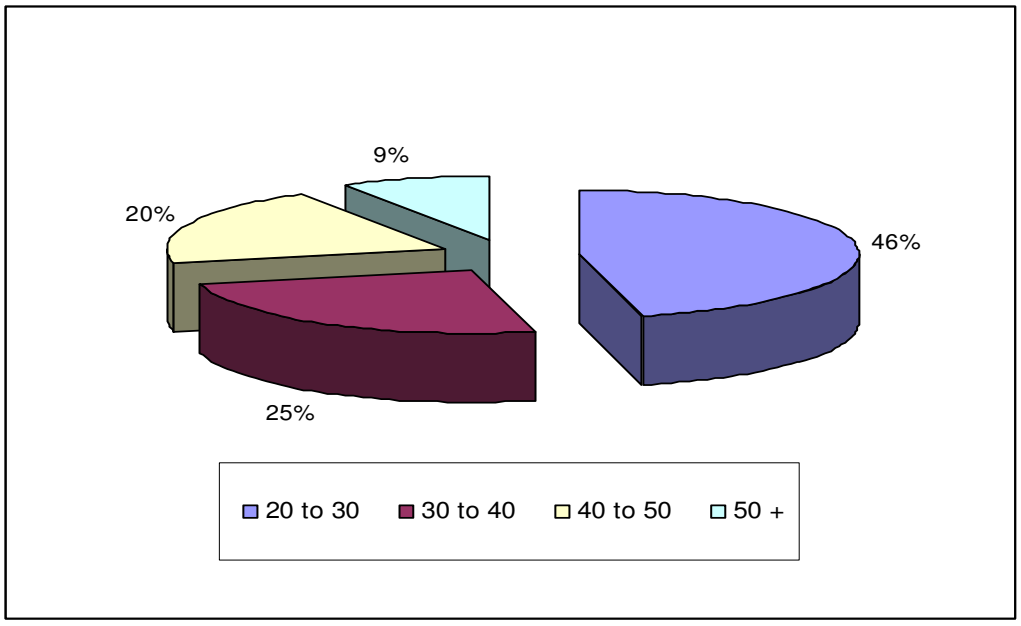
The margin of error was 0%, because all the questions were answered and 100% of the questionnaires were received back from the participants.

3.4 RESULTS OF DEMOGRAPHICAL INFORMATION

During the study a sample of eighty (n = 80) were taken and the variables are discussed in the coming section.

3.4.1 Age distribution

Figure 3.3: Age distribution



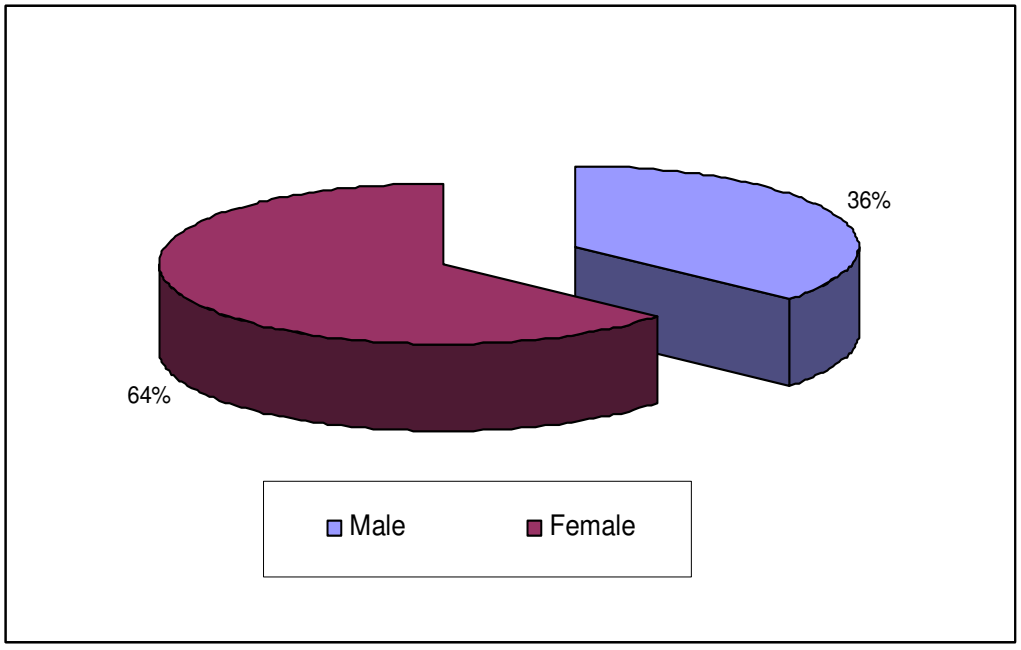
From the four different categories the majority of the participants were between the ages of twenty to thirty years old. This means that the majority of doctors, nurses and pharmacists in rural areas are interns or community service personnel doing their practical year/s. The reason for this is that they are placed in rural areas where there are shortages of medical staff members.

The four different age categories are:

1. Twenty to thirty years (46,25%)
2. Thirty to forty years (25,00%)
3. Forty to fifty years (20,00%)
4. Fifty years and above (8,75%)

3.4.2 Gender distribution.

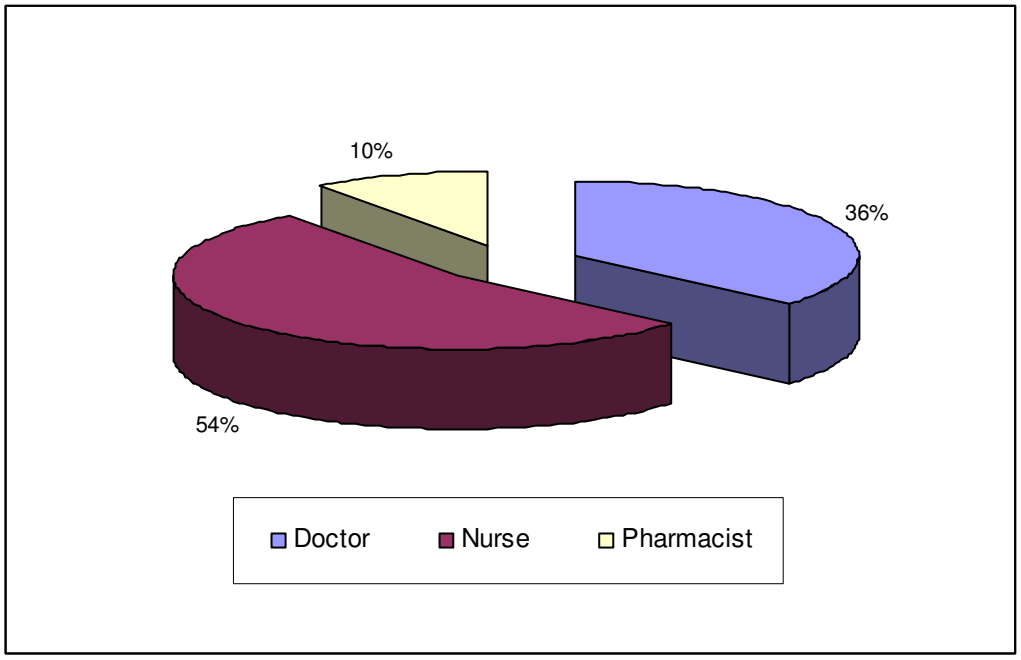
Fig. 3.4: Gender distribution



Out of the eighty participants the majority of them were females (63,75%). The number of medical students (doctors, nurses and pharmacists) finishing their medical degrees are increasing for the female gender by a large number and this situation is increasing annually. Out of the hospitals surveyed there were only twenty-nine male participants and fifty-one female participants who took part in the research.

3.4.3 Occupation

Figure 3.5: Occupation



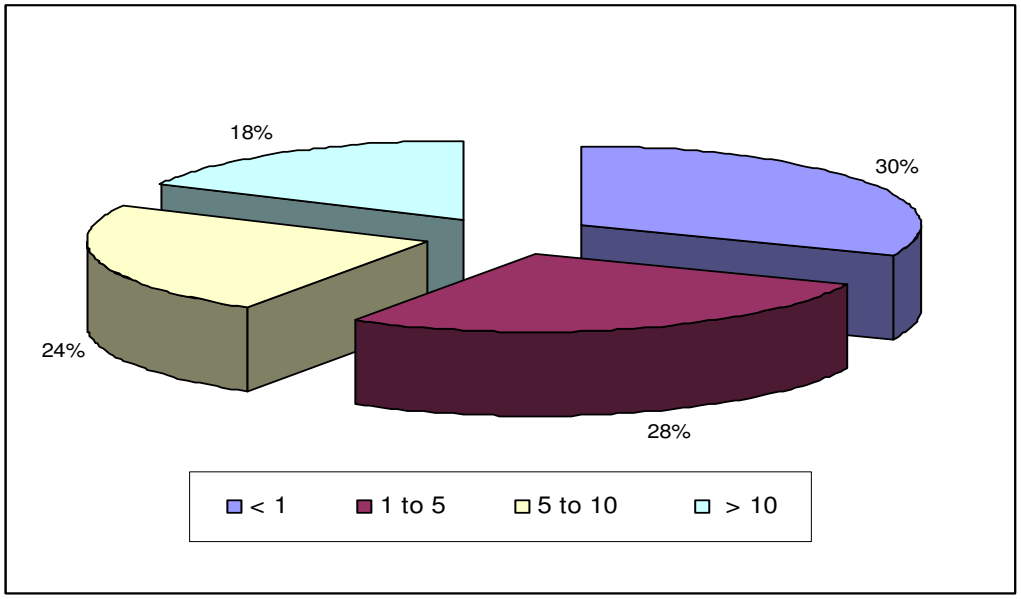
The majority of respondents in hospitals are females, because they make out the majority of nurses, but the amount of female doctors graduating are increasing annually. The nurses made out fifty-four percent of the population survey, while doctors were thirty-six percent and pharmacists only ten percent.

