

https://dspace.org/

# Knowledge and perceptions of patients regarding anaesthetists and anaesthesia

**Mooruth, Vivek**

**2016-02-15**
http://hdl.handle.net/10539/19567

Downloaded from a DSpace repository. https://dspace.org/

# Knowledge and perceptions of patients regarding anaesthetists and anaesthesia

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

Vivek Mooruth
01/07/2015
Johannesburg

# Declaration

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

..... (Signature)

..... day of ....., 2015

# Abstract

**Background:** The poor public image of anaesthetists, and their discipline, has been a long standing and ubiquitous problem. Extensive research has been done in the developed world investigating public awareness of anaesthetists but there are few publications from the developing world, and no publications from South Africa were identified.

**Aim:** The aim of this study was to describe Chris Hani Baragwanath Academic Hospital patients' knowledge and perceptions regarding anaesthetists and anaesthesia.

**Methods:** A qualitative, contextual, exploratory, descriptive research method was used to elucidate patients' knowledge and perceptions of anaesthesia and anaesthetists. Qualitative data were collected from a convenience sample of 26 Chris Hani Baragwanath Hospital surgical outpatient department patients using semi-structured individual interviews until data saturation was achieved. The thematic method was used to analyse the data.

**Findings:** The major theme that emerged from the data was perioperative education. It related to the operative process in general and not specifically to anaesthesia. This theme covered a range of domains from the preconceptions and knowledge patients came with, to the counselling they received and its impact, and their desire for further knowledge.

**Conclusion and recommendations:** Patients' descriptions of their perioperative counselling and education experiences showed their need and desire for personalised communication and further education. Whether their needs are met affects their impressions of their perioperative experience. Therefore, patients' communication needs deserve greater emphasis in healthcare professionals' training. Healthcare professionals need to develop adequate knowledge and skills to help patients negotiate this potentially traumatic experience. Likewise, further research in this area is suggested to enrich the field.

# List of abbreviations

| | |
|---|---|
| CHBAH | Chris Hani Baragwanath Academic Hospital |
| SOPD | Surgical Outpatients' Department |
| SA | South Africa |
| ASA | American Society of Anaesthesiologists physical status classification system |

# Acknowledgements

I would like to thank the following people:

To my supervisor, Juan Scribante, for her sustained guidance and support.

To my supervisor, Prof Lionel Green-Thompson, for his expert insight and experience.

To my supervisor, Prof Eduard Oosthuizen, for inspiring this research topic.

To Helen Perrie, for her invaluable input.

To the Witwatersrand Health Sciences Library staff, for their generosity and assistance.

To the Chris Hani Baragwanath Academic Hospital surgical outpatient department staff, for allowing me to interview their patients.

Lastly, I would like to thank my wife for her unending support and encouragement.

# Table of Contents

Declaration ..... i

Abstract ..... ii

List of abbreviations ..... iii

Acknowledgements ..... iv

Table of Contents ..... v

Chapter One ..... 1

1. Overview of the study ..... 1

1.1 Introduction ..... 1

1.2 Problem statement ..... 3

1.3 Aim ..... 4

1.4 Objectives ..... 4

1.5 Research definitions and assumptions ..... 4

1.6 Research methodology ..... 5

1.6.1 Research design ..... 5

1.6.2 Study population ..... 5

1.6.3 Study sample ..... 5

1.6.4 Data collection ..... 6

1.6.5 Data management ..... 6

1.6.6 Data analysis ..... 6

1.6.7 Trustworthiness (validity and reliability) ..... 6

1.7 Significance of study ..... 7

1.8 Study outline ..... 7

1.9 Summary ..... 7

Chapter Two ..... 8

2. Literature review ..... 8

2.1 Introduction ..... 8
2.2 Background ..... 8
2.3 Scope of Practice of South African anaesthetic providers ..... 8
2.4 Anaesthetist's definition and roles ..... 9
2.5 Knowledge and perceptions regarding anaesthetists ..... 10
2.5.1 Knowledge and perceptions of medical education of anaesthetists 11
2.5.2 Knowledge and perceptions of roles and importance of anaesthetists ..... 14
2.6 Knowledge and perceptions regarding anaesthetic management ..... 17
2.7 Knowledge and perceptions of the medical fraternity regarding anaesthetists ..... 17
2.8 South African context ..... 18
2.9 Reasons for the public's misconceptions and lack of knowledge ..... 19
2.10 Consequences of the public's misconceptions and lack of knowledge 20
2.10.1 Implications for the anaesthetist ..... 20
2.10.2 Consequences for the patient ..... 21
2.11 Summary ..... 23
Chapter Three ..... 25
3. Research methodology ..... 25
3.1 Introduction ..... 25
3.2 Problem statement ..... 25
3.3 Aim ..... 26
3.4 Objectives ..... 26
3.5 Demarcation of study field ..... 26
3.6 Ethical considerations ..... 26
3.7 Research methodology ..... 27
3.7.1 Research design ..... 27

3.7.2 Study population ..... 28
3.7.3 Study sample ..... 29
3.7.4 Data collection ..... 30
3.7.5 Data management ..... 33
3.7.6 Data analysis ..... 33
3.7.7 Data evaluation ..... 34
3.7.8 Trustworthiness (validity and reliability) ..... 34
3.8 Summary ..... 36
Chapter Four ..... 37
4. Findings and discussion ..... 37
4.1 Introduction ..... 37
4.2 Findings ..... 37
4.2.1 Sample realisation ..... 37
4.2.2 Demographic characteristics ..... 37
4.2.3 Results ..... 38
4.3 Discussion ..... 46
Chapter Five ..... 50
5. Improving the patient experience ..... 50
5.1 Introduction ..... 50
5.2 Summary ..... 50
5.2.1 Aim ..... 50
5.2.2 Objectives ..... 50
5.2.3 Methodology ..... 50
5.2.4 Findings ..... 51
5.3 Limitations ..... 51
5.4 Recommendations ..... 51
5.4.1 For clinical practice ..... 51

5.4.2 For further research ..... 52
5.5 Conclusion ..... 52
References ..... 54
Appendices ..... 58
Appendix A: Human Research Ethics Committee (Medical) approval ..... 58
Appendix B: Postgraduate Committee of the University of the Witwatersrand approval ..... 59
Appendix C: Postgraduate Committee of the University of the Witwatersrand change of title of research approval ..... 60
Appendix D: MAC of CHBAH permission to conduct research ..... 61
Appendix E: Information letter for potential participants ..... 62
Appendix F: Informed consent from participants ..... 63
Appendix G: Interview guide ..... 64
Appendix H: Demographic data collection form ..... 66

# Chapter One

# 1. Overview of the study

In this chapter the introduction, problem statement, aims and objectives, research assumptions, research methodology, significance, trustworthiness and outline of this study are discussed.

## 1.1 Introduction

Anaesthesiology is one of the youngest branches of medicine that has made tremendous technological advancements over the last 60 years (1). This has improved operative safety and patient outcome (2). Likewise, the role of the anaesthetist has extended not only inside but also outside the operating room. The anaesthetist now plays a very critical role in intensive care units (ICU), trauma centres, pain clinics and resuscitation teams (3).

Yet these advancements have not been conveyed to the public. Misconceptions have been perpetuated and awareness of anaesthesia and the anaesthetist has been limited. This is in contrast to the growing global trend of increasing general health awareness (4).

A 2009 world-wide meta-analysis showed that on average, fewer than two-thirds of patients knew that anaesthetists are physicians. It showed a trend that patients of poor and developing nations had less knowledge of an anaesthetist's qualifications, when compared to the developed world. (5)

However the findings of recent studies such as a 2011 Brazilian survey, which showed 79% of patients knew that anaesthetists were specialists, have questioned this assumption (6).

Findings that were consistent in several studies were the positive correlations of both education and income level to depth of knowledge of anaesthetists and anaesthesia (2, 4, 6).

De Oliveira et al (7) established a significant positive correlation between prior anaesthetic experience and patients' knowledge of anaesthetists. This finding however was not widely supported (8-12). The fact of prior anaesthetic experience not improving patient knowledge may allude to a lack of efficient communication by anaesthetists (9).

A 1978 study from the UK showed that 57% of patients believed that the anaesthetist worked under the instruction of a surgeon (13). This trend continued into the 1990's as shown in a USA survey in which patients ranked anaesthetists as less important than both physicians or surgeons (14). Since the turn of the century, this view has slowly changed with anaesthetists becoming second to only the surgeon and of equal standing to the physician (15).

It has been repeatedly shown that patients have limited or out-dated insight into all the roles of the anaesthetist (2, 4). Hence, many authors agree that the technological advancements in anaesthesiology should be advertised to the public. Even if the sole purpose is to allay unrealistic fears (10).

This out-dated insight is ubiquitous in both developed and developing countries. For example, in 1991, Shevde and Panagopoulos (14), found that only 5% of USA patients were aware of the important functions of the anaesthetist post induction in monitoring vital signs and maintaining normal haemodynamics throughout the operation. They also showed that 32% were under the perception that the anaesthetist was not in attendance throughout the operative procedure (14). This finding was reiterated in 2003 in Israel by Calman et al (8).

Even in those countries where patients were adequately informed about roles related to anaesthesia per se, there was poor insight of the anaesthetist's other roles, such as ICU care and pain management (8, 11). This was further illustrated by Hariharan et al (11) in 2006, where 60% of respondents knew the anaesthetist's various perioperative roles, yet only 19% knew of their role in ICU.

In India, Naithani et al (12) determined the contributions various sources made to patients' knowledge regarding anaesthetists and anaesthesia. They found that media played an important role in public education. But the most significant and

disheartening finding was that the contribution of an anaesthetist in providing information was the least (1.33%).

Defendants such as Irwin (9), Leite (6) and Zvara (16) have cited many reasons for the poor public awareness from: limited contact with the conscious patient (9), the administration of sedative and anaesthetic medications (6), and multiple caregivers providing preoperative and postoperative treatment (16).

However, this should not minimise the importance of performing a thorough preoperative visit. The benefits of this visit were emphasised by several studies, which found positive correlations such as earlier postoperative recovery (10), reduced perioperative anxiety and pain (10, 17), and improved patient satisfaction (9, 17).

In summary, patients' knowledge and perceptions of anaesthetists and anaesthesia are poor worldwide. Anaesthetists should be motivated to rise to the challenge of enhancing their public image instead of despairing at these findings.

## 1.2 Problem statement

The poor public image of anaesthetists, and their discipline, among both the medical and lay communities has been a long standing and ubiquitous problem (10, 18). Anaesthetists and their discipline have failed to thrive in the public eye, despite phenomenal growth in their scope of practice, efficacy and safety. As a result, they continue to linger behind the screen as masked figures.

Extensive research has been done in the developed world investigating public awareness of anaesthetists but there are few publications from the developing world (11), and no publications from South Africa were identified.

Chris Hani Baragwanath Academic Hospital (CHBAH) patients' knowledge and perceptions regarding anaesthetists and anaesthesia are currently unknown.

Increasing public awareness would be beneficial to both patient and service provider. However, in order to improve the knowledge and perceptions among patients

presenting for surgery at CHBAH, we first needed to determine their level of knowledge and perceptions regarding anaesthetists and anaesthesia.

## 1.3 Aim

The aim of this study was to describe CHBAH patients' knowledge and perceptions regarding anaesthetists and anaesthesia.

## 1.4 Objectives

The objectives of this study were to:

- describe CHBAH patients' knowledge and perceptions of anaesthetists
- describe CHBAH patients' knowledge and perceptions of anaesthesia.

## 1.5 Research definitions and assumptions

The following definitions were used in this study.

**Anaesthetist (19):** any qualified medical doctor that practices anaesthesiology. This will include the terms anaesthetist and anaesthesiologist.

**Anaesthesia (20): "**loss of sensation, especially of pain, induced by drugs: called general anaesthesia when consciousness is lost and local anaesthesia when only a specific area of the body is involved."

**Physician:** In South Africa a physician is a registered medical specialist. Internationally, a physician is a synonym for medical doctor.

**Knowledge (20):** the facts known by the participants gained by experience or learning.

**Perceptions (20):** the way the participants think about or understand someone or something.

## 1.6 Research methodology

### 1.6.1 Research design

This study was conducted using a qualitative, contextual, exploratory, descriptive research method.

