FACTORS INFLUENCING INPATIENT SATISFACTION WITH PUBLIC HEALTH SERVICES AT A REGIONAL HOSPITAL, DURBAN, ETHEKWINI DISTRICT, KWAZULU-NATAL, SOUTH AFRICA

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DECLARATION

I declare that the work presented herein, **Factors influencing inpatient satisfaction with public health services at a regional hospital, Durban, eThekwini District, KwaZulu-Natal, South Africa**, is original and that it has not been submitted for any degree or examination in any other university or institution for the award of a degree or certificate and that all sources of information and data used or quoted have been duly indicated and acknowledged.

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Date: 20 September 2022

DEDICATION

I dedicate this thesis to all those who rise from poverty, pursue education and make sound contributions to society to bring social change.

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KEYWORDS

Inpatient satisfaction

Public health services

Service quality

Patient-centred care

Measuring satisfaction

Resource-constrained settings

ABBREVIATIONS

CHC	Community Health Centre
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HIC	High Income Country
LMI	Low Middle Income
LMIC	Lower Middle-Income Country
NDoH	National Department of Health
NHRD	National Health Research Database
OPD	Outpatient Department
PHC	Primary Health Care
PHREC	Provincial Health Research and Ethics committee
SDG	Sustainable Development Goal
SPSS	Statistical Package for the Social Sciences
UN	United Nations
WHO	World Health Organisation

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ABSTRACT

Determining the factors that influence patient satisfaction and measuring patient satisfaction levels with public health care services offers the prospect of addressing patient dissatisfaction with health services. Although patient satisfaction has long been established as an indicator of quality in healthcare and an important measure of health services performance, the literature suggests that patient satisfaction levels amongst inpatients in public health services in South Africa are low.

In this research, a cross-sectional study design was conducted using a survey questionnaire distributed to a random sample of adult patients who had spent at least 24hrs as inpatients, prior to leaving the hospital, with the aim to determine the factors associated with satisfaction and measure patient satisfaction levels at this hospital. A total of 347 patients aged 18yrs and over participated in the study. The majority of participants were females 292 (84.1%) and 55 (15.9%) were males. More than half of the study participants were in the age group 18-30 years (58.5%) with a mean age of 30.8 (SD = 10.49) and the age range was 71 years. Of all participants, 200 (57.6%) had started high school but did not matriculate. Data were analysed initially using descriptive statistics followed by chi-square tests of independence and finally ordinal regression analysis, to identify variables with a significant impact on inpatient satisfaction.

It was generally observed that patients were not satisfied with services at this facility, symbolised by a 55.6% not satisfied satisfaction rating. Overall, males were less satisfied than females. Patients in the surgical cluster were the least satisfied, with 76% of patients not satisfied, followed by orthopaedics and gynaecology, both with 56% of patients not satisfied while obstetrics had 48%, of patients not satisfied.

The results of the analysis showed 12 determinants of overall patient satisfaction. Hospital staff telling patients what new medicines were for before administering them was the most salient predictor (OR 23.031, CI 8.529 – 62.192) followed by doctors treating patients with courtesy and respect (OR 18.311, CI 4.644 – 72.197).

This work offers insights into the development of patient-centred service quality improvement strategies and an opportunity to overcome barriers to patient satisfaction in resourced-constrained settings.

CHAPTER 1: INTRODUCTION

This chapter provides an overview of this study. The introduction to the topic is presented, and the problem statement is set out followed by the research question, the aim and objectives, and the significance of this research.

"Patient satisfaction is an attitude resulting from a person's general orientation towards an experience of health care" (Woldeyohanes et al., 2015:1). Patient satisfaction has been well documented as a measure to identify gaps in health services delivery, quality of care, and health services performance (Hussain et al., 2019; Nyakutombwa et al., 2021; Shuja Qadri et al., 2012). WHO's Sustainable Goals for Development (SDG's), No.3, "Ensure healthy lives and promote well-being for all at all ages", highlights healthcare as a priority the world over (United Nations [UN], 2016).

In South Africa, the health care system consists of public sector services funded by the South African Government and private sector services provided by independent service providers at a cost to the consumer (Coovadia et al., 2009). With an estimated population of 60.14 million (Statistics South Africa [STATS SA], 2022) of which an estimated 16.6% belong to a medical aid (STATS SA, 2018: 26) and more than 80% accessing public health services for their health needs, South Africa's public health service plays an essential role in providing health care services to its population. However, although the strategic importance of quality health care has long been identified and widely recognised, and accepted, there remain significant differences in the quality of care among various providers (De Jager & Du Plooy, 2007).

South Africa's Health Ministry has demonstrated its commitment to patient participation in matters that affect their health by including, "Patient and Public Involvement", as one of the Seven Pillars of Clinical Governance (Health Systems Trust, 2014) and "Patient's Rights" and "Patient Safety", as domains of The National Core Standards for Health Establishments in South Africa (NDoH, 2011). This means that health services must maintain certain norms and standards for quality of care and continually evaluate and improve service standards. Consequently, to inform health establishments in South Africa of their performance efficiency in satisfactorily meeting the health needs of its population, health services must continually consult with patients regarding satisfaction with public health services and draw from this feedback to improve services.

Furthermore, the National Department of Health has improved mechanisms to address public dissatisfaction with health services. Combined with these improved mechanisms, is the improved access to print and broadcast media, especially social media platforms, allowing South Africans extensive public reach. As such, these platforms are increasingly becoming the selected option for public healthcare users to publish opinions and experiences about healthcare facilities (Du et al., 2012; Ranard et al., 2016). This has increased the number of complaints lodged at public health facilities from disgruntled users.

Successful litigations against public health services each year due to claims of inefficient care are placing a strain on public health funds. In KwaZulu-Natal, an amount of R 205 312 359.94 of the annual health budget was paid out in successful litigation cases in 2013/2014 (Commission of Inquiry into Medico-Legal Claims, 2017:16). These litigation costs deplete funds allocated for health services provision and further constrain resources. As a result,

managers of institutions are spending large amounts of resources investigating, redressing, and reporting on complaints received from dissatisfied consumers. Therefore, to enhance health services uptake, retain patients in care, and improve population health outcomes, it is important to investigate the factors that influence patient satisfaction with public health services to successfully mitigate threats to patient satisfaction with care received while accessing public health services (Girgin et al., 2019; Nyakutombwa et al., 2021; Schoenfelder et al., 2011). It is for these reasons that this study seeks to determine the factors that influence patient satisfaction and measure patient satisfaction levels at this hospital.

1.1 Problem Statement

Various authors recognise the importance of quality in health services and identify patient satisfaction with public health services as an indicator of service quality (J. de Jager & du Plooy, 2007; Hussain et al., 2019; Phaswana-Mafuya et al., 2017). Patients who experience high levels of satisfaction when accessing public health services for their healthcare needs are more likely to be retained in care and achieve positive health outcomes (de Schacht et al., 2022; Kennedy et al., 2014; Knutsson et al., 2022; Mukamba et al., 2020).

In South Africa, the results of the National General Household Survey indicate that only 53.8% of the population was very satisfied with public health services (STATS SA, 2018: 25). In KwaZulu-Natal, this dissatisfaction is evidenced by a significant increase over six years, from 176 in 2014/15 to 446 in 2018/19, in the number of medico-legal claims submitted to the Minister of Health (Whittaker et al., 2021). Furthermore, according to the latest report of the Commission of Inquiry into Medico-Legal Claims, KwaZulu-Natal

recorded the highest pay-out from their annual health budget in successful medical malpractice litigations in 2013/14, amounting to R51 700 001.45 more than the amount paid from the Gauteng health budget in the same period. This is despite Gauteng recording a population greater than 2000 000 people, when compared to KwaZulu-Natal, during the same reporting period (Commission of Inquiry into Medico-Legal Claims, 2017:16).

Additionally, there is a significant gap in existing literature regarding patient satisfaction with respect to inpatient care in South Africa, making the current patient satisfaction landscape in this patient population unclear. This lack of literature means that the factors that influence patient satisfaction are not clearly understood and therefore staff and managers cannot formulate and implement informed strategies to effectively enhance patient satisfaction.

The purpose of this study is thus to determine the factors that influence inpatient satisfaction with services at a Regional Hospital in the eThekwini District. Furthermore, it will determine the order of importance of these factors, as they relate to inpatient satisfaction, to help address this lack of understanding among managers and staff regarding the drivers of inpatient satisfaction. Understanding and acting on the drivers of patient satisfaction in this hospital will improve the quality of care, retention in care, patient health outcomes, and patient satisfaction. Moreover, the study findings will also contribute to the broader literature regarding patient satisfaction.

1.2 Research Question

What are the factors that influence inpatient satisfaction with public health services?

1.3 Aims and objectives

Aim

To determine the factors associated with public health services satisfaction amongst inpatients at a Regional Hospital in the eThekwini District, KwaZulu-Natal

Objectives

1. To describe the socio-demographic characteristics of respondents
2. To measure satisfaction with public health services among inpatients
3. To determine factors that influence patient satisfaction with public health services

1.4 Significance of this research

The results of this study may add to the knowledge and understanding of nurses, doctors, managers, and allied healthcare professionals, of the measures of patient satisfaction and service quality that matter most to patients. As the main role players in patient care, when healthcare professionals know what satisfies patients, they can plan and implement strategies that focus on these satisfaction indicators and improve patient satisfaction. Consequently,

nurses and doctors could improve patient care plans, developed on admission, to prioritise and enhance total patient satisfaction.

Additionally, this study identifies predictors of patient satisfaction, thus useful in the development of a training programme manual that focuses on these predictors. This training manual could be used during ongoing in-service education and training of personnel and induction and training of new employees. The trainings will provide continued reinforcement and create awareness for patient satisfaction and intervention strategies designed to improve satisfaction.

Furthermore, results could inform appropriate budget allocation for the purchasing of resources required to effectively address patient satisfaction needs. This could assist in the identification of the correct resources and the amounts required, including their appropriate distribution between departments to achieve improved patient satisfaction levels. Moreover, planning could include scheduling patient satisfaction surveys at departmental and organisational level at various intervals. Narrowing the focus on patient satisfaction to a more manageable departmental level could ensure that patient satisfaction is achieved within each department, thereby strengthening and enhancing patient satisfaction at an overall organisational level. Results of these surveys could inform the individual departments and the organisation at large, of their performance towards achieving excellence in patient satisfaction. Moreover, results could inform the formulation of strategies to improve satisfaction, including the identification of additional factors that might contribute to patient satisfaction in the various unique patient care settings.

CHAPTER 2: LITERATURE REVIEW

This chapter presents a review of the literature on the topic of interest. It provides an overview of patient satisfaction in the global, Sub-Saharan Africa, and South African context and discusses factors that emerged as impacting positively on inpatient satisfaction with public health services.

2.1 Patient satisfaction

There is vast literature on patient satisfaction with public health services globally and on the African continent (Aiken et al., 2018; Jacobsen & Hasumi, 2014; Jha et al., 2008; Ogaji et al., 2015; Schoenfelder et al., 2011; Zahidie & Shaikh, 2012). This literature demonstrates that patient satisfaction is an increasingly important issue in healthcare and an important component of improved health outcomes. Furthermore, patient satisfaction is complex, including that it is a self-reported experience of care and is widely reported to be influenced by patient-level factors and provider-level factors (Chen et al., 2019). While patient-level factors vary between patients and are usually unmodifiable, provider-level factors are largely modifiable. These modifiable risk factors have also been acknowledged in literature (Abolfotouh et al., n.d.; Barber et al., 2016; Phaswana-Mafuya et al., 2017; Trinh et al., 2019).

In reviewing existing literature, several factors emerged as impacting positively on patient satisfaction, that were common among both High-Income Counties (HIC) and Low Middle-Income Countries (LMIC), namely: communication with nurses (Mitropoulos et al., 2018;

Schoenfelder et al., 2011), communication with doctors (Hussain et al., 2019; Larson et al., 2017), communication about medication (Abdu-Aguye et al., 2022; Marama et al., 2018), nursing services (Girgin et al., 2019; Kraska et al., 2017; Mulugeta et al., 2014a), discharge information (Mensa, 2017; Mitropoulos et al., 2018a; Schoenfelder et al., 2011), physical environment (Aga et al., 2021; Hussain et al., 2019; Marama et al., 2018) and pain control (Lee et al., 2020; Phillips et al., 2013a).

These factors will be discussed briefly in this literature review to gain an understanding of their relationship and influence on patient satisfaction.

2.1.1 Nurse-patient Communication

Effective communication, which encompasses both verbal and non-verbal forms, is crucial to patient satisfaction. Nurses are the primary caregivers of hospitalised patients, thus communication between the nurse and patient is important in improving the quality of health care and is significant to inpatient satisfaction with nursing care (Alshammari et al., 2019; Lotfi et al., 2019). The importance of effective nurse-patient communication was demonstrated in a nationwide study of patient satisfaction in public hospitals in Greece, which reported communication between nurse and patient as the most salient predictor of patient satisfaction (Mitropoulos et al., 2018). Its authors argued that inpatients interact more with nurses during their stay and are thus more likely to be impacted by regular communication with them. Similarly, a large study conducted in 39 hospitals in an inpatient setting in Germany, found that the kindness of the hospital's nurses was one of the most influential determinants of patient satisfaction demonstrating that when nurses used a kind

demeanour during interactions with the patient, this improved patient satisfaction (Schoenfelder et al., 2011).

Additionally, some studies have pointed out how the non-verbal aspect of communication negatively influenced the effectiveness of communication, leading to lower patient satisfaction levels (Ahmed, 2020; Akoja et al., 2019; Griffith Iii et al., 2003; Dimatteo, 1980). Contrastingly, a study conducted in Italy that investigated how the forced use of face masks affected the perceived quality of nurse-patient communication before and during the Covid-19 pandemic, reported no difference in the perceptions of the quality of nurse-patient communication by patients (Vitale et al., 2021).

Furthermore, some studies have investigated the negative impact of barriers to effective nurse-patient communication. This was demonstrated in a review of studies conducted over 18 years in Saudi Arabia, that focused on nurse-patient communication due to language and cultural barriers, attributed to the large number of non-Saudi nurses employed in the Saudi health care system. The study reported that these barriers in nurse-patient communication negatively affected patient safety and lead to poor patient satisfaction (Alshammari et al., 2019).

These studies build on the important communication aspects that influence nurse-patient communication, contributing to the understanding of the importance of effective nurse-patient communication to enhance patient satisfaction.

Hypothesis 1 (H1): The hypothesis drawn from past literature is that there is a statistically significant relationship between nurse-patient communication and patient satisfaction.

2.1.2 Doctor-patient communication

Several studies have reported that effective patient-provider communication and the attitudes and behaviours of physicians are essential to patient satisfaction (Chandra et al., 2019; Comstock et al., 1982; Kamra et al., 2016b). A study that explored developing physician communication skills for patient-centred care in the United States of America (USA), reported that teaching physicians patient-centred communication skills had a positive impact on patient satisfaction, treatment adherence, and self-management. The study additionally reported a link between teaching physicians patient-centred communication and reduced care costs (Levinson et al., 2010). Similarly, a review of literature of initiatives undertaken to enhance communication between cancer patients and their doctors reported a positive impact on patient satisfaction (Brédart et al., n.d.). These studies have successfully shown the positive influence of effective doctor-patient communication on patient satisfaction.

In contrast, a study conducted in Pakistan determined that doctor-patient communication had an insignificant relationship with patient satisfaction (Hussain et al., 2019). This view was supported by a randomised controlled study to assess the effectiveness of intensive education for physicians, compared with a traditional session on communicating with breast cancer patients, which reported no significant difference in communication between the two physician groups. Nonetheless, the study did report a significant improvement in the satisfaction levels of patients in the physician intervention group (Stewart et al., 2007).