The nurses were the majority of the participants, because they form the backbone of the health system. The only negativity is that these nurses train in

state institutions and when they complete their course, they leave the country for better salary packages and better working conditions abroad.

3.4.4 Experience

Figure 3.6: Experience



The experience of the employees was equally divided. The majority of experience was employees with less than one year experience. The results were:

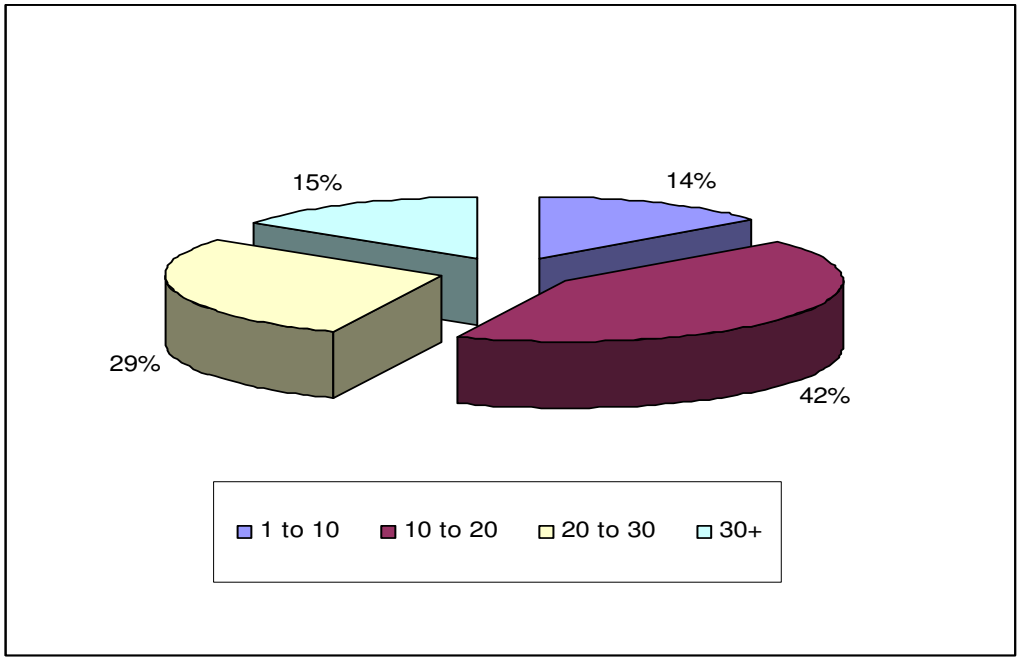
- < 1 Year = 30%
- 1 to 5 years = 28%
- 6 to 10 years = 24%
- > 10 years = 18%

It may be assumed that the employees may eventually leave the institution for better working conditions or more money if the conditions does not improve in the institutions. The working environment should be safe for the employee to perform their duties in; otherwise it is possible that they leave the department and seek for a better and a safer workplace in foreign countries or in the private sector.

The lack of experience in any institution may lead to trouble, because a lack of experience usually goes hand-in-hand with a lack of knowledge. This may be a major concern for the patient, because the chances of mistakes are huge.

3.4.5 Patients treated daily

Figure 3.7: Patients treated daily



The number of patients seen on a daily basis by the medical employees exceeds the recommended amount, because on average the time a medical practitioner needs to examine a patient is approximately 30-45 min. The assumption can be made that patients are not properly examined by medical professionals, leading to misdiagnosis of these patients.

The major reason for this large amount of patients seen daily by doctors, nurses and pharmacists may be the result of the unaffordable medical aid funds. The

end result is that the medical professionals need to work fast and they may get tired and start making mistakes like needle pricks.

3.5 STATISTICAL ANALYSIS

The data collected were statistically analysed with the South African Statistical Institute Incorporate (SAS, 2005). The statistical analysis consisted of two phases. Firstly, descriptive statistics were explored for each of the statements. Each statement was analysed and the mean and standard deviation were calculated. The five different components each contained a number of statements, which lead to certain assumptions on the results.

The second phase of analysis describes the inferential section of the study. Statistical and practical significant relationships between the different demographic variables were explored based on the data collected from the health and safety questionnaire.

3.5.1 Descriptive

During the analysis, the basic descriptive statistics used were:

- *Frequency %:* Frequency tables are the simplest way to analyse categorical data. Frequency tables are used to review different categories of values and how they are distributed in a sample. Relative frequency distribution is formed by dividing each frequency by the total number of values. The frequency percentage is formed by multiplying each frequency by 100% (Levine *et al.,* 2008:46).

- *Mean:* The mean (arithmetic mean) is a particularly informative measure of the central tendency (Levine *et al.,* 2008:97). The positive thing about the mean is that it takes all the scores into account. If the scores resemble a normal distribution, then it will be a bell-shaped distribution where most of the scores will cluster fairly close to the mean.

- *Standard Deviation:* These measure the “average” scatter around the mean (Levine *et al,* 2008:106). It takes all the scores into consideration and calculates the spread of scores in a normal distribution with great precision. The only disadvantage is that it is much harder to calculate than the other measuring methods.

3.5.2 Descriptive study

The demographical information will be plotted on a clustered column chart to determine the relationship between the five different components of the health and safety of rural hospitals and the demographic section which includes *age, gender, occupation, experience at the institution and the amount of patients treated daily.*

The main aim of this analyses is to determine if there is a difference between the evaluations based on the mean score, for example the responds from a male and a female regarding the health and safety (Field, 2009:328). The results will be descriptively analysed.

3.6 DESCRIPTIVE STATISTICS

Each statement was taken separately with four frequency percentages, collected from the Likert four-point scale. The last two columns consist of the *mean* and *standard deviation*. The frequency percentages give an indication on how the employees responded to the respective statements made.

3.6.1 Management and employee commitment

The results for this component will be found in table 3.1 with the statement and the frequency percentage distribution, and the standard deviation.

In the total of eight statements made, there were only two that had a mean above three. The statements that scored the highest were:

- Management takes health and safety seriously
- Management trusts your department in doing health and safety issues correctly

These two statements scored the highest mean values and had the smallest standard deviation values. The statement that scored the lowest mean value, but the highest standard deviation was:

- Management approaches employees for insets on improving health and safety

This means that management does not take the employees in consideration when upgrading or developing policies, which is not good, because the employee are exposed to the risk or whatever the concern is about.

Table 3.1: Descriptive statistics- Management and employee commitment

		FREQUENCIES %				DESCRIPTIVE	
Item	**Statement**	**1**	**2**	**3**	**4**	**Mean**	***SD**
A1	Management puts in the necessary effort to lay claim of the importance of health and safety	1,27	34,18	55,70	8,86	2,72	0,64
A2	Management follows all the health and safety regulations themselves at all time	5,06	45,57	44,30	5,06	2,49	0,68
A3	Management takes health and safety seriously	0	18,75	61,25	20	3,01	0,63
A4	Health and safety are managed properly in the hospital by employees	5,06	36,71	40,51	17,72	2,71	0,82
A5	Management trusts your department in doing health and safety issues correctly	0	20	56,25	23,75	3,04	0,66
A6	Management takes care of employee satisfaction	6,33	50,63	35,44	7,59	2,44	0,73
A7	Management approaches employees for inputs on improving health and safety	17,72	37,97	32,91	11,39	2,38	0,91
A8	New or improved suggestions are taken seriously by management	1,27	29,11	51,90	17,72	2,86	0,71

* SD= Standard Deviation

According the statement A1, the majority (64,56%) believed that management lays the necessary claim on the health and safety importance, while in statement A2 half of the employees feel that they (management) do not obey the health and safety regulations themselves. This leads to double-standards, because they emphasize the importance of health and safety while not following the regulations themselves.

In contrast, in statements A3 and A5, the majority of employees felt that management took health and safety seriously and trusted the respective departments in obeying the health and safety regulations. Another negative point was in statements A6 and 7: employees felt that management did not approach them for inputs on health and safety and that they (management) did not care about the employee's work satisfaction.