### 1.6.2 Study population

Patients at the surgical outpatient department (SOPD) of CHBAH comprised the study population. This included both preoperative and postoperative patients.

### 1.6.3 Study sample

The principle of data saturation was utilised. When themes in the data became repetitive, and no new information could be gathered, data collection ended (21, 22). A convenience sampling method was used. Sampling by convenience was economical and efficient, but it may have not provided the most information-rich sources. (21)

#### Inclusion and exclusion criteria

The following inclusion and exclusion criteria were used.

Inclusion criteria:

- patients 18 years and older
- ability to communicate in English
- patients who had undergone an anaesthetic previously
- patients who had never undergone an anaesthetic.

Exclusion criteria:

- inability to participate in an interview due to altered mental status
- patients refusing to sign informed consent.

### 1.6.4 Data collection

After approval was received from the relevant authorities, participants were identified with the assistance of the nursing staff in the surgical outpatients department (SOPD). Semi-structured interviews were held with a small representative number of participants. I acted as the interviewer. I was not part of the treating team at the time of the interviews. The interview was held in an examination room in the surgical outpatients' department. It was a private, permissive and non-threatening environment that facilitated conversation. The lengths of the interviews were on average twenty minutes. In addition to the field notes, all interviews were audio recorded to increase the accuracy of data collection.

### 1.6.5 Data management

Audio recordings were transcribed verbatim by the researcher. The transcripts were reviewed twice and corrections made before a final typed copy was produced. Thereafter, the digital audio recordings were deleted. The transcripts will be stored securely for a period of six years after completion of the study.

### 1.6.6 Data analysis

A content analysis of the data was performed with the assistance of the research supervisors who have expertise in qualitative research. The thematic method of data analysis (23) was used to analyse the interviews.

### 1.6.7 Trustworthiness (validity and reliability)

Trustworthiness was ensured in this study by using "the criteria of credibility, dependability, confirmability, transferability and authenticity" (21, 22). These criteria are discussed in further detail in Chapter Three.

## 1.7 Significance of study

There is a dearth of data in South Africa concerning the public's knowledge and perceptions regarding anaesthetists and anaesthesia. This study's findings will paint a portrait of the deficiencies in the public's awareness. Armed with this information appropriate steps may be taken to improving anaesthetists' public image and their relationship with the public.

Improved public awareness may be beneficial to patients in areas ranging from perioperative anxiety to effective use of anaesthetic services. In addition, anaesthetists may derive a sense of validation by having their importance acknowledged by the public.

## 1.8 Study outline

The chapters in this study include:

- Chapter One: Overview of the study
- Chapter Two: Literature review
- Chapter Three: Research methodology
- Chapter Four: Findings and discussion
- Chapter Five: Improving the patient experience.

## 1.9 Summary

In this chapter the introduction, problem statement, aims and objectives, research definitions and assumptions, demarcation of study field, research methodology, significance of study, trustworthiness (validity and reliability), and study outline were discussed. The next chapter, Chapter Two, will provide a review of the literature.

# Chapter Two

# 2. Literature review

## 2.1 Introduction

This chapter is a review of the published literature on the knowledge and perceptions of patients regarding anaesthetists and anaesthesia, as well as the causes and consequences of poor public awareness.

## 2.2 Background

The poor public image of anaesthetists, and their discipline, among both the medical and lay communities has been a long standing and ubiquitous problem (10, 18). Anaesthetists and their discipline have failed to thrive in the public eye, despite phenomenal growth in their scope of practice, efficacy and safety. As a result, they continue to linger behind the screen as masked figures.

## 2.3 Scope of Practice of South African anaesthetic providers

The South African Society of Anaesthetists (SASA) acknowledges the need and existence of general practitioner (GP) anaesthetists in communities without specialist anaesthetic services. SASA has, in their 2013 Practice Guidelines (24), “set out what reasonable practice in anaesthesia should be expected from practitioners in the Republic of South Africa. Various levels of training as well as the practitioner’s location have been taken into account. This was done to improve the standard of service delivery.” (19, 24)

According to the SASA 2013 Practice Guidelines (24), “anaesthetic practice for the various classes of medical practitioner should be confined as follows.

- Community service doctors:
    - two months' training under direct supervision
    - subsequent anaesthetic practice under supervision, which may be remote.
- General practitioners:
    - independent practice of anaesthesia not recommended.
- Diplomate anaesthetists:
    - independent practice for ASA (American Society of Anaesthesiologists physical status classification system) I and II patients
    - supervision for all other ASA categories.
- Registrars (specialists in training):
    - supervision at all times.
- Specialist anaesthetists (registered as anaesthetists):
    - independent practice for all categories of patient
    - it is suggested that elective neonatal anaesthesia only be conducted in specialist units."

The Health Professions Council of South Africa (HPCSA) regulates the general standards of anaesthetic practice in order to uplift anaesthetic service delivery around South Africa. "It is a distinct reality that many patients are exposed to hazardous anaesthesia in untrained hands in often less than ideal circumstances". (19)

It is important to assess whether patients are aware of the qualifications and level of skill of the doctor that is anaesthetising them. This has major implications for topics ranging from preoperative anxiety, malpractice and patient safety (10, 25). At present, no publications from South Africa regarding the public's awareness of anaesthetists could be identified.

## 2.4 Anaesthetist's definition and roles

There is no consensus as to the most appropriate name for a doctor specialising in anaesthesia with countries such as the United States of America (USA) referring to them as anesthesiologists, and other countries such as the United Kingdom (UK)

referring to them as anaesthetists (20). The term anaesthetist is also not always reserved for doctors; the USA refers to nurses trained in anaesthesiology as anaesthetists (11).

The discipline of anaesthesia has grown to encompass pain management, intensive and emergency care. As such, the definition of anaesthesia and anaesthetist has been changed repeatedly and fundamentally. However, these paradigm shifts have not been conveyed to the public and their knowledge of the discipline has not evolved in parallel (3, 14).

Some proponents believe that the problem may arise from within the discipline itself (26). Anaesthetists themselves may have difficulty in defining their role due to its sundry nature, or that the discipline's rapid evolution may have overtaken current nomenclature (27).

It is a common opinion that the terms anaesthesia and anaesthetist are anachronisms, which limit the view of the discipline to theatre (28). As a means of increasing their profile and implying expertise and administrative responsibility in other areas, many anaesthesiology departments have changed their title to "Anaesthesia and Pain Management", "Anaesthesia and Intensive Care" (9) or "Department of Perioperative Medicine" (5). Yet this is not an ubiquitous trend, nor does this change fulfil the purpose of inclusivity as there are yet more roles that fall outside this definition.

## 2.5 Knowledge and perceptions regarding anaesthetists

This section is a review of the published literature on the knowledge and perceptions of the public from across the world regarding anaesthesia and anaesthetists.

### 2.5.1 Knowledge and perceptions of medical education of anaesthetists

#### General

This section discusses whether the public is aware that anaesthetists are doctors, and furthermore, medical specialists.

A meta-analysis, in 2009 by Hariharan (5), of 17 surveys from across the world, from 1978 until 2006, showed that less than two-thirds of patients knew that anaesthetists are physicians. There were some exceptions: 90% in Finland (15), 95% in Israel and 99% in Switzerland (29) knew that anaesthetists are medically qualified physicians.

Tohmo et al (15) in 2003 revealed that 90% of Finnish patients knew that anaesthetists were medically qualified, only 3% stated that they were not medically qualified, and 7% stated they did not know. This study however is biased as the questionnaires were completed postoperatively by the patients unlike most other surveys, which were completed preoperatively. This is known to affect patients' knowledge regarding the medical qualifications of anaesthetists. (15)

The survey in Israel in 2003 by Calman et al (8) revealed that 95% of patients were knowledgeable regarding the medical qualifications of anaesthetists. However, this may have been due to the higher socioeconomic status of the patients they surveyed as it was conducted at a private hospital.

The study by Kindler et al (29) was published in German and as such was not adequately critiqued. However, it is known that the patients were surveyed postoperatively like the Finnish study, and as a result may be biased and not available for comparison to most studies that survey patients preoperatively.

The meta-analysis created a trend that showed that patients of poor and developing nations had less knowledge of an anaesthetist's qualifications, when compared to the developed world. But they did provide a warning of: "this has not been quite consistent". (5)

In developed countries, the majority of patients have more than 10 years of schooling, which may lead to their better knowledge of the education of an anaesthetist (6).

In 1999, Khan et al (30) assessed Pakistani patients regarding their knowledge and perception of anaesthetists and found that only 56% of the patients knew that anaesthetists were physicians. In 2006, Baaj et al (4) performed a prospective survey at Saudi Arabia's King Khalid University Hospital. They showed that 50% of the patients in Saudi Arabia were aware that the anaesthetist is a doctor. Also in 2006, Hariharan et al (11) found that 59% of patients awaiting surgery in a Caribbean public hospital knew that the anaesthetist is a doctor. These results were lower than those of the developed world.

Although not part of Hariharan's (5) meta-analysis there have been recent studies that cast doubt on the validity of this trend. A 2011 survey in Brazil by Leite et al (6) perfectly illustrates that not all patients from developing or poor countries have limited knowledge of anaesthetists. They showed that 79% of Brazilian patients in a public hospital knew that anaesthetists are specialists. The patients in this study may have been biased as the patients were aware that it was a university hospital where newly graduated physicians attend specialisation programs. (6)

**Education**

In 2011, de Oliveira et al (7) demonstrated, among a Brazilian population, that education was a statistically significant factor to define patients who knew about the medical education of anaesthetists. They proposed that this may be explained by the relationship that those of higher intellect look for more information and show more coherent assimilation. Similarly, Baaj et al (4) and Naithani et al (12) demonstrated that a high level of education correlated well with the knowledge that the anaesthetist is medically trained.

### Income level

Baaj et al (4) also demonstrated that higher income correlated well with correct knowledge that the anaesthetist is a doctor. Other than this citation this correlation has not been investigated. It has only been inferred by comparing private and public hospital patients. Dodds et al (31) found that private hospital patients were more knowledgeable than their public hospital counterparts.

### Prior anaesthetic experience

De Oliveira et al (7) established a significant correlation that prior anaesthetic experience increased the probability of knowing that anaesthetists are physicians. Calman et al (8) however failed to demonstrate knowledge differences between the group of patients with prior anaesthetic experience and those receiving their first anaesthetic. However, both groups were homogenous, including similar socioeconomic backgrounds, which may make the population better informed about medical issues. Prior anaesthetic experience not improving patient knowledge may allude to a lack of efficient communication by anaesthetists (9).

### Trends over time

Whilst general public health awareness has improved over time, there has been no matching improvement in knowledge of anaesthesia and anaesthetists (4). A series of surveys from the UK from 1978 and 1993 to 1994, showed that 67%, 81% and 65%, respectively, of the subjects knew that anaesthetists are doctors (3, 32, 33). There have been outliers such as Finland and Switzerland as demonstrated above.

### 2.5.2 Knowledge and perceptions of roles and importance of anaesthetists

#### General

Have you watched a movie or series with an anaesthetist in a main role? If at all, he is shown wearing a face mask, and answering in monosyllables to the star, typically a surgeon. (28)

The perceptions regarding the various roles of the anaesthetist are mixed. Even patients from developing countries, such as Pakistan and India, had insight varying from good to out-dated over a five year period (2, 4).

In 2009, Mathur et al (2) found that 100% of illiterate people, 85% of those with below matriculation education and 73% of those with above matriculation education believed that a general anaesthesia is given by using certain vapours in a handkerchief without monitoring. Of Indian medical undergraduates, 64% had the impression that ether was still used in present day general anaesthesia as compared to 31% of people with non-medical post-graduate education. This however may have more to do with the inadequacies of their medical undergraduate curriculum than public education, which will be discussed again later.

In Pakistan, in 2004, Ashan Ul-Haq et al (1) showed that 66% of patients believed that the anaesthetist was responsible for the perioperative care of the patient. Twenty six percent were unsure and only 8% were of the opinion that the surgeon was responsible for their perioperative care. When comparing these results to a previous study, it can be inferred that public awareness about anaesthesia has improved in Pakistan in the last four years. In 1999, Khan et al (30) showed that only 35% knew that the anaesthetist was a qualified doctor.

