



**FOODSERVICE SATISFACTION LEVELS AMONG  
PATIENTS IN PRIVATE HOSPITALS IN KWAZULU-NATAL**

BY

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## DECLARATION

I, the undersigned, hereby declare that this submission is as a result of my own work and has not been submitted to any other University. All other sources are acknowledged in the list of references.

Chad Saus

29/7/2020  
Date

## DEDICATION

To my dearest Dad who is my pillar of strength during the past few years and my late Mum, Margaret Saus who passed away last year after a long battle with lung cancer Rest in Peace. I am forever grateful for all the support that you have both given me during my years of studies.

*“In life, nobody, except your parents will care to overlook who you have become and continue believing in what you can still be – WishesMessages.com”*

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## **ABSTRACT**

The quality of foodservice is strongly associated with patient satisfaction in hospitals, and most hospital foodservice organisations are changing their focus on to patient care in order to boost patient satisfaction. The public's perception of hospitals is always considered as an institution, and institutional catering is generally viewed as low class. This negative image of hospital food is common and is therefore not necessarily related to the food itself but to other factors in hospitals. This study aims to investigate the levels of satisfaction with foodservice amongst patients in private hospitals in KwaZulu-Natal. A quantitative research approach was used for the study, and the data was collected by means of a structured questionnaire that was targeted at patients admitted to various wards at three private hospitals in KwaZulu-Natal. Overall, the study concluded that patients were generally satisfied with the foodservice in hospitals. However, some patients were found to be dissatisfied with cultural considerations in menu choices, meal serving times and the availability of healthy food choices.

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# CHAPTER ONE: INTRODUCTION

## 1.1 Introduction

Due to the rise in competition within the healthcare industry, many hospital foodservice operations are looking for strategies to improve patient satisfaction (Theurer 2011:17). The public's perception of hospitals is always considered as an institution, and institutional catering is generally viewed as being inferior (Bender 1984:912). The negative image of hospital food is common, and is therefore not necessarily related to the food itself, but to other factors in hospitals (Cardello 1996:20). There are many factors that affect patient satisfaction in foodservice in private hospitals. These factors include the food temperature, menu design, food satisfaction and food wastage. A patients' overall perception of the hospital experience is based on their food expectations and other aspects of foodservice delivery. Patients seem to be more satisfied once their expectations are met (Fottler, Ford, Robbert, Ford and Spear 2000:91). Therefore, provision of hospital foodservices must go beyond the expectation levels of the patient, and must be considered as an essential contribution towards the quality of service in a hospital (Fallon, Gurr, Hannan-Jones and Bauer 2008:45). Today, the general population eat out more often at food outlets and restaurants. When they are admitted to private hospitals, they often expect the meal quality, presentation and service delivery to be the same as that of a restaurant.

Hospital foodservice standards are important in gaining the market share edge in a highly competitive healthcare industry (Theurer 2011:17). According to Buzalka (2008:35), many hospital foodservice organisations are evolving, to be more focused on patient care in order to improve patient satisfaction. Gray, Williamson, Karp and Dalphin (2007:22) mentioned that, with today's patient's adequate knowledge and experience of the world around them and expecting more than before, experts are of the opinion that the way to achieve competitive advantage in today's service industry, without compromise, is through the quality of foodservice provided to patients. Gray, Williamson, Karp and Dalphin (2007:22) further mention that the quality of service and patient satisfaction has a direct link to patients' behavioural intentions to recommend the hospital to other patients or re-use it. Hekkert, Cihangir, Kleefstra, Van den Berg

and Kool (2009:68) found that patient satisfaction is a major factor in advancing superior healthcare services to address patients' increasing demands for excellent service.

## **1.2 Problem statement**

Kotler and Keller (2012:259) warns that organizations are supposed to care about their customer (patient) satisfaction level because patients can easily spread negative information to the rest of the world. In healthcare services, patient satisfaction is of special importance to service providers in private practice. Food served in a hospital should be regarded as part of the clinical treatment process (Aase, 2011:1118). Factors that affect the patient satisfaction with regards to food quality while they are admitted in hospitals are: menu and menu design, the taste of the food, food presentation, food quality, cultural consideration and temperature of the food. These factors are important to achieve patient satisfaction. Patients enthusiastically look out for mealtimes, and it has been broadly reported in the literature that food and nutrition services in hospitals are significant contributors to the quick recovery and the wellbeing of patients (Kokkinakis, Kokkinakis Kyriakidis, Markaki and Fragkiadakis 2011:1073). The satisfaction of patients improves if food in the hospital reminds them of their food at home. Personal contact with catering staff can enhance patient satisfaction (Doorduyn, Gameren, Vasse and de Roos 2016:1174).

## **1.3 Aims and objectives of the study**

The aim of this study is to investigate the levels of satisfaction with foodservice amongst patients in private hospitals in KwaZulu-Natal.

The objectives of the study are to:

- Determine the level of satisfaction of patients in terms of foodservices in private hospitals in KwaZulu-Natal.
- Ascertain the challenges facing foodservices in hospitals in KwaZulu-Natal.
- Examine how foodservices in private hospitals in KwaZulu-Natal can be improved.

#### **1.4 Significance of the study**

Studies conducted by Navarro, Boaz, Krause, Elis, Chernov, Giabra, Levy, Giboreau, Kosak and Mouhieddine (2016:1158) indicate that hospital foodservices have not been well-researched. This has created an existing research gap on patient's satisfaction level with foodservices. Therefore, the significance of this study is to identify the level of satisfaction with foodservices amongst patients in private hospitals in KwaZulu-Natal (KZN), and to identify gaps that exist in this field of study. The study will further assist the hospital foodservice industry to determine the perceptions of patients with regards to menu design, food temperature, taste and presentation, and food wastage. The findings of the study will also assist the hospital foodservice companies to identify the reasons for dissatisfaction and the recommendations will assist the food companies to improve their service levels.

#### **1.5 Delimitation**

The management and staff of the private hospitals will not be included in the study, as the study endeavours to ascertain only the patient's opinions with regards to foodservice satisfaction level amongst patient in private hospitals in KZN. Hence, only patients admitted at the three-private hospitals in KZN will be included in the study. Due to time and resource constraints, the geographical area is limited to the KwaZulu-Natal Province.

#### **1.6 Limitations**

Sarantakos (2012:20) argues that the lack of participation, preciseness and truthfulness are often limitations to social-related studies. These issues may possibly undermine the accuracy of the current study. More so, some patients might feel that they would be victimized for giving negative comments, therefore would not want to take part in the study. Hence, to address these limitations, the researcher informed the patients that their names or identity will not be disclosed.

## **1.7 Ethical considerations**

The ethical norms prescribed by Gumede (2015:21) on how information is collected, processed and used were applied in this study. The researcher informed patients on the aims and objectives of the study, and their permission was obtained for participation in the study. The confidentiality of information shared, and the anonymity of patients was assured. Ethical clearance for this research was obtained from the Research Ethics Committee of the Durban University of Technology. Permission to conduct the study was requested from three private hospitals in KZN, as well as from an outsourcing company, and was obtained. Approval was granted by the Group General Manager of the three private hospitals in KZN.

## **1.8 Outline of the dissertation**

### **Chapter One: Introduction**

Chapter one provides the introduction to the study, the background, aims, objectives, problem statement and limitation of the study.

### **Chapter Two: Literature review**

Chapter two examines the conceptual framework and reviews relevant literature on patient foodservice satisfaction in hospitals.

### **Chapter Three: Research methodology**

Chapter three presents the research methodology, the research design, the data collection instrument, sampling techniques, and as well as the reliability and validity of the study.

### **Chapter Four: Presentation and discussion of results**

Chapter four presents the data analysis and a discussion of the research findings.

### **Chapter Five: Conclusions and recommendations**

Chapter five includes the conclusion and recommendations resulting from the findings in chapter four. This chapter also discusses procedures that if implemented can help the foodservice company curb challenges on patient's foodservice satisfaction.