However, this might have been because this study was conducted in an outpatient setting where patients are usually not very ill and do not require extensive interaction with doctors.

In summary the studies considered here demonstrate an inconsistency in the relationship between doctor-patient communication and patient satisfaction.

Hypothesis 2 (H2): The hypothesis drawn from past literature is that there is a statistically significant relationship between doctor-patient communication and patient satisfaction

2.1.3 Communication about medication

Improving patient satisfaction regarding communication about medication and potential side effects can improve overall health outcomes and patient satisfaction (Ahrens & Wirges, 2013a). A study conducted in Ethiopia reported that when patients are given an explanation regarding the indication for drug prescriptions and directions for administration, this improves compliance with prescribed treatment, health outcomes, and relationships with health care professionals, and an overall improvement in satisfaction with care received (Mensa, 2017).

There have also been several studies that investigated the challenges of a lack of adequate patient education about medication, in patients discharged from care. One such study conducted in two hospitals in the United Kingdom (UK), investigated the knowledge of patients regarding medication prescribed on discharge and reported this lack of information

regarding the potential side effects and drug interactions of medicines (Sze et al., 2020). This view was supported by a survey of patients discharged from a teaching hospital in New York that reported that most patients did not know the name of the medication, the purpose for taking it, or the major side effects (Friedman & Makaryus, 2005). Likewise, a study conducted amongst European geriatric patients with polypharmacy further supported these findings. The authors suggested that problems in medication self-management on discharge, in this patient population, could be improved by inpatient preparation, where doctors use easy-to-understand language in explaining to patients the purpose and potential side effects of medications (Mortelmans et al., 2021).

Other studies have investigated the poor health outcomes due to this lack of communication about medication. One such study that investigated health outcomes, as it relates to medication adherence as a predictor in the 30-day readmission rate of patients discharged from inpatient care in the USA, reported that the readmission rate for low and intermediate treatment adherence was 20% compared to a readmission rate of 9.3% in those with high adherence (Rosen et al., 2017). The authors assert that patients who did not adhere to treatment regimens had a poorer prognosis than those who did. Furthermore, the authors claim that these readmissions were mostly avoidable if identified earlier by health professionals and acted on (Rosen et al., 2017). However, a key problem with this study is that it mentioned intermediate adherence as an outcome but failed to make a clear distinction between low and intermediate adherence within the study. Instead, the study combined these two categories, where it might have otherwise provided insight into the relationship between adherence and readmission in the three categories i.e., low, intermediate, and high outcomes as three separate categories. In this way, re-evaluation of patient satisfaction post the introduction of interventions aimed at improving treatment adherence to improve patient

satisfaction could better inform progress towards achieving high adherence, as improvement is usually incremental.

These studies have conclusively shown the importance of clear communication with the patient regarding the indication for medication prescriptions and potential side effects, including the negative impact that a lack of communication has on patient health outcomes and patient satisfaction.

Hypothesis 3 (H3): The hypothesis drawn from past literature is that there is a statistically significant relationship between communication about medication and patient satisfaction.

2.1.4 Nursing services

One study characterised quality nursing care as "competence and personal caring supported by professionalism and delivered with an appropriate demeanour" (Izumi et al., 2010: 1). Other authors have emphasised that the quality of healthcare services can be measured based on the views and satisfaction of patients and their relatives. The authors argue that patient satisfaction is the most important indicator of the quality of care of health services and is strongly influenced by nursing services (Karaca & Durna, 2019).

A considerable amount of literature has been published that links the quality of services provided by nurses, to patient satisfaction with healthcare services, demonstrating consistency in this argument (Girgin et al., 2019; Karaca & Durna, 2019; Kutney-Lee et al.,

2009; Sharew et al., 2018). Some of this literature has emphasised the caring component of nursing when related to patient satisfaction (Mohamed et al., 2015; Rafii et al., 2014, Wolf et al., 1998). Additionally, some authors have asserted that "care preserves human dignity and is cure-orientated" (Wolf et al., 1998: 99), while other authors have suggested that the care and attention given to the needs of the patient by the nursing staff are important factors influencing patient satisfaction (Girgin et al., 2019; Kamra et al., 2016b). Similarly, results of a large-scale study involving 999 hospitals with 300 200 patients in Germany, reported nursing care as a dimension of patient satisfaction (Kraska et al., 2017). Likewise, two studies conducted in public hospitals in Ethiopia, reported that the amount of time that nurses spend at the patient's bedside rendering care while admitted to hospital, renders nursing services the major supportive service, thereby having a significant impact on patient satisfaction (Kasa & Gedamu, 2019; Mulugeta et al., 2014a).

Nursing services are the backbone of most healthcare systems, accounting for the majority of healthcare personnel in most public organisations. As such, literature has conclusively shown a strong positive association between patient satisfaction and nursing services, supporting the view that nursing is the major supportive service and is significantly associated with patient satisfaction.

Hypothesis 4 (H4): The hypothesis drawn from past literature is that there is a statistically significant relationship between nursing services and patient satisfaction.

2.1.5 Discharge information

Literature has shown that the provision of discharge information according to patients' needs was highly significant to patient satisfaction and reduced the number of complaints against the institution (Mitropoulos et al., 2018; Schoenfelder et al., 2011). In contrast, a large study conducted in the USA involving 19 730 participants discharged from 132 acute care hospitals, who had spent at least one night as an inpatient, reported a low significance between discharge information and patient satisfaction (Elliott, 2009). A more recent study that investigated the factors associated with inpatient satisfaction with nursing services, while still admitted, in a general hospital in Ethiopia, reported that patients generally reported low levels of satisfaction with nursing services. In their argument, the author asserts that the amount and type of discharge education provided to patients in preparation for their discharge was poor and not according to the patients' needs, contributing to the low levels of satisfaction. The author claims that this lack of adequate and appropriate information was the cause of many patients' readmission after discharge, other patients being admitted several times, and others having a length of stay exceeding 15 days. However, an important difference between these two studies is that one investigated patients whilst still admitted while the other surveyed patients by mail or telephone after discharge. This might have introduced certain biases in the study sample surveyed after discharge.

However, although these studies reported varying degrees of the association between patients receiving discharge information and patient satisfaction, they provide evidence that points to the presence of an association.

Hypothesis 5 (H5): The hypothesis drawn from past literature is that there is a statistically significant relationship between discharge information and patient satisfaction.

2.1.6 Physical environment

Physical settings and appearance, which relates to the physical infrastructure in which patient care takes place, has been identified as a factor associated with inpatient satisfaction (Fang et al., 2019). Numerous authors have claimed that the physical environment is central to positively influencing most other aspects identified as having a direct impact on patient satisfaction, such as pain control, sleep, and anxiety (Park & Mattson, 2009; Esther et.al, 2013; Jamshidi et al., 2020; Malenbaum et al., 2008; Shepley et al., 2012). The authors assert that the physical environment is associated with most aspects of overall satisfaction and argue that if healthcare workers' efforts focused on just the physical aspects of the patient care environment, they would directly improve most other important aspects that influence overall patient satisfaction. Similarly, a recent study reported that various physical environment factors might influence the manner in which health services are rendered to patients, stimulating varied satisfaction levels (Nyakutombwa et al., 2021).

While some authors have focused their argument on the tangible aspects of the physical environment, others have focused their attention on noise levels and cleanliness, as physical features in the patient care environment. They argue that patients experience more satisfaction with services when environments are quiet and clean, emphasising that such environments are conducive to patient care and recuperation (Kamra et al., 2016b; Ramadani et al., 2016). Contrastingly, a study conducted in public sector hospitals in Greece reported that physical facilities had an insignificant relationship with patient satisfaction (Hussain et al., 2019).

Furthermore, some authors have described privacy, as an aspect of the physical environment and have considered its relationship with patient satisfaction (Aga et al., 2021; Marama et al., 2018). This was demonstrated in two, recent studies conducted in adult inpatient settings in Ethiopia, that reported that physical environments which offer patient privacy impacted, patient satisfaction. Similarly, a critical review of determinants of patient satisfaction conducted in Pakistan supported the view that privacy has an impact on patient satisfaction and reported that a lack of privacy led to decreased patient satisfaction (Zahidie & Shaikh, 2012).

These studies have emphasised that the patient care environment goes beyond its structural features, demonstrating that aspects such as cleanliness, noise levels, and privacy, impact patient satisfaction.

Hypothesis 6 (H6): The hypothesis drawn from past literature is that there is a statistically significant relationship between physical environment and patient satisfaction.

2.1.7 Pain control

"The association between pain control and satisfaction is a complex relationship" (Phillips et al., 2013:684). In 1995, the American Pain Society declared pain, as the fifth vital sign in light of the lack of clear, effective pain management guidelines in the USA. Many healthcare providers thought that this lack of effective pain management was contributing to the opioid

misuse crisis being experienced. Hence, to improve pain care, many healthcare organisations included pain-related questions in patient satisfaction surveys (Scher et al., 2018).

However, while it is assumed that pain control is correlated with patient satisfaction, there appears to be relatively little literature published that evaluates the association between pain control and patient satisfaction, especially in the inpatient setting. A study that compared baseline data obtained two years before the implementation of several programmes designed to improve pain management concluded that pain relief was the critical determinant of patient satisfaction (Ward et al., 1996). Another study that investigated perceived pain control, in an inpatient setting, reported a significant relationship between perceived pain control and satisfaction. However, although the study reported that patients who experienced more pain were less satisfied than those who experienced less pain, the authors argue that it is patients' interpretation of having their pain controlled that is most related to satisfaction (Pel|ino & Ward, 1998). Meanwhile, in a more recent study conducted in the chronic pain management clinic at Groote Schuur Hospital in South Africa, pain relief was identified as one of the drivers of patient satisfaction with services at the clinic (Majangara et al., 2021). The results of these studies have supported the assumption that pain control and patient satisfaction are associated.

Contrastingly, a study that investigated the relationship between pain intensity and patient satisfaction, amongst inpatients, reported no association. The study found that patients were overall satisfied with pain management, regardless of their pain management score. In this study, the authors recommended that institutions should use pain intensity scores, together

with a measure of patient satisfaction with pain control, when conducting quality programmes (Phillips et al., 2013b).

The results of these studies are conflicting and therefore show that there might be a lack of a clear understanding regarding the relationship between pain control and patient satisfaction.

Hypothesis 7 (H7): The hypothesis drawn from past literature is that there is a statistically significant relationship between pain control and patient satisfaction.

2.2 Conclusion

This literature review has demonstrated that, while nurse-patient communication, communication about medication, nursing services, and the physical environment have been identified as factors that influence patient satisfaction in the global, Sub-Saharan Africa, and South African context, in some instances, there is a lack of understanding regarding the influence of doctor-patient communication, discharge information and pain control in different settings. Therefore, this study will aim to determine which of these identified factors influence patient satisfaction in this hospital to focus on the specific aspects of patient satisfaction in this inpatient population.

CHAPTER 3: METHODOLOGY

This chapter outlines the study methods used to access, collect and analyse the data. The study aim is presented followed by a description of the study design most appropriate for its aim and objectives. Thereafter, the study setting, population used in the study, and sampling strategy are described. A description of the data collection, data collection instrument, and data analysis concludes the chapter.

3.1 Study design

This study aimed to determine the factors associated with satisfaction with public health services among inpatients. A quantitative approach was best suited to quantify overall satisfaction prevalence, satisfaction among the various patient subgroups within the population, and the relationship between patient satisfaction and the various independent variables being investigated. A cross-sectional study design, which is the collection of data from many different individuals at a single point in time (Wang & Cheng, 2020) was employed. A cross-sectional design allowed the investigation of associations between risk factors and the outcome of interest (Mitropoulos et al., 2018). Hence, a survey questionnaire was administered on consecutive weekdays between 22 February and 11 March 2022 among patients, discharged on the day, who had received inpatient care for ≥24hrs. A cross-sectional survey enabled the collection of data over a short period to assess inpatient satisfaction with public health services at that specific point in time (Marama et al., 2018; Woldeyohanes et al., 2015). The nature of the study design enables data to be collected before the patient leaves the hospital thus, easily accessible. This eliminates the challenge of participants who

are loss-to-follow up when using other study designs (Howe et al., 2016; Jager et al., 2020; LeMorte, 2016; Spencer et al., 2017). Additionally, this study design quantifies the association between several exposures and hence discerns the possibility of causality (Aga et al., 2021). It is useful in deciding which exposures to explore further and which do not warrant further exploration (Schoenfelder et al., 2011). A cross-sectional analytical study design will also enhance the efficiency of the study because more than one exposure variable can be assessed in a single study (Robson & McKarten, 2016).

3.2 Study setting

The study setting was a Regional Hospital within the eThekwini Health District of KwaZulu-Natal, South Africa. This hospital is located within a suburban community south of Durban. It services a catchment area that extends further South, East, and West of the eThekwini District and holds district and regional status, providing preventive, curative, and rehabilitative services. It serves as a referral site for one district hospital, two Community Health Centres, and several surrounding government and municipal clinics. It has an operational strength of 543 inpatient beds and has multi-disciplinary functions (R.K. Khan Hospital, 2020).

A large portion of the serviced population is Low Middle Income (LMI), with a significant portion reliant on social assistance (Hinely et al., 2012; Taylor & Mabaso, 2017). Many government-funded housing schemes exist in the community; however, there is a serious problem of informal housing, strategically located alongside industrial areas, indicative of rural-urban migration for employment.

3.3 Study population and Sampling

The research setting was a Regional Hospital that serves a catchment area of an estimated 1.5 million people (R.K. Khan Hospital, 2020). The study population comprised adult patients (18yrs and above).

Inclusion criteria:

- All patients who have been admitted for 24hrs and more during the study period
- All patients who are 18yrs and above and able to represent themselves i.e. can legally give informed consent
- Patients whose severity of their health condition has not, in any way, affected their ability to think clearly or be in control of and responsible for their actions

Exclusion criteria:

- Patients who are regarded by law, as not having the capacity to represent themselves due to being below 18yrs old, therefore unable to give legal and informed consent
- Patients whose severity of their health condition has, in any way, affected their ability to think clearly or be in control of and responsible for their actions
- Patients who are not mentally fit to properly understand and respond to questions
- Patients who are too ill to participate

The sample survey intended to achieve a 95% level of precision, a 2% acceptable margin of error, and 0,5 degrees of variability in attributes being measured.

To achieve randomisation, a list of the various wards in the hospital was compiled. Thereafter, the wards were grouped according to the type of care rendered i.e., surgery, orthopaedics, gynaecology, and obstetrics. On each day of the research, a list of the patients discharged from each ward was compiled, each patient was allocated an identifying number starting from one, and all patients allocated odd numbers were recruited to complete a survey questionnaire.

To determine an appropriate sample proportion for each cluster, the preceding three months' average of patients discharged in each cluster was used, available from the District Health Information System (DHIS). Statistics for November 2021, December 2021, and January 2022 are as follows: Surgery: 299, Orthopaedics: 137, Gynaecology: 300, and Obstetrics: 1014, with a total of 1750 patients. A suitable sample size (*n)* was calculated using the Yamane formula ($n = \frac{\mathrm{N}}{1+ \mathrm{N}(e^2)}$) for calculating sample size in cross-sectional studies where *n* represents the patient population and *e* is the level of precision for a 95% confidence interval (CI) (Yamane, 1967). Using a population size of 1750, a suitable sample size is 327. Proportional allocation, to ensure appropriate representation, was calculated as follows: Orthopaedics: 137 ÷ 1750 is a sample proportion of 0.08, Surgery: 299 ÷ 1750 is a sample proportion of 0.17, Gynaecology: 300 ÷ 1750 is a sample proportion of 0.17, and Obstetrics: 1014 ÷ 1750 is a sample proportion of 0.58. A total of 347 patients (100% response rate) aged 18yrs and above participated in the study.