In 2011, in Brazil, de Oliveira et al (7) showed that 75.5% of patients knew that it was the role of the anaesthetist to ensure the patient awoke safely from surgery. Yet very few thought the anaesthetist was responsible for postoperative analgesia (44%), infusion of fluids and drugs during the surgery (35.25%), as well as the decision to transfuse blood (22.5%). They also demonstrated that whilst patients recognised the anaesthetist role in determining fitness for surgery, the majority believed that the

decision regarding the type of anaesthesia belonged to the surgeon in association with the anaesthetist.

In 1991, Shevde and Panagopoulos (14), found that only 5% of USA patients were aware of the important functions of the anaesthetist post induction in monitoring vital signs and maintaining normal haemodynamics throughout the operation. They showed that 32% perceived that the anaesthetist was not in attendance throughout the operative procedure.

This was echoed in 2003 by Calman et al (8), who showed that 58% of Israeli patients had the same perception. And yet again, in Singapore, Chew et al (34) found that only 18.2% of patients identified the anaesthetist as the intraoperative primary care giver whereas 37.1% believed it was the surgeon. Only 51.5% of the patients recognised that the anaesthetist remained with the patient during the operation.

In contrast, Gurunathan et al (35) found, in 2004, that only 2% of Indian patients had thought that the anaesthetist left the room once the patient was asleep. Thus the scenario seems to be similar regardless of economic development of the country.

In those countries where patients were adequately informed about roles related to anaesthesia per se, they had poor insight of other roles, such as ICU care and pain management (8, 11). This was displayed in 2006, by Hariharan, et al (11), where 60% of respondents knew the anaesthetist's various perioperative roles, yet only 19% knew of their role in ICU. Calman, et al (8), showed that 91.5% of patients believed that anaesthetists only worked in theatre. In Finland, although 90% knew that the anaesthetist was a doctor, 41% of patients did not know that anaesthetists work in pain clinics, 36% did not know their role in departments of obstetrics and radiology (68%), ambulances (58%) and research work (46%).

Better results were posted by de Oliveira et al (7). They demonstrated that 85.75% of patients knew that the anaesthetist worked in the delivery room, 72.5% for ICU, 70.5% for the emergency room and 64.75% for small surgery outpatient clinic. Only 57.25% knew that anaesthetists also undertake medical research, and 42% knew that pain is also an area where anaesthetists work.

### Education

A study done in Nigeria, in 2010, showed that patients who had tertiary education (62.9%) have a significantly higher level of knowledge of the anaesthetist's role than those with secondary (22.9%) or primary education (14.2%) (36).

### Prior anaesthetic experience

Hariharan et al (11) showed that previous anaesthetic experience does not seem to improve patients' knowledge regarding the responsibilities of the anaesthetist. Similarly Naithani et al (12) showed no correlation between patient's knowledge of the anaesthetist's roles and past exposure to anaesthesia.

### Time trends

A 1978 study in the UK revealed that 57% of patients believed that the anaesthetist worked under the instruction of a surgeon (13). This trend continued into the 1990's as shown in a USA survey in which patients ranked anaesthetists as less important than both physicians or surgeons (14).

Since the turn of the century, this view has slowly changed with anaesthetists now being viewed as second to only the surgeon and of equal standing to the physician (15). In 2011, a Brazilian study displayed no statistically significant difference between the rankings of surgeon and anaesthetist (7). This illustrates that this perception is even changing in developing countries.

Naithani et al (12), found that no Indian patient believed that surgery could be performed without anaesthesia. At least all patients in this study had come to believe that anaesthesia is vital for surgery.

## 2.6 Knowledge and perceptions regarding anaesthetic management

Some of the perceptions of anaesthesia have been discussed, such as the anaesthetist leaving the operating theatre during the operation, but this topic bears further exploration.

In Western studies (10, 14) the major preoperative concern was awareness during anaesthesia and failure to regain consciousness followed by intra and postoperative pain. In Asian studies (12, 35) the concerns were similar but ranked differently. Pain (intra and postoperative) was followed by failure to wake up after surgery and then awareness under anaesthesia.

Naithani et al (12) found that the actual discomforts of the patient during surgery were less and different from the preoperative fears. Most of the patient fears were unfounded as technological advancements have greatly improved operative safety standards. Proper education and communication to patients can allay unrealistic fears (10).

Gurunathan et al (35), showed that 73% of Indian patients agreed with preoperative fasting but 35% did not know the reason for fasting, 24% knew that it was to prevent vomiting. The rest of them gave incorrect answers such as: “to make surgery successful”, “to avoid a heart attack”, “to avoid bowel problems” and “to make the patient comfortable”. These answers were even given by patients who had prior exposure to anaesthesia. This once again illustrates the problem of vital information not being conveyed to the public from anaesthetists.

## 2.7 Knowledge and perceptions of the medical fraternity regarding anaesthetists

This section has been included to convey the severity of poor public perception and knowledge. Even their colleagues in surgery and internal medicine have little insight into anaesthesiology. Their colleagues’ knowledge deficiencies may be conveyed to

the public and this may be a factor that allows poor public awareness to be perpetuated.

Contemporary surgeons no longer view the anaesthetist as their “sleep servant” and have acknowledged the importance of an experienced anaesthetist for a successful outcome (28). Jenkins et al (37) reversed the perspective and asked anaesthetists how they believed surgeons viewed them. Only 45% of respondents felt highly regarded by surgeons.

There are still deficits in the knowledge base of other healthcare professionals with regard to anaesthetists, their roles and practices. “A survey of 2500 paediatricians, 30% of whom routinely examined children before elective surgery and 60% of whom believed they should ideally do so, revealed that they perceived a deficiency in their own training and experience in the preoperative preparation of children.” (38)

These deficits may be due to inadequate undergraduate training. As mentioned before, many developing world undergraduate curriculums offer inadequate training with regard to anaesthesiology (2, 18, 39) when compared to developed countries (40). Thus, there is also a great discrepancy within the medical fraternity with regard to knowledge of anaesthesiology.

## 2.8 South African context

There are an insufficient number of specialist anaesthetists to meet the needs of South Africa. As a consequence, standards vary with location with urban populations receiving mainly first world standard anaesthesia whilst a significant proportion of the rural population lack access to even basic primary healthcare facilities. (19)

Due to this deficiency, a large percentage of the anaesthetics in South Africa are performed by non-specialists. Many of whom lack training beyond that of the basic internship programme. The public is generally ignorant of this situation, and may not always be aware of whether the doctor anaesthetising them is a specialist. (19)

South Africa is not unique in this regard. First world countries, including Australia and Canada, also struggle to meet the needs of their rural communities (19).

## 2.9 Reasons for the public's misconceptions and lack of knowledge

In addition to the many demographic and economic factors, discussed above, there are factors specific to the discipline of anaesthesia that may exacerbate a poor public image.

Foremost is that anaesthetists are secondary physicians; patients primarily consult a surgeon for their ailments. They are then generally referred to an anaesthetist by the surgeon. Few patients are aware of their right to choose their own anaesthetist, and most do not wish to exercise this right believing that the surgeon would make a better choice (6, 14). This referral process has resulted in most patients believing that anaesthetists are the surgeon's assistants (13). It also illustrates the trust that patients have in their surgeon, due to a developed rapport, whilst at this point they have no rapport with the anaesthetist.

Anaesthetists have limited contact with the conscious patient, in comparison to other medical professionals (9). Other factors, specifically related to the practice of anaesthesiology, such as the administration of sedative and anaesthetic medications (6), and preoperative and postoperative treatment by multiple caregivers within a relatively short period, may exacerbate poor patient awareness (16).

Zvara et al (16) demonstrated that when asked to recall the name of the anaesthetist in the postoperative period, there was only a 10.4% spontaneous recall, and 45% prompted recall. This was significantly different to the recall of the surgeon's name, which was greater than 80%. This study also surprisingly demonstrated that an increased number of postoperative visits did not improve the patients' recognition of their anaesthetist's name. It also did little to improve their perception of the anaesthetist as helpful, or their understanding of the anaesthetist's role in their surgery.

The only study to come out of Africa on this topic showed that only 35.4% of surgical patients remembered seeing an anaesthetist prior to their operation, while 90.9% remembered the surgeon. The authors ascribed this finding to the scarcity of anaesthetists in Nigeria, similar to other West African countries. (36)

The Zvara et al (16) study was accompanied by an editorial by Klock and Roizen (41), who proposed that the quality of the anaesthetist's visit is probably more important than the quantity. They stated that a good preoperative visit was important, while postoperative visits were merely part of continuing care. Nonetheless, they did suggest that this study was a "wake up call" for anaesthetists to improve their preoperative practices.

It is important to know about the various sources from which patients gain information as it assists us in elucidating the source of patient's perceptions and misunderstandings regarding anaesthesia and anaesthetists. Naithani et al (12) showed that 16% of patients were informed by their friends and family, while TV and newspapers was the source of information for 10.67%. This suggests that media can play an important role in public education. The most important finding was that the anaesthetist contributes the least information (1.33%). The reason could be that an anaesthetist usually has limited time during the preoperative examination in which to provide sufficient information.

## 2.10 Consequences of the public's misconceptions and lack of knowledge

There are conflicting views as to whether there will be any benefit by improving public awareness and the public image of the anaesthetist. Some authors have admonished that anaesthetists should not be dismayed by the repeated findings of widespread public ignorance of the speciality, "but should swallow our pride and continue as the silent heroes" (42). Others have disagreed and argued that increasing public awareness has many diverse benefits besides bolstering the anaesthetist's ego.

### 2.10.1 Implications for the anaesthetist

Healthcare administrators and other practitioners lack of awareness regarding the important role of the anaesthetist in numerous aspects of healthcare is a

fundamental threat to the future of the discipline. Increased appreciation of anaesthesiology, by healthcare providing bodies and administrators, may assist in increasing available resources for development and future research. (9)

Additionally, if the effort of specialising goes unnoticed and unappreciated, it may lead to low self-esteem and job dissatisfaction of the anaesthetist (37). The repercussion of this has been difficulty in retaining and attracting staff (9, 37). A UK study in 2005 showed that although the choice of specialising in anaesthesia was consistently increasing, it remained low in comparison to other specialties (40).

A more selfish but very practical incentive for improving the patient relationship and public image is to decrease malpractice litigation. Adamson et al (25), assessed the relationship between patients' opinions of their physicians' communication skills and the physician's record of medical malpractice claims. They found an inverse relationship between the number of malpractice claims filed and patients' assessments of their physician's communication skills. They concluded that improved communication between physicians and patients may result in fewer unmerited malpractice claims while leading to less costly resolution of merited claims. They suggested that physicians should tailor their communications to a patient's individual needs. (25)

### 2.10.2 Consequences for the patient

The preoperative visit, a basic professional requirement, has been discussed before but it bears reiteration due to its significance. It is often the sole meeting at which, in addition to the clinical assessment and planning, knowledge of the anaesthetic can be imparted, perceptions improved and a good relationship established with the patient (6).

The important benefits of the preoperative visit, as described above, is emphasised by several studies finding positive correlations such as earlier postoperative recovery (10), reduced perioperative anxiety and pain (10, 17), and improved patient satisfaction (9, 17).

A good patient-anaesthetist relationship created during the preoperative visit may aid in reducing patient anxiety (10). Reliable information assists in mentally preparing the patient for the intended surgery and anaesthetic (12). It will also improve patient cooperation (12).

Anaesthetists carefully inform patients about the perioperative period, not always realising the extent to which patients may misunderstand medical terminology (32, 43).

The benefit of the dissemination of information to the public remains controversial. When Jathar et al (44) conducted postoperative interviews, 86.3% of patients could recall a visit by an anaesthetist compared to 44% before the operation. Postoperatively, 84% of patients said that the anaesthetist was the one who administered their anaesthesia compared to 42% in the preoperative period. This showed a tremendous change in perception and improvement in knowledge after the detailed preoperative visit. Thus, a typical recommendation is that sufficient time should be allocated to allow for a comprehensive preoperative visit that the patient understands (9).

However, Kindler et al (29) failed to show any improvement by disseminating information via media such as video, pamphlet, etc. Likewise, de Oliveira et al (7) failed to demonstrate a statistically significant difference between the answers from groups that underwent pre-anaesthetic evaluation and those who had not spoken to the anaesthetist.

Hariharan et al (11) found that anaesthetists failed to explain the procedures and complications of anaesthesia to patients' satisfaction (11). This finding, of patients being dissatisfied with the depth of information provided, has been echoed in other studies (31). Hariharan et al (11) proposed that the reason for this was that many anaesthetists felt that providing detailed information would increase patient anxiety.