The management takes new improvement suggestions seriously, but they still do not approach all the employees for suggestions. For A8, the majority (69,62%) of employees felt positive about the improvements of policies, but their inputs are not acknowledged. This is a concern, because the employees are the ones working in these conditions and will know more about the risks than management.

3.6.2 Organisational culture climate

The organisational culture climate was calculated and plotted in table 3.2. Out of the 12 statements, there was only two statements where the employees strongly agreed (B1 and B2), because the mean was above 3,0. The participants mostly just agreed on the other statements, because the mean was round-about 3,0. The highest mean and standard deviation was statement B1 and B2 namely:

- Do you enjoy being an employee at this Department
- Employees should take responsibility for their own Safety in the workplace

Overall, the organisational climate seems very positive in the departments, except for the cultural clashes that seem to happen in the departments and the communication gaps that exist between the employees.

Table 3.2: Descriptive statistics - Organizational culture climate

		FREQUENCIES %				DESCRIPTIVES	
Item	**Statement**	**1**	**2**	**3**	**4**	**Mean**	***SD**
B1	Do you enjoy being an employee at this department	0	15	51,25	33,75	3,19	0,68
B2	Employees should take responsibility for their own safety in the workplace	2,53	10,13	48,10	39,24	3,24	0,77
B3	There is good teamwork in your department	2,53	24,05	49,37	24,05	2,95	0,77
B4	Employees are aware of safety risks and help each other to obey them	2,50	22,50	61,25	13,75	2,86	0,67

B5	There are a lot of cultural differences and clashes in the department	12,50	33,75	41,25	12,50	2,54	0,87
B6	Everyone in your department obeys the health and safety rules	3,80	31,65	51,90	12,66	2,73	0,73
B7	There are steps taken against these guilty parties	11,69	49,35	36,36	2,60	2,29	0,71
B8	There are “blame-shifting” among different races	11,25	43,75	32,50	12,50	2,46	0,86
B9	There is good communication between the employees	2,50	38,75	38,75	20	2,76	0,79
B10	There is a reward system in the department	30	42,50	18,75	8,75	2,06	0,92
B11	My co-workers encourages me to perform better	2,50	27,50	57,50	12,50	2,80	0,68
B12	You enjoy the variety of tasks that you do every day	5,00	15,00	57,50	22,50	2,97	0,76

*SD= Standard Deviation

As mentioned earlier, the two highest scoring statements were the first two where the employees was happy in their workplace (B1) and all agreed that it is the responsibility of the employee to ensure the health and safety at the workplace (B2).

According to the results from the statements B3 and B4, there is good teamwork in the departments where employees help each other in obeying the health and safety regulations. They motivate and encourage each other in performing better in their working environment.

There are some problems with the cultural clashes and the “blame-shifting” that needs to be addressed by management. In statement B5, almost half of the participants (46,25%) felt that there is cultural clashes, while (55%) felt that there is a stigma of “blame-shifting”. This means that no-one can be held responsible for things going wrong in the departments and everyone is just blaming the next one.

There is no “reward system” in the departments, with (72,50%) disagreeing of any reward system. That may be a very important section, because most about

the employees want to be rewarded and acknowledged for doing a good job, so management should look into this section carefully, because if not fixed, employees may easily be de-motivated.

The statement in B12 indicated that most of the employees (80%) enjoy their daily tasks, but the risk about this is that they may fall into a routine, which can lead to mistakes, because the daily tasks may stay the same all the time and that may lead to a lack in concentration and mistakes, because of doing the same tasks routinely.

The organisational culture is very important to any company or institution, because if the employees are not committed to their job, then the institution will not be successful. The employees may determine the success of a company and a happy employee can usually be seen as a hard-working employee that is positive about the workplace and the tasks on hand.

3.6.3 Occupational hazards or risks in the departments

Out of the 7 statements there were 2 that had a higher than 3,0 mean which correspond to a very positive mood from the participants, while the standard deviation (SD) indicates the variances. Assuming that 68% of the participants clustered around the mean, thus it indicates that there is still a few employees that disagree. Statements C1 and C5 showed the highest mean with the smallest standard deviation.

In table 3.3 the results are revised for further discussion.

Table 3.3: Descriptive statistics- occupational hazards/risks in the departments

		FREQUENCIES %				DESCRIPTIVE	
Item	**Statement**	**1**	**2**	**3**	**4**	**Mean**	***SD**
C1	Awareness of all the health risks in the workplace	1,25	10,00	52,50	36,25	3,24	0,68
C2	All the equipment in the department are trusted	10,00	40,00	36,25	13,75	2,54	0,86
C3	Health and safety policies are upgraded on a regular basis	7,50	30,00	45,00	17,50	2,72	0,84
C4	Employees would rather work safe than rushing off tasks just to complete it	11,25	30,00	42,50	16,25	2,64	0,89
C5	Immunization (Hepatitis B) happens regularly	3,80	10,13	50,63	35,44	3,18	0,76
C6	Information on disease outbreaks are given	3,80	35,44	35,44	25,32	2,82	0,86
C7	The necessary personal protective clothing are always available	5,06	35,44	37,97	21,52	2,76	0,85

*SD= Standard Deviation

The majority of the participants (88,75%) were aware of the risks in the workplace according to statement C1. They also felt that policies are regularly upgraded, because COHSASA holds big inspections every second year, thus the policies need to be upgraded and be up-to-date.

The feeling is exactly divided in C2 between the participants concerning the working condition of equipment, which is not a positive sign, because patients lives depend on these equipment used in the hospital. Management should budget for new equipment, because the equipment is used a lot during the year, due to the large amount of patients.

In statement C3, the majority of participants (62,50%) feel that the policies are upgraded on a regular basis, but according to some insight from employees, only the dates are renewed, the policies are still very old. Management should renew the policies every second year to keep up to date with the latest interventions and guidelines.

In statement C4 and 5, the majority of the participants agreed that they are immunized by the health practitioner, because the employees are exposed to all kinds of diseases for long periods every day.

In the next two statements C6 and C7 there were quite a few participants that did not agree that the necessary personal protective clothing, for example: gloves and overcoats, are not always available, due to a shortage of stock at the depot or the person in charge did not order the clothes.

3.6.4 Department health and safety adherence

Out of the 8 statements, there were only 2 that were overwhelmingly positive, the other remaining statements were close between positive and negative.

Statement D1 had the highest mean (3,21) and the lowest standard deviation (0,68), meaning that the participants all agreed that there is a health and safety policy.

Table 3.4: Descriptive statistics- Department health and safety adherence

		FREQUENCIES %				DESCRIPTIVE	
Item	**Statement**	**1**	**2**	**3**	**4**	**Mean**	***SD**
D1	The department has a health and safety policy	1,25	11,25	52,50	35,00	3,21	0,68
D2	The department spends enough time on a daily basis on health and safety	2,50	48,75	37,50	11,25	2,57	0,72
D3	The department does enough to ensure the safety of employees	5,06	40,51	40,51	13,92	2,63	0,79
D4	Enough training on health and safety is given	5,06	39,24	41,77	13,92	2,65	0,78
D5	Accidents re-occur due to a lack of knowledge	11,25	35,00	42,50	11,25	2,54	0,84
D6	Safety hazards are well known to the employees in the department	3,80	25,32	44,30	25,58	2,94	0,82
D7	Safety issues are overlooked in the department due to time consuming	6,25	27,50	53,75	12,50	2,72	0,76
D8	In-service training are held in the department regarding fire protection	7,50	13,75	36,25	42,50	3,14	0,92

*SD= Standard Deviation

In statement D2 the participants were also divided and half of them felt that the management did not do enough daily in securing their health and safety, while the others were positive about the management's handling of health and safety daily.

The participants felt positive and negative when asked about their safety at work, where 45,57% disagreed that they felt safe at the workplace and the other 54,43% felt safe in their working environment.

44,30% of the employees were not impressed by the in-service training given by the department. The reason for that may be that the nurses and personnel on duty cannot leave their departments to attend these training sessions or they work night shift and cannot attend these training sessions. Different time slots need to be implemented, to accommodate every employee. More than half of the (53,75%) participants believe that accidents re-occur due to a lack of knowledge or training on how to use the different equipment.

Some 66,25% felt that safety issues were over-looked due to a shortage of time. The time consuming issue is because there are too many patients to treat according to the book, thus the safety issues are overseen most of the time. This holds a great risk for both patient and employee, because this usually leads to accidents like needle pricks and issuing of wrong medication. The risk in this connection is increasing daily, because the amount of patients in hospitals is increasing on a daily basis.

3.6.5 Occupational health and safety

The highest mean (3,81) and the lowest standard deviation (0,42) was at the statement that almost every participant (98,74%) admitted that health and safety is very important for any institution.