3.4 Data collection

On 16 February 2022 a pilot study of 10% (N=36) of the study sample was conducted to determine the feasibility of the research protocol, pre-test the questionnaire, focus the content, test its feasibility, and identify errors for correction. None of the patients expressed any difficulty in understanding the questionnaire, with a 100% response rate. However, the flow of the answer selections from one page to another required the answer selections to be rewritten at the top of each new page to allow ease of flow and a reduction in the time taken to complete the questionnaire. In the pilot study, participants took approximately 15 minutes to complete the questionnaire. Data from the pilot study was entered into data analysis software, Statistical Package for The Social Sciences software IBM-SPSS 28.0 (2021), and the feasibility of statistical tests was confirmed. These participants were not included in the main study.

Primary data in the main study were collected every weekday from 22 February to 11 March 2022 with the assistance of two isiZulu first language research assistants. Research assistants were previously employed with a local non-governmental organisation (NGO) in the position of HIV Counsellor and Linkage Officer, respectively. They were trained by the researcher in the data collection process over two days before project commencement and assisted in conducting patient interviews with isiZulu first language participants.

On each day of the research, a list of all patients discharged on the day was compiled, comprising the patients' name, age, date of admission, and home language. Thereafter, patients who met the stipulated inclusion and exclusion criteria were randomly selected and

recruited as study participants. All respondents were verbally informed, in their preferred language, about the full purpose of the research with all agreeing to participate in the study. Thereafter, each participant was provided an information sheet containing the study information, in their preferred language. The English and isiZulu Information Sheets can be found in Appendices A & B.

Each participant was accompanied by the researcher or assistant researcher to a private interview room where informed consent was signed. The English and isiZulu Consent forms can be found in Appendices C & D. Thereafter, each participant was asked whether they preferred to complete the questionnaire on their own or be interviewed. A face-to-face interview using a structured interview method was conducted for 243 participants who selected to be interviewed. The 104 participants who preferred to complete the questionnaire on their own were given a brief overview of how questions are asked in the questionnaire, and the response options and advised to call for help if needed. These participants were instructed to open the door once they had completed the questionnaire, the researcher checked that all questions had been answered and that questions not answered, was deliberate. The participant was then instructed to deposit their questionnaire into the one-way deposit box provided in the interview room.

3.5 Data collection instruments

A survey questionnaire adapted from the already valid Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey tool was used as questions in this instrument are consistent with literature reviewed (United States of America [USA], 2021).

The tool can be viewed in the attached link:

https://hcahpsonline.org/globalassets/hcahps/quality-assurance/2022_survey.

Moreover, this tool is specifically designed to survey patients who have received care in an inpatient setting, thus focusing on unique issues related to satisfaction in this patient population. The instrument is known to be the most standardised and unbiased instrument to measure patient satisfaction (Mitropoulos et al., 2018; Vogus & McClelland, 2016). It was developed in the USA in 2002 and is the gold standard survey instrument used by healthcare providers across multiple platforms of care in the USA to measure service performance and quality (Larson et al., 2019; Ranard et al., 2016). Its benefits include financial incentives for well-performing hospitals and penalising poor-performing hospitals (Ranard et al., 2016). Survey results are openly published in the USA and easily accessible to the public and it is widely practiced that the public chooses their preferred healthcare provider based on their published HCAHPS scores.

There is widespread use of the instrument globally, including in Africa. In South Africa, Mediclinic and Life Healthcare, who are private-sector healthcare providers have adopted this tool for measuring patient satisfaction (Mediclinic, 2017; Life Healthcare, n.d.). Additionally, a recent study measuring patient satisfaction in Africa used this survey instrument, indicating contextual applicability (Lawal et al., 2018).

The questionnaire consisted of three parts. The first part comprised questions on the socio-demographic characteristics of the respondent (age, gender, type of ward, and level of education). The second part comprised the seven identified core domains of patient care,

namely: communication with nurses, communication with doctors, communication about medication, nursing services, discharge information, physical environment, and pain control. Items that measure these **7** core domains and tested the stated hypotheses were assessed on a Likert-type scale (possible responses: never =1, sometimes = 2, usually =3, always = 4). The third part comprised two further ratings: on an 11-point scale of 0 to 10, with 0 being the worst and 10 being the best a hospital can be. This item was classified as the single item of the questionnaire that measures the patients' overall satisfaction and is used as the dependent variable in the regression analysis. This scale was categorised as follows: 0-6 (not satisfied), 7-8 (moderately satisfied), 9-10 (very satisfied), and results were reported in these categories (Chen et al., 2019; Fang et al., 2019; Ranard et al., 2016). A final question about whether the patient would recommend the hospital to family and friends was included (possible responses: definitely no, probably no, probably yes, and definitely yes). Translation of the questionnaire from English into the predominant isiZulu language was conducted by an IsiZulu first language translator. Both the English and isiZulu questionnaires are attached in Appendices E & F.

3.6 Data Analysis

Data analysis began by entering the data into excel for sorting, cleaning, and checking for completeness, missing data, and any outliers. The data was then imported into IBM-SPSS for windows version 28 statistical programme, for analysis. Initial exploration of the data began using descriptive statistics to compute the frequency of the variables of the study population. The frequency and percentage of patients satisfied was computed and the distribution of observations was summarised using bar charts.

Using inferential statistics, chi-square tests and associated *p*-values were computed to assess for significant association between variables and patient satisfaction. All variables entered into the chi-square tests mirrored the patient's experience of care, thus patients' socio-demographics were not included. The chi-square statistic is a non-parametric test designed to analyse group differences when the dependent variable is measured at a nominal level. This test is robust to the distribution of data, thus most suitable (Khoie et al., 2017). Additionally, the significance test is calculated according to the frequency contingency table of the independent classes (each item in the data set belongs only to one class). Then, this value is compared to the critical values in the chi-square table, and if it is larger than the critical value, then the null hypothesis is rejected. Typically, in the chi-square test, if the *p*-value is <.05, the independence of the features in the association is rejected. The focus of this approach is to find patterns in patient response to all satisfaction questions and relate them to overall patient satisfaction (Khoie et al., 2017; Mchugh, 2013). However, before using the chi-square test for validating the associations, we must ensure that the dataset meets the test assumptions. The chi-square test requires that no more than 20% of the frequencies of categories are less than five, or the *p*-values might not be accurate. In instances where there are many empty or low frequencies in the contingency table that violate these test assumptions, *phi* is reported for association and effect size (Khoie et al., 2017; Mchugh, 2013). This study observes these stipulated criteria, in reporting of findings.

Furthermore, in the questionnaire, some domain items began with a question that uses skip logic, with a Yes/No response. These questions did not provide any information about the patient but determined whether the following dependent questions, in that domain, were applicable to the patient. For example, if a patient was not prescribed any medicine during the hospital stay, that they had not taken before, all the communication about new medicines

questions have missing values for that patient, hence all these dependent questions were omitted, and were treated as missing values in the dataset. Lastly, all statistically significant variables in the chi-square test were entered into ordinal logistic regression analysis, on the dependent variable, patient satisfaction, to identify predictors of patient satisfaction and ultimately the determinants of patient satisfaction (Schoenfelder et al., 2011). Items that test each stated hypothesis were regressed per domain at each stage of the analysis. The odds ratio and associated 95% confidence intervals around them were reported.

3.7 Validity and Reliability

Reliability refers to the instrument's ability to provide consistent results when used repeatedly. The Cronbach alpha has been a widely used measure of reliability (Hussain et al., 2019) thus, the internal consistency of questionnaire items was tested by measuring the Cronbach alpha scores for questionnaire items that measured patient satisfaction in each domain.

To improve validity, a pilot study of 10% of the study sample was conducted to determine the feasibility of the research protocol, pre-test the questionnaire, focus the content, test its feasibility, and identify errors for correction. Data obtained during the pilot study was analysed to test data entry, coding of items, and appropriateness of the statistical tests (Abu Hassan et al., 2006). Additionally, appropriate sample representation was achieved through the application of proportional allocation, and randomisation was applied to select a representative sample population. To increase the reliability of measures, the questionnaire was completed before the patient left the hospital, thereby eliminating recall bias (Jha et al.,

2008; Sürücü & Maslakçi, 2020). A quiet space free of distraction and interruption was ensured for all participants and the completed questionnaire was deposited in a one-way deposit box to avoid any manipulation of questionnaires.

3.8 Ethical Considerations

Ethics approval for this research was obtained from The Biomedical Research Ethics Committee at the University of The Western Cape and The KwaZulu-Natal Provincial Health Research and Ethics Committee (PHREC) via the National Health Research Database (NHRD) website http://nhrd.hst.org.za, through online application. Permission to conduct the study was obtained from the Hospital Research and Ethics Committee. These approvals are attached in Appendices G, H & I.

The researcher ensured that the full purpose, objectives, and benefits of the study were explained to and understood by potential participants in their preferred language. Potential participants were also informed that participation is voluntary, and anyone could withdraw from the study at any time, without any explanation for their withdrawal or any fear of repercussion. The meaning and implications of conflict of interest were explained and the researcher declared no conflict of interest. Additionally, there were no patients who declared any conflict of interest.

This research involved collecting data in adults who were hospitalised, thus in a compromised state of health. Hence, the study could have potentially caused psychological

distress. If any participant experienced psychological distress, they would be referred to the ward doctor who would make an appropriate referral to the hospital psychologist. However, there were no patients who demonstrated or reported any distress during the study.

The anonymity of the participants was ensured by using a participant number on the questionnaire and not the participant's details, thereby ensuring the protection of the personal information of participants (Protection of Personal Information Act, No. 4 of 2013, 2013: s 1). The Participant Information Sheet that has been translated into isiZulu, which explains the purpose and outlines the data collection process, was provided to all participants before participation.

Benefits include those that study findings will generate towards improvements in service delivery, improving the patient's experience of care and health outcomes. In this study there was no identified potential harm that participants would be exposed to during the study as strict application of the inclusion and exclusion criteria were upheld, thereby ensuring that only patients, whose health status does not impair their ability to give voluntary consent, participated.

Dissemination of research findings will be done through a written report to the hospital, where the study was conducted, and the KwaZulu-Natal Provincial Department of Health via the National Health Research Database (NHRD) website. Research data will be safely stored for the minimum prescribed time of five years and destroyed according to the prescripts of the National Archives and Record Service of South Africa Act (National Archives of South Africa Act, No. 43 of 1996, 1996: s 1).

CHAPTER 4: RESULTS

This chapter presents the findings of the study from the data collected. The demographic data of the participants is presented, including overall patient satisfaction levels, and satisfaction according to the type of ward, gender, age, and level of education. Results of the associations between patient satisfaction and the various independent variables being investigated are summarised in Table 8.

4.1 Socio-demographic characteristics of respondents

A total of 347 adult inpatients who had spent ≥24hrs at this hospital were included in this study. Of all study participants (*N* = 347), 84.1% were female and 15.9% were male. Overall, 58.5% of participants were aged 18 to 30yrs, 30.8%, were 31 to 40yrs, 5.2% were 41-50yrs and the remaining 8.2% were 51- >80yrs. The mean age of the participants was 30.8 (SD=10.49). The minimum age was 18 with the range of 71. Regarding the level of education, 57.6% had started high school but did not matriculate, 23.3% had matriculated, 15.0% had grade 7 or less and the remaining 4.1% were college or university educated. Overall, 17.0% of participants were from surgery, 8.4% from orthopaedics, 17.0% from gynaecology, and 57.6% from obstetrics (Table 1).

Table 1: Socio-demographics of the population (N=347)

Sample characteristics	Frequency	Percentage
Gender		
Male	55	15.9%
Female	292	84.1%
Total	347	100
Age		
18-30	203	58.5%
31-40	107	30.8%
41-50	18	5.2%
51-60	10	2.9%
61-70	7	2.0%
71-80	1	.3%
>80	1	.3%
Total	347	100%
Education Level		
Grade 7 or less	52	15.0%
Some high school but did not matriculate	200	57.6%
Matriculated	81	23.3%
College educated	10	2.9%
4-year university degree	3	.9%
More than 4-year university degree	1	.3%
Total	347	100%
Type of ward		
Surgery	59	17.0%
Orthopaedics	29	8.4%
Gynaecology	59	17.0%
Obstetrics	200	57.6%
Total	347	100%

4.2 Patient satisfaction levels

Overall, 55.6% (n= 193) of the participants were not satisfied, 20.2% (n= 70) were moderately satisfied and 24.2% (n=84) were very satisfied (Fig. 1).

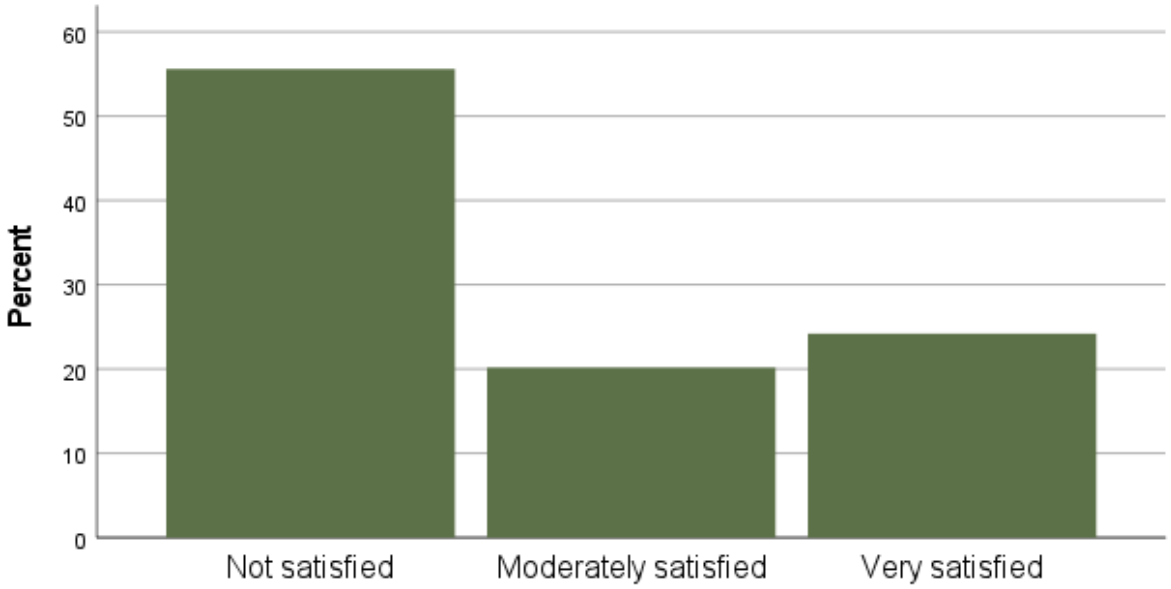

Figure 0-1: ***Overall satisfaction rating***

Of the total participants who were not satisfied 55.6% (n= 193), there were 23.3% (n= 45) from surgery, 8.8% (n= 17) from orthopaedics, 18.1% (n= 35) from gynaecology and 49.8% (n= 96) from obstetrics. Participants who were moderately satisfied were 20.2% (n= 70), with 11, 4% (n= 8) from surgery, 4.3 (n= 3) from orthopaedics, 15.7% (n= 11) from gynaecology and 68.6% (n= 48) from obstetrics. Participants who were very satisfied were 22.2% (n= 84),

with 7.1% (n= 6) from surgery, 10.7 (n= 9) from orthopaedics, 15.5% (n= 13) from gynaecology and 66.7% (n= 56) from obstetrics (Table 2).