Moerman et al (45) produced a questionnaire in 1996 that they reported could identify very anxious patients preoperatively and those patients that wanted more detailed information about their surgery and anaesthetic. Roizen et al (46) challenged the reliability and validity of the questionnaire in an editorial in the same issue by using anecdotal evidence.

The differences in information seeking behaviour may also be attributed to cultural and sociological backgrounds. Many patients who value their autonomy request more information, whereas other patients, who accept the paternalistic attitude of the physicians, do not want to know details (11).

The lack of autonomy among patients was illustrated by Nathani et al (12). They showed that only 34.67% of patients were aware of the information contained in the consent form which they or their relative had signed. Only 15.33% of the patients were knowledgeable about the risks of anaesthesia noted in the consent form. This could be due to the God-like image of a doctor in India. Thus the patient completely trusts the doctor's decision and considers signing the consent form a mere formality. Illiteracy could also be the reason for this finding. Also it may have been due to inadequate explanation of the document as when asked about future inclination to know about anaesthesiology a majority of patients (70%) were interested in getting more information about anaesthesia and the anaesthetist.

Thus, the depth of information that should be divulged to patients, beyond that necessary for informed consent, and which patient subgroups would derive the greatest benefit, remains to be determined. (46)

## 2.11 Summary

Patient knowledge of anaesthetists and their roles inside and outside theatre are poor worldwide. As stated earlier, this may be due to the anaesthetist spending most of their time with amnesic or unconscious patients in comparison to other healthcare professionals. Efforts to increase interactions with awake patients through the introduction of anaesthetic clinics, routine preoperative and postoperative visits were expected to improve patients' knowledge about anaesthesia and anaesthetists. But alas, this was not always the case.

However, anaesthetists should not despair and abandon these clinics and visits as they were shown to have other benefits when performed at a high quality. Proper education and communication were shown to allay unrealistic fears, reduce anxiety, improve patient – anaesthetist rapport and improve patient satisfaction.

Further education of the public through various media would be invaluable in promoting the importance of anaesthetists. Also, increasing healthcare administrators' appreciation for anaesthesiology may assist in increasing available resources for development and future research. These benefits should motivate anaesthetists to enhance their public image.

# Chapter Three

# 3. Research methodology

## 3.1 Introduction

In this chapter the problem statement, aims and objectives, demarcation of study field, ethical considerations, research methodolgy and conclusion will be presented.

## 3.2 Problem statement

The poor public image of anaesthetists, and their discipline, among both the medical and lay communities has been a long standing and ubiquitous problem (10, 18). Anaesthetists and their discipline have failed to thrive in the public eye, despite phenomenal growth in their scope of practice, efficacy and safety. As a result, they continue to linger behind the screen as masked figures.

Extensive research has been done in the developed world investigating public awareness of anaesthetists but there are few publications from the developing world (11), and no publications from South Africa were identified.

Chris Hani Baragwanath Academic Hospital (CHBAH) patients' knowledge and perceptions regarding anaesthetists and anaesthesia were unknown.

As discussed, increasing public awareness will be beneficial to both patient and service provider. However, in order to improve the knowledge and perceptions among patients presenting for surgery at CHBAH, we first needed to determine their level of knowledge and perceptions regarding anaesthetists and anaesthesia.

## 3.3 Aim

The aim of this study was to describe CHBAH patients' knowledge and perceptions regarding anaesthetists and anaesthesia.

## 3.4 Objectives

The objectives of this study were to:

- describe CHBAH patients' knowledge and perceptions of anaesthetists
- describe CHBAH patients' knowledge and perceptions of anaesthesia.

## 3.5 Demarcation of study field

This study was conducted at CHBAH. This is a large, central hospital occupying 0.70 km² with 2800 beds and 25 theatres, and on average 6500 surgeries are performed annually. CHBAH is affiliated to the University of the Witwatersrand as such is a teaching hospital. Patients are exposed to doctors of varying levels of education and experience. CHBAH is located in Soweto, Johannesburg. (47)

## 3.6 Ethical considerations

Approval was received from the Human Research Ethics Committee (Medical) (Appendix A) and the Postgraduate Committee of the University of the Witwatersrand (Appendix B & C).

Verbal assent was obtained from the Clinical Head of Division of General Surgery and permission was requested to interview patients attending the surgical outpatients department.

Once these requirements were fulfilled, consent to perform the study was received from the Medical Advisory Committee of CHBAH (Appendix D).

The nursing manager of the surgical outpatients department was informed of the research.

Participants were invited to participate in the study after a brief explanation of the study's purpose. If they agreed to participate they were then provided with an information letter (Appendix E). The information letter detailed the purpose of the study, ethics, and the rights of participants to anonymity and withdrawal from the study. Written informed consent (Appendix F) was also obtained at the commencement of each interview regarding participation as well as consent for audio recording of the interview (Appendix F). Anonymity of participants was ensured by not recording participants' names on the transcripts. Furthermore, confidentiality was ensured as the researcher and supervisors were the only people to have access to the raw data.

The study was conducted in adherence to the principles of the Declaration of Helsinki (48) and the South African Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants (49).

The digital audio recordings were deleted after transcription of the interviews. The transcripts will be stored for six years after the completion of the study.

## 3.7 Research methodology

### 3.7.1 Research design

This study was conducted using a qualitative, contextual, exploratory, descriptive research method.

Qualitative research was "developed within the social and human sciences, and refers to theories on interpretation and human experience" (21). Emphasis is placed on "the inherent complexity of humans, their ability to shape and create their own experiences, and the idea that truth is a composite of realities" (21). Thus, there is a strong focus on understanding the human experience as it is lived. Subjective observations or conversations (narratives) are systematically collected, organised and analysed (21). The South African public's awareness of anaesthesia and

anaesthetists is currently unknown and unmeasured. As such, this topic lends itself well to a qualitative research method, which is typically used when exploring a relatively unknown topic.

A constructivist approach was used in order to interpret the participants' reflections of their knowledge and perceptions of anaesthesia and anaesthesiology.

I chose a qualitative paradigm to allow the participants to express what they knew about anaesthesia and anaesthetists, in contrast to a questionnaire, which would have presupposed a definition of knowledge.

Context refers to a specific location within a system (22). This study was conducted contextually at CHBAH.

Exploratory studies are designed to increase the knowledge of the field of study (22). This study was exploratory in nature since it aims to explore, describe and understand the perceptions and knowledge of patients regarding anaesthetists and anaesthesia.

The main objective of descriptive research is to provide an in depth portrayal of peoples' characteristics. The purpose of this is to describe the experience, its significance and its frequency (21, 22), and then to further examine the relationship between variables. There is no intention to predict or determine cause-effect relationships and thus no treatment or intervention is tested. This study was descriptive in nature as it aimed to describe the knowledge and perceptions of patients regarding anaesthetists and anaesthesia.

### 3.7.2 Study population

Patients in the surgical outpatient department of CHBAH comprised the study population. This included both preoperative and postoperative patients.

### 3.7.3 Study sample

There are a number of approaches to sampling in qualitative research. In this study the principle of data saturation was utilised. This occurs when themes in the data become repetitive, and no new information can be collected (21, 22). As a result, 26 semi-structured interviews were conducted.

In this study the convenience sampling method (sometimes referred to as a volunteer sample) was used (21). Patients were chosen from the CHBAH SOPD as there are many patients waiting for prolonged periods who met the inclusion criteria and were more willing to converse as opposed to those waiting nervously in the theatre waiting room.

#### Inclusion and exclusion criteria

The following inclusion and exclusion criteria were used.

Inclusion criteria:

- patients 18 years and older
- fluency and literacy in the English language
- patients who had undergone an anaesthetic previously
- patients who had never undergone an anaesthetic.

Exclusion criteria:

- inability to participate in an interview due to altered mental status
- patients refusing to sign informed consent.

## 3.7.4 Data collection

### Participant selection

With the assistance of the nursing staff in OPD, patients scheduled later on the appointment list were identified. Patients were assured that they would not lose their place in the queue. They had the study verbally explained to them and were then invited to participate in the study. If they agreed, they were provided with an information letter (Appendix E), and written informed consent for the interview and for the audio recording process was obtained.

### Semi-structured Interview

Semi-structured interviews were held individually with participants who were believed to be of informative value regarding the subject under investigation (22). This method of data collection was used to gain insight into the knowledge and perceptions of patients and thus had the potential to elucidate multiple dimensions of the subject under investigation (21, 22). Interviews involved verbal communication during which the subject provided information to the researcher. The semi-structured interview was selected as the tool for data collection because it allowed me to engage with the ordinary person on the street in order to understand their perceptions of anaesthesia and its context. This is supported by Henning (50) who suggests that interviews are based on the fact that we “assume that the individual’s perspective is an important part of the fabric of society and of our joint knowledge of social processes”.

The interviews were guided by a written set of questions. However, I did allow the patients free reign. In the interviews my role in the process was moderately structured by a written guide (Appendix G) whereas the participants’ role was unstructured. I conversed freely within the subject area, worded questions spontaneously, but remained focused on a particular subject that had been predetermined by the guide. Great flexibility was ensured in that participants, whose roles were unstructured, raised issues not in the guide. I pursued this in order to

explore participant expressions as a way of deepening the value of the discussion. (21, 22)

A semi structured interview guide is a written topic guide containing a summary of issues or objectives to be covered with each participant. It is a memory aid for the interviewer. The benefit of a guide is that it ensures that I have carefully decided beforehand, how best to utilise the limited time available in an interview situation. (21)

Based on the problem statement, aims and objectives, an interview guide was created. The guide included suggestions for “probes” designed to elicit more detailed information. Also, the questions were open ended to give participants an opportunity to provide robust, comprehensive information regarding the subject matter. (21)

**Interviewer**

I was the interviewer. I was not part of the treating team at the time of the interviews. I introduced the topic and facilitated the interview in an unbiased and conversational style. The participant understood that the interviewer was there to learn from them and gain insight regarding the topic under discussion. I remained objective and ensured that my body language and facial expression reflected this stance. I was allowed to elaborate on the meaning of the question or rephrase the question so the subject could better understand it. (21)

**Conduct of the interview**

The interviews were held in an examination room in the surgical outpatients’ department. It was a private, permissive and non-threatening environment that facilitated conversation.

It was a one-on-one interview with the participant. I introduced myself as a “humble learner”; there to learn and gain insight regarding the topic under discussion. I did not introduce myself as a doctor or anaesthetist. This was done to avoid fear of

judgement from the participant. Fear of being wrong would cause the participant to be guarded and not forth coming with their perceptions and knowledge.

The first few minutes, before actual questioning began, was used for two purposes. Firstly, to break the ice in order to build rapport with the participant. This allowed for richer information and access to intimate details of the participants' stories. Secondly, to share relevant information about the study (e.g. confidentiality). (21, 22)

It was anticipated that interviews would last thirty minutes but due to the emergent nature of this study design, most interviews lasted for a shorter time period due to the quality of information gathered.

The last question allowed the participant to provide any information that the interviewer may have not requested: "Is there anything else you would like to tell me?" or provide feedback: "Are there any other questions that you think I should have asked you?"

**Field notes**

I wrote brief field notes during the interviews and elaborated on them at the end of the data collection process. These were mainly reflective in nature.

Reflective field notes are theoretical, methodological or personal. Theoretical notes attempt to interpret the observations. These notes are further used to generate hypotheses and build an analytic scheme. Methodological notes are critiques of the current research methods and ideas of potential methods that may improve data collection. Reflexive notes are the researcher's own reactions, reflections and experience. (21)

The field notes led to refinement and adaptation of my interview technique that improved participant engagement and led to richer data. They were used as new talking points during later interviews. They provided observations that added depth and context to the interviews that ultimately assisted in elucidating the unexpected theme of perioperative education. Eventually, many of the field notes served as the beginning for many of subthemes discussed.

**Audio recording**

All interviews were audio recorded in order to increase the accuracy of data collection. Prior to conducting the interviews, the researcher tested the volume and quality of audio recording in the interview room, using two strategically placed audio recorders. These devices were placed in full view of each participant.