## **1.9 Conclusion**

The patient satisfaction in hospitals is a very important element in the evaluation of the quality of good healthcare services, and the quality of food can determine the patient's satisfaction with the total hospital experience. There are various reasons affecting hospital foodservice satisfaction which does not only include issues affecting patient satisfaction, but also the elements affecting the quality of foodservice to the patient. Hence it is important to consider these factors in order to improve patient's nutritional status and health. This chapter introduced the context of the research, and the following chapter will focus on a review of pertinent literature based on the study.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

Patient satisfaction is considered as the main element in improving superior healthcare services, and to satisfy patients' needs for service excellence (Hekkert et al., 2009:68). Patient satisfaction on foodservices remains a universal pandemic, and South Africa is not exempted from this (Abdelhafez Al Qurashi, Al Ziyadi, Kuwair, Shobki and Mograbi 2012:123). Abdelhafez Al Qurashi et al (2012:124) maintain that although research has been conducted on levels of satisfaction in healthcare facilities, studies on patient satisfaction on foodservices is relatively low, and the affiliation involving patient satisfaction and perceived foodservice quality is largely unexplored (Theurer 2011:15). There are limited studies on patient satisfaction on foodservices in the hospital and this has recently drawn the attention of researchers (Donini, Castellaneta, Guglielmi, DeFelice, Savina, Coletti, Paolini and Cannella 2008:114).

This chapter presents the literature review on the level of satisfaction of patients with foodservices in a global and national setting. The foodservice quality in hospitals is examined with specific reference to patient satisfaction, patient nutritional needs, food temperature, menu design, environmental factors, methods of food preparation and service in hospitals and food wastage. Challenges facing foodservices in hospitals and possible solutions are also explored in the literature review.

### **2.2 Foodservice quality in hospitals**

Patient satisfaction with hospital service is a very important element in the evaluation of the quality of healthcare services. Theurer (2011:30) noted that the quality of food can determine the patient's satisfaction with the total hospital experience, and Sheehan-Smith (2006:581) and Jeong and Seo (2014:1276) asserted that food quality is related to total patient satisfaction. In addressing the general patient satisfaction, foodservice seems to go unnoticed, as other elements such as nursing and physician quality are more easily sighted (Abdelhafez, Qurashi, Ziyadi, Kuwair, Shobki, Mograbi 2012:50). Yet, the quality of foodservice can influence the overall patient satisfaction level in hospitals (Watters, Sorensen, Fiala and Wismer 2003:1347). If the foodservice fails to meet the patient's expectations, patients may decline eating the hospital food,



and this may lead to malnutrition and contribute to the deterioration of their health condition (Wright, Connelly and Capra 2006:182).

A study conducted on the Royal Alexandra Hospital in the U.S.A indicated that good food can influence a patient's speedy recovery and wellbeing (Watters, Sorensen, Fiala and Wismer 2003:1347). Foodservices in hospitals are vital requirements for the healthcare management of patients, and it is imperative to consider the provision of meals to patients in hospitals as a vital component of hospital treatment (Jamaluddin, Manan, Basri and Karim 2010:261). Porter and Cant (2009:82) concur that foodservice quality to be the best patient-satisfaction analysis, as good food and health services have advantageous effects on the recovery and quality of life of the patients in the hospital (Doorduijn, Gameren, Vasse, and Roos 2016:1174).

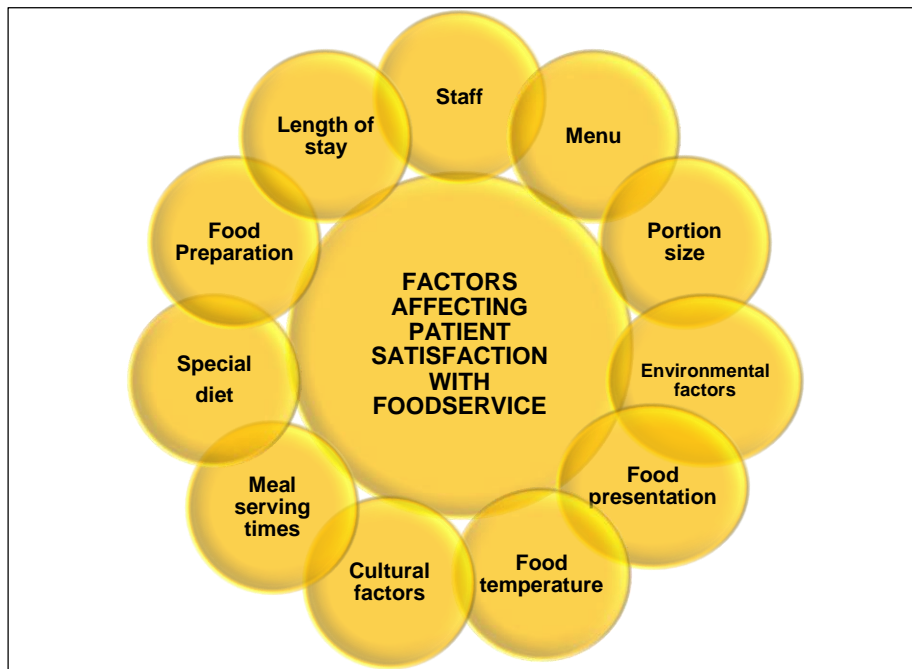
A study conducted by Fernando and Wijesinghe (2016:20) at teaching hospitals in Karapitiya, Sri Lanka, on patient opinions on hospital foodservice, revealed that amongst the patients who consumed a hospital diet, the quality of foodservice was rated as satisfactory by the majority of patients. The aroma, taste, and variety of food were described as unsatisfactory by the most participants when compared to some other factors of hospital foodservice. Another study by Messina, Galli, Giaccio and Peronace (2009:36), on patient satisfaction with hospital food, indicated that food quality (taste, presentation, flavour, preparation, variety) is the best forecaster of patient satisfaction in general. This study proposed a broader menu, improved timing, and information on ingredients, presentation and food delivery, as vital variables to consider in the improvement of hospital foodservice. Al-Torky, Mohamed, Eman, Mohamed, Fouad, Yousef, Nesreem, and Ali (2015:37) undertook research in Shohag on patient satisfaction and found that 64.2% of the respondents were happy with the hospital foodservices. However, this result is low compared to research conducted by Stanga, Zurfluh, Roselli, Sterchi, Tanner and Knecht (2003:241-246), where a large proportion of respondents were satisfied with hospital food. Abdelhafez et al. (2012:123) also found that 78.8% of patients were pleased with hospital foodservices in Makkah, Saudi Arabia.

Ahmed, Jones, Redmond, Hewedi, Wingert, and Gad El Rab (2015:54), is of the view that most patients have a negative perception about hospital food as being tasteless, cold, badly served and poorly presented. Kim, Kim, and Lee (2010:163-172) affirmed that improving hospital foodservice quality is quite a daunting task, as this requires the understanding of the process flow from start to finish. There are various reasons affecting hospital foodservice satisfaction which does not only include issues affecting patient satisfaction, but also the elements affecting the quality of foodservice to the patient, and hence it is important to consider these factors to improve the patient nutritional status and health.

### **2.3 Factors that affect patient satisfaction with foodservice in hospitals**

Kim, Kim and Lee (2010:172) indicated that there are various factors that patients rely on to evaluate food quality, such as sanitation, temperature, taste temperature, nutrition meal time, portion size, food server's attitude and meal time. According to Luning and Marcelis (2006:378), food supply, demographic situations, social situations, and consumption behaviour, are further determinants of patient satisfaction with food quality and service. Moreover, the affiliation between the hospital and suppliers has a consequence on the quality of food that is being provided to patients, and therefore the food procurement process, food production and foodservice to the patient's further impacts on the patient satisfaction (Ahmed et al., 2015:54). Heat (2016) defined patient satisfaction as the level of which a patient is happy with their healthcare which includes the measure of care quality that includes the effectiveness of their care and their level of empathy that they have experienced as a patient whilst being admitted in hospital.

Figure 2.1 highlights the factors affecting patient satisfaction with foodservice in private hospitals that will be discussed in this chapter, and includes: staff, menu and menu design, environmental factors, food presentation, food temperature and cultural factors, taste of food, serving time and portion size.



**Figure 2. 1: Factors that determine patient satisfaction with foodservices**

### **2.3.1 Staff**

Hwang, Eves, and Desombre (2003:143) noted that the behaviour of staff responsible for foodservice in hospitals, is a component that contributes to the foodservice quality, and their mannerisms has a bearing on the patient's perception on meal quality. Johns, Hartwell and Morgan (2010:51) concurs that the attitude of the staff serving food has a greater impact on the patient's experience than the food. According to Meiselman (1996:239), it is not all about food, but the food, the patient and the circumstances in which the food is served. Patient satisfaction is of paramount importance in private hospitals because those who can afford private medical services have many hospitals to choose from. Therefore, the level of patient's services in a private hospital is very important to increase the bed occupancy (Suki, Lian and Suki 2011:46). In private hospitals, the foodservice employees are responsible for the communication between the kitchen staff and the patients, to ensure that the patients are assisted with selecting meal choices, serving the correct meal that was ordered by the patient orders, and making menu orders. Patients feel comfortable when close interactions occur between hospital staff members and them during their stay in hospital (Reynolds 2003:30). Shockey (2003:87) further believes that foodservice employees build strong bonds with patients during their stay in hospital.