Table 2: Overall patient satisfaction according to ward type

	Surgery	Orthopaedics	Gynaecology	Obstetrics	Total
Not satisfied	45 (23.3%)	17 (8.8%)	35 (18.1%)	96 (49.8%)	55.6%
Moderately satisfied	8 (11.4%)	3 (4.3%)	11 (15.7%)	48 (68.6%)	20.2%
Very Satisfied	6 (7.1%)	9 (10.7%)	13 (15.5%)	56 (66.7%)	24.2%

In so far as satisfaction prevalence for each ward is concerned, of all the patients surveyed in the surgical cluster, 76% were not satisfied with the care received, followed by orthopaedics and gynaecology each at 59% respectively, and 48% in obstetrics (Table 3).

Table 3: Patient satisfaction prevalence per ward type

	Surgery	Orthopaedics	Gynaecology	Obstetrics
Not satisfied	45 (76%)	17 (59%)	35 (59%)	96 (48%)
Moderately satisfied	8 (14%)	3 (10%)	11 (19%)	48 (24%)
Very satisfied	6 (10%)	9 (31%)	13 (22%)	56 (28%)
Total	59 (100%)	29 (100%)	59 (100%)	200 (100%)

Of all male participants, 80% (n= 44) were not satisfied, 7.3% (n= 4) were moderately satisfied and 12.7% (n= 7) were very satisfied. Of all female participants, 51% (n= 149) were

not satisfied, 23% (n= 66) were moderately satisfied and 26% (n= 77) were very satisfied (Table 4).

Table 4: Patient satisfaction according to gender

	Males	Females
Not satisfied	44 (80%)	149 (51%)
Moderately satisfied	45 (80%)	66 (23%)
Very satisfied	46 (80%)	77 (26%)

Of the total patients who were not satisfied 57% (n= 110) were aged 18-30yrs, 32.6% (n= 63) were aged 31-40yrs, 5.7% (n= 11) were ages 41-50yrs, 3.6% (n= 7) were ages 51-60yrs and 1.0% (n= 2) were aged 61-70yrs. Of the total patients who were moderately satisfied 51.7% (n= 40) were aged 18-30yrs, 30.0% (n= 21) were aged 31-40yrs, 5.7% (n= 4) were aged 41-50yrs, 2.9% (n= 2) were aged 51-60yrs, 1.4% (n= 1) were 61-70yrs, 1.4% (n= 1) were 71-80yrs, 1.4% (n= 1) were ≥80yrs. Of the total patients who were very satisfied 63.1% (n= 53) were aged 18-30yrs, 27.4% (n= 23) were aged 31-40yrs, 3.6% (n= 3) were aged 41-50yrs, 1.2% (n= 1) were aged 51-60yrs and 4.8% (n= 4) were aged 61-70yrs (Table 5).

Table 5: Patient satisfaction according to age

	18 - 30	31 - 40	41 - 50	51 - 60	61 - 70	71 - 80	≥80	Total
Not satisfied	110 (57.0%)	63 (32.6%)	11 (5.7%)	7 (3.6%)	2 (1.0%)	-	-	193
Moderately satisfied	40 (51.7%)	21 (30.0)	4 (5.7%)	2 (2.9%)	1 (1.4%)	1 (1.4%)	1 (1.4%)	70
Very satisfied	53 (63.1%)	23 (27.4)	3 (3.6%)	1 (1.2%)	4 (4.8%)	-	-	84

Of the total patients who were not satisfied 9.8% (n= 19) had a grade seven or less education, 78.2% (n= 151) had started high school but did not matriculate, 10.4% (n= 20) had matriculated and 1.6% (n= 3) were college educated. Of the total participants who were moderately satisfied 20.0% (n= 14) had a grade seven or less education, 27.1% (n= 19) had started high school but did not matriculate, 45.7% (n= 32) had matriculated, 4.3% (n= 3) were college educated and 2.9% (n= 2) had attained a 4-yr university degree. Of the total participants who were very satisfied 22.6% (n= 19) had a grade seven or less education, 35.7% (n= 30) had started high school but did not matriculate, 34.5% (n= 29) had matriculated, 4.8% (n= 4) were college educate, 1.2% (n= 1) had attained a 4-yr university degree and 1.2% (n= 1) had attained more than a 4-yr university degree (Table 6).

Table 6: Patient satisfaction according to level of education

	Grade 7 or <	Some high school	Matriculated	College educated	4-yr university degree	More than 4-yr university degree
Not satisfied	19 (9.8%)	151 (78.2%)	20 (10.4%)	3 (1.6%)	-	-
Moderately satisfied	14 (20.0%)	19 (27.1%)	32 (45.7%)	3 (4.3%)	2 (2.9%)	-
Very satisfied	19 (22.6%)	30 (35.7%)	29 (34.5%)	4 (4.8%)	1 (1.2%)	1 (1.2%)

Regarding the overall likelihood that patients would recommend the hospital to family and friends, 4.0% (n= 14) of the participants responded definitely no, 6.6% (n= 23) responded probably no, 57.3% (n= 199) responded probably yes and 32% (n= 111) responded definitely yes (Fig. 2).

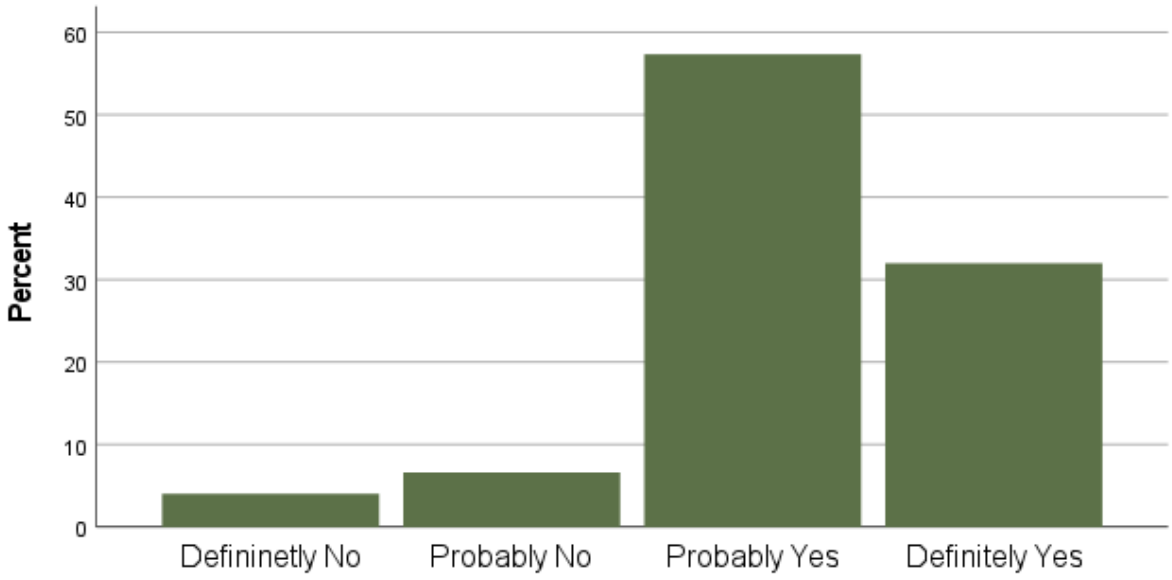

Figure 0-2: ***Overall experience recommending the hospital***

4.3 Statistical tests and derived associations

The Cronbach alpha coefficients test was conducted to measure the reliability of the survey questionnaire. The results ranged from .667 to .970, exceeding the acceptable threshold value of 0.50 when there are less than 10 items on a scale (Pallant, 2016). Furthermore, all variables were correlated and were statistically significant. The nursing services domain had only two items measuring patient satisfaction; therefore, Cronbach's alpha could not be performed for this domain. Table 7 provides a summary of descriptive statistics and Cronbach alphas.

Table 7: Descriptive statistics and Cronbach's Alphas among variables

	Mean	**SD**	
Domain			
Communication with nurses	3.118	2.271	**(.930)**
Communication with doctors	3.279	2.213	**(.970)**
Communication about medication	2.780	1.310	**(.872)**
Discharge information	3.135	1.691	**(.667)**
Physical environment	3.208	2.011	**(.815)**
Pain control	3.105	1.464	**(.965)**

Note 1: SD = Standard deviation Note 2: Numbers in parenthesis are Cronbach's Alphas (α)

In this research, we made several hypotheses. To test the stated hypotheses, chi-square tests of independence and associated *p*-values were computed to assess for significant association between twenty-three independent variables and the dependent variable, patient satisfaction. The results are presented in Table 8. Table 9 provides a summary of the hypotheses including

the practical implications for patient satisfaction, following statistically significant differences between the variables under investigation and patient satisfaction.

Hypothesis 1 (H1): There is a statistically significant and positive relationship between nurse-patient communication and patient satisfaction.

Chi-square statistics were used to examine the association between the construct nurse-patient communication which was constructed from three variables and patient satisfaction. There was a statistically significant and positive relationship between nurse-patient communication and patient satisfaction with *phi* .678 - .754 and *p*-value <.001 for all variables.

This reflects that when nurses treated patients with courtesy and respect, listened carefully to them, and explained things to them in a way they could understand, they experienced higher satisfaction levels.

Hypothesis 2 (H2): There is a statistically significant and positive relationship between doctor-patient communication and patient satisfaction.

Chi-square statistics were used to examine the association between the construct doctor-patient communication which was constructed from three variables and patient satisfaction.

There was a statistically significant and positive relationship between doctor-patient communication and patient satisfaction with *phi* .780 - .789 and *p*-value <.001 for all variables.

This reflects that when doctors treated patients with courtesy and respect, listened carefully to them, and explained things to them in a way they could understand, they experienced higher satisfaction levels.

Hypothesis 3 (H3): There is a statistically significant and positive relationship between communication about medication and patient satisfaction.

Chi-square statistics were used to examine the association between the construct communication about medication which was constructed from three variables and patient satisfaction. There was a statistically significant and positive relationship between communication about medication and patient satisfaction with *phi* .591 - .728 and *p*-value <.001 for all variables.

This reflects that when patients who were prescribed medicines that they had not taken before, were informed what the new medicine was for and possible side effects were explained in a way that the patients could understand, they experienced higher satisfaction levels.

Hypothesis 4 (H4): There is a statistically significant and positive relationship between nursing services and patient satisfaction.

Chi-square statistics were used to examine the association between the construct nursing services which was constructed from two variables and patient satisfaction. There was a statistically significant and positive relationship between nursing services and patient satisfaction with *phi* .500 -. 674 and *p*-value <.001 for all variables.

This reflects that when patients who called for help, received help as soon as they wanted, they experienced higher satisfaction levels.

Hypothesis 5 (H5): There is a statistically significant and positive relationship between discharge information and patient satisfaction.

Chi-square statistics were used to examine the association between the construct discharge information which was constructed from three variables and patient satisfaction. There was a statistically significant and positive relationship between discharge information and patient satisfaction with *phi* .238 - .722 and *p*-value <.001 - .003.

This reflects that when hospital staff took the preferences of the patient and family or caregiver into account in deciding the patients' health care needs, patients had a good understanding of the things they were responsible for in managing their health and patients

clearly understood the purpose of taking their medicines when they left the hospital, they experienced higher satisfaction levels.

Hypothesis 6 (H6): There is a statistically significant and positive relationship between the physical environment and patient satisfaction.

Chi-square statistics were used to examine the association between the construct physical environment which was constructed from three variables and patient satisfaction. There was a statistically significant and positive relationship between physical environment and patient satisfaction with *phi* .587 -. 752 and *p*-value <.001 for all variables.

This reflects that when patients' rooms and bathrooms were kept clean, the area around their room was quiet at night and their privacy was respected, they experienced higher satisfaction levels.

Hypothesis 7 (H7): There is a statistically significant and positive relationship between pain control and patient satisfaction.

Chi-square statistics were used to examine the association between the construct pain control which was constructed from three variables and patient satisfaction. There was a statistically significant and positive relationship between pain control and patient satisfaction with *phi* .313 -. 791 and *p*-value <.001 for all variables.

This reflects that when patients who were prescribed medication for pain, had their pain well controlled and the staff did everything, they could to help patients with their pain, they experienced higher satisfaction levels.

Table 8: Chi-square tests between variables and patient satisfaction

Variables	Construct	Percentage Expected count <5	Phi	p-value
During this hospital stay, how often did nurses treat you with courtesy and respect?	Nurse-patient communication	**25%**	**.678**	**<.001**
During this hospital stay, how often did nurses listen carefully to you?		**25%**	**.741**	**<.001**
During this hospital stay, how often did nurses explain things in a way you could understand?		**16.7%**	**.754**	**<.001**
During this hospital stay, how often did doctors treat you with courtesy and respect?	Doctor-patient communication	**25%**	**.789**	**<.001**
During this hospital stay, how often did doctors listen carefully to you?		**25%**	**.781**	**<.001**
During this hospital stay, how often did doctors explain things in a way you could understand?		**25%**	**.780**	**<.001**
During this hospital stay, were you given any medicine that you had not taken before?	Communication about medication	**0%**	**.591**	**<.001**
Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?		**50%**	**.728**	**<.001**
Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?		**50%**	**.685**	**<.001**
During this hospital stay did you call for help from the nursing staff?	Nursing services	**0%**	**.500**	**<.001**
After you called for help, how often did you get help as soon as you wanted?		**16.7%**	**.674**	**<.001**
After you leave this hospital, are you going directly home or to another health facility?	Discharge information	50%	.068	.448
During your hospital stay, did hospital staff talk with you about whether you would have the help you needed when you left the hospital?		0%	.130	.054
During your hospital stay, did you get information in writing about what symptoms of your health problems to look out for after you left the hospital?		0%	.020	.931
During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I left.		**50%**	**.238**	**.003**
When I left this hospital, I had a good understanding of the things I was responsible for in managing my health.		**50%**	**.274**	**<.001**
When I left this hospital, I clearly understood the purpose for taking each of my medications		**26.7%**	**.722**	**<.001**
During this hospital stay, how often were your room and bathroom kept clean?	Physical environment	**25%**	**.587**	**<.001**
During this hospital stay, how often was the area around your room quiet at night?		**25%**	**.752**	**<.001**
During this hospital stay, was your privacy respected?		**25%**	**.628**	**<.001**
During this hospital stay, were you prescribed medication for pain?	Pain control	**0%**	**.313**	**<.001**
During your hospital stay, how well was your pain controlled?		**25%**	**.778**	**<.001**
During your hospital stay, how often did the hospital staff do everything they could to help you with you pain?		**25%**	**.791**	**<.001**

Bold values are of statistical significance

Table 9: Hypotheses and the practical implications for patient satisfaction

Hypothesis	Practical Conclusion
Hypothesis 1 (H1): There is a statistically significant and positive relationship between nurse-patient communication and patient satisfaction.	This reflects that when nurses treated patients with courtesy and respect, listened carefully to them, and explained things to them in a way they could understand, they experienced higher satisfaction levels.
Hypothesis 2 (H2):There is a statistically significant and positive relationship between doctor-patient communication and patient satisfaction.	This reflects that when doctors treated patients with courtesy and respect, listened carefully to them, and explained things to them in a way they could understand, they experienced higher satisfaction levels.
Hypothesis 3 (H3): There is a statistically significant and positive relationship between communication about medication and patient satisfaction.	This reflects that when patients who were prescribed medicines that they had not taken before, were informed what the new medicine was for and possible side effects were explained in a way that the patients could understand, they experienced higher satisfaction levels.
Hypothesis 4 (H4): There is a statistically significant and positive relationship between nursing services and and patient satisfaction.	This reflects that when patients who called for help, received help as soon as they wanted, they experienced higher satisfaction levels.
Hypothesis 5 (H5): There is a statistically significant and positive relationship between discharge information and patient satisfaction.	This reflects that when hospital staff took the preferences of the patient and family or caregiver into account in deciding the patients' health care needs, patients had a good understanding of the things they were responsible for in managing their health and patients clearly understood the purpose of taking their medicines when they left the hospital, they experienced higher satisfaction levels.
Hypothesis 6 (H6): There is a statistically significant and positive relationship between physical environment and patient satisfaction.	This reflects that when patients' rooms and bathrooms were kept clean, the area around their room was quiet at night and their privacy was respected, they experienced higher satisfaction levels.
Hypothesis 7 (H7): There is a statistically significant and positive relationship between pain control and patient satisfaction.	This reflects that when patients' who were prescribed medication for pain, had their pain well controlled and staff did everything, they could to help patients with their pain, they experienced higher satisfaction levels.