## 3.7.5 Data management

After the field notes were written, they were typed, labelled and filed to become the basis of analytic memos. Audio recordings were transcribed verbatim by the researcher. The transcripts were reviewed twice and corrections made before a final typed copy was produced. Then the audio recordings were deleted.

## 3.7.6 Data analysis

A content analysis of the data was performed using MAXQDA 11©. MAXQDA 11© is a software program designed for qualitative data analysis. The research supervisors who have expertise in qualitative research provided assistance. Qualitative content analysis is “the analysis of the content of narrative data to identify prominent themes and patterns among the themes”.

The thematic method of data analysis (23) was used to analyse the interviews. This consisted of the following steps:

1. Read all the participant’s transcripts to familiarise myself with them
2. Reviewed each transcript and generated initial codes
3. Collated codes into potential themes
4. Validated themes by reviewing them against the coded extracts and entire data
5. Refined each theme by clearly defining and naming each theme
6. Produced a report of the analysis.

### 3.7.7 Data evaluation

The conclusions extracted from the content analysis were compared to the current published literature.

### 3.7.8 Trustworthiness (validity and reliability)

Trustworthiness refers to “the degree of confidence qualitative researchers have in their data”. It is assessed using the criteria of credibility, dependability, confirmability, transferability and authenticity. These criteria are parallel to the quantitative criteria of internal validity, external validity, reliability, generalisability and objectivity. (21, 22)

In order to ensure trustworthiness, the following strategies were employed: (21)

**Credibility**

This is a criterion for evaluating integrity and quality in qualitative studies. It refers to “confidence in the truth of the data and interpretations”. Lincoln and Guba (21) noted that “credibility involves two aspects: first, carrying out the study in a manner that enhances the believability of the findings, and second, taking steps to demonstrate credibility in research reports”.

Credibility was strengthened by the following measures (21).

- **Prolonged engagement:** sufficient time was invested to allow for an in-depth understanding of the subject under study. The interviews were long enough to allow completion of the participants’ expressions. None of the interviews needed to be stopped, all ended as a conversation might do.
- **Reflexivity:** the researcher self-reflected about his own biases, preferences and preconceptions. These have been the subject of the field notes.
- **Bracketing:** the researcher held in abeyance any biases, preferences and preconceptions about the subject under study, identified by self-reflection. I had to constantly remind myself to allow participants to express themselves fully

rather than insist on their commenting directly on the anaesthetists' role in their perioperative experience

- **Method triangulation:** this was achieved by comparing the interview data to the literature review.
- **Comprehensive recording of data:** field notes were taken by the researcher; accuracy was improved by audio recording the interviews; an audit trail was also created.
- **Audit trail:** data was systematically documented, which would allow an independent auditor to draw their own conclusions regarding trustworthiness, if need be.
- **Member checking:** in which the researcher attempts to provide feedback to participants about emerging interpretations, and obtain participants reactions was not feasible with this patient population. To replace member checking, I listened to the interviews again whilst reading the transcripts.
- **Peer reviewing and debriefing:** a qualitative research expert was consulted to critique the research.

**Dependability**

This refers to "the stability of data over time and conditions. It is akin to reliability in quantitative studies" (21, 22). Dependability was ensured by method triangulation, comprehensive recording of data and maintaining an audit trail.

**Confirmability**

This refers to "objectivity, which is the potential for congruence between two or more independent observers about the data's accuracy, relevance and meaning". It is concerned with ensuring that the data represents the information provided by the participants, and that it is not tainted by the researcher's biases or perceptions. (21, 22) Reflexivity, bracketing and peer review were used to ensure confirmability.

### Authenticity

This refers to “the extent to which researchers fairly and faithfully show a range of realities in the data analysis and interpretation”. (21) This was ensured through the use of thick and contextualised descriptions and comprehensive data recording.

### Transferability

This refers to “the potential for extrapolation or the applicability of the findings to other settings”. (21) This study enhanced transferability by using the strategies of data saturation, comprehensive recording of the information and the maintenance of an audit trail.

## 3.8 Summary

In this chapter the problem statement, aims and objectives, ethical considerations, research methodology and the trustworthiness of this study were discussed. Discussion of the research methodology included the research design, study population, study sample, data collection and data analysis. The next chapter, Chapter Four, presents and discusses the findings of this study.

# Chapter Four

# 4. Findings and discussion

## 4.1 Introduction

This chapter contains the findings of the study and the discussion thereof. All italicised statements in this chapter are direct extracts from patient interviews.

## 4.2 Findings

### 4.2.1 Sample realisation

This study was conducted at CHBAH SOPD from 14/10/2013 until 25/10/2013. Individual semi-structured interviews were conducted with patients until data saturation was achieved, totalling twenty six interviews. A convenience (volunteer) sampling method was used. No patients that volunteered were excluded from the study.

### 4.2.2 Demographic characteristics

The patients included thirteen males and thirteen females ranging in age from 21 to 78 years (median of 40). The majority (twenty three) of participants were black with two white and one coloured participant. The majority (ten) of patients were unemployed. The income for those that were employed ranged from R1500 to R17000 p.m. The education level ranged from grade 7 to completed tertiary education, with the majority (fourteen) not having completed high school.

Eight patients had never had an operation or anaesthetic. Eighteen patients had had an operation or anaesthetic. The length of time since the operation varied from 1 to 36 years, but the majority (ten) of patients had their operation that year (2013). Four patients underwent emergency procedures including exploratory laparotomy and

caesarean section. The remainder underwent a variety of elective surgeries including orthopaedic procedures, gynaecological procedures, cholecystectomy, herniotomy, tonsillectomy and lumpectomy.

Eight patients received regional anaesthesia, eighteen received general anaesthesia and no patients received conscious sedation.

### 4.2.3 Results

Patients enter the complex and stressful perioperative environment in a state of vulnerability deepened by their lack of knowledge of the perioperative period. The numerous activities related to the conduct of the surgery, the interactions with multiple personnel, and the varied situations encountered contribute to this confusing and stressful environment. The trauma of navigating this process may be worsened by patients own personal perceptions and preconceptions, which they bring to this experience.

Patients expressed the desire to be better prepared through education about the perioperative period. They display remarkable retention and understanding based on their detailed recollection of events. However, their perioperative counselling needs to be relevant to their priorities and provided at appropriate, regular intervals to be meaningful.

Patients seek reassurance and guidance throughout the perioperative experience from healthcare professionals. The patient's perception of the quality of care is enhanced if there is continual education and counselling.

This study set out to describe patients' knowledge and perceptions regarding anaesthetists and anaesthesia. Instead, I was taken on an unexpected journey in which the role of the anaesthetist and importance of anaesthesia was downplayed in relation to patients' whole perioperative experience. I felt despondent when I found that patients were mostly uninterested in the role of the anaesthetist and viewed it as largely irrelevant despite many having fears of issues related more to anaesthesia than surgery. During the series of interviews the focus shifted from my anaesthesia

related concerns to the patients' concerns, relating to a return to a healthy state with minimal ongoing pain and suffering. (Reflections from field notes.)

During the interview process, these issues were not only revealed by patient answers, but by their questions as well. Some patients asked me to explain various aspects of the perioperative period whilst they took notes, which illustrated their desire for further education.

The interview process seemed to fulfil many needs that, until then, had gone unmet. Most patients' yearned for closure; both a physical end to their suffering and an answer to their questions of what happened during the surgery and why.

The major theme that emerged from the data was perioperative education. It related to the operative process in general and not specifically to anaesthesia.

This theme covered a range of domains:

- the preconceptions and knowledge patients came with
- the counselling they received and its impact
- an emerging new truth
- patients' desire for further knowledge.

Patients enter the elective surgery process via the surgical outpatients department *still nervous, not sure about the operation* and *afraid of the after effects (Interview 15).*

They are *worried because of what* [they] *used to hear from other people about operations (Interview 16),* demonstrating that their knowledge and perceptions are strongly influenced by their *loxion*. [1]

*Especially, when you grow up in the loxion (Interview 3),* there are oversimplifications such as, *when you go there, you won't wake up (Interview 3),* and generalisations like, m*ost of the people after they have an operation they start getting sick (Interview 15)*. Sensational stories like, *the instrument that they were using was* [left] *inside her (Interview 12)* stoke the flames of fear and doubt in the loxion.

[1] Loxion is a word from the Scamto or 'tsotsi taal' language and means township. Loxion culture refers to a communal experience located in South African township settlements.

There are even specific *rumours about these public hospitals* [that] *they don't take care of the patients the way* [they do] *in private (Interview 17),* leading patients to delay and avoid seeking treatment. The following extract illustrates how a patient was influenced by a community's reluctance and nearly prevented him from limb-saving surgery.

> *Friends, family… They had no option to say that you can stop [surgery] because they would see my hand and they said: 'Okay, just do it!' But they were not much happy about the decision that I was taken to it (Interview 3).*

The main concern with public hospitals are *some of the doctors they study with you (Interview 12),* captures the fear that patients experience when they believe that doctors experiment on them for training purposes, instead of having patients' best interests at heart.

*So you never know if* [the operation] *is going to be successful or not… If it's a trainee, it's too* [risky] *(Interview 9),* illustrates patients' doubt in the capability and judgement of their attending doctors.

The most prevalent fear amongst patients is that of persistent postoperative pain. *So many people who have been operated, they suffer with these pains when it's cold; just often comes and goes; so that's my worry: that the pain will continue (Interview 13).*

Patients' fear of pain is a strong deterrent especially if they believe *I'm normal; I'm not sick; there's no pain; it's just this thing* [epigastric hernia] *is growing. So I'm afraid that after the operation I'm going to start having pains… I'm not sure about the operation (Interview 15).*

The next most prevalent fear was that of death or not waking from the anaesthetic. The following quote demonstrated a recurring perception that anaesthesia and surgery are chaotic processes that doctors have little control over and they stand equal chances of success or failure. This patient was so convinced of this that she absolved her doctors of responsibility for her possible death.

*It's very sensitive because sometimes you can awake and sometimes you can't awake. And then while it's not their [the doctors'] problem because anytime is teatime for anybody. Because you can just die (Interview 25).*

Appropriate perioperative education and counselling appears to dispel these negative perceptions and emotions and create a more positive operative experience.

*So he told me all the things he was going to go through. Unlike what I had heard […] in the loxion. That when you are in that situation they just take you, and just put you an injection. From then you are gone and you do not know about it. But I find that the situation is not the way how they talk on the outside (Interview 3).*

Collaborative decision making and open communication engender feelings of trust and confidence in the perioperative process and personnel.

*And they were asking me some questions and allowing me to even ask, which made me so much happy. And they would make me feel as if it [operation] is not something that is so much hard, than the way I used to hear (Interview 3).*

*And then they come and they discuss something with you so that you don't think that they going to do an operation. Ja, they try to make some jokes and focus on something else so that you not aware (Interview 9).*

Patients even believe *it is wise to explain to all the patients* […] *that: 'Okay, this kind of an operation is going to be done on you. We are going to sedate you with this kind of an injection (Interview 12).* When the expected preoperative education and counselling is lacking, patients are distraught and disappointed by the system.

*And also I was doing an operation on this lipoma. I don't even know what's that. My idea… I thought maybe here in hospital they would explain to me. […] But they said: 'lipoma' only (Interview 17).*

Therefore, in the context of this study, the consent process emerges as an essential and sometimes the sole component of patient education. Despite this, there appeared to be varying levels of quality of the consent taking and counselling process. This ranged from where [it] *was just explained everything thoroughly; what*

*was going to happen and how (Interview 26),* to a complete lack of education where [they] *just signed the papers without knowing … (Interview 16).*

> *So I wanted to ask you, doctor that if you refuse to make an operation and you see that it's not compulsory, so why they make it compulsory? Because sometimes, because we don't have knowledge, and some, we are not educated, we just sign something that we never have any knowledge about it. All to find that they force you to sign. At the end of the day, you make a mistake, unaware that person can die then you say to me, 'Ja, you signed!' So who do we blame, me or you? That's the question that I want. But sometimes it might be difficult, you know why, I sign not knowing not having any knowledge, neh and you are [negligent] and I die. Who do we blame? If I want to sue you, I can sue you? (Interview 9)*

When patients are counselled inappropriately about the perioperative period numerous detrimental effects may result.