Belanger and Dube (1996:360) mentioned that when foodservice staff are delivering meals, they must be conscious of the fact that some patients have feelings of anxiety and fear. It is important to communicate clearly to patients when their demands cannot be addressed, and when their eating plan is changed (Belanger and Dube 1996:360). Watters et al. (2003:1349) proposed that it is important to provide patients with information on meal preparation and the specific ingredients used to prepare the meal and menu options so that communication with patients will be improved. Proper explanation of the menu will also facilitate food consumption, because the patients will have a clear understanding of what to expect when meals are ordered. The patients' reply to a question can be subjective to the behaviour of the ward hostess (Warren 2015:82).

According to Lau and Gregoire (1998:1305), the attention of staff responsible for serving food and descriptions of food items on the menu, compounds the maximum elements of patient satisfaction with food. Lau and Gregoire (1998:1305) revealed that patient satisfaction rating was high when their expectations about the attitude of foodservice staff were addressed. Jessri, Mirmiran, Jessri, Johns, Rashidkhani, Amiri, Barfmal and Azizi (2011:531) asserted that this concurs with the reports of researchers in, Australia, Canada and Iran, where the qualities of staff (helpfulness, menu knowledge, friendliness, and attentiveness general interaction with patients) serving food, had a noteworthy result on patient's satisfaction with foodservices.

The physical appearance of foodservice staff is also a contributing factor to patient's satisfaction levels (Vilnai-Yavetz and Rafaeli 2011:164; Vilnai-Yavetz and Rafaeli 2011:164). This appearance is described by how employees are seen through their clothing, jewellery, and other essentials of appearance (Vilnai-Yavetz and Rafaeli 2011:164). Fallon et al. (2008:44), noted that issues with catering staff such as staff neatness and cleanliness always score higher in food quality satisfaction surveys.

### **2.3.2 Menu and menu design**

The path from the patient's choice of meal to the actual service of the meal, starts with the menu (Hartwell, 2004:44). Therefore, the first point of contact between the kitchen and the patient is the menu (Johns et al., 2010:181). According to Jessri et al.

(2011:533), a well-balanced and a well-planned menu will positively affect patient satisfaction levels, reduce malnutrition in the hospital and provide an excellent prospect to expose patients to a healthy diet. It is imperative to place special consideration to patient choices in menu planning, because the menu is a vital element in patient satisfaction and is associated with a positive hospital meal service experience (Navarro et al., 2016:1153). Bannerman, Scott and Davidson (2008:41) noted that hospital menu structures should address the dietary needs of the patients due to the differences that is associated with different patient groups. Watters et al. (2003:1349) maintains that patients should be offered adequate information on the menu choices in order to develop communication patterns with the patients. A clear and proper explanation of the menu will further improve food intake as patients will know exactly what to expect at mealtimes (Johns et al., 2010:181).

When designing and planning a hospital menu, it is important to have a menu cycle that is based on a 21-day or a 4-week cycle, as this will cater for long-term patients and prevent menu fatigue (Grieg 2016: 2). The menu must meet the nutritional content and guidelines that are stipulated by a dietician, to ensure that therapeutic diets are addressed. Furthermore, providing patients with a nutritionally adequate menu is an essential factor in combating malnutrition in hospitals (Hartwell, 2004:56).

### **2.3.3 Presentation of food**

The presentation of food is a very important determinant of patient satisfaction with food in hospitals (Dall'Oglio, Nicolò, Di Ciommo, Bianchi, Ciliento, Gawronski, Pomponi, Roberti, Tiozzo, and Raponi 2015:584). Zellner, Lankford, Ambrose, and Locher (2010:575) mentioned that although many people think that the taste of food is the main factor that influences food intake, the first sensory contact with the food is through the eyes, and therefore the physical appearance is also a factor that greatly determines food intake. Wadhera and Capaldi-Phillips (2014:132) noted that there are many visual factors that are interrelated with food appearance, such as the colour, variety, portion size, and volume. These factors influence food acceptance and consumption (Zellner, Loss, Zearfoss and Remolina 2014:31; Navarro, et al., 2016:1154). Spence (2017:14) asserts that extra concentration should be placed on food appearance. Hartwell, Shepherd, Edwards and Johns (2016:293) maintain that

the poor appearance of food leads to inadequate nutrition in hospitals, and that is why the meal presentation constitutes an integral part of patient satisfaction. In many instances, patients in hospitals have a lesser appetite than when they are home, hence well-presented food can stimulate their appetite to desire food (Stanga et al., 2003:241), and plated meal services must display quality presentations which will assist the foodservice organization to achieve high standards (Hwang, Desombre, Eves and Kipps 1999:293).

#### **2.3.4 Temperature of food**

Tranter, Gregoire, Fullam and Lafferty (2009:2068) asserted that food temperature has a significant effect on patient satisfaction. Sahin, Demir, Celik and Teke (2006:384) and Wright et al. (2006:190) noted that hot food was considered important to patients in a foodservice satisfaction survey undertaken in Turkey and Australia. Stanga et al. (2003:246) maintain that patients in Switzerland believe that food temperature is very vital, and to keep the food continuously hot, the technique of food transportation from the kitchen to the ward should be carefully considered. A study conducted in Spain to assess the impact of temperature on the amount of food consumed by patients, revealed that patients who ate hot food that was stored in isothermal trolleys, ate very well compared to those that were served food not stored in the isothermal trolleys, (González Molero, Oliveira Fuster, Liébana, Oliva, Laínez López, Muñoz Aguilar 2008:54). In another similar study undertaken by Warren (2015:17) in South Africa, 87% of patients indicated they were happy with the temperature of cold food such as cold desserts and yoghurts, salads, sandwiches, as the temperature was maintained at the ideal temperature for meal consumption.

#### **2.3.5 Taste of food**

Studies undertaken in Canada by O'Hara, Harper, Kangas, Dubeau, Borsutzky and Lemiren (1997:405), and in Australia by Kennewell and Kokkinakis (2001:37), revealed that the taste of meals is the most important element of overall foodservice satisfaction in hospitals. Also, Wright et al. (2006:188) noted that meal taste influenced patients' satisfaction level with food in Australian hospitals. Similarly, Jessri et al. (2011:533) established that the taste of food was found to be a determinant to patient satisfaction with food. Fernando and Wijesinghe (2016:20) undertook a study

of 316 patients who received in-patient treatment at T.H. Karapitiya teaching hospital in Sri Lanka, and concluded that 78% of the patients were pleased with the taste of food at the hospital. A study similar to that was done by Sahin et al. (2006:381), to determine the foodservice satisfaction level in a military hospital in Turkey, in which taste and appearance of food was noticed as the highest component of dissatisfaction.

### **2.3.6 Food portion size**

Huizinga, Carlisle, Cavanaugh, Davis, Gregory, Schlundt and Rothman (2009:324) confirmed that portion size is important in menu pricing and controlling food waste, and suggested that patients should read the menu and understand what meals they are ordering before it is served to them, in order to prevent wastage and dissatisfaction. A study conducted by Jessri et al. (2011:534), in a hospital in Iran, found that the small meal portion sizes were a problem because the hospital did not cater for an additional snack service, and therefore more than two-thirds of the patients felt hungry during hospitalization. Although a study conducted by Curll, DiNardo, Noschese and Korytkowski (2010:355) in Pennsylvania USA, reported that there was overall satisfaction with their meal portion size, it was noted that some specific race groups considered the food portions to be insufficient. This may be as a result of a difference in culture (Curll et al., 2010:355). Curll et al. (2010:355) stated that patients should be allowed to ask for a second helping, as their medical condition may vary, and this may require different nutritional requirements.

### **2.3.7 Meal serving times**

Dickinson, Welch, Ager and Costar (2005:269) and Doorduijn et al. (2015:1174), stressed that meal serving times greatly impacts on patient's satisfaction with foodservice. Meal service times can harmfully sway patients' overall satisfaction, as some patients need their meals served at times appropriate to their medication requirements (Watters et al., 2003:1348). Research conducted in Canada by Dube et al. (1994:401) to determine patients' perceptions of hospital food and dietary services, confirmed that 78% of patients were happy with the service times of meals and beverages. Furthermore, 83% of patients revealed that the prompt delivery of meals as being an important influence to excellent service (Dube, Trudeau and Belanger 1994:401). Meals that arrive on time were reported as being very important to elderly

patients in the UK who look forward to mealtimes, whilst other patients were found to be dissatisfied with foodservice when meals were late (Johns et al., 2010:182).