Table 3.5: Descriptive statistics- Occupational health and safety

		FREQUENCIES %				DESCRIPTIVES	
Item	**Statement**	**1**	**2**	**3**	**4**	**Mean**	***SD**
E1	There is a health and safety committee	1,25	12,50	58,75	27,50	3,12	0,66
E2	Are there any feedback from health and safety meetings held	3,75	47,50	28,75	20,00	2,65	0,84
E3	There is a occupational hazards policy	6,25	10,00	52,50	31,25	3,09	0,81
E4	There is an occupational health practitioner	1,27	12,66	41,77	44,30	3,29	0,74
E5	Do you feel safe in your working environment	10,13	36,71	43,04	10,13	2,53	0,81
E6	Health and safety is important for any department	0,00	1,27	16,46	82,28	3,81	0,42

*SD= Standard Deviation

In statements E1 and 2, most of the participants (86,25%) agreed that there is an health and safety committee, but only half (51,25%) received any form of feedback from meetings held by the committee. There may be some reasons for that, but the two most obvious are either the employee works in a shift where he or she misses the feedback or the health and safety representative fails in his or her job description.

In statement E4 the majority of the participants (86,07%) were aware of the occupational health practitioner, because every newly appointed employee should get their immunization within two weeks from starting work at the institution. The occupational health practitioner also sees the employees if they are sick or if they have been booked off sick; the employee should come for a follow-up by the practitioner.

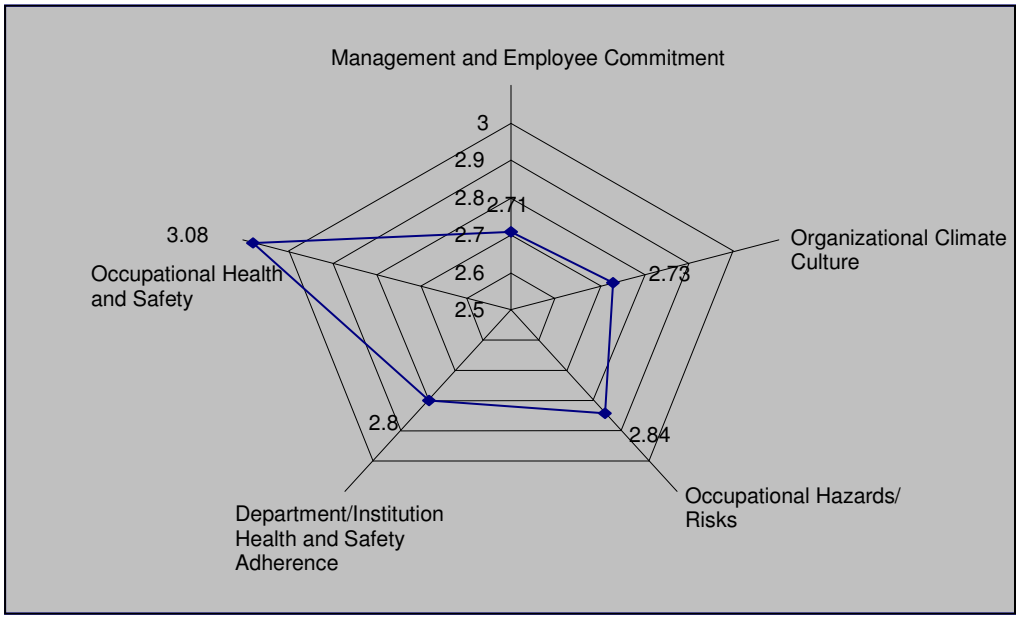
Most of the employees agreed that they feel safe at the workplace and their attitudes were positive in this regard. There was 46,84% who felt unsafe at the workplace, while the others felt quite safe at the workplace. This may lead to problems, because it is difficult to concentrate and put in the necessary effort if you do not feel at ease in the workplace. This may lead to mistakes and the rushing off of important tasks. This may also be seen as a major threat why

employees leave these institutions, because most employees do not want to risk their health while working.

3.6.6 Descriptive statistics of resulting components

The average mean was calculated and plotted on a radar chart. The consistency was low, but the reason for the inconsistency may be because of the different department needs. Only one component was above the value of 3,0 and that was the *Occupational Health and Safety.* This component should be above three, because all the departments should all have the same occupational health and safety policies and guidelines.

Figure 3.8 Mean scores for the health and safety components



1. Management and employee commitment (2,71)
2. Organisational climate culture (2,73)
3. Occupational hazards/risks (2,84)
4. Department/Institution health and safety adherence (2,8)
5. Occupational health and safety (3,08)

Only one component shows a value more than 3,00 which indicates that the other four components show a negative sentiment towards the health and safety of rural hospitals. This should be seen as a challenge for management, because they need to change the attitudes of the employees to create and ensure a safe working environment. This can only be achieved by creating a positive attitude with the employees.

3.7 FURTHER STATISTICAL ANALYSIS

This second section of analysis will shed light on the five components and the demographic variables namely; *age, gender, occupation, experience at the institution* and *the amount of patients treated daily*. The aim will be to determine if there is a relationship between the demographic variables and the five components of the health and safety management of selected rural hospitals that was identified.

The relationship will be determined by making use of the average mean of the five components in the previous section. These averages are then plotted on a clustered column chart to determine which component and department are best adherent. The results are then discussed.

3.7.1 Age

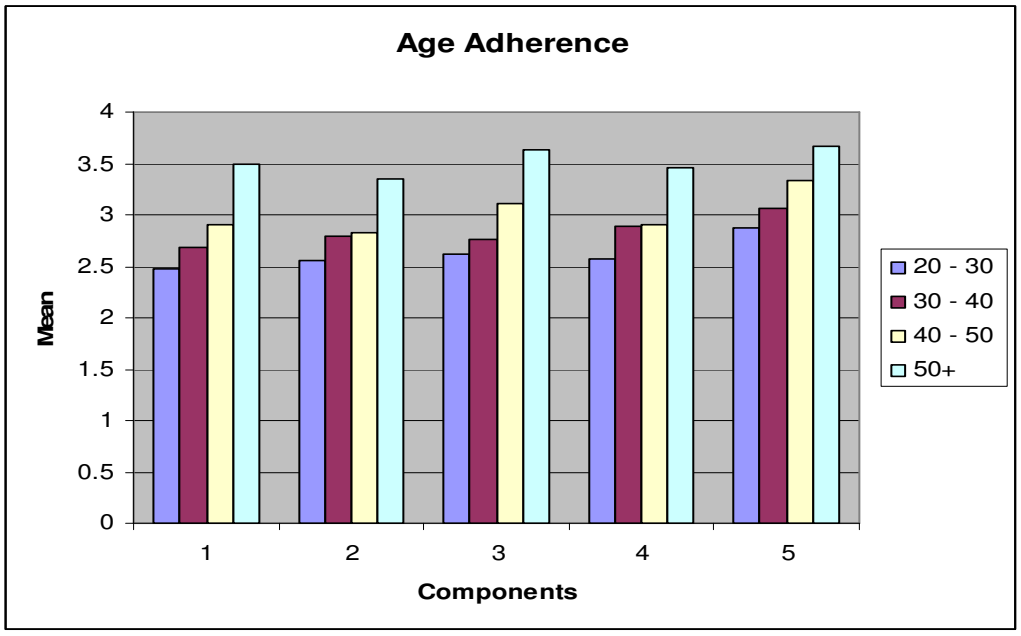
The lowest mean (2,47) and highest standard deviation (0,84) were calculated at the age group of 20 to 30 years. All the means and standard deviations are relatively close, but the higher means and lower standard deviations are found at the higher age groups, meaning that the older employees are more adherent than the younger new employees.

Table 3.6 Age-group descriptive

Age Group	Management and Employee Commitment		Organisational Culture Climate		Occupational Hazards/Risks		Department Health and Safety Adherence		Occupational Health and Safety	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
20 – 30 years	2.47	0,69	2,55	0,73	2,62	0,84	2,57	0,79	2,87	0,71
31 – 40 years	2,69	0,67	2,80	0,78	2,76	0,74	2,89	0,68	3,06	0,63
41 – 50 years	2,91	0,59	2,83	0,66	3,11	0,65	2,91	0,64	3,34	0,47
50 + years	3,49	0,58	3,35	0,66	3,63	0,53	3,46	0,63	3,66	0,49

SD = Standard Deviation

Figure 3.9: Age adherence



According to the calculations and findings in the clustered column chart, it may be assumed that the older the employees are, the more adherent they are to the different policies. The over 50 years group had an average mean of above 3, while the 20 to 30 years group did not have a mean of above 3 at all.

The assumptions that can be made are that the younger employees are less adherent than the older employees; the reason may be that there may be a lack of decent training in health and safety or the younger employees are not interested and just want to complete their tasks in quick succession of time. The older employees work more thoroughly and that minimizes the risks from occurring.