Ordinal logistic regression was then conducted for multivariable analysis to identify the predictive factors associated with patients' satisfaction. The dependent variable was patient satisfaction and the twenty independent variables that were statistically significant in the chi-square test of independence were included in the regression model.

The goodness-of-fit test was used to assess the overall significance of the model. Seven models were obtained with Model-fitting-information significant (<0.001), suggesting the tests for fitness of the models were satisfied. The Goodness-of-fit tests were found to be non-significant (>.05), emphasising that the models were good predictors of the data. The results of the models are summarized in Table 10 and the results of all variables in the equation are presented in Table 11.

Table 10: Model fitting summary information

	GOF	Chi-square
Communication with nurses	27.682	<.001
Communication with doctors	301.894	<.001
Communication about medication	83.789	<.001
Nursing services	9.640	<.001
Discharge information	3.946	<.001
Physical environment	4.340	<.001
Pain control	11.460	<.001

Abbreviations: GOF, Goodness-of-fit

Nurse-patient communication

“During this hospital stay, how often did nurses listen carefully to you”, was a statistically significant predictor of patient satisfaction in the model (OR= 5.431, CI= 2.814-10.485).

The OR of 5.431 indicates an increasing probability of patients being very satisfied as scores increased in nurses listening carefully to patients.

“During this hospital stay, how often did nurses explain things in a way you could understand”, was a statistically significant predictor of patient satisfaction in the model (OR= 2.620, CI= 1.566 - 4.383). The OR of 2.620 indicates an increasing probability of patients being very satisfied as scores increased in nurses explaining things to patients in a way they could understand.

Doctor-patient communication

“During this hospital stay, how often did doctors treat you with courtesy and respect”, was a statistically significant predictor of patient satisfaction in the model (OR= 18.311, CI= 4.644 – 72.197). The OR of 18.311 indicates an increasing probability of patients being very satisfied as scores increased in doctors treating patients with courtesy and respect.

Communication about medication

“Before giving you any new medicine, how often did hospital staff tell you what the medicine was for”, was a statistically significant predictor of patient satisfaction in the model (OR=

23.031, CI= 8.529 – 62.192). The OR of 23.031 indicates an increasing probability of patients being very satisfied as scores increased in hospital staff telling patients what any new medicine was for.

Nursing services

"After you called for help, how often did you get help as soon as you wanted", was a statistically significant predictor in the model (OR= 6.806, CI= 4.027 – 11.504). The OR of 6.806 indicates an increasing probability of patients being very satisfied as scores increased in nurses providing patients with care as soon as they wanted.

Discharge information

"During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left", was a statistically significant predictor in the model (OR= .352, CI= .210 - .592). The OR of .352 indicates an increasing probability of patients being very satisfied as scores increase in staff taking the preferences of the patient and family or caregiver into account in deciding their healthcare needs when they left the hospital.

"When I left this hospital, I had a good understanding of the things I was responsible for in managing my health", was a statistically significant predictor in the model (OR= .489, CI=

.258 - .928). The OR of .489 indicates an increasing probability of patients being very satisfied as scores increase in patients' understanding of the things, they were responsible for in managing their health when they left the hospital.

“When I left this hospital, I clearly understood the purpose for taking each of my medications”, was a statistically significant predictor in the model (OR= 4.428, CI= 3.337 – 5.874). The OR of 4.428 indicates an increasing probability of patients being very satisfied as scores increased in patients clearly understanding the purpose for taking each of their medications when they left the hospital.

Physical environment

“During this hospital stay, how often were your room and bathroom kept clean”, was a statistically significant predictor in the model (OR= 2.383, CI= 1.609 -3.529). The OR of 2.383 indicates an increasing probability of patients being very satisfied as scores increased in patients’ rooms and bathrooms being kept clean.

“During this hospital stay, how often was the area around your room quiet at night”, was a statistically significant predictor in the model (OR= 4.207, CI= 2.496 – 7.089). The OR of 4.207 indicates an increasing probability of patients being very satisfied as scores increased in the area around their room being quiet at night.

“During this hospital stay, was your privacy respected”, was a statistically significant predictor in the (OR= 5.035, CI= 2.798 – 9.060). The OR of 5.035 indicates an increasing probability of patients being very satisfied as scores increased in patients’ privacy being respected.

Pain control

“During your hospital stay, how well was your pain controlled”, was a statistically significant predictor in the model (OR= 7.250, CI= 2.447 – 21.475). The OR of 7.250 indicates an increasing probability of patients being very satisfied as scores increased in patients’ pain being well controlled.

Table 11: Ordinal logistic regression between variables and patient satisfaction

Variable	p-value	OR	CI
During this hospital stay, how often did nurses treat you with courtesy and respect?	.136	1.538	.874 - 2.708
During this hospital stay, how often did nurses listen carefully to you?	**<.001**	**5.431**	2.814 - 10.485
During this hospital stay, how often did nurses explain things in a way you could understand?	**<.001**	**2.620**	1.566 - 4.383
During this hospital stay, how often did doctors treat you with courtesy and respect?	**<.001**	**18.311**	4.644 - 72.197
During this hospital stay, how often did doctors listen carefully to you?	.626	1.364	.391 - 4.761
During this hospital stay, how often did doctors explain things in a way you could understand?	.385	1.359	.681 - 2.714
Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?	**<.001**	**23.031**	8.529 - 62.192
Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?	.970	1.012	.536 - 1.913
After you called for help, how often did you get help as soon as you wanted?	**<.001**	**6.806**	4.027 - 11.504
During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I left.	**<.001**	**.352**	.210 - .592
When I left this hospital, I had a good understanding of the things I was responsible for in managing my health.	**.029**	**.489**	.258 - .928
When I left this hospital, I clearly understood the purpose for taking each of my medications.	**.000**	**4.428**	3.337 - 5.874
During this hospital stay, how often were your room and bathroom kept clean?	**<.001**	**2.383**	1.609 - 3.529
During this hospital stay, how often was the area around your room quiet at night?	**<.001**	**4.207**	2.496 - 7.089
During this hospital stay, was your privacy respected?	**<.001**	**5.035**	2.798 - 9.060
During your hospital stay, how well was your pain controlled?	**<.001**	**7.250**	2.447 - 21.475
During your hospital stay, how often did the hospital staff do everything they could to help you with your pain?	0.17	3.776	1.269 - 11.240

Abbreviations: CI, confidence interval; OR, odds ratio

Bold values are of statistical significance

CHAPTER 5: DISCUSSION

This chapter discusses the key findings of the study as presented in chapter 5, in comparison to other relevant literature. Limitations of the study, the significance of the research findings, and future implications are presented. The study aimed to determine the factors associated with satisfaction with public health services amongst inpatients at a regional hospital in KwaZulu-Natal. This chapter discusses the demographics of the participants in terms of gender, the type of ward that the patient was admitted to, age, and educational level. Patient satisfaction is discussed in relation to nurse-patient communication, doctor-patient communication, communication about medication, nursing services, discharge information, physical environment, and pain control.

In this study, it was generally observed that patients were not satisfied with services at this hospital, symbolised by a 55,6% not satisfied satisfaction rate. Males were overall less satisfied than females, with 80% and 51% satisfaction rates. The surgical domain had the lowest satisfaction prevalence, with 76% of patients who were not satisfied, followed by the orthopaedics and gynaecology domains, each with 56% of patients not satisfied and obstetrics had 48% of patients not satisfied. The results of the analysis showed 12 determinants of overall patient satisfaction. Hospital staff telling patients what new medicines were for before administering them was the most salient predictor of patient satisfaction followed by doctors treating patients with courtesy and respect.

5.1 Socio-demographics

The demographics of the participants included in the study indicate that the majority were of the female gender (84.1%). This is partially because the largest sample proportion calculated originated from the obstetrics group, accounting for (n = 200) 57.6% of the total study sample. However, the literature also supports that women have better health-seeking behaviours as compared to men (Ek, 2015; Tong et al, 2014).

The mean population age was 30.8 (SD = 10.49) and the age range was 71. The minimum age was 18 and the maximum age 89. Most of the participants were in the age group 18-30 (58.5%) and (57.6%) had started high school but did not matriculate.

While gaining an understanding of the demographic characteristics of the population of interest is important, it is equally important to understand that these variables are largely unmodifiable and impractical in contributing to improvement plans, thus contributing to a small degree in this research (Al-Abri & Al-Balushi, 2014; Schoenfelder et al., 2011). In this research, we aimed to determine the factors that influence patient satisfaction in the inpatient population in the context of a regional hospital. These are modifiable risk factors that when identified, can be the focus of informed decision-making and quality improvement strategies and activities that can contribute meaningfully to improved patient satisfaction in this setting.

5.2 Overall satisfaction

This study provides insight into the patient satisfaction landscape in this hospital. Because patients were overall not satisfied, this research findings will likely serve as a baseline for

future surveys of patient satisfaction at this hospital and inform measures that will be used to monitor patient satisfaction in this patient population.

Of fundamental importance in measuring patient satisfaction, is the identification of specific areas for improvement. Through an extensive review of literature and the identification of common drivers of patient satisfaction in the global, Sub-Saharan Africa, and South African contexts, the HCAHPS survey tool was identified as the most appropriate tool to measure patient satisfaction and identify its drivers in this setting.

This study found that overall, 55. 6% of patients were generally not satisfied with the care at this hospital. This is a significantly low satisfaction score when compared with High-Income Countries. A study from as far back as 2002, conducted in five National Health Services (NHS) in Scotland, found that almost 90% of patients were satisfied, with 55% stating that their inpatient stay was "excellent" (Jenkinson et al., 2002). There are similarities in a systematic review of published surveys of access and health services quality by the patient's opinion, conducted in 2011 that found 71% of Europeans positively evaluated hospital services quality (Jankauskiene, 2011). A more recent study that investigated the overall satisfaction of healthcare users with quality and access to healthcare services, across six European countries, found that only 10-14% of users were not satisfied (Stepurko et al., 2016). These studies provide evidence of a consistently satisfactorily performing healthcare system.

Patient satisfaction at this hospital is also low when compared to studies done in other African countries. In Ethiopia, satisfaction among inpatients at Black Lion Hospital was

90.1%, 60.8% at Pawie General Hospital, 61.9% at Jimma Specialised Hospital, and 79.7% at other Public Hospitals in Mekelle Town (Aga et al., 2021; Marama et al., 2018; Mulugeta et al., 2014b; Woldeyohanes et al., 2015). However, the study at Black Lion Hospital focuses on nursing care which might have influenced the high satisfaction rate, while Jimma Hospital offers specialised services, hence a difference in hospital characteristics.

Results of this study show lower satisfaction rating scores when compared to a study in Nigeria that investigated patient satisfaction with care at public hospitals using the HCAHPS survey instrument and reported a 93% satisfaction rate (Lawal et al., 2018). However, a critical difference between this research and the study conducted in Nigeria is that the study considered all patients who gave a minimum overall satisfaction rating score of ≥5 out of ten, as satisfied (Lawal et al., 2018). A rating of five can be viewed as a mediocre performance.

Furthermore, patient satisfaction was also lower than in a study in KwaZulu-Natal, which investigated patient satisfaction with TB and HIV services and reported findings of 95% and 97% (Chimbindi et al., 2014). However, this might also be related to the fact that the study was conducted in two specialised services in a primary healthcare setting where there is a difference in services and setting.

This study's finding underscores the importance that health services should strive for excellence in patient care and services delivery. The more than 80% of South Africans who depend on the public health system for their health needs, cannot accept an average-performing public health system. It would mean that more than 80% of South Africans, who

are to a large extent vulnerable persons, might never see the day that South Africa's public health care system efficiently meets population health care needs.

5.3 Recommendation of facility to other users

In this study, overall patient satisfaction with care received was measured by a single Likert scale item on the questionnaire. A final question about whether the patient would recommend the hospital to family and friends was included. More than half (57.3%) of the patients indicated that they would probably recommend this hospital to their family and friends, with 32% indicating that they would definitely recommend the hospital to family and friends. This indicates that patients might still have a positive outlook of the hospital, which is a motivation for improvement in the quality of health services delivery at this hospital (Bamidele et al., 2011).

5.4 Determinants of patient satisfaction

5.4.1 Nurse-patient communication

This study found that when nurses listened carefully to patients, they experienced greater satisfaction. One author has described effective listening as an important aspect of non-verbal communication and asserts that when one listens effectively, this improves communication and understanding (Shipley, 2010). This was demonstrated in a recent study in the USA among patients following a recent hospital admission that aimed to determine which nurse

behaviours patients' believed conveyed nurse listening. The study found that specific behaviours, both verbal and non-verbal, led patients to believe that the nurse was either listening or not listening. Moreover, the study found that the patient's perception of whether or not the nurse was listening, affected their sense of safety and trust in the nurse (Loos, 2021). Another study reported an improvement in patient-centred care in healthcare workers who actively listened to patients (Haley et al., 2017). Similarly, a comparative study that investigated patient satisfaction with the delivery of primary health care services in the Free State and Gauteng provinces in South Africa found that over 90% of patients were satisfied with services and reported that nurses listening to patients was a factor associated with patient satisfaction in both Provinces (Nunu et al., 2017). This literature, therefore, highlights nurses listening to patients as an important satisfaction indicator, common across healthcare service points globally and locally.

Additionally, this study found that when nurses explained things to patients in a way they could understand, they experienced greater satisfaction. Some countries, such as Saudi Arabia experience nurse-patient communication challenges due to the large number of non-Saudi nurses employed in their healthcare system who are not proficient in the patient's language and lack cultural awareness. One such study describes how these barriers in communication result in communication being misinterpreted, leading to poor-nurse patient relationships and having a negative effect on the quality of care, patient safety, and satisfaction (Alshammari et al., 2019). Additionally, two large studies that investigated determinants of inpatient satisfaction with public hospitals in Greece and Germany found that patients' communication with nurses was overall a highly influential determinant of patient satisfaction (Mitropoulos et al., 2018; Schoenfelder et al., 2011).

Patients' understanding is improved when barriers to effective communication, such as language barriers, are overcome thus improving understanding. When the nurse and patients have a common language, this barrier is overcome. Furthermore, nurses should avoid medical jargon when explaining things to patients, and instead communicate using words that make it easier for patients to understand the information being communicated.