The traditional meal system in a hospital usually consists of three meals, which include breakfast, lunch and dinner, with an additional service of hot and cold beverages and sometimes snacks (Doorduyn et al., 2016:1174). According to a study conducted by Van der Meij and Kruizenga (2016:23), only 1 in 10 hospitals in the Netherlands offers flexible mealtimes. This means that when a meal is missed by the patient, the meal can be easily served by the ward hostess to the patient when they are available or back in their ward and ready for foodservice. According to Doorduyn et al. (2015:20), the mealtimes are around 7.15am for breakfast, 12.15 pm for lunch and 17.15pm for dinner. Dinner is often served earlier than most patients would eat at home, which leads to a long duration of time between dinner and breakfast (Mibey and Williams, 2002:95). Some patients may prefer their main meal at mid-day while others may prefer it in the evening, hence the menu must be able to provide adequate meal choice and portion sizes for all patients if it is likely to help patients improve their food intake (Oh, 2000:58). Overall, patients can become dissatisfied with delayed meal services, and this may influence their overall satisfaction with different areas of the foodservice when meals are late (Johns et al., 2010:181).

### **2.3.8 Patients special diet and nutritional requirements**

There are a variety of menu diets that patients in hospital must adhere to. The common patient diets include normal diets, short-term liquid diets, soft transitional diets, restricted or special diets, and therapeutic hospital diets. Each type of diet may have an impact on the patient's meal satisfaction. A special diet is a diet prescribed by a physician for a patient that may warrant certain restrictions for example, calories, sodium content, and fat content (Schirg 2007:41). Restricted diets include diverse types of diets for patients based on their personal medical requirements. These could incorporate an array of special diets that limit calories, fat, salt and other substances based on the patient's medical requirements. For example, a restricted-fat diet permits only low-fat versions of milk, cheese, cereal and ice cream but does not place limits on the amount of fresh fruit or vegetables a patient may eat (Goel 2018:2). A restricted



diet may also modify the other types of diets. For example, a postoperative patient with heart disease may be prescribed a low-fat full-liquid diet (Goel 2018:3).

A study done in South Africa by Warren (2015:85) did not find any important relationship between being on a special diet and the level of patient satisfaction.

Similar findings were evident in a study undertaken by Fallon et al. (2008:46), who reported no major disparity in general patient satisfaction which relies on taking in a special diet. Several special diets require change to the texture, appearance taste, and food presentation (Fallon et al. 2008:46). O'Hara et al. (1997:407), noted that being on a special diet can determine a patients' satisfaction level with the food, and that when attention is given to texture-modified diets to make them appealing, these diets do not have effect on patient satisfaction.

### **2.3.9 Methods of food preparation**

Methods of food preparation can affect patient's satisfaction with foodservice. Several foodservice preparation systems now exist in hospitals. These include cook–chill, sous vide, cook-serve and steamplivity methods.

#### **2.3.9.1 Cook-chill method**

According to Huizinga et al. (2009:324), the term cook-chill refers to a food preparation system which relies on the full cooking of food followed by fast chilling, with storage in controlled low-temperature conditions that are just above freezing (between 0+1°C and +3°C), followed by complete re-heating close to consumption. The cook-chill foodservice permits food to be prepared ahead of mealtimes, so hot entrée dishes for both main meals can be made during a single working shift by the production staff. This can be cost effective for catering organisations, as meals are often made well ahead of time of patient menu selection, so it is impossible to consider patient's personal choices about the quantity of food and type of food required. According to McClelland and Williams (2003:245), these cooking methods can ensure that the meals on the plate are just about the same volume and portion size.

There are several advantages associated with this type of cooking method. Food can be purchased at any stage of production, either as basic ingredients, or as

components of partially prepared recipes, allowing food-service units to save labour and time. The cook-chill foodservice system has a number of advantages which include increased productivity, reduction in operational costs, and the maximization of production volumes.

McLelland and Williams (2003:245) conducted a study amongst 80 hospitals in New South Wales, Australia and found that 36 hospitals were using the cook-chill foodservice system. The main models of foodservice in Australia are the cook-chill system (Nettles and Gregoire 2006:107). The study found that hospitals with a cookchill system had menus that were more likely to meet patients' nutritional needs and provide a greater choice of hot menu items than those hospitals that were using a cook-serve system. Gray, Orme, Pitt and Jones (2017:19) stated that there is evidence from Australia that the introduction of cook-chill systems enhanced the food quality in hospitals in New South Wales from 1986 to 2003. There is also recognition that the quality of cook-chill meals is generally very high, and provides excellent choice for specialist diets that are increasingly needed.

Hwang et al. (1999:293) mentioned that despite the advantages of the cook-chill method, there are, some limitations to this method. For example, temperature control may compromise food safety and nutritional content, and the prepared food has a short shelf life after re-thermalisation (Hwang et al., 1999:308). Also, hospitals with cook-chill systems were less likely to offer the patients a choice of serving size. Rodgers (2005:117) stated that the major challenge of cook-chill food safety design lies in the impact of the several steps in the production process together with the potential unevenness of temperature distribution and product deterioration during storage of the products.

#### **2.3.9.2 *Sous Vide method***

The Sous-vide, or 'under vacuum', food processing method was developed in the 1970's by the French, to reduce the shrinkage of portions whilst maintaining the flavour. Huizinga et al. (2009:324) mentioned that the food product can be served directly or rapidly chilled to between +1°C and +3°C and stored between 0°C and 3°C for 21 days. Sous vide is a variant of the cook-chill operation. The system is based on

a large scale of production systems and the use of vacuum packaging, either before or after cooking, in combination with the chilling techniques of the cook-chill method (Creed 2001:219). Sous-vide is an adapted version of cook-chill, whereby food is vacuum-cooked for a period of time. The major benefit of this system lies in the integration of a 'time buffer', during which food can be cooked and stored for several days prior to being reheated and served to patients. This differs to the cook-chill method, where the shelf-life is very short (Creed 2001:227).

### ***2.3.9.3 Steamplicity method***

Edward and Hartwell (2006:421) suggested that one of the most radical developments in private hospital catering was the introduction of the steamplicity method. This new technology is based on a sealed pack with a valve, wherein raw and partially cooked food are plated in a centralized production unit, chilled (less than 5 degrees Celsius), and distributed to satellite kitchens where it remains chilled for an estimated four days before its expiry (Edwards and Hartwell 2006:430). The meals are heated and cooked individually in a microwave to over 75 degrees Celsius, which allows patients choice to be delivered at short notice and ensures consistent food quality. A further advantage is the ability to control the cooking environment, allowing consistent regeneration of the food with the right climate of moist heat, thus avoiding drying out and therefore enhancing texture. Research conducted within a large university hospital in the UK, confirmed that patients were more pleased with the steamplicity system (Edwards and Hartwell 2006:421).

Edwards and Hartwell (2006:421) indicated and this method has been implemented with success in the UK, and that the steamplicity concept has been tried in a British hospital where patients were offered an extended menu choice. The concept was compared with the conventional cook-chill method, and the results showed that patients preferred the steamplicity cooking method with regards to food choice, ordering, delivery and food quality (Edwards and Hartwell, 2006:421). Dias-Ferreira, Santos and Oliveira (2015:146) concluded that plate wastage was higher with the cook chill method than the steamplicity method.

#### **2.3.9.4. Cook-serve method**

According to Zellner et al. (2010:40), the cook-serve system is a “traditional” catering operation where food is made on site and delivered at the correct temperature to patients in the wards. The meals are either served in bulk or are plated (Zellner et al., 2010:40). This system permits batch cooking, which helps to minimize hot-holding and loss of nutrients and optimizes food sensory characteristics, as it can be made close to the required time (Zellner et al., 2010:40). Edwards and Hartwell (2006:421) mentioned that there can be a substantial time delay between production and consumption as the patient wards are often situated a long way from the kitchens. The result is that many of the potential advantages are not from a nutritional point of view, unless food must be held at 28 degrees Celsius for a long period of time. According to Rodgers and Assaf (2007:39), the cook-serve method is the most popular in the UK hospital system and is suitable for public hospitals because it provides fresh food, flexibility and menu variety (Puckett 2012:50).