3.7.2 Gender

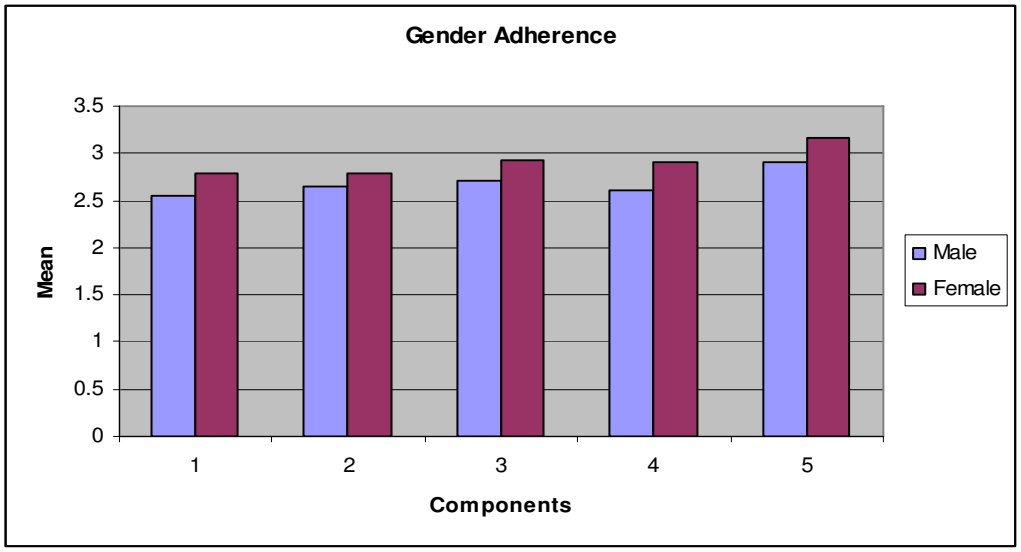
According to the calculations about the gender adherence, the assumption can be made that the females are more adherent than the males. The females were the dominant participants in the questionnaire and still showed more adherence than the males.

Table 3.7 Gender adherence descriptive

Health and Safety Component	Gender	Participants	Mean	SD
Management and Employee Commitment	Male	29	2.56	0,76
	Female	51	2,79	0,68
Organisational Culture Climate	Male	29	2,65	0,85
	Female	51	2,78	0,70
Occupational Hazards/Risks	Male	29	2,70	0,89
	Female	51	2,92	0,76
Department Health and Safety Adherence	Male	29	2,61	0,87
	Female	51	2,90	0,72
Occupational Health and Safety	Male	29	2,91	0,79
	Female	51	3,17	0,64

SD = Standard Deviation

Figure 3.10: Gender adherence



Another assumption that can be made on the clustered column chart is that the female gender was victorious in all five components of health and safety in the rural hospitals. Most of the males are doctors or pharmacists and they may work in a day-to-day task mode and not bother about the risks in the working surroundings.

Assumptions from the chart can be made that female employees are much more concerned about their safety. The females put in more effort to obey the health and safety regulations and thus create a safer working environment. Females are also more thorough than males and they make sure that they work safely and neatly; thus creating a safe working environment for both employee and patient.

3.7.3 Occupation

The three occupations (doctors, nurses and pharmacists) are analysed and compared to the five components of health and safety. The three occupations are set out in the descriptive statistics table. The three occupation categories are opposite each of the five components of health and safety.

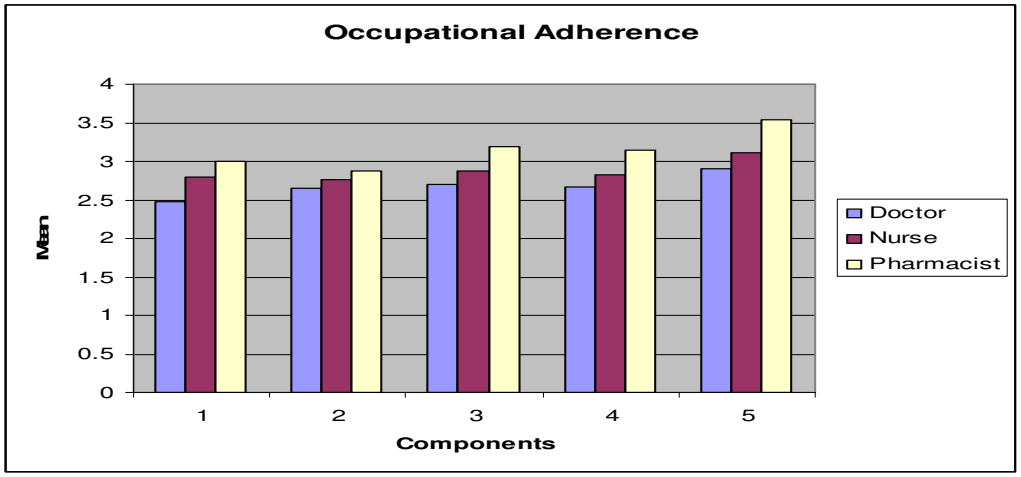
Table 3.8: Occupation adherence

Occupation	Management and Employee Commitment		Organisational Culture Climate		Occupational Hazards/Risks		Department Health and Safety Adherence		Occupational Health and Safety	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Doctor	2,48	0,66	2,65	0,77	2,70	0,88	2,66	0,86	2,90	0,70
Nurse	2,80	0,74	2,76	0,77	2,87	0,76	2,83	0,80	3,11	0,70
Pharmacist	3,00	0,59	2,87	0,68	3,19	0,77	3,15	0,62	3,54	0,57

SD = Standard Deviation

In this demographic section, the pharmacists had the highest mean (3,54) and the lowest standard deviation (0,57). The main reason for this may be that they all work in the same department with the same guidelines to ensure a safe working environment. The doctors and nurses all work in different departments in the hospital like in a ward, casualty and in clinics.

Figure 3.11: Occupational adherence



As can be seen in the chart above, the doctors' and nurses' means are lower for all five components than those of the pharmacists. The reason for that will be that the needs for a nurse or doctor working in casualty such as car accidents, all the time, will be way different than a nurse or a doctor working in a ward where it is much more calm.

Doctors and nurses working in clinics are much more time bonded and have to rush to see all the patients in time, which will lead to mistakes and raise the health and safety risks. The time limit seeing patients in the overbooked clinics will differ much more than doctors doing ward rounds twice daily and have much more time seeing patients.

These elements should be taken into consideration separately, and the needs of the different departments should be taken seriously, because there is not a single set of guidelines that will protect and ensure a safe working environment for all the departments.

3.7.4 Experience at the institution

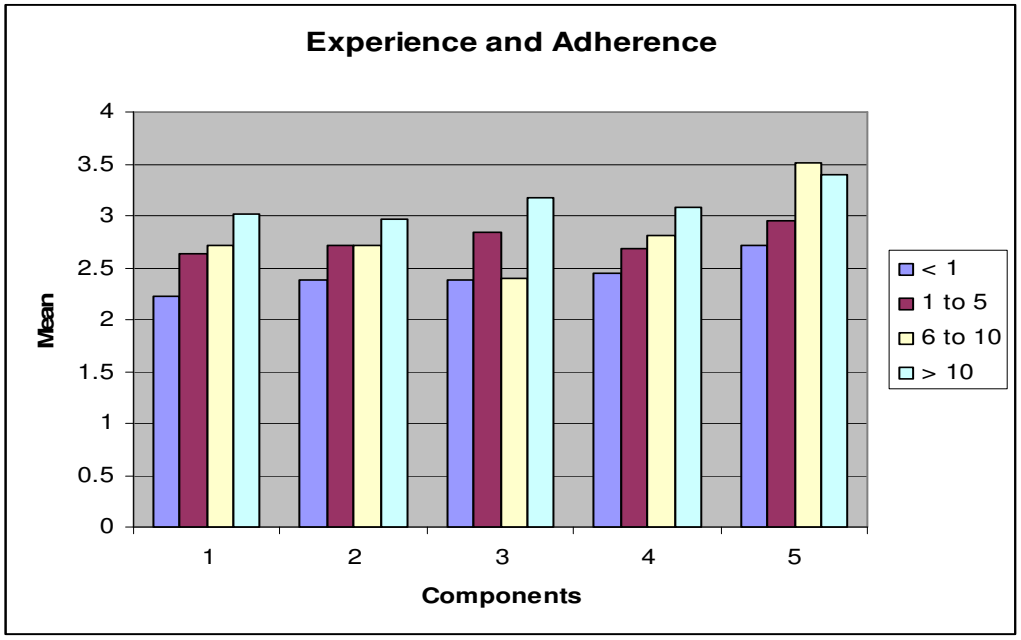
Experience at any institution is very important and is of the most valuable assets, because it reflects the loyalty of the employee to the workplace and *vice versa*. The highest mean (3,39) with the lowest standard deviation was with employees working almost ten years at the institution, which is obvious because the knowledge obtained during the years are shown then.

Table 3.9 Experience at the institution and the adherence

Experience in years	Management and Employee Commitment		Organisational Culture Climate		Occupational Hazards/Risks		Department Health and Safety Adherence		Occupational Health and Safety	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
< 1	2,23	0,56	2,38	0,72	2,38	0,77	2,45	0,79	2,71	0,54
1 – 5	2,64	0,72	2,72	0,70	2,84	0,83	2,69	0,76	2,95	0,74
6 – 10	2,72	0,71	2,71	0,78	2,39	0,69	2,81	0,74	3,51	0,85
> 10	3,02	0,66	2,97	0,72	3,18	0,67	3,08	0,70	3,39	0,58

SD = Standard Deviation

Figure 3.12: Experience and adherence



Overall the average of the employees working more than 10 years at the institution was most compliant with the five components of health and safety. The concern for the institution is that the new employees (doctors, nurses and pharmacists) doing their community service year do not know the guidelines or policies regarding a safe working environment.