Their feelings of disappointment and doubt are illustrated by them *losing hope in our public hospitals. They not serving needs the way we were expecting (Interview 17).*

Their mounting anxiety in anticipation of their surgery is due to the uncertainty of whether *they are going to kill the pain and operate with me while I'm awake (Interview 21).*

Patients feel disempowered when they aren't properly counselled and left out of the decision making process.

> *I think it was going to be better that way. For him or her to give me better information for me to choose between to sleep and injection [local anaesthetic]. But in Bara they don't give you any option (Interview 17).*

The benefits that patients derive when appropriately counselled in a manner relevant and understandable to them are:

They create realistic expectations and as a result derive a greater level of satisfaction. This was well illustrated by the participant who had a debilitated and mangled hand, yet despite this, *I'm happy that my hand, at least, although it is not*

*holding so much, at least it is now better* [...] *If I was not to have that operation by now my hand would not be working totally (Interview 3).*

They develop a sense of peace, which was demonstrated by *the fear just goes out a little bit, when he told me the type of operation that he was going to go through (Interview 3).*

> *I didn't have pain when they tell me: 'Mary, we going to give you an injection to make the thing that we are going to take out of you not to feel the pain. It's then that I got relaxed because I was actually restless (Interview 12).*

When there has been proper communication, patients want to *thank them (doctors) because they did a great job to me. And they were asking me some questions and allowing me to even ask, which made me so much happy (Interview 3).*

Patients properly counselled were more cooperative and willing to undergo surgery.

> *And they would make me feel as if it is not something that is so much hard, than the way I used to hear (Interview 3).*

Upon having a favourable operative experience, which included proper education, patients were quick to dispel any misconceptions they had and accept what they had experienced first-hand as the truth. Some were even willing to disseminate this new truth through the community in order to not perpetuate misguided preconceptions.

> *I would tell them that it is not that much as what we have heard. Especially on the loxion, they used to tell us when you are there you see it as if you just go into a room and somebody just inject you not knowing you are going for an operation. Then after that is when you'd see after that you've been operated on or you just won't wake up at all. You just go dead. Which is a different matter. So I think I would refer him and say (to him) that it is good to go for an operation (Interview 3).*

The overall impression of patients' knowledge of the perioperative period was that it was limited preoperatively and significantly improved postoperatively when they were appropriately counselled.

The majority of patients interviewed displayed limited knowledge and understanding of the anaesthetist's role. They also found it difficult to differentiate the roles of the various healthcare professionals, often mistaking the anaesthetist for a nurse or technician, or believing the surgeon provided both the anaesthetic and surgery.

This may be due to patients' simplistic view of doctors roles; believing that there is only *a medical and surgical doctor (Interview 21).* Or they may be unable to differentiate healthcare professionals' roles due to *doctors and nurses* working *hand in hand (Interview 21)*. Or else it may be due to the lack of continuity of care, with patients *seeing too many doctors (Interview 13).*

It is plainly evident that patients can identify and remember their surgeon more easily than their anaesthetist. One patient in particular could remember his entire attending surgical team and commented that he knew them by their voices alone. His comment illustrated that the prolonged patient-surgeon interaction in the wards led to an improved rapport.

However, he could not recall his friendly anaesthetist who wore a name tag and provided him with a meaningful and comprehensive preoperative visit.

No patient could recall their anaesthetist's name even when *he* [anaesthetist] *did tell me his name it's just that I forget it. But I just remember who operated me only by that time* […] *Dr. Khan (Interview 26).*

Postoperative patients did not have a similar improvement in their anaesthetic knowledge as with their general knowledge of the perioperative period. Their knowledge of anaesthesia remained limited even if they had received preoperative anaesthetic counselling.

In stark contrast, patients' knowledge of surgery and the surgeon's role was much better. Patients' vocabulary included surgical jargon that they understood well after proper preoperative counselling by surgeons. I was surprised by how comfortable the patients were with such terminology.

> *Some operations are conducted using lasers, some cut or put stitch or staples (Interview 24).*

> *He said to me, '… so what is going to happen is you are going to make laparoscopic.' … Then I asked, 'How is it being done?' Then he [said], 'No, what we are going to do, we are going to open some hole; some sort of keyhole' (Interview 26).*

Patients *would like to learn more because* [they] *have no knowledge about doctors and so on* (Interview 4). They *would love to know which options* [they] *can take (Interview 13),* in order to improve their decision making abilities. This desire for further knowledge was expressed in the interview by them asking questions. This was facilitated by the safe and comfortable atmosphere of the interview.

> *Okay, so what happens when they put you to sleep? What is it that makes you to be asleep? Do they take out the oxygen? I just want to understand. (…) My main concern was to understand exactly what you doing in order to put a patient to sleep. But now the manner in which you explained to me was comprehensive (Interview 2).*

Besides educating patients the interview also served the unintended purposes of providing closure to many patients' experience. This next quote captures patients' emotional distress when information was withheld from them.

> *Because now I'm having operation sir but I can't tell you anything. I don't know what they found there; what was wrong! I don't know anything! They never explain me! You know some of the doctors in the ward you try to ask them [and] they say, 'don't worry because you are saved now, why do you want to know all that' (Interview 23).*

This patient described me as *a man of God (Interview 23)* for simply introducing myself to him and listening to his story. Patients expect acknowledgement and a good rapport with their doctor, yet this was sadly found lacking from this patient's experience.

> *No, some of the doctors there, I am telling you the truth, they don't do that. They've got no time to talk to you about that and asking you that and 'hallo, how are you? How are you feeling?' and all that (Interview 23).*

## 4.3 Discussion

Perioperative education emerges as a significant contributor to an improved patient experience during this traumatic time. This is a very significant finding as perioperative education has been used to improve patients' perioperative experiences (51). And, in the patient-centred care model, patient satisfaction is a very important goal. Perioperative education encompasses the provision of relevant information, coping skills, and psychosocial support for surgery (52).

Perioperative education is conveyed by healthcare professionals through many different methods. However, the patient - healthcare professional conversation still represents a critical nexus for the exchange of health information (53). This is in spite of increased utilisation of informal sources of information external to the healthcare setting such as the internet. Communication between healthcare professionals and patients has been shown to impact patients' knowledge, motivation, decision making, empowerment, and even health status (54) . Thus, effective communication is necessary to properly educate patients about the perioperative period.

Before we can establish whether communication is effective we first need to determine the functions of a medical conversation or consultation. de Haes and Bensing (55) offer a six part functional model for a medical conversation/consultation, including: "(1) fostering the patient - healthcare professional relationship (2) information gathering, (3) information giving, (4) (shared) decision-making, (5) strengthening patient self-management and (6) attending to emotions".

When all of these functions are completed, then a medical consultation can be deemed successful.

Despite information exchange forming the majority of a medical consultation, it is intricately intertwined and dependent upon the other functions for its effectiveness. Also, from our patients' view the quality of the patient- health provider relationship and the emotional tone of the medical consultation were equally, if not more, important than the information exchange. (56)

In our study, patients seem to expect and take for granted basic interpersonal abilities. Our patients' desire to be treated as a person suggests the importance of a highly flexible and individualised approach. Deledda et al (56) also reported that creating a rapport with the patient and recognising their individuality is a strong patient expectation and an important endpoint for an effective consultation.

Patients in our study identified problems with education and counselling, which raised concerns about health providers' failure to meet their expectations. This finding was supported by Ley (57) and Otte (58). Akin to Otte's (58) study, we showed that communication breakdown led to a lack of patient confidence. The patients in this study echoed a common finding in the literature regarding a desire for relevant counselling and improved communication (59).

Similar to our study, Kruzik et al (51) reported that patients perceived that patient - healthcare professional communication was an important tool for enhancing care quality. Both sets of patients described good communication as being constructive, encouraging and supportive, whilst poor communication was frustrating, impeding and demoralizing.

The benefits of preoperative education evident in this study were mirrored in findings that patients become immediately more knowledgeable about their prospective operation and could make an informed decision (60). Klafta (10), Leite (6) and Naithani (12) reiterated the emotional benefits such as, reductions in patient anxiety by allaying unrealistic fears, fostering realistic expectations, increasing patient satisfaction, confidence and cooperation. Hewitt et al (61) states that preoperative education empowers patients to take control of their health and well-being and make a meaningful contribution to their decision making process. Whilst this has been the experience amongst the patients in this study, many more felt that poor counselling left them feeling disempowered.

Empowerment can be defined as "the subjective perception that one has mastery over one's health behaviour and the health decisions relevant to oneself" (62). According to Aujoulat et al (63), seen from the perspective of the relationship between healthcare professional and patient, power is ''given'' by the healthcare professional to the patient during the process of education and counselling. The purpose of empowerment-based interventions such as perioperative education is to

help patients learn to think critically and make informed decisions. Anderson et al (64) believe that it is health providers' responsibility to help patients achieve their health needs through education, expert advice, self-reflection, and support.

To complete the picture, patients may take control of their own health and become empowered through health education programmes, support groups or searching the internet for medical information (65). In our study, it was an interesting and unique finding that patients were willing to educate and empower others. This was done by them spreading the new truth to their community after having a positive perioperative experience.

A concept that is inextricably linked to health empowerment is health literacy. The World Health Organisation, describes health literacy as "the cognitive and social skills that influence peoples' motivation and ability to gain access to, understand and use information in ways which promote and maintain good health'' (66). Baker (67) and Levin-Zamir (68) have shown that patients with inadequate health literacy have limited information of their diseases and treatments and lack the skills necessary to negotiate the healthcare system. This was similar to our study where preoperative patients displayed poor knowledge of the perioperative experience and lacked the skills to effectively negotiate it. This was exemplified by some of our patients displaying poor health seeking behaviour and avoiding surgery or presenting late.

Schulz (69) confirms the interaction of the two factors of health empowerment and health literacy. He recently presented a concept of the two factors in which he claimed that if empowerment is lacking, health literacy is by and large wasted. And vice versa, if a person feels empowered, he will take decisions in his own hands irrespective of whether his decisions are based on a sound fundament. What needs to be aspired to are high levels of both health literacy and empowerment.

The anaesthetist has a crucial role in perioperative education. Our patients' reflections on their encounters with the anaesthetist in the perioperative period was generally positive. However, few of them remembered the details of this encounter. Anaesthetists' contact with conscious patients is usually brief. Thus, well-honed communication skills are necessary during such circumstances. According to the literature there are several reasons for ineffective anaesthetic communication. Unfortunately these were not fully explored in this study. In our study it was noted

that patient anxiety and medication-clouded consciousness did diminish the effectiveness of the anaesthetic consultation. Another reason cited in the literature was production pressure. Thus, clear, concise, respectful and individualised communication is vital to functioning in this limited time frame.

Egbert et al (70) established that a comprehensive description of the perioperative experience is a potent anxiolytic than no perioperative visit or barbiturate sedation alone. Leigh et al (43) showed that an information booklet is less effective than a preoperative encounter with an anaesthetist.

Deledda et al (56) showed the benefits of preoperative education but it is routinely poorly performed. This is borne out in this study. It has been argued that it is a time-consuming process that burdens an already time constrained system. Through this data it appears that a simple intervention in the preoperative period may profoundly improve a patient's experience.

# Chapter Five

# 5. Improving the patient experience

## 5.1 Introduction

In this chapter a summary of the study is presented. The limitations of the study are addressed. Recommendations are made, and a conclusion is presented.

## 5.2 Summary

### 5.2.1 Aim

The aim of this study was to describe CHBAH patients' knowledge and perceptions regarding anaesthetists and anaesthesia.

### 5.2.2 Objectives

The objectives of this study were to:

- describe CHBAH patients' knowledge and perceptions of anaesthetists,
- describe CHBAH patients' knowledge and perceptions of anaesthesia.

### 5.2.3 Methodology

This study was conducted using a qualitative, contextual, exploratory, descriptive research method. This study was conducted contextually at CHBAH. Patients in the surgical outpatient department of CHBAH comprised the study population. This included both preoperative and postoperative patients. Twenty-six semi-structured interviews were conducted. Audio recordings were transcribed verbatim by the researcher. The thematic method was used to analyse the interviews via the

MAXQDA 11© software programme. Trustworthiness was maintained by ensuring that findings were credible, dependable, confirmable, transferable and authentic.

### 5.2.4 Findings

The overall theme identified was that of perioperative education. Patients' preoperative knowledge and preconceptions were described as well as the influence that perioperative education had on it. The benefits of perioperative education created a positive operative experience.