#### **2.3.10 Length of stay in hospital**

A study conducted in South Africa by Warren (2015:61), showed that the most satisfied patients were those that had been in hospital for between three to seven days. Those patients that had been in hospital for more than one week were least satisfied with hospital services. A study done by El-Sherbiny, Ibrahim and Hewedi (2017:104) in Fayoum City, Egypt found a negative relationship between length of stay and overall satisfaction with hospital food and foodservices. Stanga et al. (2003:241) noted that patients who stayed in hospital for a period longer than eight days were dissatisfied with hospital food. This is due to the fact that patients who stay longer in hospitals have loss of appetite due to the same menu options being offered, and may eat a lesser quantity of food as a result of the seriousness of their illness (Stanga et al., 2003:241). To overcome this, Fallon et al. (2008:42) found that long staying patients (greater than 14 days) were given different menu with additional choices.

#### **2.3.11 Cultural considerations and patient satisfaction with foodservice**

Although a standard hospital menu meets most patient’s cultural and religious food needs, there are many other patient groups with alternative needs (Williams, Hazlewood and Pang 2014:5). Many religions such as Christianity, Islam and

Hinduism, have rules or guidelines about foods which may not be eaten, or which may be restricted at certain times of the year. In a varied hospital patient population, food must meet the dietary needs of patients, appropriate for religious, different age groups, cultural and social backgrounds, and across a range of medical conditions needs (Williams et al., 2014:5). Religious considerations for menu planning, for example, Halal Certified Food for those of Muslim faith, and Kosher meals for Jewish patients, may involve the purchase of meals for the patients from the certified supplier (Benjamins 2006:85). Moreover, meal service times need to be flexible to accommodate for the specific religious festivals and celebrations, such as Ramadan (Williams et al., 2014:6).

It is very important to introduce a multicultural menu for patients, as the different cultures require different menu patterns, variations, cooking methods and serving techniques. In some religions, there are stringent procedures of how meals are prepared and served. This may reduce the food acceptability and limit the menu choices and influence patient satisfaction (Johns et al., 2013:530). Benjamins (2006:86) noted that if there is a higher level of religious salience, there would a corresponding satisfaction with healthcare even after demographic, social and health variables have been considered.

### **2.3.12 Environmental factors**

The eating environment is a great determinant to the patient satisfaction, and the environment of the hospital is a vital element to consider in patient satisfaction with foodservice (Dall'Oglio et al., 2015:567; Hartwell et al., 2016:293; Jakobs 2016:21).

The patient's first impression of the hospital has a direct impact on their service satisfaction, which includes the ambient conditions, space and function as well as signs, symbols, and artefacts. Temperature, lighting, noise, music, comfort, and scent will also influence the patient's food intake and eating behaviour. The spatial layout which is how the machinery, equipment and furnishing are arranged, and the functionality, is also considered as the environmental factors that can influence the patient meal satisfaction (Jakobs 2016: 21).

The management of environmental conditions in which food is served, such as the room temperature, levels of noise, smells, and background music may greatly influence arousal of emotions, leading to a more positive patient fulfilment level with the foodservice (Belanger and Dube 1996:354-360). Unpleasant odours, mealtime interruptions, unclean and damaged crockery, and cutlery shortages are environmental factors that can influence patient satisfaction with foodservice (Jessri et al., 2011:535). The Better Hospital Food Project was introduced at a UK hospital in 2001, as part of a government inventiveness to fix hospital foodservices, in view of “fattening up” emaciated hospital patients. Central to this project was an emphasis on the environment in which the food was provided. It was suggested that patients should be in relaxing positions in an enjoyable environment; assistance with eating should be given where necessary and practical issues such as the use of special cutlery and well-fitting dentures should be well thought-out (Schenker 2003:195). Naithani, Whellan, Thomas, Gulliford and Morgan (2008:294) found that receiving sufficient nutrition was an important part of overall clinical care. However, after conducting a series of research through interviews and gathering their results, the researchers concluded that organisational, physical, and environmental barriers are factors which affected patient’s happiness in hospital foodservice.

## **2.4 Methods to improve foodservice in hospitals**

For many years there has been much disapproval about the quality of the food prepared for hospital patients (Cortis 1997:666). Kotler and Keller (2012:152) warns that organisations need to be concerned with their patient satisfaction level today, because the Internet provides a tool for patients to quickly spread both positive and negative information to the world. Patient satisfaction is very vital to private service providers, and over the last ten years there has been the rhetoric of improving hospital food, since more than 75% of patients rely on the catering menu of the hospital as their source of nutrition (Allison 2003:113). Monitoring and improving levels of satisfaction with foodservice in hospitals is therefore imperative. There are various ways to improve foodservice in hospitals, such as Better hospital food program (BHF), protected mealtimes, menu descriptors, hospital environment, feedback from patients and the use of a patient liaison officer (PLO).

#### **2.4.1 Protected mealtimes**

Protected mealtimes is defined as “the periods on a hospital ward when all non-urgent clinical activity stops. During these times, patients can eat without being interrupted and staff can offer assistance” (Association 2004:12). Protected mealtimes have been spread across Australia, UK and Canada to deal with the problems of underfeeding and poor mealtime experiences in the hospitals. The concept of protected mealtimes has been useful in preventing unnecessary disturbances in the ward during meal consumption. According to Kim et al. (2010:163), the time allocated for service may go well with the patients and staff, give confidence to the patients, develop the eating surroundings and patients’ diet, reduce food wastage and increase patient longevity in the hospital. Protected mealtimes ensure patients are not interrupted during mealtime and helps to prevent food wastage and malnutrition (Naithani et al., 2008:294). A study of 104 hospital inpatients in the UK reported that interruptions during patient mealtimes impact on increased plate waste (Deutekom, Philipsen, Ten Hoor and Abu-Saad 1991:163).

#### **2.4.2 Menu descriptors and e-Menus**

It has been suggested that the perception of a food’s desirability can be improved by using menu descriptors (Ozdemir and Caliskan 2015:189). Sloan (2007:8) inferred that even though the term “fresh” is the most wanted food attributes and features greatly on new marketing claims, there is a diverse list of descriptors that are equally attractive to consumers, such as house-made, seasonal, local, natural and organic food. All of these are made to enhance food characteristics. Consumers scan menus looking for benefits that will satisfy them at any given time or with any given ingredient. Therefore, Watters et al. (2003:1346) recommend that patients should be guided with information on the type of ingredients, the preparation, and choice of menu to enhance communication with patients. An accurate and detailed information will facilitate food intake because patients will have a better understanding of what to expect from the food they order.

A different approach will be for patients to place orders using e-Menus like touch screen technology (Hartwell and Edwards, 2009:906). It is possible to connect such a system directly to the system that produces food, so that individual orders are placed

correctly. When food is ordered electronically, there can be a direct respond to patients demands, and this will help in reducing the number of wrong orders, improve food intake, and reduce food wastage (Ofei, Holst, Rasmussen, and Mikkelsen 2014:49). The advantage of displaying food on a screen, is that more information can be provided about the food than on a paper menu. Detailed and increased information on menus is helpful to the patient's satisfaction, as it improves food choice and food intake (Vanderlee and Hammond, 2014:1393).

There is a rising demand in Europe for information relating to catered food, even though there is no current European legal obligation to provide information about nutrition, ingredients or provenance on menus. Patients are interested in the health composition of foods, including the nutrition components and ingredients (Hoefkens, Veettil, Van Huylbroeck, Van Camp and Verbeke 2012:741). Provenance has become prominent because of concerns about ethics of production and food miles (Hartwell, Johns and Edwards 2016:16). Furthermore, the legal obligations in Europe, for example to display allergens, will increase the quantity of information that must be provided by food caterers about food (Allen, Turner, Pawankar, Taylor Sicherer, Lack, Rosario, Ebisawa, Wong and Mills 2014:15). Operators are careful of the amount of information provided on menu as a result of these pressures. With e-Menus, different types of information, as well as food pictures, are displayed at the selection point (Hartwell et al., 2016:5).

No research has thoroughly evaluated e-Menus in hospitals, except the study done by Beldona, Buchanan and Miller (2014:367), which investigated a bedside menu system which is based on touch screen technology in a National Health Service (NHS) hospital in the UK. Instead of completing a paper form, the e-Menu system makes it easier for patients to glance through dishes and make their selection a few hours before meal times. The touch screen menus were considered to be among the first in the healthcare foodservice industry in the UK, which is aimed at providing patients with a greater level of choice assurance about their food.