This study findings, therefore, mean that nurses should be able to communicate effectively with patients to strengthen nurse-patient relationships and gain patients' trust. When nurses gain patients' trust, patients are more inclined to cooperate with and see nurses as their partners when accessing care, who impart knowledge and skills that will assist them in understanding and managing their health. As such, the impact of poor nurse-patient communication creates a risk for adverse health events, rather than improvement in patients' health. Therefore, improved nurse-patient communication might mitigate the risk of adverse events, thereby reducing litigation risks, and improving patient confidence in the staff, the institution, and the healthcare system at large.

5.4.2 Doctor-patient communication

Doctors treating patients with courtesy and respect, emerged overall as the second most significant predictor of patient satisfaction in this research. Good bedside etiquette is a common phrase known amongst doctors. One study that investigates physician behaviour and bedside manners dates its origins to Dr. William Osler who practiced medicine in the eighteen hundreds. The author describes Osler's bedside manner, amongst other things, as warm, friendly, compassionate, and interested. The author additionally notes that Osler taught

this etiquette, including the positive impact of good bedside etiquette on patient care, to other doctors. Furthermore, the author reminds doctors that their work begins with human interactions and not with "genetic or cellular interactions" (Silverman, 2012). This study reminds us of the importance of good doctor-patient relations, including the negative impact poor relations have on doctor-patient communication, and emphasises this lack of good bedside manners among doctors in the current era.

Additionally, according to The Health Professions Council of South Africa, Guidelines for Good Practice, (HPCSA), good professional practice is grounded in core ethical values and standards, which include respect for patients and knowledge of their worth and dignity, underscoring the importance of respectful doctor-patient interactions (HPCSA, n.d.).

Furthermore, a study that sort to understand patients' conceptions of respect and what it means to be respected by medical providers, reported that patients believe the major elements of respect are empathy, care, autonomy, provision of information, recognition of individuality, dignity, and attention to needs (Dickert & Kass, 2009). Another study that investigated the meaning of respect from the patients' perspective found that respect meant more than physicians being "nice" to patients. The authors assert that physicians should, in addition, engage with and value patients as human beings in the same way that they expect to be respected by patients (Frosch & Tai-Seale, 2013). Moreover, a study that investigated whether patients treated with dignity experience higher satisfaction found the probability of a high level of satisfaction and optimal preventive care was higher for those patients who were treated with dignity than those not treated with dignity (Beach et al., 2005). A more recent study that investigated the association between orthopaedic surgeon empathy and orthopaedic

patient experience, reported an association between empathy and surgeon respect (Dobransky et al., 2020). In another such study, the authors assert that the doctor-patient relationship is a powerful aspect of a patient's healthcare visit and can alter patient health outcomes (Chipidza et al., 2015).

This study finding is consistent with these earlier studies, highlighting the positive impact that a courteous and respectful doctor-patient relationship has on patient satisfaction. Patients should be able to hold their doctors in such high esteem that they are comfortable and confident that their doctor will always uphold and preserve their dignity.

Furthermore, this study supports the importance of ethical and professional behaviour by doctors through treating patients with courtesy and respect, further emphasising the role of ethics and professionalism in strengthening doctor-patient communication.

5.4.3 Communication about medication

This study found that, when staff told patients what new medicines were for before administering them, they experienced greater satisfaction. Furthermore, this predictor emerged as the most salient predictor of patient satisfaction in this research. This study finding is therefore consistent with the literature.

One of the primary criteria for admission of patients to the inpatient setting is for the administration of drug therapy that cannot be administered in the outpatient setting, including

the close observation of the patient's drug response. This means that inpatients are most often prescribed and administered medication.

According to one study, patients wanted information about their medication prescriptions primarily from the prescriber (Chan et al., 2020). In the inpatient setting, a doctor's prescription is required before the administration of any medicine, new or previously used. Additionally, the doctor could be both a prescriber and administrator of a new drug. Therefore, consulting with and informing a patient of a new medicine prescription begins with the doctor. Furthermore, the aforementioned study reported that the information patients wanted to know included, what the medicine was meant to treat, and its side effects as they felt that this information would enhance their health decision-making and self-management (Chan et al., 2020). Therefore, it is during this information-sharing session that the patient who is the drug recipient is made aware of the intended new drug treatment.

Another study reported that when physicians prescribe patients new medicines, they often fail to communicate critical elements of the purpose of taking these new medicines, which leads to patients failing to take the medicine as directed (Tarn et al., 2006). This study highlights the importance of patient consultation regarding their proposed treatment plan to ensure that they gain an understanding of their prescribed medicines, thereby improving treatment adherence and positive health outcomes.

While doctors play the role of medicines prescriber in the inpatient setting, it is important to note that nurses primarily perform the role of medication administration, hence the main providers of medication information and education to the patient. As reported, physicians

often fail to communicate essential elements of the purpose of taking new medicines (Tarn et al., 2006). Therefore, nurses play a critical role in educating about any new medicines before their administration.

The patient must be told what any new medicine is for before being administered as this provides an opportunity for the patient to receive information and education, ask questions or raise concerns that might emanate as the patient gains more knowledge about the drug. Furthermore, the nurse and patient might identify any contraindication for the drug prescription in that patient.

Moreover, medication errors have been well documented as one of the most common errors globally, accounting for an estimated 42 billion US$ annually or almost 1% of global health expenditure (WHO, 2017). It is well known that doctors and nurses work in extremely high-paced environments and the risk for error is high. Often, nurses are interrupted from completing a task because they must attend to a patient who requires urgent care, such as a patient who suddenly falls out of bed or a patient who requires emergency resuscitation. For example, one nurse might initiate a new drug in a patient, after which their attention is diverted to an emergency, before completing the necessary documentation. Another nurse might assume that the new drug has not been administered and attempt to do so. Hence, if it were a well-practiced and standard organisational process that all patients are told about a new drug, before its administration, this would provide an opportunity for the patient to advise the nurse that they have already received the drug, providing an opportunity to mitigate the risk of medication errors. This means that the patient could assist in preventing a medication error.

Additionally, if the patient is informed of the new medicine before its administration, this enables the patient to monitor its effect and evaluate its response. For example, medicines that treat pain should provide pain relief; hence the patient can provide the health care worker accurate feedback regarding its effect, thereby assisting to inform their treatment plan for their continued management and discharge preparation.

Communication about medication can improve patient satisfaction and overall healthcare outcomes (Ahrens & Wirges, 2013b). Hence, it is in this regard that the patient, nurse, and attending doctor must work together to achieve the most effective medication treatment plan for each patient, by involving the patient at the earliest stage by telling them their intention to treat with any new medicine. In this way, patients might achieve improved treatment adherence and improved health outcomes, thereby experiencing greater satisfaction (Mensa, 2017).

5.4.4 Nursing Services

In this study, nurses helping patients as soon as they asked for help was a predictor of patient satisfaction. This predictor speaks to the promptness of nursing care provided to patients who call for assistance from nursing staff. This finding is well explained by a study conducted at Balimbingan Hospital in Indonesia, which found a positive relationship between the ability of nursing services to provide care promptly and patient satisfaction (Mutia Sari et al., 2019). Other scholars have also supported this finding. Two such studies conducted in public hospitals in Ethiopia found nursing services had a significant impact on patient satisfaction due to the amount of time nurses spend at the patient's bedside rendering care. As such, the

authors assert that nursing services are the major supportive service for inpatients (Kasa & Gedamu, 2019; Mulugeta et al., 2014b).

By being hospitalised patients experience heightened levels of anxiety caused by ill health, pain, and fear of the unknown and unfamiliar surroundings (Mirani et al., 2019; Palmer et al., 2021). This anxiety might be exacerbated by the sight of fellow patients who might be experiencing extreme pain and suffering. As the primary caregivers of hospitalised patients, nurses should demonstrate a caring attitude towards their patients to allay anxiety. Therefore, the timeous provision of care, through the avoidance of unnecessary delays in attending to a patient's call for help, is especially important, as a lack of timeous care could result in an adverse event and even death.

As such, nurses should be urged to develop a culture of responding immediately to a patient's call for help to determine the nature of urgency of the patient's care needs. Where a patient's needs or request is deemed non-urgent, the nurse should reassure the patient that care will be provided as soon as possible, with an estimated response time. Furthermore, in many circumstances, patients call for help on behalf of fellow patients who they perceive to be experiencing a medical emergency, thus being unable to call for help. Therefore, nurses should not delay response to the call of any patient because they perceive them to be generally well, and therefore not in need of urgent attention.

Moreover, nurses are the backbone of healthcare systems (Minnaar, 2004). As the primary caregivers of hospitalised patients and to whom patients have continued access, patients must feel comfortable that their first point of call is the nurse. As such, nurses have the power and

authority to bring about impactful change. It is in this regard that nurses must become strong advocates for their patients. In so doing, their patients might feel comfortable expressing concerns or seeking clarity about dissatisfactions as well as expressing their satisfaction with care.

5.4.5 Discharge information

This study found that the involvement of the patient, family, or caregiver in the discharge planning process and patients having a good understanding of what they were responsible for in managing their health, improved patient satisfaction. This finding is supported by a study that reported that successful discharge planning included patient participation and resulted in improved patient satisfaction and quality of life (Carroll & Dowling, 2007). Similarly, another study reported that involving caregivers in the patient's transition from the hospital to their home environment was a part of patient satisfaction. The authors argue that caregiver involvement enhances the patient's ability to retain, understand, and adhere to discharge care instructions (Hahn-Goldberg et al., 2018).

Additionally, patients having a good understanding of the purpose for taking each of their medications when they left this hospital was a predictor of patient satisfaction in this study and is supported by an earlier study that identified that patients wanted to be consulted by their doctor about their treatment (Stone, 2003). Likewise, a more recent study conducted in Ethiopia reported that when patients receive an explanation regarding the indication for drugs prescribed and directions for administration, compliance with prescribed treatment, health outcomes, and relationships with health care professionals improved. Furthermore, the study

reported that this led to an overall improvement in inpatient satisfaction with the care received (Mensa, 2017).

This study finding, therefore, supports the view, that a discharge planning process that includes the patient and their family or caregiver and ensures that the patient has a good understanding of what they are responsible for in managing their health, positively influences patient satisfaction. This is further enhanced when patients have a clear understanding of the purpose of taking their medicines when they leave the hospital. Therefore, discharge planning that incorporates these aspects might improve medication adherence which in turn might reduce readmission rates and reduced healthcare costs, leading to improved health outcomes.

5.4.6 Physical environment

This study found that the cleanliness of patients' rooms and bathrooms, the area around the patient's room being quiet at night, and respect for the patient's privacy were all predictors of patient satisfaction. This finding is consistent with a study in Japan that investigated patient satisfaction and found physical setting and appearance as a factor influencing patient satisfaction (Elleuch, 2008). Similarly, a systematic review of the impact of water sanitation and hygiene (WASH) in healthcare facilities, on care-seeking behaviour and patient satisfaction in LMICs, found that improving WASH facilities would decrease patient dissatisfaction and increase care-seeking behaviour (Bouzid et al., 2018). Likewise, a large study that investigated patient satisfaction with public health facilities in both inpatient and outpatient settings in India, found that poor cleanliness of facilities was a major reason for dissatisfaction among patients (Kaur et al., 2020). However, an important difference between

this study and the systematic review is that it investigated both inpatients and outpatients while this study's focus was inpatients. However, this difference in the study populations helps us understand that cleanliness of the physical environment is an important aspect of patient satisfaction among all patients accessing healthcare facilities, irrespective of whether they are exposed to the inpatient or outpatient environment.

Furthermore, inpatients are subjected to long exposure to the physical aspects of the patient care environment. However, despite this variation in the duration of exposure among these different patient populations, it is important to note that the hygiene and cleanliness of the environment impacted satisfaction even in outpatients who had a shorter exposure to the patient care environment, thus emphasising the relationship between cleanliness and patient satisfaction.

Another important aspect of cleanliness as a physical attribute of the hospital environment is its impact on the potential risk of acquisition and spread of hospital-acquired infections (HAIs) among patients and staff. For example, the recent Coronavirus pandemic has reinforced the rate at which viruses can be transmitted among patients and staff in healthcare facilities. More importantly, patients who acquire hospital infections might be discharged during the virus incubation period, thus not exhibiting signs and symptoms of infection. This means that patients might return to their families, workplaces, and communities and unknowingly spread these infections, with devastating consequences. Hence, hospitals must maintain a clean physical environment through effective infection prevention and control (IPC).

A quiet hospital environment is known to promote rest and recuperation in hospitalised patients (Kamra et al., 2016b; Ramadani et al., 2016). Therefore, ensuring measures that keep patient care areas free of noise and disturbances is important in ensuring that patients rest without unnecessary interruptions. Patient care activities should be performed with as little noise as possible and healthcare staff should ensure that during resting hours, the patient care environment is quiet. The sooner that a patient recovers, the sooner they might be discharged, and return to their family and work. Increased length of stay in economically active patients has a negative financial impact on the patient, employer, and economy in terms of time and income lost. Additionally, as patient days increase, which is the number of days a patient stays in the hospital, so does the cost of care.

A study conducted among inpatients at a general hospital in Ethiopia found that privacy was associated with patient satisfaction (Aga et al., 2021). Similarly, a study that investigated nurses' respect for the privacy of hospitalised patients, found that patients valued nurses' protection of their physical privacy as well as ensuring privacy when giving patients health information or asking questions. Additionally, the authors assert that when patients' privacy is respected, they feel free to answer questions, allow healthcare staff to conduct physical examinations without fear of exposure, and more easily receive and understand the information provided by the healthcare staff (Valizadeh & Ghasemi, 2020). Furthermore, a critical review of determinants of patient satisfaction in the health care system in Pakistan found that a lack of privacy leads to a decrease in patient satisfaction (Zahidie & Shaikh, 2012).

This study's findings support the hypothesis that there is a relationship between the physical environment and patient satisfaction, suggesting that when care and attention are given to the tangible and intangible aspects of the patient care environment, patients might feel that their person and personal information are protected, thereby experiencing greater satisfaction.

5.4.7 Pain control

This study found that when the patient's pain was well controlled, they experienced greater satisfaction. This finding is consistent with a study that found that high pain relief positively predicted patient satisfaction (Lee et al., 2020). However, another study found that patients' degree of satisfaction depended on additional aspects related to various other aspects of pain control such as the type of pain relief, the ability to request more pain relief, and information about pain relief, rather than just the pain intensity (Felicia et al., 2021). Contrastingly, one study found no association between pain intensity and patient satisfaction in patients who received opioid pain relief medication in an acute care institution in the USA (Phillips et al., 2013a). As a result of these conflicting findings, other authors have attempted to describe this seemingly complex nature of the relationship between pain control and patient satisfaction. One such study found that many internal and external patient-related causes create bias in numerical pain-related ratings (Boring et al., 2021). This means that more robust methods are required for future pain control research.

However, despite the lack of a clear understanding amongst researchers regarding the relationship between pain control and patient satisfaction, this study finding provides evidence that supports the hypothesis that an association exists. Therefore, it might be useful

for healthcare workers to ensure that pain control is achieved from the patients' perspective. Therefore, pain management should be tailored to unique individual patient needs. More importantly, strengthened, and effective communication between the patient, nurse, and prescribing doctor regarding pain monitoring and the evaluation of the patient's medication response.

Furthermore, patients expect that their pain is well managed and controlled in the hospital environment as pain control medicines are readily available and healthcare staff is available to timeously administer and monitor patients' drug response for comfort and rest. Good pain management while in the hospital provides an opportunity for patients who are chronic pain sufferers to have their pain effectively treated and controlled so that they are discharged with an effective pain management regime. In patients who are experiencing acute pain onset, for example, post-operatively, ensuring that their pain is well controlled is critical for their comfort and recuperation.