There is no formal training regarding the health and safety of employees or how to go about doing tasks in the hospital or clinics. This is a major concern, because the one doctor is doing things the way he thinks is best and then the other doctor does it in a whole different manner. This leads to confusion amongst employees and may lead to mistakes with diagnosing the patients.

Each department should do inspection on health and safety issues and then create a guideline framework in which to work. All the employees starting at a department should get formal training on the safety guidelines and how to approach different situations to ensure the safety of the patient and themselves.

3.8 CONCLUSION

Data analysis is very important; the data obtained can be interpreted in an entire subjective way. Data analysis has the advantage that it can be precise in the interpretations of the data obtained for the necessary information to be gathered.

This chapter focused on the discussion of the *research* and *methodology* used in the empirical study, to meet the objectives as set out in chapter 1. Choice of *population, sampling method, research instrument, questionnaire design, the data collection and the statistical analysis* were very important in the study and in this chapter. The statements (questionnaire) were analysed, discussed and the necessary assumptions were made for feedback to management.

Statistical analysis of the survey data determined the differences in the mean of the health and safety competence scores and the mean scores of the five different components of health and safety management in selected rural hospitals.

The empirical study chapter consisted of the questionnaire created from the literature review in chapter 2. There were 80 participants. The data was obtained and analysed with South African Statistical Institute Incorporate (SAS, 2005). The analysed data were then captured in tables for discussion and assumptions.

The big disadvantage of working in a rural area is that medical professionals that are placed out to work in a hospital do not have an idea on the policies or procedures or on how things work in specific hospitals and they do not give an effort in learning these guidelines, because most of the time, they only stay on for one or two years in government institutions.

Most of the new employees were unaware of the policies and guidelines to ensure a safe working environment, because there is no formal training regarding

the health and safety risks in the workplace. This may lead to many mistakes from the intern or community service professionals like needle pricks, contact with contaminated blood, and more.

The older employees gave more positive feedback on the health and safety issues, because either they went through training during the years or they trained themselves in working safely and then create a safe working environment for themselves and those around them. The elder employees answered the questions with a much more positive perception than the younger employees, because they have more experience and knowledge about the different policies and procedures, due to experience obtained during the years.

The five components of the health and safety used, gave an indication of which departments needed training for which component. There are components like occupational health and safety that showed good results, but then components like management and employee commitment had low positive means and agreeing percentages. Management should identify the components needing improvement and create guidelines in increasing the safety of the working environment.

In chapter 4 the conclusion of the research done and the necessary recommendations will be made for management to attend to in making the working environment safer. Overall, health and safety in most of the hospitals where research was done was up-to standard according to the regulations and guidelines available, except for some components and sections.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

Chapter 4 will give the conclusions and recommendations of the assessment. Chapter 1 set the framework for this mini-dissertation. It entails the introduction and background leading to and motivating the cause for assessing the relevant topic of health and safety management in selected rural hospitals. Chapter 1 clearly states the relevant problem and sets the objectives for the study.

The literature study done in chapter 2 sets the criteria for health and safety management in selected rural hospitals. The criteria were established through research on health and safety management.

The empirical study done in chapter 3 contains the results of the research questionnaires which were constructed from the set criteria in chapter 2. The questionnaires were distributed to selected rural hospitals in the Eastern Free State and requested to be completed by the relevant participants.

The criteria which were not satisfactorily met were identified as outliers. These outliers are characterized as areas diagnosed for recommendations and improvements.

This chapter entails the discussion of meeting the relevant primary and secondary objectives as set out in chapter 1.

Conclusions were drawn from the literature review and empirical results. The recommendations derived from the study on health and safety management in selected rural hospitals will be discussed.

4.2 STUDY MOTIVATION

There is a negative perspective about rural hospitals in South Africa, mainly because of the health and safety issues of employees and patients. People cannot afford medical aid funds anymore, thus they have to make use of the medical care in government (public) hospitals or clinics. This means that the number of patients are growing daily due to the cost of living. Government should implement guidelines to ensure that every patient gets the correct medical care.

The latest figures released by the statistical department showed a positive picture of less health and safety incidents, but the ones that occurred are the same incidents happening over-and-over again, due to a lack of training. Apart from the positive figures, employees are still leaving the *public sector* for the *private sector* or even immigrate overseas. The main reason for the emigration may be unsafe working conditions and the exposure to life-threatening diseases on a daily basis.

4.3 LIMITATIONS OF THE STUDY

There were a few limitations during this research:

1. Only a few topics regarding the health and safety issue in hospitals were discussed, because of the wide variety.
2. The questionnaires were only handed out to doctors, nurses and pharmacists because the topics chosen were in their line of duty.
3. The Eastern Free State region was chosen, because the department of health in the entire Free State operates on the same policies and all the institutions should implement these policies and procedures.

4. Only 80 questionnaires were completed, because of the shortage of professional staff members in these rural areas.

The findings of the study will be limited to the extent that the respondents are honest, careful, and without bias when responding to the survey instrument. According to the stratified research done, the assumptions can not be generalised for all the institutions, because the research were only done on a specific area, but some of these recommendations may be made to use in other provinces for improving the health care system.

Some of the assumptions made may be used in other regions to ensure and promote the health care system, but not all the institutions in function the same manner.

4.4 OVERVIEW OF RESEARCH OBJECTIVES

The primary objective of the research was to optimise the health and safety process in streamlining the health care system in rural hospitals, because the number of patients is increasing and the time to see patients are decreasing.

To achieve this primary objective, the secondary objectives needed to be taken into account:

Theory evaluation:

- Literature study will be done to gain insight on the health care system
- To determine the different aspects of hazards in the hospital departments
- Provide an overview on the different policies to be implemented in the different departments and institutions
- Do an assessment on the current status in the different institutions and departments

Empirical research:

- Gain data on the employees' opinions on certain aspects in the different departments through questionnaires
- Research will be done on only on a certain population and area. Through this research, assumptions can be made for improvements as a whole.

During the assessment the *primary* and *secondary* objectives were met and the following and appropriate conclusions could be made on the health and safety issues in these institutions.

4.5 CONCLUSIONS

4.5.1 Literature findings

Occupational health and safety over the last few years has drawn a lot of attention from companies and institutions' management, because of the major impact it has on the success of a business or institution. The implementation of health and safety guidelines in institutions is very important, because if followed correctly, the amount of health and safety incidents should decrease dramatically.

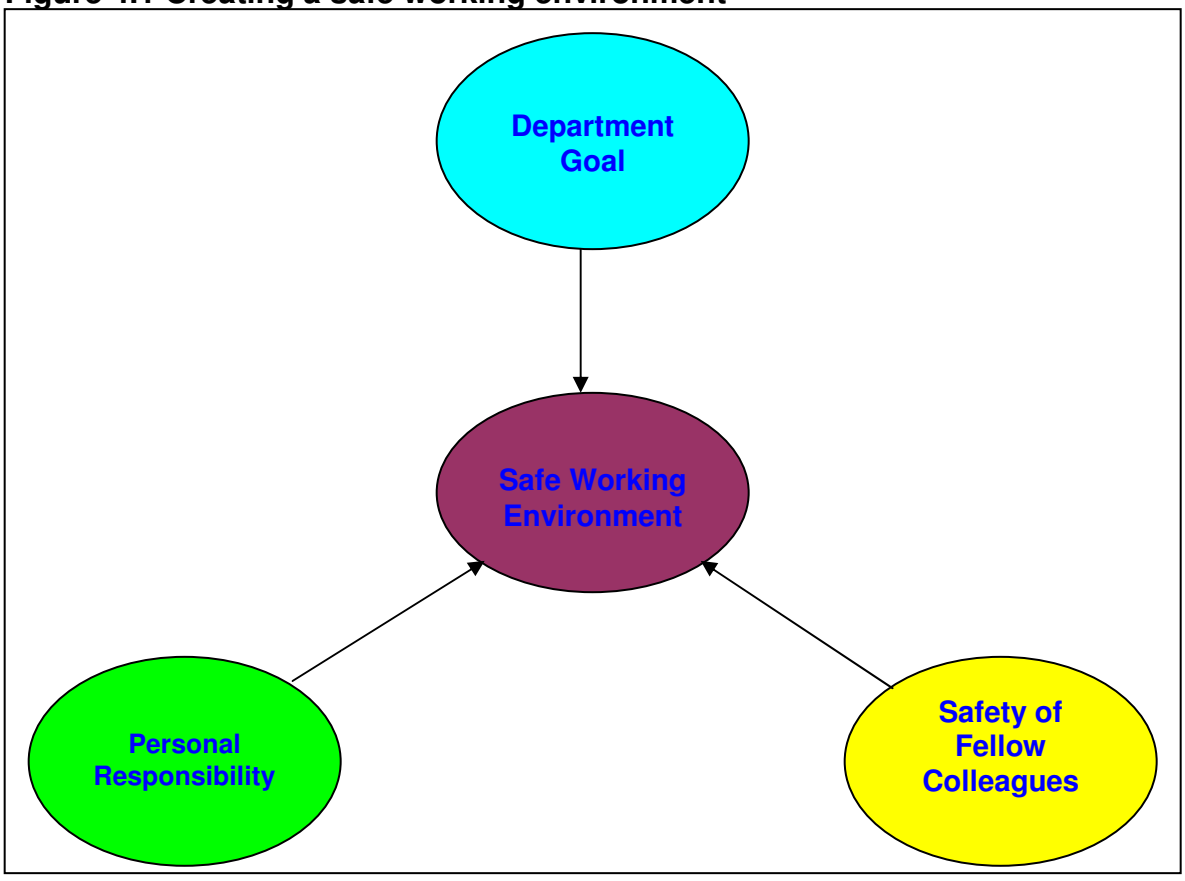
As assumed in the literature review in chapter 2, the necessary policies and guidelines are in place at these rural hospitals and are upgraded regularly. The question now is why does health and safety incidents keep happening: the possibility may be due to a lack of training in health and safety for the newly appointed employees or the shortage of time that pushes the employee to rush to examine all the patients in time.