### **2.4.3 Feedback from patients**

Food satisfaction measurement is very important for any hospital as this will provide management with some feedback as to how well the foodservice department is doing. Satisfaction is based on the personal view of the patients. It is dictated by the disparity between the patient's expectations and the patient's perception of the service as rendered by the organisation. The measurement of patient food satisfaction levels is a tool adopted in research to upgrade food quality and catering services. Patient satisfaction with the hospital foodservices is multifactorial due to the different anticipations of the patients (Jamaluddin et al., 2010:261). Evaluating the views of patients on the food quality served to them will be very helpful in determining the level of patient satisfaction (Abdelhafez et al., 2012:124).

The initial step is to fully identify with the patients' expectations which may be fully and clearly expressed or implied. These expectations outline the most important foundation of the service that is then considered and delivered by the organisation. Nonetheless, it is essential to differentiate between the quality of the service rendered by the organisation, and the patient's perception of this service, because it is the latter which determines satisfaction. In order to attain patient satisfaction, the organisation should: appreciate (and maybe direct) the patients' expectations; design and render services alongside those expectations, and; evaluate (and maybe direct) the patient perception of the rendered service. The degree to which the delivered service is perceived by the patient to conform to the expectations will be expressed in the dimensions of customer satisfaction (Fernando and Wijesinghe., 2016:20). Consequently, the monitoring and evaluation of patient satisfaction deals with every feature of this sequence (Fernando and Wijesinghe., 2016:20).

Patient surveys in Hillside hospital resulted in an initiative of the improvement of food quality. The board considered the idea as part of a broader transformation agenda (Lee, Baeza and Fulop 2018:109). Furthermore, Watters et al. (2003:1345) proposed that a team approach will be ideal in helping patient's concerns; this will comprise of providing foodservice information to all staff in the hospital as well as feedback forms to the patients in all the units. Beck, Balkn, Fürst, Hasunen, Jones, Keller, Melchior, Mikkelsen, Schauder and Sivonen (2001:455) recommended that patients should be

included in meal planning decision meetings, so that they can have some control on food selection whilst in hospital, and information gathered as feedback from patients was found to be very helpful improve meal quality.

Also, in foodservice and nutrition research, patient emotions and their role in satisfaction, compliance and other health related behaviours has largely been ignored. Understanding patient emotions and taking them into account when delivering meals will have a remarkable outcome in hospital nutrition care (Donini et al., 2008:105). Therefore, foodservice assessment is essential since it creates awareness on shortcomings and staff understanding. By acknowledging inpatient rights and involvement, meaningful decisions in foodservice improvement will be guaranteed (Rasudin, Ahmad, Hussain, and Hamah 2019:21).

## **2.5 Overview of hospital foodservice in South Africa**

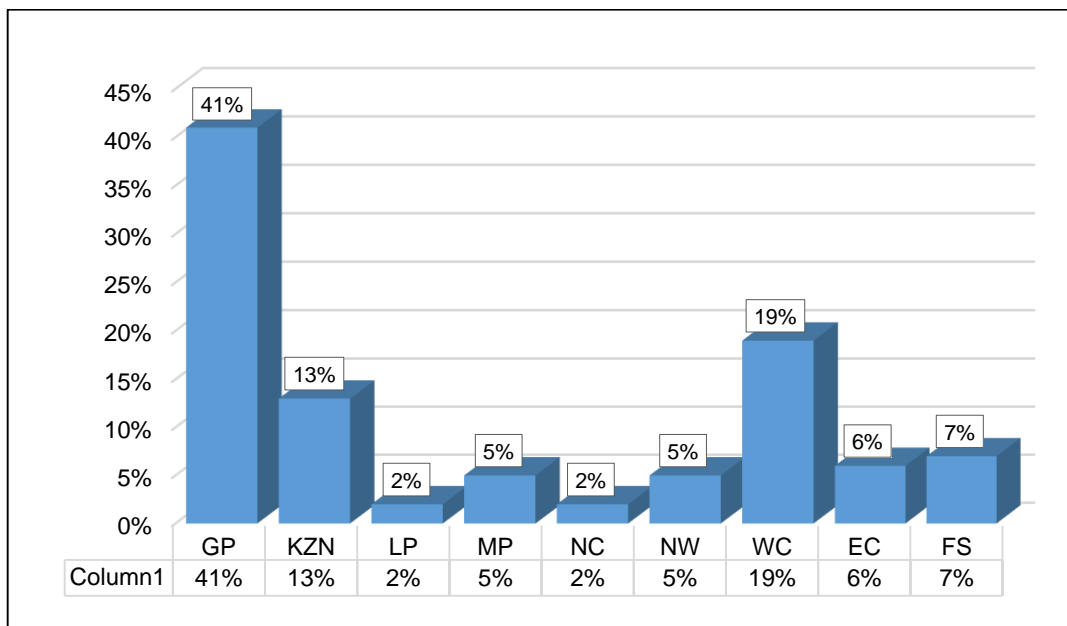
The hospital sector in South Africa mirrors deep inequalities in the country as a whole. The private, for-profit hospital sector is well resourced and caters to a population that tends to be wealthier, urban and more likely to be formally employed. The public hospital sector, catering to the majority of South Africans, faces lower human resourcing ratios, financial constraints and ageing infrastructure (Ranchod, Adams, Burger, Carvounes, Dreyer, Smith, Stewart and van Biljon 2017:101). Public healthcare is government-funded and offered to all South African citizens at affordable costs. However, there are disadvantages, such as long waiting times, rushed appointments, old facilities, poor disease control and prevention (Ranchod et al., 2017:101). Citizens can opt to purchase private insurance and be treated at private healthcare facilities, which offer perks and services unavailable in public healthcare. South Africa's National Health Insurance is gradually being introduced to the country for a unified, equitable, more affordable and accessible healthcare system for the South African population (Young, 2016:10). South Africans are faced with transforming national healthcare delivery and all its relevant institutions (Ncube and Letsoalo 2019:455).

South African healthcare is competitive, and patients have become more quality conscious. Consequently, they do not hesitate to switch to other providers if services do not meet their expectations (Ramsaran-Fowdar 2008:59), which means the industry is becoming increasingly concerned about quality enhancements to meet intensified patients' demands for service excellence (Kim et al., 2010). Simultaneously, food and foodservice delivery have become the most significant elements in determining inpatient's overall healthcare satisfaction in South Africa (Muraal and Davas, 2014:38).

Currently, there are limited South African studies that focus on hospital foodservice quality, and therefore, perceived quality and factors influencing inpatient's foodservice satisfaction remain unidentified (Ncube and Letsoalo 2019:455). Foodservice assessment is regarded as a global issue. Although global perception should be recognised, it is vital to identify country specific foodservice quality perceptions because countries vary in nature and comprise diverse populations with different foodservice needs (Dall' Ooglio et al., 2015:85). A study conducted by Ncube and Letsoalo (2019:455) in South African indicated that patients were not informed about hospital mealtimes, they had to wait longer than expected for meals, and they were not given reasons for delays. However, they thought hospital meals were generally served on time and were satisfied with hospital mealtimes

Private hospitals are considered short stay hospitals where majority of the patients are admitted below thirty days (Matsebula and Willie 2006:15). There is a huge difference between public and private healthcare. Since the private healthcare hospitals receive no funding from the government, are required to sponsor themselves or source funds to pay for their own private healthcare services. Obtaining a private health insurance is very expensive and the facilities are limited compared to the public healthcare domain (Young 2016:9). Private healthcare has some advantages like quick attendance, sophisticated equipment, better services, better disease control and prevention practices (Young 2016:9).

The growth trend in a private sector healthcare is to develop centres of excellence that can produce benefits to patients who need specialised care at a hospital that has such centres. An important element in private hospitals is to prioritize cost minimisation on their services (Matsebula and Willie 2006:159). Warren (2015:49) noted that private hospitals in South Africa came into existence during the early 20<sup>th</sup> century when it was primarily made up of general surgical units and maternity homes regulated by some bodies responsible for private hospitals. Recently, there has been an association of private healthcare providers representing the welfare of South Africans. The Hospital Association of South Africa (HASA) is an industry association which represents the shared welfare of most private hospital groups and independently owned private hospitals in South Africa. Presently, HASA consists of 212 private hospitals, owning about 26,868 beds and over 90 percent of the private hospital industry in South Africa. HASA's members include individual hospitals that subscribe a membership fee calculated according to the number of beds owned, as indicated in Figure 2.2.