The implications of patient dissatisfaction cannot continue to be looked at from the periphery. This study's findings have implications for patient satisfaction, health services quality, financial management, improved future spending, and improved patient health outcomes at this hospital. Furthermore, this study provides specific aspects of the significance of each dimension of patient satisfaction and can thus be used to develop an effective intervention programme that addresses these specific patient-provider aspects of care (Otani et al., 2011).

In light of the expansion of the public health services underway in South Africa to improve accessibility, accompanied by an ever-dwindling national health budget, services cannot

continue to be looked at through the prism of resource constraints. There is growing evidence that the increased availability of health services does not guarantee improved health outcomes and might even negatively impact service quality (Larson, 2018). Health services managers must become proactive leaders who are innovative, creative, broad, and deep thinkers with exceptional critical thinking abilities. In this way, health funds might be directed towards health services provision and not away from services e.g., in the form of litigation costs and further health care costs for patients who have been inefficiently managed.

5.5 Limitations

This study focus is on inpatients; therefore, study findings are not generalisable to overall satisfaction with public health services. Additionally, this study investigated patients who were discharged on the day. This means that they had received a health outcome. Hence, patients who had received a good health outcome might have rated their satisfaction highly. Similarly, patients who had received a poor health outcome might have given low ratings, potentially producing spurious associations. A further limitation is that, because patient satisfaction is subjective, depending on some factors of the day, responses given might sometimes differ from what they would have experienced over an extended period, for example, healthcare providers might have improved patient care during the survey period, inflating study findings.

CHAPTER 6: CONCLUSION

This chapter discusses the main findings and discussion of this study. The study aimed to determine the factors associated with satisfaction with public health services amongst inpatients at a Regional Hospital in the eThekwini District, KwaZulu-Natal. Therefore, a cross-sectional study design was employed through the administration of a survey questionnaire which allowed the collection of information from 347 adults who had spent ≥24hrs as inpatients at this hospital and who were discharged on the day. Information about their demographics, communication with nurses, communication with doctors, communication about medication, nursing services, discharge information, physical environment, and pain control was collected. Recommendations for future research and practice are presented.

6.1 Main Findings

This research has investigated the factors influencing inpatient satisfaction with public health services at a regional hospital in KwaZulu-Natal. The study set out to describe the socio-demographic characteristics of respondents, measure patient satisfaction at this hospital, and determine the factors associated with satisfaction with public health services amongst this patient population.

As reported in the results section, the study has shown that 55.6% of participants were not satisfied with the services at this hospital. Most participants were of the female gender, symbolised by 84.1%, 58.5% were of the age 18-30 years and 57.6% had started high school

but did not matriculate. The most influential predictors in descending order were, before giving patients any new medicine the hospital staff told the patient what the medicine was for (OR 23.031), doctors treated patients with courtesy and respect (OR 18.311), patients pain was well controlled (OR 7.250), patients got help from nurses as soon as they wanted (OR 6.809), nurses listened carefully to patients (OR 5.431), patients' privacy was respected (OR 5.035), patients clearly understood the purpose for taking each of my medications when they left the hospital (OR 4.428), the area around the patients' room was quiet at night (OR 4.207), nurses explained things to patients in a way that they could understand (OR 2.620), the cleanliness of the patients room and bathroom (OR 2.383), patients had a good understanding of the things that they were responsible for in managing their health when they left the hospital (OR .489), staff took the preferences and those of the patient, family or caregiver into account in deciding their healthcare needs would be when I left (OR .352).

Therefore, it can be said that the most influential determinants of patient satisfaction, in descending order, were communication about medication, followed by doctor-patient communication, pain control, nursing services, nurse-patient communication, physical environment, and discharge information.

In line with the stated hypotheses, this research results support that patient satisfaction with public health services is influenced by nurse-patient communication, doctor-patient communication, communication about medication, nursing services, discharge information, physical environment, and pain control.

6.2 Recommendations

These research findings might encourage staff to become more motivated to improve patient satisfaction and quality of care at this hospital by focusing on the identified predictors of satisfaction. Furthermore, managers should prioritise in-service training of staff regarding patient satisfaction, its benefits, and how it might be improved through the implementation of interventions aimed at addressing the identified predictors. In so doing, patient satisfaction might improve at this facility and potentially lead to improved patient satisfaction levels and improved patient health outcomes.

Additionally, further research into patient satisfaction with public health services is required in various settings, particularly in the inpatient population, in KwaZulu-Natal and South Africa at large. In this way, factors that improve patient satisfaction in these settings could be identified, and improvement programmes around these factors could be formulated and implemented through consultation and collaboration between patients, staff, and managers. This would bring the patient to the forefront of health services delivery and help to restore patient confidence in the public health services in South Africa. Moreover, future studies could survey patients whilst they are still in care, before discharge, including controlling for the sample population's socio-demographics.

6.3 Conclusions

Health services quality and performance is receiving much attention from researchers. As such, there is a vast body of knowledge regarding health services performance available in

the public domain. Health policy decision-makers should draw from this research evidence to influence and inform policy to achieve improved health outcomes in South Africa. South Africa's sub-optimally performing public health system cannot continue to deliver mediocre services to patients. As the primary recipients of these services, patients must truly have a say in matters affecting their health. Patient satisfaction needs must be at the forefront of a strengthened health care system, and health services providers at the coalface of services delivery must develop a patient-centred approach towards efficiently achieving public health needs.

The tide must turn in the public health services in South Africa towards developing more efficient strategies aimed at achieving the global health agenda of Health for All. As the clock ticks towards 2030, South Africa's public health sector must vigorously work at growing a strengthened, self-reliant, and resilient healthcare system or its people might never realise WHO's SDG, 3, "Ensure healthy lives and promote well-being for all at all ages.

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Appendices

Appendix A: English Information Sheet

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21 959 2809 Fax: 27 21 959 2872

E-mail: soph-comm@uwc.ac.za

INFORMATION SHEET

All Covid-19 safety protocols will be adhered to during this research.

Project Title: Factors influencing inpatient satisfaction with public health services at a Regional Hospital, Durban, eThekwini District, KwaZulu - Natal, South Africa

What is this study about?

This is a research project being conducted by Colleen M. Stuart at the University of the Western Cape. We are inviting you to participate in this research project because you are a patient admitted to this hospital and we would like to know about your experience of our care during your stay. The purpose of this research project is to determine the factors associated with satisfaction with health services amongst inpatients to improve our services to you.

What will I be asked to do if I agree to participate?

You will be asked to complete a questionnaire about your stay at R K Khan Hospital. It will take approximately 15mins to complete this questionnaire. When answering all questions, you must only tell us about the current admission. The questions are about your experience with the nurses and doctors in this hospital, the environment in the ward, the medicines for pain control and/or medicines to treat other medical problems, and the information and instructions given to you before your discharge.

Would my participation in this study be kept confidential?

The researcher undertakes to protect your identity and the nature of your contribution. To ensure your anonymity, the survey will not contain any information that will personally identify you.

To ensure your confidentiality this questionnaire and consent form will be stored in a safe, access-protected place.

If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risk. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral for further assistance or intervention will be made by the ward doctor to the psychologist at R K Khan Hospital, Dr. Noor-Mohammed on 031 459 6360.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about what is important to you as a patient in this hospital. We hope that, in the future, other people might benefit from this study through an improved understanding of how we can improve our services to you.

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalised or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by **Colleen Margaret Stuart** at the University of the Western Cape. If you have any questions about the research study itself, please contact:

Colleen Margaret Stuart on 082 894 6596 or email: stuart.colleen998@gmail.com

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof Uta Lehmann

Head of Department: School of Public Health

University of the Western Cape

Private Bag X17

Bellville 7535

ulehmann@uwc.ac.za

Prof Anthea Rhoda

Dean: Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

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chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Biomedical Research Ethics Committee.

Biomedical Research Ethics Committee

University of the Western Cape

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Bellville

7535

Tel: 021 959 4111

e-mail: research-ethics@uwc.ac.za

Xhosa translation if required

Oluphando lupasiswe sisigqeba sekomiti yophando IYunivesithi yaseNtshona Koloni kunye nekomiti yezemigomo Biomedical.

Biomedical Research Ethics Committee

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Afrikaans translation if required

Hierdie navorsing is goedgekeur deur die Universiteit van Wes-Kaapland se Biomediese Navorsingsetiekkomitee.

Biomediese Navorsingsetiekkomitee

Universiteit van Wes-Kaapland

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REFERENCE NUMBER: BM21/10/36

Appendix B: isiZulu Information Sheet

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IPHESHANA LEMININGWANE

Yonke imigomo yokuphepha ye-Covid-19 izolandelwa kulolu cwaningo ngokugqokwa kwesifonyo kanye nokuqhelelana.

Isihloko sohlelo: Izimo eziwumthelela wokwaneliseka kweziguli ekutholeni izinsiza zempilo yomphakathi esibhedlela i, Isibhedlela Sesifunda, Isifunda saseThekwini, KwaZulu-Natal, eNingizimu Afrika

Ngabe lolu cwaningo lumayelana nani?

Lolu uhlelo locwaningo oluholwa **nguColleen M. Stuart** e-University of the Western Cape. Siyakumema ukuthi ubambe iqhaza kuloluhlelo locwaningo ngoba uyisiguli esingeniswe kulesi sibhedlela futhi singathanda ukwazi ngolwazi lwakho lokunakekelwa kwethu ngenkathi uhlala khona. Inhloso yalo loluhlelo locwaningo ukuthola ukuthi yiziphi izimo ezihambisana nokwaneliseka ngezinsiza zezempilo ezigulini ukuze sikwazi ukwenza ngcono izinsiza zethu kuwe.

Yini engizocelwa ukuba ngiyenze uma ngivuma ukubamba iqhaza?

Uzocelwa ukuthi ugcwalise uhlu lwemibuzo mayelana nokuhlala kwakho e-R K Khan Hospital. Kuzothatha cishe imizuzu eyi-15 ukugcwalisa le mibuzo. Uma usuphendula yonke

imibuzo, kufanele usitshele kuphela ngokulaliswa kwakho kwamanje. Imibuzo imayelana ngohlangabezane nakho kubahlengikazi nodokotela bakulesi sibhedlela, inhlalo yasewodini, imithi yokulawula izinhlungu kanye / noma imithi yokwelapha ezinye izinkinga zezokwelapha nemininingwane kanye nemiyalelo oyinikeziwe ngaphambi kokuphuma kwakho.

Ngabe ukubamba iqhaza kwami kulolu cwaningo kungagcinwa kuyimfihlo?

Umcwaningi uzibophezela ukuvikela ubunikazi bakho kanye nohlobo lomnikelo wakho. Ukuqinisekisa ukungaziwa kwakho, inhlolovo ngeke ibe nayo imininingwane ezohlonza wena uqobo. Ukuqinisekisa ubumfihlo bakho lemibuzo kanye nefomu lemvume lizogcinwa endaweni ephephile, endaweni enokufinyelela okuvikelekile. Uma sibhala umbiko noma isethulo ngaloluhlelo locwaningo, ubunikazi bakho buzovikelwa.

Buyini ubungozi balo lolucwaningo?

Konke ukuxhumana kwabantu nokukhuluma ngawe noma abanye buhamba nobungozi obuthile. Noma kunjalo sizobunciphisa ubungozi obunjalo futhi sithathe isinyathelo ngokushesha ukukusiza uma uhlangabezana nokungaphatheki kahle, kwengqondo noma ngenye indlela ngesikhathi sokubamba iqhaza kwakho kulolu cwaningo. Uma kunesidingo, kuzokwenziwa ukudluliselwa okufanele kochwepheshe kuzodluliselwa uchwepheshe ofanele ukuze uqhubeke ukuthola usizo noma ukungenelela.

Ziyini izinzuzo zalolu cwaningo?

Lolu cwaningo alwenzelwe ukusiza wena uqobo, kodwa imiphumela ingasiza umphenyi ukuthi afunde kabanzi ngokubalulekile kuwe njengesiguli kulesi sibhedlela. Siyethemba ukuthi, ngokuzayo, abanye abantu bangazuza kulolu cwaningo ngokuqonda okuthuthukile kokuthi singazithuthukisa kanjani izinsiza zethu kuwe.

Ukubamba iqhaza kwakho kulolu cwaningo kungokuzithandela ngokuphelele. Ungakhetha ukungabambi iqhaza nhlobo. Uma uthatha isinqumo sokubamba iqhaza kulolu cwaningo,

ungayeka ukubamba iqhaza nganoma yisiphi isikhathi. Uma uthatha isinqumo sokungabambi iqhaza kulolu cwaningo noma uma uyeka ukubamba iqhaza nganoma yisiphi isikhathi, ngeke ujeziswe noma ulahlekelwe inoma imiphi imihlomulo ovele ofanele ukuyithola.

Kwenzekani uma nginemibuzo?

Lolu cwaningo lwenziwa nguColleen Margaret Stuart e-Nyuvesi yase Western Cape. Uma unemibuzo mayelana nocwaningo uqobo, sicela uthinte: **Colleen Margaret Stuart on 082 894 6596 or email:** stuart.colleen998@gmail.com

Uma kwenzeka unanoma yimiphi imibuzo maqondana nalolu cwaningo namalungelo akho njengomhlanganyeli wocwaningo noma uma ufisa ukubika noma yiziphi izinkinga ohlangabezane nazo ezihlobene nocwaningo, sicela uthinte:

Prof Uta Lehmann

Head of Department: School of Public Health

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Prof Anthea Rhoda

Dean: Faculty of Community and Health Sciences

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Lolu cwaningo luvunyiwe yiKomidi Lezimilo Zokuziphatha Ngezocwaningo Ngezomnotho eNyuvesi yaseWestern Cape

Biomedical Research Ethics Committee

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Xhosa translation if required

Oluphando lupasiswe sisigqeba sekomiti yophando IYunivesithi yaseNtshona Koloni kunye nekomiti yezemigomo Biomedical.

Biomedical Research Ethics Committee

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Afrikaans translation if required

Hierdie navorsing is goedgekeur deur die Universiteit van Wes-Kaapland se Biomediese Navorsingsetiekkomitee.

Biomediese Navorsingsetiekkomitee

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INOMBOLO YOKUBHALWA: BM21/10/36

Appendix C: English Consent Form

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E-mail: soph-comm@uwc.ac.za

CONSENT FORM

Title of Research Project: Factors influencing inpatient satisfaction with public health services at a Regional Hospital, Durban, eThekwini District, KwaZulu-Natal, South Africa.

The study has been described to me in a language that I understand. My questions about the study have been answered. I understand what my participation will involve, and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

___ I agree to be **[**videotaped/audiotaped/photographed**]** during my participation in this study.

___ I do not agree to be **[**videotaped/audiotaped/photographed**]** during my participation in this study

Participant's name…….

Participant's signature…….

Date……

Appendix D: isiZulu Consent Form

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Tel: +27 21-959 2809, Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

IFOMU YEMVUME

Isihloko sohlelo locwaningo: Izimo eziwumthelela wokwaneliseka kweziguli ekutholeni izinsiza zempilo yomphakathi, Isibhedlela Sesifunda, Isifunda saseThekwini, KwaZulu - Natal, eNingizimu Afrika

Ucwaningo luchazwe kimi ngolimi engiluqondayo. Imibuzo yami mayelana nocwaningo iphenduliwe. Ngiyakuqonda ukuthi ukubamba iqhaza kwami kuzobandakanya ini futhi ngiyavuma ukubamba iqhaza ngokuzikhethela nenkululeko yami. Ngiyakuqonda ukuthi ubunikazi bami abuzukudalulwa kunoma ngubani. Ngiyaqonda ukuthi ngingahoxa ocwaningweni nganoma yisiphi isikhathi ngaphandle kokubeka isizathu futhi ngaphandle kokwesaba imiphumela emibi noma ukulahleka kwezinzuzo.