The assessment done indicated that some institutions need health and safety guidelines to ensure a safe working environment. There are several components

that need to be managed to ensure the health and safety of employees and patients. The components identified in this assessment were: *Management and Employee Commitment, Organisational Culture Climate, Occupational Hazards/Risks, Department Health and Safety Adherence* and *Occupational Health and Safety.*

The health and safety of any department should be seen as three different compartments melting into one to achieve the ultimate goal, and that is the creation of a safe working environment.

Figure 4.1 Creating a safe working environment



Cultural theories can be made according to the organisations' culture climate: organisational culture does exist in the institution, and organisational culture is

related to performance. The culture can be changed to influence performance (Scott, Mannion, Marshall & Davies, 2003:105).

Most employees admitted that they are responsible for their own safety at work, according to the questionnaire, thus will be forced to work safely and according to the implemented guidelines. If every employee works according to the safety guidelines, then their colleagues will also be safe in the workplace. If all three these phases are implemented and working, the work environment will be safe for both employee and patient.

4.5.2 Health and safety adherence in selected rural hospitals

Overall, there was a positive result regarding the health and safety guidelines in the institution, but there is still room for improvement. These assumptions were made from the *empirical study* done in chapter 3. The five components were identified as most important for managing the health and safety in these rural hospitals, namely: *management and employee commitment, organisational culture climate, occupational hazards/risks, department health and safety adherence* and *occupational health and safety.* Under the five components, there were some positive results and a few shortcomings about the health and safety of these rural hospitals.

In Table 4.1 the positive results will be pointed out:

Table 4.1 **Positive health and safety adherence in the selected rural hospitals**

Management and Employee Commitment	Organisational Culture Climate	Occupational Hazards/Risks	Department Health and Safety Adherence	Occupational Health and Safety
▪ Management puts in effort to lay claim on health and safety ▪ Management takes health and safety very seriously ▪ Employees adhere to the health and safety regulations ▪ Departments are trusted by management in doing the health and safety correct ▪ Management takes new improved suggestions by employees	▪ Employees are positive working in their departments ▪ Employees take responsibility for their own health and safety ▪ The teamwork is good in the departments ▪ The risks are known to the employees in the departments ▪ The employees obey the health and safety regulations ▪ The communication amongst employees are very good ▪ The employees encourage each other in performing better ▪ The variety of tasks done daily are liked by the employees in the departments	▪ Most of the employees were aware of the risks and hazards in their departments ▪ The health and safety policies are upgrade regularly (at least every 2 years) ▪ The employees choose to work safe, rather than rushing of tasks ▪ The employees get their immunisation on a regular basis from the health practitioner ▪ Employees are informed on disease outbreaks for example Meningitis, etcetera ▪ The necessary PPE (Personal Protective Clothing) is available for the employees most of the time	▪ The departments has health and safety policies ▪ The department does enough to ensure the health and safety of the employees ▪ There is enough training on health and safety in the department/s ▪ Safety hazards in the department/s are well known to the employees	▪ The institution has a health and safety committee represented by each department ▪ The occupational health and safety act are known to the employees ▪ Every employee acknowledges the importance of health and safety in the institution

Along with these positive results there were also a few shortcomings from the results obtained in the empirical study from chapter 3. These shortcomings are listed in table 4.2 below.

Table 4.2 Shortcomings in the Health and Safety of Selected Rural Hospitals

Health and Safety Component	Shortcomings
Management and Employee Commitment	▪ Management sets double standards by not following the health and safety regulations themselves
	▪ Employee satisfaction are not taken into account by management
	▪ Employees are not approached by management for improved health and safety inputs
Organisational Culture Climate	▪ There are many cultural differences and clashes in the departments
	▪ There are no steps taken against employees not obeying the health and safety regulations
	▪ There is "blame-shifting" in all the departments, thus no one takes responsibility for mistakes
	▪ There is no reward system for employees, acknowledging their good work
Occupational Hazards/Risks	▪ All the equipment in the departments are not trusted, because it is old and no real maintenance is done to keep it from breaking
Department of Health and Safety Adherence	▪ The departments do not spend enough time on health and safety on a daily basis
	▪ Accidents re-occur due to the lack of training and knowledge
	▪ Some safety issues are overlooked, due to the time consumption
Occupational Health and Safety	▪ There is a lack of feedback by the representatives after health and safety meetings

According to the empirical study results, there are a few aspects that need some attention in creating a safer working environment. These aspects were mentioned in Table 4.2 under the different components of health and safety. There may be a perception between the different departments that the one department is more important than the other one, because most of the shortcomings were from the

organisational culture climate. The clashes between employees should be minimised, because this may lead to a negative working atmosphere.

There is quite a negative perception about employees not following the regulations, but nothing gets done about it. This makes employees feel that some employees are more important than others, because they get away with things in the workplace.

Management should consider in getting employees more involved in health and safety decisions, because the employees are experiencing health and safety issues daily. Ignoring the inputs of employees will lead to a negative attitude and tasks will not be completed on time or not done properly, because of the dissatisfaction the employees experience at their workplace. The double standards set by management by not following the health and safety regulations should also be sorted out, because you have to practice what you preach.

Equipment in the departments is a major concern for both employees and patients, because this equipment is used to save the lives of people. If the equipment is not trusted by the employees, then the patients can surely not trust the equipment. Management should consider replacing equipment every second year or get a basic replacing time span. Maintenance should be done on equipment regularly to ensure that it is in a good working condition at all times.

The whole department should spend more time on health and safety on a daily basis by making the employees aware of the workplace risks. In-service training should be held every morning or at least once a week. This training and risk awareness will decrease accidents from re-occurring in the workplace.

According to the occupational health and safety component, the health and safety meetings are held, but there is a lack in feedback to the employees, thus the latest developments are not carried over to the department employees.

Improvements cannot be made, because all the employees are not taken into consideration.

These shortcomings should be dealt with by the management to ensure that the workplace safety is up-to-standard and that the employee satisfaction will also be taken in consideration.

4.6 RECOMMENDATIONS

After the results and conclusions from the empirical study done had been made, there are a few recommendations to be made that management should seriously consider in improving the health and safety in all the different departments.

4.6.1 Improving the health and safety for medical professionals

For the government to keep medical professionals to stay on in these rural hospitals after they have completed their community or intern year/s there are a few suggestions to consider and either implement or improve:
In the previous section the shortcomings were identified for improvement. All the different components had their own shortcomings and should be attended to. The best way to address these problems is to get external inspections and the employees not obeying the regulations should face warnings or even expulsion until they follow the regulations.

Government should increase the health care budget to employ more doctors, nurses and pharmacists to ensure that the patients get the best medical care and that employees have enough time to examine each patient according to the health regulations. This may ensure that the current employees will be less under stress and it will lead to better job satisfaction. The previous assumption made can be explained by the number of patients that goes to the hospital and are

discharged, only to return the next week, because of a problem not attended to the first time.

Management should do employee “stock take” and identify where there is a shortage and then budget to employ more professionals. By creating jobs like a queue master will ensure that the patients will exactly know where to go and the doctors can then attend to them for longer. If the patient is on chronic medication and reacts well on the medicine, the patient can then be referred to their local clinics which will lead to a decrease in the traffic at hospitals.

There are many ways to improve the health and safety of employees and patients, but then the management and the employees should take the responsibility and put in effort to ensure that all the departments run smooth.

4.6.2 Study evaluation

The primary objective for this study was to optimise the heath and safety for employees and patients and to streamline the health care system in these selected rural hospitals.