**Figure 2. 2: Private Day clinics and hospitals in South Africa, per province, 2013.**

**Source: Data from the Hospital Association of South Africa (HASA)**

There were 314-day clinics and private hospitals in South Africa in 2013 of which about 40% are in Gauteng. This allocation is also aligned with the distribution of hospital and clinic beds per province: 15,424 of the total 34,572 private beds are located in Gauteng. Netcare (8,926 beds), Life Healthcare (7,944 beds) and Mediclinic (7,299

beds) are the 3 largest private hospital groups in South Africa. Together, these three listed hospital groups make 70% of the market (Hospital Association of South Africa 2013).

## **2.6 Conclusion**

According to Heidegger, Saal and Nuebling (2006) patient satisfaction is very complex and far from clear. It is influenced by cultural, socio-demographic, cognitive and affective components. Quality and satisfaction can be seen as synonymous terms (Cronin and Taylor 1994). In particular, patients' expectations of hospital food have been shown to be a generator of overall satisfaction with foodservice, and the manner in which it is served often influences patient satisfaction with the entire hospital experience (Porter and Cant 2009). In this chapter, literature concerning patient's food satisfaction levels in hospital was explored. The chapter covered aspects of patient's foodservices satisfaction level and the views of various factors on patient's food services satisfaction level were examined. In fact, patient's satisfaction level on food services is a core ingredient to the patient's quick recovery in the hospital. An exploration of literature revealed that there is limited research on patient's food satisfaction level in South Africa. This study will make recommendations which will be helpful to address the various challenges. The next chapter will deal with research methodology of the research.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

The research methodology adopted for the study is presented in this chapter. Aspects such as the research design, pre-testing, ethical issues, as well as validity and reliability of the research instrument, are discussed. The quantitative research design was adopted for this study and will be discussed in this chapter. A structured questionnaire was used as the data collection instrument for the study. The target population for this study comprised of 295 patients admitted in three private hospitals in Kwa-Zulu Natal Province of South Africa. This study aims to ascertain foodservice satisfaction levels amongst patient in private hospitals in KZN in South Africa. The processes employed for data collection as well as ethical considerations are discussed in this chapter.

### **3.2 Research design**

A research design is a plan, structure and strategy of inquiry adopted by a researcher to provide answers to the research problem (Kumar 2019:94). The research design for this study is descriptive in nature, as it is designed to collect data which describes the characteristics of the patients that were admitted to the three private hospitals. A descriptive research study could either be qualitative or quantitative (Sekaran and Bougie 2016:97). The quantitative research approach was adopted for this study. Quantitative research typically examines the relationship between variables and is measured numerically using different statistical techniques (Saunders, Lewis and Thornhill, 2012:892). Moreover, quantitative research is made up of quantifiable data (Rasinger, 2013:10). The quantitative research design throws more light into a phenomenon by assimilating numerical data that was scrutinized employing scientific techniques (Muijs, 2011:19). The researcher adopted the quantitative method to get details from the patients that were admitted to three private hospitals in KZN, to get a better understanding of the research problem.

### **3.3 The study population and sample**

According to Bambale (2014:871), the population of a study refers to the entire group of people, events or things of interest that the researcher wishes to investigate and wants to make inferences based on a derived sample. Huizinga et al. (2009:324) describes a target population as the group of individuals about whom the investigator aims to write about in his study report and from which the investigator intends to derive his sample. The target population for this study were the patients that were admitted to the three private hospitals in KwaZulu-Natal (KZN), during the time of the research, as indicated in Table 3.1.

Patients from the three private hospitals in KZN were approached to answer the questionnaire. 114 questionnaires were completed in hospital A, 105 questionnaires completed in hospital B, 56 questionnaires were completed in hospital C. The patients completed the questionnaire over a period of 3 weeks as it was face to face interviews and various categories of patient's admissions were considered from different wards e.g. Medical Ward, General ward, Surgical ward, Maternity, Orthopaedic ward. Only those patients that was admitted to the three private hospitals in KZN for more than three days were considered to complete the questionnaire.

A census sampling method was chosen for the study. Census sampling was chosen as the suitable sampling method for this study. In a census sample, data is accumulated from all the members of the target population that is studied, as opposed to selecting a desired sample (Harding, McNamara, Daly and Tanton 2009:41). Participants were inclusive of every patient that was admitted in the hospitals. The participants included patients from the medical, surgical, orthopaedic and general wards of each of the hospitals in KZN. The sample size was 295, of which only 275 (93.2%) answered the questionnaire from the three hospitals in the study. Figure 3.1 presents the distribution of the sample across the hospitals and the various wards. According to Williams (2003:4), a census is a more acceptable than a sample in doing social survey, because the characteristics of participants would meet the demands of the researcher in that they will not be selected from a bigger population size.

**Table 3. 1: Distribution of the sample**

<b>Ward category</b>	<b>Number of respondents</b>
<b>HOSPITAL A</b>	
10 <sup>th</sup> Floor male medical	27
9 <sup>th</sup> Floor female medical	32
7 <sup>th</sup> Floor general ward	20
6 <sup>th</sup> Floor Surgical	21
7 <sup>th</sup> New Wing General Ward	14
Total patients	<b>114</b>
<b>HOSPITAL B</b>	
Medical Male ward	14
Medical Female ward	29
Orthopaedic ward	20
Surgical ward	22
Maternity ward	20
Total patients	<b>105</b>
<b>HOSPITAL C</b>	
Medical ward	22
Surgical ward	21
Maternity ward	13
Total patients	<b>56</b>
<b>Total study sample</b>	<b>275</b>

### **3.4 Data collection**

Data was collected by using a closed-ended structured, survey questionnaire that was presented in English language. According to Phellas, Bloch, and Seale (2011:181-205), structured surveys are convenient when the respondents are given time to gather information. Through the survey activity, data is collected in an organized way. Information from large samples of the population can be obtained through surveys. Surveys are also suitable in obtaining demographic data that can describe the characteristics of the sample. Surveys can produce complex information that are difficult to obtain using observational methods (Glasow 2005:1). The information that was gathered in the literature review was used to design the questionnaire. The researcher encouraged participants and respondents to be transparent and truthful with a tactful approach during interviews.



After all the paperwork had been approved, the researcher made appointments to see the authorities first i.e. general manager, hospital managers, matrons and sisters in charge, to brief them about the research to be conducted. A letter pertaining to the ethics was then presented at the meeting, in order to receive permission to proceed with the questionnaire. An explanation was then given on how the questionnaire would be administered, highlighting the benefits that would arise thereafter. Once all the parties concerned had understood the aims and the goals of the research, the researcher then scheduled an appointment to visit the patients that had been admitted to the three selected private hospitals. The questionnaire was then distributed to the 295 patients in the hospitals in KZN that were selected for the study. The questionnaire was accompanied by a covering letter specifying the purpose of the study, and assured the respondents of their anonymity. The questionnaires were administered face-to-face in December 2018, and were self-completed, by the patients that were admitted in hospital. The participation was voluntary, and all participants were competent enough to participate in the study. The questionnaire was compiled by face to face interviews between the researcher and the patients. The questionnaire took three weeks to complete as the researcher interviewed various patients that were admitted during the 3-week period from the following wards Medical ward, General ward, Surgical ward, Maternity, Orthopaedic ward.

### **3.5 Pilot study**

According to Welman, Kruger and Mitchell (2011:1), a pilot study is used when a new measuring instrument is developed, and to test the instrument before administering it to the actual participants. This is done by handing out the questionnaire to a small sample of the same population with similar characteristics, in order to test the validity and understanding of the questions. Prior to administering the questionnaire, a pilot study was conducted on a group of individual patients that were admitted at the time of the pilot study in a private hospital in KZN. A pilot study is important because it helps the researcher to discover errors in questions, enhance question sequencing, and instructions (Blumberg, Cooper and Schindler 2008:344). Similarly, this provides a chance to gauge the meaning attributed to the survey questions, before a substantial investment is made in the wrong questions. During the pilot study a few minor errors

were encountered. Corrections and adjustments were accordingly made to the questionnaire. Three patients from hospital A, were select for the pilot study. The three patients from hospital A for the pilot study were not used for the main study.