## 5.3 Limitations

Interviews were conducted in English. Whilst all patients were conversant in English, I could not guarantee that English was every patient's first language. This may have affected the depth of the information received.

Some patients were told by SOPD staff that I was an anaesthetist. This may have biased some of the interviews.

The inclusion criteria may have been too broad, resulting in the study sample including two patients that had an operation over thirty years ago. This may have resulted in outdated operative experiences being presented.

## 5.4 Recommendations

This study proposes the following:

### 5.4.1 For clinical practice

Perioperative education and counselling must assume a central role in the field of patient care as I have shown that it has a significant impact on the quality of their experience. Conversations between healthcare professionals and patients are the essential processes by which people are informed, educated and motivated to make

healthier choices. Thus, communication skills training must be increased and improved. In the long run, patients will profit from the improved communicative competence of healthcare professionals.

Anaesthetists interact and converse with patients for only a short time and this period is very stressful for patients with many factors that detract from this conversation. Thus, anaesthetists require specific skills training that would allow them to effectively empower patients with the necessary knowledge to make informed decisions about their care.

Healthcare professionals may also wish to reflect upon their own practices which leave patients feeling depersonalised, excluded and a burden.

### 5.4.2 For further research

My study has shown the value of understanding patients' perioperative experience and elucidated factors that are important to patients. Further exploration of this experience can make a significant contribution to the planning and delivery of care and training of healthcare professionals.

There is a limited and underdeveloped evidence base for the relevance of healthcare professional - patient communication during the perioperative period. Further research can identify what happens during healthcare professional – patient conversations and whether the behaviour displayed is effective. This must be central to advancing patient care, both in its broader concept and with regard to patient empowerment specifically.

## 5.5 Conclusion

Patients' descriptions of their perioperative counselling and education experiences showed their need and desire for personalised communication and further education. Whether their needs are met affects their impressions of their perioperative experience. Therefore, patients' communication needs deserve greater emphasis in healthcare professionals' training. Healthcare professionals need to develop

adequate knowledge and skills to help patients negotiate this potentially traumatic experience. Likewise, further research in this area is suggested to enrich the field.

# References


1. Ahsan- Ul Haq M WA, Mubeen M. A survey of patients' awareness about the peri-operative role of anaesthetists. Biomedica. 2004;20.
2. Mathur SK, Dube SK, Jain S. Knowledge about anaesthesia and anaesthesiologist amongst general population in India. Indian Journal of Anaesthesia. 2009 Apr;53(2):179-86. PubMed PMID: 20640120. Pubmed Central PMCID: 2900103. Epub 2009/04/01.
3. Swinhoe CF, Groves ER. Patients' knowledge of anaesthetic practice and the role of anaesthetists. Anaesthesia. 1994 Feb;49(2):165-6. PubMed PMID: 8093141. Epub 1994/02/01.
4. Baaj J, Takrouri MS, Hussein BM, Al Ayyaf H. Saudi patients' knowledge and attitude toward anesthesia and anesthesiologists - A prospective cross-sectional interview questionnaire. Middle East Journal of Anesthesiology. 2006 Feb;18(4):679-91. PubMed PMID: 16749563. Epub 2006/06/06.
5. Hariharan S. Knowledge and attitudes of patients towards anesthesia and anesthesiologists. A review. Anestesia en México. 2009 2009;21(3):174-8.
6. Leite F, Silva LMd, Biancolin SE, Dias A, Castiglia YMM. Patient perceptions about anesthesia and anesthesiologists before and after surgical procedures. Sao Paulo Medical Journal. 2011;129:224-9.
7. de Oliveira KF, Clivatti J, Munechika M, Falcao LF. What do patients know about the work of anesthesiologists? Revista Brasileira Anestesiologia. 2011 Nov-Dec;61(6):720-7. PubMed PMID: 22063373. Epub 2011/11/09.
8. Calman LM, Mihalache A, Evron S, Ezri T. Current understanding of the patient's attitude toward the anesthetist's role and practice in Israel: effect of the patient's experience. Journal of Clinical Anesthesia. 2003 Sep;15(6):451-4. PubMed PMID: 14652124. Epub 2003/12/04.
9. Irwin MG, Fung SK, Tivey S. Patients' knowledge of and attitudes towards anaesthesia and anaesthetists in Hong Kong. Hong Kong Medical Journal. 1998 Mar;4(1):16-22. PubMed PMID: 11832547. Epub 2002/02/08.
10. Klafta JM, Roizen MF. Current understanding of patients' attitudes toward and preparation for anesthesia: a review. Anesthesia & Analgesia. 1996 Dec;83(6):1314-21. PubMed PMID: 8942605. Epub 1996/12/01.
11. Hariharan S, Merritt-Charles L, Chen D. Patient perception of the role of anesthesiologists: a perspective from the Caribbean. Journal of Clinical Anesthesia. 2006;18(7):504-9.
12. Naithani U PD, Bajaj P. Public awareness about anaesthesia and anaesthesiologist: A survey. Indian Journal of Anaesthesia. 2007;51 (5):420.
13. Herman CR. An appraisal of the anaesthetist-patient relationship. Anaesthesia. 1978 Jan;33(1):45-8. PubMed PMID: 626336. Epub 1978/01/01.
14. Shevde K, Panagopoulos G. A survey of 800 patients' knowledge, attitudes, and concerns regarding anaesthesia. Anesthesia & Analgesia. 1991;73(2):190-8.
15. Tohmo H, Palve H, Illman H. The work, duties and prestige of Finnish anesthesiologists: patients' view. Acta Anaesthesiol Scand. 2003 Jul;47(6):664-6. PubMed PMID: 12803582. Epub 2003/06/14.
16. Zvara DA, Nelson JM, Brooker RF, Mathes DD, Petrozza PH, Anderson MT, et al. The importance of the postoperative anesthetic visit: do repeated visits improve patient satisfaction or physician recognition? Anesthesia & Analgesia. 1996 Oct;83(4):793-7. PubMed PMID: 8831323. Epub 1996/10/01.

17. Harms C, Young JR, Amsler F, Zettler C, Scheidegger D, Kindler CH. Improving anaesthetists' communication skills. Anaesthesia. 2004 Feb;59(2):166-72. PubMed PMID: 14725519. Epub 2004/01/17.
18. Cooper GM, Hutton P. Anaesthesia and the undergraduate medical curriculum. British Journal of Anaesthesia. 1995 January 1, 1995;74(1):3-5.
19. Executive_Committee. Scope of practice of anaesthesia in the Republic of South Africa: South African Society of Anaesthesiologists (SASA); 2002 [31/10/2012]. Available from: www.sasaweb.com/images/SASA_Scope_of_Practice_Nov_2002.pdf.
20. Harper Collins. 2012. English Dictionary.
21. Polit D, Beck C. Nursing Research: Generating and Assessing Evidence for Nursing Practice. 9th ed. Philadelphia: Lippincott Williams & Wilkins; 2011.
22. Burns N, Grove S. The Practice of Nursing Research: Appraisal, Synthesis, and Generation of Evidence. Missouri: Saunders; 2008.
23. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3:77 - 101.
24. Practice Guidelines. Southern African Journal of Anaesthesia and Analgesia. 2013 2013/01/01;19(1):S1-S42.
25. Adamson TE, Tschann JM, Gullion DS, Oppenberg AA. Physician communication skills and malpractice claims. A complex relationship. Western Journal of Medicine. 1989 Mar;150(3):356-60. PubMed PMID: 2735043. Pubmed Central PMCID: 1026477. Epub 1989/03/01.
26. Strunin L. Anaesthesia, what's in a name? - time for change. Anaesthesia. 2000 Oct;55(10):941-2. PubMed PMID: 11012486. Epub 2000/09/30.
27. Notcutt W. Anaesthesia, what's in a name? Anaesthesia. 2001 Mar;56(3):273-4. PubMed PMID: 11251438. Epub 2001/03/17.
28. Simini B. Anaesthetist: the wrong name for the right doctor. The Lancet. 2000;355(9218):1892.
29. Kindler CH, Harms C, Alber C. [The patients' perception of the anaesthetist in a Swiss university hospital]. Der Anaesthesist. 2002 Nov;51(11):890-6. PubMed PMID: 12434262. Epub 2002/11/16. Das Berufsbild des Anasthesisten Eine Untersuchung aus Patientensicht in einem Schweizer Universitatsspital.
30. Khan FA, Hassan S, Zaidi A. Patients view of the anaesthetist in a developing country. Journal of the Pakistan Medical Association. 1999 Jan;49(1):4-7. PubMed PMID: 10463007. Epub 1999/08/27.
31. Dodds CP, Harding MI, More DG. Anaesthesia in an Australian private hospital: the consumer's view. Anaesthesia & Intensive Care. 1985 Aug;13(3):325-9. PubMed PMID: 4051175. Epub 1985/08/01.
32. Keep PJ, Jenkins JR. As others see us. The patient's view of the anaesthetist. Anaesthesia. 1978 Jan;33(1):43-5. PubMed PMID: 626335. Epub 1978/01/01.
33. Hennessy N, Harrison DA, Aitkenhead AR. The effect of the anaesthetist's attire on patient attitudes. The influence of dress on patient perception of the anaesthetist's prestige. Anaesthesia. 1993 Mar;48(3):219-22. PubMed PMID: 8460799. Epub 1993/03/01.
34. Chew ST, Tan T, Tan SS, Ip-Yam PC. A survey of patients' knowledge of anaesthesia and perioperative care. Singapore Medical Journal. 1998 Sep;39(9):399-402. PubMed PMID: 9885718. Epub 1999/01/14.
35. Gurunathan UJ, R. The public's perception of anaesthesiologists - Indian attitudes. Indian Journal of Anaesthesia. 2004;48(6):456-60.

36. Eyelade ORA, J O Adewole I F. Patients' perception and knowledge of anaesthesia and anaesthetists – a questionnaire survey. Southern African Journal of Anaesthesia and Analgesia. 2010;16(4):28-31.
37. Jenkins K, Wong D. A survey of professional satisfaction among Canadian anesthesiologists. Canadian Journal of Anaesthesia. 2001 Jul-Aug;48(7):637-45. PubMed PMID: 11495869. Epub 2001/08/10.
38. Fisher QA. "Clear for surgery": current attitudes and practices of pediatricians. Clinical Pediatrics. 1991 Jan;30(1):35-41. PubMed PMID: 1995201. Epub 1991/01/01.
39. Cheung V, Critchley LA, Hazlett C, Wong EL, Oh TE. A survey of undergraduate teaching in anaesthesia. Anaesthesia. 1999 Jan;54(1):4-12. PubMed PMID: 10209363. Epub 1999/04/21.
40. Turner G, Goldacre MJ, Lambert T, Sear JW. Career choices for anaesthesia: national surveys of graduates of 1974-2002 from UK medical schools. British Journal of Anaesthesia. 2005 Sep;95(3):332-8. PubMed PMID: 16006486. Epub 2005/07/12.
41. Klock PA, Roizen MF. More or better--educating the patient about the anesthesiologist's role as perioperative physician. Anesthesia & Analgesia. 1996 Oct;83(4):671-2. PubMed PMID: 8831300. Epub 1996/10/01.
42. Hall IA, Earlam C. 'They are not proper doctors, are they?'. Anaesthesia. 1995 Jan;50(1):87. PubMed PMID: 7702160. Epub 1995/01/01.
43. Leigh JM, Walker J, Janaganathan P. Effect of preoperative anaesthetic visit on anxiety. British Medical Journal. 1977;2(6093):987-9. PubMed PMID: PMC1631741.
44. Jathar DS, V S Patel, R D Naik, L D. A study of patients' perception about knowledge of anaesthesia and anaesthesiologist. Indian Journal of Anaesthesia. 2002;46(1):26-30.
45. Moerman N, van Dam FS, Muller MJ, Oosting H. The Amsterdam Preoperative Anxiety and Information Scale (APAIS). Anesthesia & Analgesia. 1996 Mar;82(3):445-51. PubMed PMID: 8623940. Epub 1996/03/01.
46. Roizen MF, Klock PA, Klafta J. How much do they really want to know? Preoperative patient interviews and the anesthesiologist. Anesthesia & Analgesia. 1996 Mar;82(3):443-4. PubMed PMID: 8623939. Epub 1996/03/01.
47. Wikipedia. Chris Hani Baragwanath Hospital 2012 [18 June 2012]. Available from: http://en.wikipedia.org/wiki/Chris_Hani_Baragwanath_Hospital.
48. World Medical Organization. Declaration of Helsinki. BMJ. 1996;313(7070):1448-9.
49. Department of Health. Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa. Pretoria, South Africa2006.
50. Henning E, van Rensburg W, Smit B. Finding your way in qualitative research. Pretoria: Van Schaik; 2004.
51. Kruzik N. Benefits of preoperative education for adult elective surgery patients. AORN Journal.90(3):385-7.
52. Scott A. Managing anxiety in ICU patients: the role of pre-operative information provision. Nursing in Critical Care. 2004;9(2):72-9.
53. Kennedy A, Gask L, Rogers A. Training professionals to engage with and promote self-management. Health Education Research. 2005 October 1, 2005;20(5):567-78.
54. Roter DL. Oral literacy demand of health care communication: Challenges and solutions. Nursing Outlook.59(2):79-84.