The results from Table 4.2 indicated where the institutions fell short and where improvements should be done. Every one of the five components had problems that should be addressed to ensure the streamlining and health and safety for these selected rural hospitals. For better and more in-depth research to be done, a quality research approach should be followed. This includes interviews with employees, and will give a much more in-depth idea for why the problems in the different departments exist. The only negative part of this research method is that it is very time consuming and the employees will not always work together. According to the problems identified in Table 4.2, it can be concluded that the primary objective have been achieved.

The secondary objectives include:

- Current situation
- Cost benefit
- Culture
- System change

Most of these objectives were discussed in the *literature review* (chapter 2) chapter. The cost benefit could not be fully discussed, because the government will not leak out the budget information. According to the current situation, there was proof that everything is not well at this stage in the public sector. Newspaper facts and assumptions from the questionnaire proved that there are shortcomings in the public health system that needs attention.
The system change was only discussed in short, because of the introduction of the National Health Insurance (NHI) that is expected to be implemented from 2012. There are no clear indication on how this NHI will operate and what changes it will bring along, thus no real facts are out yet on the implication it will have on the health system. The NHI will provide good free health for all and will be funded by the taxpayers with an estimating amount of R45 000 000 every year for three years.

There were five components identified in improving the health and safety in these selected rural hospitals, namely:

- Management and employee commitment
- Organisational culture climate
- Occupational hazards/risks
- Department health and safety adherence
- Occupational health and safety

These five components are not the only components in the health and safety for rural hospitals, but were enough to identify and recognise the health and safety issues in these selected rural hospitals. Enough problems were identified to draw the attention of management to improve the situation.

Health and safety is an ongoing process and needs to be attended to on a daily basis, because employees and patients are exposed to these issues on a daily basis. Management is very important in regulating these issues, because the health and safety of employees and patients are relying on their decisions.

4.7 CONCLUSION

This study was done on the management of health and safety in selected rural hospitals and the overall impression was that the systems are in place and followed by both employees and patients.

There was a few shortcomings identified that need to be addressed by management to decrease the incident rate on health and safety issues. The shortcomings identified were discussed and recommendations were given in improving these problems. These problems should be addressed by management; otherwise it may lead to more accidents and health issues.

The data obtained was accurate because of the participant confidentiality, but during interviews in qualitative research, more problems may be identified for further investigation.

4.8 CHAPTER SUMMARY

This was the final chapter of the mini-dissertation and the content was mainly the *conclusions and recommendations.* The conclusions and recommendations were

made from the results of the theoretical (chapter 2) and the empirical study (chapter 3) done earlier.

The chapter started with why this assessment was done on Health and Safety Management in Selected Rural Hospitals and to identify any components that needed improvements. The next part of the chapter identified all the positive characteristics from the five different components followed by the shortcomings. The conclusion to these characteristics was that there were more positives than shortcomings, but the shortcomings were crucial for success.

The positive characteristics proved that the employees have a positive attitude regarding the health and safety issues, while the negative characteristics also proved that there is room for improvement and to achieve the goals set. The main goal for any company or institution is to create and maintain a safe working environment for both employees and patients.

The chapter concludes with some recommendations from the findings in the previous chapters. The study evaluation proved that the objectives set out in chapter 1 were achieved. Health and safety is an ongoing process and needs evaluation regularly to keep improving to ensure the health and safety of the employees and their colleagues.

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ANNEXURES

HEALTH AND SAFETY MANAGEMENT IN SELECTED RURAL HOSPITALS

Questionnaire

Title: Mr.
Name and Surname: G.L.S. Scott
Student number: 12295027
Date of birth: 2 May 1981
Degree: MBA
Format: Mini-dissertation (Skripsie)
Contact number: 082 494 6844
Email: scottgls@fshealth.gov.za
Proposed study leader(s): Johan Coetzee

Instructions

Nr.

The purpose of this questionnaire is to gain insight in your thoughts and feelings regarding the Health and Safety in Rural Hospitals. Think about your experiences in the Hospital and continue to complete the questionnaire.

1. Kindly indicate your response on each question by checking off with a cross (**x**) one of the alternatives provided. Do not leave any question out.

2. There is no time limit, but you are requested to complete the questionnaire in one uninterrupted session.

3. Take note that your participation in this survey remains **anonymous**. No form of identification (name, industry name etc) needs to be provided.

4. There are no wrong or right answers. Only your honest opinions are required.
.

5. Do not reveal your answers to another person or discuss it with them.

BIOGRAPHICAL DATA

KINDLY COMPLETE THE FOLLOWING SECTION BY FILLING IN WHERE RELEVANT AND TICKING OFF THE APPROPRIATE BOXES:

1. AGE:

20 to 30 years	31 to 40 years	41 to 50 years	50 +

2. GENDER

MALE ☐ **FEMALE** ☐

3. OCCUPATION

DOCTOR ☐ **NURSE** ☐ **PHARMACIST** ☐

4. EXPERIENCE (in years)

< 1 ☐ **1 - 5** ☐ **6 - 10** ☐ **> 10** ☐

5. PATIENTS TREATED DAILY

1 – 10 ☐ **11 – 20** ☐ **21 – 30** ☐ **30 +** ☐

	QUESTION
1.	**Are you aware of all the health risks in you workplace?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
2.	**Does your institution have a Health and Safety Policy?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
3.	**Do you enjoy being an employee at this Department?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐

4.	**Does your Department spend enough time on Health and Safety on a daily basis?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
5.	**New or improvement suggestions for Health and Safety are taken seriously by Management?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
6.	**The Employees should take responsibility for their own Safety at the workplace?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
7.	**The mistakes made in the past, helped setting up the Health and Safety Policies?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
8.	**There is good team work in your section helping each other with Safety issues in the Department?** Strongly Disagree Agree Strongly

	Disagree ☐ ☐ ☐ Agree ☐
9.	**Are most Safety Hazards identified in the Department and well-known to the employees?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
10.	**Do you feel that your Department does enough to ensure the Safety of the employees?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
11.	**Are safety issues overlooked to save some time in your Department?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
12.	**Management trusts your Department in doing the Safety issues correct?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐

13.	**Do you think Management takes Health and Safety seriously?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
14.	**Do you trust all the equipment in your Department?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
15.	**Does Management take care of employee satisfaction?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
16.	**The employees are aware of the Safety Risks and help their Co-workers in the Department to obey them?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
17.	**Are there a lot of Culture differences and clashes?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
18.	**Not everyone in your Department obey the rules of Health and Safety?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly

	Disagree ☐ ☐ ☐ Agree ☐
19.	**Are there any steps taken against these guilty parties at all?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
20.	**Does Management put in the necessary effort to lay claim of the importance of Health and Safety?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
21.	**Do they (Management) follow all the Health and Safety regulations themselves at all time?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
22.	**Are you ever approached for insets on improving the Health and Safety in your Department?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
23.	**Do all the employees in the Department have enough training regarding**

	Health and Safety? Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
24.	**Is the Health and Safety Policies upgraded on a regular basis?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
25.	**Will the employees rather work safe than rushing off a task just to complete it?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
26.	**There are no "shift-blaming" among different races in the Department?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
27.	**Do the same accidents often happen in your Department, due to a lack of experience/knowledge?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐

28.	**Are there good communication in the Department, between the Nurses and Doctors for example?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
29.	**Is there any "Reward System" for good work done in your section?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐

29.	**My Co-workers encourages me to Develop and perform better?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
30.	**Is there a Health and Safety Committee in the Hospital?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
31.	**Is there any feedback from the Health and Safety representatives after monthly (3 monthly) meetings?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐

32.	**Does your Department have in-service training about Fire Protection, Evacuation during disaster, etc.?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
33.	**Do you enjoy the variety of tasks that you do every day?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
34.	**Are there any Policies on Occupational Hazards?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
35.	**Do you have an Occupational Health Practitioner?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
36.	**Do you get Immunized (for Hepatitis B) on a regular basis?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
37.	**Do you get informed on disease outbreaks in your hospital?**

	Strongly Disagree ☐	Disagree ☐	Agree ☐	Strongly Agree ☐
38.	**Do you feel safe, free from risks and hazards, in your working environment?**			
	Strongly Disagree ☐	Disagree ☐	Agree ☐	Strongly Agree ☐

39.	**Do you have the necessary Protective Clothing for doing your job, like gloves, masks, over-coats, etc.?**			
	Strongly Disagree ☐	Disagree ☐	Agree ☐	Strongly Agree ☐
40.	**Do you feel that Health and Safety are managed properly in your Hospital by employees?**			
	Strongly Disagree ☐	Disagree ☐	Agree ☐	Strongly Agree ☐
41.	**Are there any Health and Safety meetings held in your institution?**			
	Strongly Disagree ☐	Disagree ☐	Agree ☐	Strongly Agree ☐

42.	**Is there any feedback from the representatives to the employees after these meetings?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐
43.	**Do you think that Health and Safety is important for any institution?** Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐

THANK YOU FOR COMPLETING THE QUESTIONNARE!!

APPENDICES ON HEALTH AND SAFETY

(Policies)