Ngiyavuma ukuthi [ngiqoshwe ngevidiyo / ngiqoshwe inkulumo / ngithwetshulwe izithombe] ngesikhathi ngibambe iqhaza kulolu cwaningo.

Angivumi ukuthi [ngiqoshwe ngevidiyo / ngiqoshwe inkulumo noma ngithwetshulwe izithombe] ngesikhathi ngibambe iqhaza kulolu cwaningo.

Igama lombambiqhaza…….

Isiginesha yombambiqhaza…….

Usuku……

Appendix E: English Survey Questionnaire

No.: Ward:

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809 Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za

SURVEY INSTRUCTIONS

Answer **all** the questions with a **tick** ✔ in the space provided.

You are sometimes told to skip over some questions in the survey. When this happens there will be a note that tells you what question to answer next, like this:

☐ Yes

☐ No (If No, Go to Question 1)

Please answer the questions in this survey about **this hospital stay only**.

ABOUT YOU	Q1	Date of admission		
	Q2	How old are you?		
	Q3	What is your gender?	☐ 1 Male	☐ 2 Female

	Q4	What is the highest grade or level of education that you have completed?	☐ 1 Grade 7 or less ☐ 2 Some high school but did not matriculate ☐ 3 Matriculated ☐ 4 College educated ☐ 5 4-year university degree ☐ 6 More than a 4-year university degree			
Domain of Care	Question		1	2	3	4
			Never	Sometimes	Usually	Always
Domain #1: Communication with nurses	Q5	During this hospital stay, how often did nurses treat you with courtesy and respect?				
	Q6	During this hospital stay, how often did nurses listen carefully to you?				
	Q7	During this hospital stay, how often did nurses explain things in a way you could understand?				
Domain #2: Communication with doctors	Q8	During this hospital stay, how often did doctors treat you with courtesy and respect?				
	Q9	During this hospital stay, how often did doctors listen carefully to you?				

	Q10	During this hospital stay, how often did doctors explain things in a way you could understand?				
Domain #3: Communication about medication	Q11	During this hospital stay, were you given any medicine that you had not taken before?	☐ 1Yes ☐ 2 No (If No, Go to Question 14)			
			Never	Sometimes	Usually	Always
	Q12	Before giving you any new medicine, how often did hospital staff tell you what the medicine was for?				
	Q13	Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?				
Domain #4: Nursing Services	Q14	During this hospital stay did you call for help from the nursing staff?	☐ 1 Yes ☐ 2 No (If No, Go to Question 16)			
			Never	Sometimes	Usually	Always
	Q15	After you called for help, how often did you get help as soon as you wanted?				
Domain #5: Discharge Information	Q16	During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I left.	☐ 1 Strongly disagree ☐ 2 Disagree ☐ 3 Agree ☐ 4 Strongly agree			

	Q17	When I left this hospital, I had a good understanding of the things I was responsible for in managing my health.	☐ 1 Strongly disagree ☐ 2 Disagree ☐ 3 Agree ☐ 4 Strongly agree			
	Q18	When I left this hospital, I clearly understood the purpose for taking each of my medications	☐ 1 Strongly disagree ☐ 2 Disagree ☐ 3 Agree ☐ 4 Strongly agree ☐ 5 I was not given any medication when I left The hospital			
			Never	Sometimes	Usually	Always
Domain #6: Physical Environment	Q19	During this hospital stay, how often were your room and bathroom kept clean?				
	Q20	During this hospital stay, how often was the area around your room quiet at night?				
	Q21	During this hospital stay, was your privacy respected?				
Domain #7: Pain Control	Q22	During this hospital stay, were you prescribed medication for pain?	☐ 1 Yes ☐ 2 No (If No, Go to Question 28)			

			Never	Sometimes	Usually	Always
	Q23	During your hospital stay, how well was your pain controlled?				
	Q24	During your hospital stay, how often did the hospital staff do everything they could to help you with your pain				

			0	1	2	3	4	5	6	7	8	9	10
Overall Experience: Rating 0 to 10	Q25	Using any number from 0 to 10, where **0 is the worst hospital possible and 10 is the best hospital possible,** what number would you use to rate this hospital?											

Overall Experience: Recommending Hospital	Q26	Would you recommend this hospital to your friends and family?	☐ 1 Definitely No ☐ 2 Probably No ☐ 3 Probably Yes ☐ 4 Definitely Yes

THANK YOU

PLEASE RETURN THE COMPLETED SURVEY TO THE RESEARCHER ONLY, I.E COLLEEN STUART

Appendix F: isiZulu Survey Questionnaire

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2809 Fax: 27 21-959 2872

E-mail: soph-comm@uwc.ac.za**IMIYALELO YENHLOLOVO**

No: Ward:

Phendula yonke imibuzo ngophawu ✔ esikhaleni osinikiwe

Kwesinye isikhathi utshelwa ukuthi weqe eminye imibuzo. Uma lokhu kwenzeka kuzoba noncazelo ekutshela ukuthi yimuphi umbuzo ozowuphendula ngokulandelayo, kanjena:

☐ Yebo

☐ Cha (Uma Cha, Iya kumbuzo 1)

Sicela uphendule lemibuzo mayelana nokuhlala kulesi sibhedlela kuphela.

MAYELANA NAWE	Q1	Usuku lokungena esibhedlela		
	Q2	Uneminyaka emingaka?		
	Q3	Buyini ubulili bakho?	☐ 1 Owesilisa	☐ 2 Owesifazane

	Q4	Yiliphi ibanga eliphakeme kakhulu noma ileveli yemfundo oyiqedile?	☐ 1 Ibanga 7 noma ngaphansi ☐ 2 isigaba sesikole samabanga aphakeme kodwa wangalenza ibanga leshumi ☐ 3 Ibanga Leshumi ☐ 4 Waya, waqeda ekolishi ☐ 5 Iziqu zeminyaka engu-4 zasenyuvesi ☐ 6 Ngaphezulu kwe-4 yeminyaka weziqu zasnyuvesi			
Inkambu yokunakekelwa	Umbuzo		1	2	3	4
			Akukaze	Ngezinye Izikhathi	Imvamisa	Njalo
Inkambu #1: Ukuxhumana nabahlengikazi	Q5	Ngesikhathi ulaliswe esibhedlela, abahlengikazi bakuphatha kangaki ngenhlonipho nangesizotha?				
	Q6	Ngesikhathi ulaliswe esibhedlela, abahlengikazi bakulalela kangaki ngokucophelela?				
	Q7	Ngesikhathi ulaliswe esibhedlela, kukangaki abahlengikazi bechaza izinto ngendlela ongayiqonda?				

Inkambu #2: Ukuxhumana nodokotela	Q8	Ngesikhathi ulaliswe esibhedlela, odokotela bakuphathe kangaki ngenhlonipho nangesizotha?				
	Q9	Ngesikhathi ulaliswe esibhedlela, odokotela bakulalele kangaki?				
	Q10	Ngesikhathi ulaliswe esibhedlela, odokotela babechaza kaningi kangakanani izinto ngendlela ongayiqonda?				
Inkambu #3 Ukuxhumana ngemithi	Q11	Ngesikhathi ulaliswe esibhedlela, ngabe wanikezwa noma imuphi umuthi owawungazange uwaphuze phambilini?	☐ 1 Yebo ☐ 2 Cha (uma uthi Cha, Iya kumbuzo 14)			
			Akukaze	Ngezinye Izikhathi	Imvamisa	Njalo
	Q12	Ngaphambi kokukunikeza umuthi omusha, abasebenzi besibhedlela bakutshela kangaki ukuthi umuthi wenzelwe ini?				
	Q13	Ngaphambi kokukunikeza umuthi omusha, abasebenzi besibhedlela bachaze kangaki imiphumela emibi engaba khona ngendlela ongayiqonda?				

Inkambu #4: Izinsizakalo Zabahlengikazi	Q14	Ngesikhathi ulaliswe esibhedlela uke wacela usizo kubahlengikazi?	☐ 1 Yebo ☐ 2 Cha (uma uthi Cha, Iya kumbuzo 16)			
			Akukaze	Ngezinye Izikhathi	Imvamisa	Njalo
	Q15	Ngemuva kokucela usizo, uluthole kangaki ngokushesha njengoba ubufuna?				
Inkambu #5: imininingwane ngokuphuma esibhedlela	Q16	Ngesikhathi ulaliswe esibhedlela, abasebenzi babheka engikukhethayo kanye nokwomndeni wami noma umnakekeli wami ekuthatheni isiqumo sokuthi ngizoba naziphi izidingo zempilo, lapho ngiphuma esibhedlela.	☐ 1 Angivumelani neze ☐ 2 Angivumelani ☐ 3 Ngiyavuma ☐ 4 Ngivuma kakhulu			
	Q17	Lapho ngiphuma esibhedlela, ngangiziqonda kahle izinto okumele ngizinake ekuphatheni impilo yami.	☐ 1 Angivumelani neze ☐ 2 Angivumelani ☐ 3 Ngiyavuma ☐ 4 Ngivuma kakhulu			
	Q18	Lapho ngiphuma kulesi sibhedlela, ngayiqonda kahle inhloso yokuphuza imithi yami ngayinye	☐ 1 Angivumelani neze ☐ 2 Angivumelani ☐ 3 Ngiyavuma ☐ 4 Ngivuma kakhulu ☐ 5 Anginikwanga muthi lapho ngishiya isibhedlela			

			Akukaze	Ngezinye Izikhathi	Imvamisa	Njalo
Inkambu #6: Indawo ohlezi kuyo	Q19	Ngalesi sikhathi sokuhlala esibhedlela, igumbi lakho nendawo yokugezela yagcinwa ihlanzekile kangaki?				
	Q20	Ngesikhathi sokuhlala esibhedlela, bekuvame kangakanani ukuthi indawo ezungeze igumbi lakho ithule ebusuku?				
	Q21	Ngesikhathi ulaliswe esibhedlela, ingabe ingasese lakho lalihlonishwa?				
Inkambu#7: Ukulawulwa Kwezinhlungu	Q22	Ngesikhathi ulalisiwe esibhedlela, ngabe wanikezwa imithi yezinhlungu?	☐ 1 Yebo ☐ 2 Cha (uma uthi Cha, Iya kumbuzo 28)			

			Akukaze			Ngezinye Izikhathi		Imvamisa		Njalo		
	Q23	Ngesikhathi ulaliswe esibhedlela, izinhlungu zakho zazilawulwa kahle kangakanani?										
	Q24	Ngesikhathi ulaliswe esibhedlela, kukangaki abasebenzi basesibhedlela benza konke okusemandleni ukukusiza ngobuhlungu bakho										
Okuhlangenwe nakho sekukonke: Isilinganiso esingu-0 kuye ku-10	Q25	Usebenzisa noma iyiphi inombolo kusuka ku-0 kuye ku-10, lapho **u-0 sinesibhedlela esibi kunazo zonke futhi u-10 isibhedlela esihle kunazo zonke,** ungasebenzisa yiphi inombolo ukukala lesi sibhedlela?	0	1	2	3	4	5	6	7	8	9	10
Okuhlangenwe nakho sekukonke: Ukunconywa Kwesibhedlela	Q26	Ungasincoma lesi sibhedlela kubangani nomndeni wakho?	☐ 1 Impela Cha ☐ 2 Mhlawumbe Cha ☐ 3 Mhlawumbe yebo ☐ 4 Impela yebo										

Appendix G: University of the Western Cape Ethics Approval

UNIVERSITY of the WESTERN CAPE

RESPICE PROSPICE

60 YEARS of hope, action & knowledge

06 December 2021

Ms C Stuart
School of Public Health
Faculty of Community and Health Sciences

Ethics Reference Number:	BM21/10/36
Project Title:	Factors influencing inpatient satisfaction with public health services at R K Khan Hospital, Durban, eThekwini District, KwaZulu-Natal, South Africa.
Approval Period:	**06 December 2021 – 06 December 2024**

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project and the requested amendment to the project.

Any further amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report annually by 30 November for the duration of the project.

For permission to conduct research using student and/or staff data or to distribute research surveys/questionnaires please apply via:
https://sites.google.com/uwc.ac.za/permissionresearch/home

The permission letter must then be submitted to BMREC for record keeping purposes.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

Appendix H: Department of Health Ethics Approval

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

DIRECTORATE:
Health Research & Knowledge Management

Physical Address: 330 Langalibalele Street, Pietermaritzburg
Postal Address: Private Bag X9051
Tel: 033 395 2805/ 3189/ 3123 Fax: 033 394 3782
Email: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

NHRD Ref: KZ_202112_009

Dear Ms C. Stuart
(UWC)

Approval of research

1. The research proposal titled **'Factors influencing inpatient satisfaction with public health services at RK Khan, Durban, eThekwini District, KwaZulu Natal, South Africa.'** was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

   The proposal is hereby **approved** for research to be undertaken at RK Khan Hospital.

2. You are requested to take note of the following:
   a. *All research conducted in KwaZulu-Natal must comply with government regulations relating to Covid-19. These include but are not limited to: regulations concerning social distancing, the wearing of personal protective equipment, and limitations on meetings and social gatherings.*
   b. *Kindly liaise with the facility manager BEFORE your research begins in order to ensure that conditions in the facility are conducive to the conduct of your research. These include, but are not limited to, an assurance that the numbers of patients attending the facility are sufficient to support your sample size requirements, and that the space and physical infrastructure of the facility can accommodate the research team and any additional equipment required for the research.*
   c. *Please ensure that you provide your letter of ethics re-certification to this unit, when the current approval expires.*
   d. *Provide an interim progress report and final report (electronic and hard copies) when your research is complete to* ***HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200*** *and e-mail an electronic copy to hrkm@kznhealth.gov.za*
   e. *Please note that the Department of Health shall not be held liable for any injury that occurs as a result of this study.*

For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely

pp.

Dr E Lutge
Chairperson, Health Research Committee
Date: 13/01/2022

Appendix I: R.K. Khan Hospital Ethics Approval

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

Physical Address : R.K. Khan Circle
Physical Address : CHATSWORTH
Tel: [031] 4596001 Fax:[031] 4011247 Email:Dianne.naicker@kznhealth.gov.za
www.kznhealth.gov.za

DIRECTORATE:
R.K. KHAN HOSPITAL
OFFICE OF THE SENIOR
MANAGER: MEDICAL SERVICES

ENQUIRIES: DR B.S. MADLALA

21 JANUARY 2021

Ms. C. Stuart
School of Public Health
Faculty of Community and Health Sciences

Dear Ms Stuart

RE: PERMISSION TO CONDUCT RESEARCH STUDY: FACTORS INFLUENCING INPATIENT SATISFACTION WITH PUBLIC HEALTH SERVICES AT R.K. KHAN HOSPITAL, DURBAN, ETHEKWINI DISTRICT, KWAZULU-NATAL, SOUTH AFRICA

Permission is granted to conduct the above research study at this institution.

Please note the following:

1. Please ensure that you adhere to all the policies, procedures protocols and guidelines of the Institution with regards to this research study.
2. Please ensure this office is informed before you commence your research study and your University's Ethics approval must be attached.
3. **You will be expected to provide feedback on your findings to this institution.**
4. You will be liaising with: Mrs C.L.Z. Simelane
   Deputy Nurse Manager
   Tel: 031-4596030 / 6384

Yours faithfully

DR B.S. MADLALA
SENIOR MANAGER: MEDICAL SERVICES