55. de Haes H, Bensing J. Endpoints in medical communication research, proposing a framework of functions and outcomes. Patient Education and Counseling.74(3):287-94.
56. Deledda G, Moretti F, Rimondini M, Zimmermann C. How patients want their doctor to communicate. A literature review on primary care patients' perspective. Patient Education and Counseling.90(3):297-306.
57. Ley P. Improving patients' understanding, recall, satisfaction and compliance. In: Broome A, editor. Health Psychology: Springer US; 1989. p. 74-102.
58. Otte DL. Patient's perspectives and experiences of day case surgery. Journal of Advanced Nursing. 1996;23(6):1228-37.
59. Davis Y, Perham M, Hurd A. Patient and family member needs during the perioperative period. Journal of Perianaesthesia Nursing. 2014;29(2):119 - 28.
60. Lee A, Gin T. Educating patients about anaesthesia: effect of various modes on patients' knowledge, anxiety and satisfaction. Current Opinion in Anesthesiology. 2005;18(2):205-8. PubMed PMID: 00001503-200504000-00017.
61. Hewitt M, Herdman R, Holland J. Meeting psychosocial needs of women with breast cancer. Washington: The National Academies Press; 2004.
62. Schulz PJ. Social influences of health literacy and patient empowerment. Patient Education and Counseling.94(1):2-3.
63. Aujoulat I, d'Hoore W, Deccache A. Patient empowerment in theory and practice: Polysemy or cacophony? Patient Education and Counseling.66(1):13-20.
64. Anderson RM, Funnell MM. Patient Empowerment: Myths and Misconceptions. Patient education and counseling. 2010 08/13;79(3):277-82. PubMed PMID: PMC2879465.
65. Holmström I, Röing M. The relation between patient-centeredness and patient empowerment: A discussion on concepts. Patient Education and Counseling.79(2):167-72.
66. Sorensen K, Van den Broucke S, Fullam J, Doyle G, Pelikan J, Slonska Z, et al. Health literacy and public health: A systematic review and integration of definitions and models. BMC Public Health. 2012;12(1):80. PubMed PMID: doi:10.1186/1471-2458-12-80.
67. Baker DW, Parker RM, Williams MV, Clark WS. Health literacy and the risk of hospital admission. Journal of General Internal Medicine. 1998;13(12):791-8. PubMed PMID: PMC1497036.
68. Levin-Zamir D. Health literacy in health systems: perspectives on patient self-management in Israel. Health Promot Int. 2001;16(1):87 - 94. PubMed PMID: doi:10.1093/heapro/16.1.87.
69. Schulz PJ, Nakamoto K. Health literacy and patient empowerment in health communication: The importance of separating conjoined twins. Patient Education and Counseling.90(1):4-11.
70. Egbert LD, Battit GE, Turndorf H, Beecher a K. The value of the preoperative visit by an anesthetist: A study of doctor-patient rapport. JAMA. 1963;185(7):553-5.

# Appendices

## Appendix A: Human Research Ethics Committee (Medical) approval

R14/49 Dr Vivek Mooruth

**HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)**

**CLEARANCE CERTIFICATE NO. M130108**

| | |
|---|---|
| **NAME: (Principal Investigator)** | Dr Vivek Mooruth |
| **DEPARTMENT:** | Department of Anaesthesiology<br>CH Baragwanath Academic Hospital |
| **PROJECT TITLE:** | Knowledge and Perceptions of Patients Regarding anaesthetic Providers and Anaethesia |
| **DATE CONSIDERED:** | 25/01/2013 |
| **DECISION:** | Approved unconditionally |
| **CONDITIONS:** | |
| **SUPERVISOR:** | Mrs Juan Scribante |
| **APPROVED BY:** | Professor PE Cleaton-Jones, Chairperson, HREC (Medical) |

**DATE OF APPROVAL:** 08/05/2013

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

**DECLARATION OF INVESTIGATORS**

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature Date

**PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES**

## Appendix B: Postgraduate Committee of the University of the Witwatersrand approval

Faculty of Health Sciences
Private Bag 3 Wits, 2050
Fax:
Tel: 027117172040

Reference: Ms Mpumi Mnqapu
E-mail: mpumi.mnqapu@wits.ac.za

25 April 2013
Person No: 684856
PAG

Dr V Mooruth
44-14th Street
Orange Groove
Johannesburg
2192
South Africa

Dear Dr Mooruth

**Master of Medicine: Approval of Title**

We have pleasure in advising that your proposal entitled *Knowledge of perceptions of patients regarding anaesthetic providers and anaesthesia* has been approved. Please note that any amendments to this title have to be endorsed by the Faculty's higher degrees committee and formally approved.

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences

## Appendix C: Postgraduate Committee of the University of the Witwatersrand change of title of research approval

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Private Bag 3 Wits, 2050
Fax: 027117172119
Tel: 02711 7172076

Reference: Ms Thokozile Nhlapo
E-mail: thokozile.nhlapo@wits.ac.za

11 March 2015
Person No: 684856
TAA

Dr V Mooruth
44-14th Street
Orange Groove
Johannesburg
2192
South Africa

Dear Dr Mooruth

**Master of Medicine: Change of title of research**

I am pleased to inform you that the following change in the title of your Research Report for the degree of **Master of Medicine** has been approved:

| | |
|---|---|
| From: | **Knowledge and perceptions of patients regarding anaesthetist providers and anaesthesia** |
| To: | **Knowledge and perceptions of patients regarding anaesthetists and anaesthesia** |

Yours sincerely

Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences

## Appendix D: MAC of CHBAH permission to conduct research

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

MEDICAL ADVISORY COMMITTEE
CHRIS HANI BARAGWANATH ACADEMIC HOSPITAL

**PERMISSION TO CONDUCT RESEARCH**

Date: 12 April 2013

TITLE OF PROJECT: knowledge and perceptions of patients regarding anaesthetists and anaesthesia

UNIVERSITY: Witwatersrand

Received by: [signature]

Principal Investigator: Dr V mooruth

Date: 29/04/2013

Department: Anaesthetics

Supervisor (If relevant): Ms J Scribante

Permission Head Department (where research conducted): Yes

Date of start of proposed study: June 2013
Date of completion of data collection: September 2013

The Medical Advisory Committee recommends that the said research be conducted at Chris Hani Baragwanath Hospital. The CEO /management of Chris Hani Baragwanath Hospital is accordingly informed and the study is subject to:-

- Permission having been granted by the Committee for Research on Human Subjects of the University of the Witwatersrand.
- the Hospital will not incur extra costs as a result of the research being conducted on its patients within the hospital
- the MAC will be informed of any serious adverse events as soon as they occur
- permission is granted for the duration of the Ethics Committee approval.

[signature]
.....
Recommended
On behalf of the MAC)
Date: 12 April 2013

[signature]
.....
Approved/Not Approved
Hospital Management
Date: 29/4/13

## Appendix E: Information letter for potential participants

Dear Patient

Hello, my name is Vivek Mooruth. I am a master's student at the University of the Witwatersrand. I would like to ask you to take part in my research study called: 'Knowledge and perceptions of patients regarding anaesthetists and anaesthesia'.

This study involves several private talks with patients. You will be asked what you think and know about being made to sleep for an operation or having local anaesthesia, and what you think and know about the person that does this. There are no right or wrong answers. There will be two audio recorders in the room which will be used to record the entire talk. Our talk will last about half an hour. It will not disrupt your scheduled clinic visit.

The study offers no benefit to you directly but may result in positive changes and improvement in quality of patient care in the future.

This study has been approved by the Human Research Ethics Committee (HREC) (Medical) (Number: M130108) and the Post-Graduate Committee of the University of the Witwatersrand.

Your consent to participate in the study is entirely voluntary. You have the right to refuse to take part or withdraw from the study at any time without giving any reason and without any discrimination against you.

All records from the interview, whether written or recorded will be treated confidentially and the information will only be accessible to me and my supervisors.

If you agree to take part in this study I will ask you to sign a consent form. By signing this, you will give me permission to include you in the study and to make an audio recording of the interview.

If you have any questions or concerns with regard to this study, you may contact me on (011) 488 4397 or Professor Cleaton-Jones (Chairman of HREC) on (011) 717 1234.

Thank you for taking the time to read this letter.

Yours sincerely

Vivek Mooruth

## Appendix F: Informed consent from participants

I _____
hereby confirm that I have received, read and understood the above written information letter for participants regarding the study entitled: 'Knowledge and perceptions of patients regarding anaesthetists and anaesthesia', and that I have had sufficient opportunity to ask questions; all of which have been answered to my satisfaction.

I am aware that all information collected will be treated confidentially and that the results of the study, including any personal details, will be anonymously processed into a study report.

I understand that taking part in this study is voluntary and that I may, without prejudice, withdraw at any time.

**PARTICIPANT**

I hereby give consent to take part in this study. I hereby give consent to be audio recorded during the interview.

_____

(Participant Name)

_____

(Participant signature)

_____

(Date)

**STUDY DOCTOR**

I _____
hereby confirm that the above participant has been fully informed about the nature, conduct, risks, and benefits of the above study.

## Appendix G: Interview guide

1) Introduce yourself.

2) Ice breakers (tailored to patient and context):
   a) Where do you stay?
   b) Shame, how early did you have to get up to be here today?
   c) What operation did you have?

3) **If the patient has undergone surgery in the past**

   **Prompts**
   a) What happened once you were taken in for the operation? (sequence of events)
   b) Do you remember who was in the theatre when you were taken in?
   c) Who do you think was the most important person, especially regarding your safety?
   d) Did you have pain during the operation; were you awake?
   e) How and who made sure you were asleep or pain free?
   f) Is he/she a qualified doctor?
   g) How long do you think he/she studied for; did they receive specialist training?
   h) Do you know what he/she is called?
   i) What do you imagine or think when you hear that word?
   j) Did he/she visit you before your operation?
   k) What did he/she discuss with you?
   l) What does he/she do once you are asleep?
   m) Do you know where else he/she may work; or other roles?
   n) Did your view of anaesthesia and the anaesthetist change after your surgical experience?

4) **If the patient hasn't undergone any surgery in the past**

   **Prompts**
   a) You are coming for an operation, what do you think is going to happen in theatre? (sequence of events)
   b) Who will be inside the theatre with you?

c) Who do you think is the most important person during your operation, especially regarding your safety?
d) Do you think the operation will be painful?
e) Why do you think it will be painful/painless?
f) Who makes sure you will be pain-free and asleep during the operation?
g) Is the person who will make you pain-free and asleep a qualified doctor?
h) How long do you think he/she studied for; did they receive specialist training?
i) Do you know what he/she is called?
j) What do you imagine or think when you hear that word?
k) What do you think he/she does once you are asleep?
l) Do you know where else he/she may work; or other roles?

5) **General**

**Prompts**

a) How important do you think the anaesthetist is?
b) Would you like to see the anaesthetist before your operation?
a) How many types of anaesthesia do you know? What are they?
b) If the anaesthetist suggests a type of anaesthesia you are not aware of, will you simply agree with him/her or would you like more information before agreeing?
c) Do you have some knowledge about the possible complications of anaesthesia?
d) Which complication are you most concerned about?
e) Where did you learn about anaesthetists and anaesthesia?

6) Collect demographic data of participant

## Appendix H: Demographic data collection form

| **Participant Number** | Age | Gender | Education level | Income level | Previous anaesthetic | Race |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |

**Demographic data of participants 1**