### **3.6 Data analysis**

The data collected was analysed using the Statistical Package for the Social Science (SPSS). The results were presented as descriptive statistics in the form of tables and graphs. The internal consistency was tested using Cronbach alpha, and the reliability scores of all the research instrument Cronbach's Alpha was used to test internal consistency, and provided reliability scores for all the items on the questionnaire. The SPSS is a computer-based program that enables a researcher to organise text, graphic, along with memos, coding, and findings into a project (Creswell 2008:670).

### **3.7 Validity and reliability**

Validity depicts the degree to which a measurement process is free from error, which implies the accuracy in measurement. Reliability on the other hand, is the extent to which the measurement process is free from errors, and the degree to which the results obtained may be generalised to different situations of measuring. It is possible to have a reliable test being invalid but impossible to have a valid test being unreliable. (Leedy and Ormrod, 2010:187). Reliability reduces as errors increase. The sample size for this study was fairly large, with 295 respondents. Larger sample sizes increases reliability. Bonds-Raacke (2011:84) posits that "the validity and reliability of measuring instruments influence the extent to which something can be learned from the phenomenon that one is studying and that one will obtain statistical significance in the data analysis, and the extent to which one can draw meaningful conclusions from the data". Cronbach's coefficient was used to measure the internal consistency in this study. Boitnott (2016: 13) wrote, Cronbach's Alpha test is one of the most broadly utilized measurements to determine reliability within the organizational and social sciences field. The author further explained that the test is the reliability of a sum (or average) of measurements where the measurement represents the questionnaire test

items. When there are multiple test items, Cronbach's Alpha is referred to as a measure of "internal consistency" or reliability.

When a new measurement instrument is developed, it is often recommended that the instrument be tested before a study is undertaken (Mouton 2012: 100-102); therefore, this study's questionnaire and interview guide instruments were pilot tested for validity and reliability to detect any flaws, identify ambiguous terms and further gauge if there was any room for correction. Data reliability is also considered through the application of various tests; therefore, this study applied Cronbach's alpha test. Wagner (2012: 273) describes reliability as the consistency of measurement of a concept whereby reliable data ensures that the evidence and conclusions obtained from the study can defend themselves against scrutiny. A reliability coefficient of 0.60 or higher is considered as "acceptable" for a newly developed construct, which was the case for this study.

### **3.8 Delimitation**

The management and staff of the private hospitals were not being included in the study, as the study endeavours to ascertain only the patient's opinions with regards to patient foodservice satisfaction in private hospitals in KZN. Hence, only admitted patients at the three-private hospital in KZN were included in the study. Due to time and resource constraints, the geographical area is limited to the KwaZulu-Natal Province.

### **3.9 Limitations**

Lack of participation, preciseness and truthfulness are often limitations to social related studies and these factors may possibly undermine the accuracy of the current study. More so, some patients might feel that they would be victimized for giving negative comments, therefore did not want to take part in the study. Hence, to address these limitations, the researcher informed the patients that their names or identity will not be disclosed. Other limitation would be language barriers, such as non-English speaking patient and patients that would like to be compensated for being part of the study.

### **3.10 Anonymity and confidentiality**

Anonymity is imperative because it offers participants the freedom to give accurate information without fearing any damage or persecution. Confidentiality is essential as it encourages the spirit of correctness and uprightness in participants. To protect participants from any negative consequence, this study followed the regulations and guidelines stipulated by the Research Ethics Committee of the Durban University of Technology, as well as that of the selected three private hospitals in KZN (research policy). Hence, in order to ensure confidentiality and anonymity, the following measures were adhered to: *Right to Privacy*, where the identities of participants and their opinions was treated with the strictest of confidentiality; *Dignity*, where the dignity and character of all stakeholders was upheld and were not subjected to embarrassment; and *Honesty*, where the findings of the study were reported honestly (Patton 2005:11).

### **3.11 Ethical considerations**

The three major ethical considerations maintained by Gumede (2014:51), were respected; that is how the information was collected, processed and utilized. The research upheld the first ethical consideration while the questionnaires were being administered. The researcher was open and honest with the patients. Ethical clearance for this research was obtained from the Ethics Committee of the Durban University of Technology. Permission to conduct the study was requested from three private hospitals in KZN, as well as from an outsourcing company. Approval was granted by the Group General Manager of the three private hospitals in KZN, and the Human Resource Manager of the outsourced company granted approval to conduct this study. Written permission was obtained from both companies to conduct the study.

### **3.12 Conclusion**

This chapter covered the research design, data collection methods and the instruments used in collecting data. The chapter highlighted the quantitative approach and design adopted for the research. This chapter aimed at explaining how data was collected and analysed. The design for the research, the target population and the

sample size and sampling technique used for this study were clearly defined. Issues pertaining to ethical considerations, and reliability and validity were also explored. More so, aspects such as pilot testing, delimitations, limitation of the study, and ethical considerations were discussed. The next chapter will focus on the data analysis and interpretation of results for the study in relation to foodservice satisfaction levels among patients in private hospitals in Kwazulu-Natal.

## CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

### 4.1 Introduction

This chapter presents the data obtained in the study and discusses the key findings of the study. Questionnaires were used as the primary tool for data collection and was distributed amongst patients at three private hospitals in KwaZulu-Natal (KZN). The data collected from the patients was analysed using the Statistical Package for Social Sciences (SPSS), version 24.0. This chapter presents the descriptive statistics and cross-tabulations in the form of graphs and tables for the quantitative data that was collected. Inferential statistics, through the use of correlations, is also presented in this chapter.

A total of 295 questionnaires were administered to patients in three hospitals in KZN. A total of 275 questionnaires were completed and returned, representing a 95% response rate. The 95% response rate is justifiable for the current study, as Fincham (2008:2) states that a response rate of 60% and above is good and reliable for research purposes. The higher the response rate, the lower the level of biasness and a response rate of 60% and above is appropriate (Livingston and Wislar 2012:110). The information that was gathered in the literature review was used to design the questionnaire. The researcher encouraged participants and respondents to be transparent and truthful with a tactful approach during interviews.

The research instrument consisted of a questionnaire, with 55 items of measurement using nominal and ordinal scales. The questionnaire was divided into three sections which addressed the following key themes:

- Section A: Biographical data
- Section B: Food satisfaction
- Section C: Foodservice satisfaction

## 4.2 Reliability statistics

Reliability and validity are the two most important aspects of precision. Reliability is calculated by taking a number of measurements on the same themes. A reliability coefficient of 0.70 or higher is considered as “acceptable” (Gliem and Gliem 2003: 87). Cronbach's alpha is a measure of internal consistency which displays how closely related a set of items are as a group (Crocker and Algina 1986:116). Cronbach's alpha permits researchers to determine the reliability of a composite, when the composite score variance and the co-variances are known.

**Table 4. 1: Reliability table**

	<b>Section</b>	<b>Number of items</b>	<b>Cronbach's Alpha</b>
<b>B3</b>	Temperature	3 of 3	.713
<b>B4</b>	Food Quality	7 of 7	.859
<b>B5</b>	Service	5 of 7	.745
<b>B6</b>	Menu	16 of 16	.835

Table 4.1 shows that for all the sections, the reliability scores are higher than the commended Cronbach's alpha value of 0.600 for a construct that is newly developed. Hence, this indicates the extent of acceptable, consistent scoring for these sections of the study.

## 4.3 Biographical data (Section A)

Section A of the questionnaire contained questions on biographical information, and included data on the patient's gender, age group, race, education and religion.

### 4.3.1 Demographic characteristics of patients

The following table presents the results of the demographic profile of patients who participated in this study.

**Table 4. 2: Demographic characteristics of patients**

Demographic characteristics		Frequency	%
<b>Gender(n=275)</b>	Male	104	37.8
	Female	171	62.2
	<b>Total</b>	<b>275</b>	<b>100%</b>
<b>Age group(n=275)</b>	21 to 30 years	64	23.3
	31 to 40 years	103	37.4
	41 to 50 years	72	26.2
	51 to 60 years	28	10.2
	More than 60 years	8	2.9
	<b>Total</b>	<b>275</b>	<b>100%</b>
<b>Race(n=275)</b>	Black	242	88.0
	Coloured	22	8.0
	Indian	6	2.2
	White	5	1.8
	<b>Total</b>	<b>275</b>	<b>100%</b>
<b>Education (n=275)</b>	Master's Degree	4	1.5
	Bachelor's Degree	46	16.7
	Diploma	105	38.2
	Certificate	57	20.7
	Secondary School	50	18.2
	Primary School	4	1.5
	Other	9	3.3
	<b>Total</b>	<b>275</b>	<b>100%</b>
<b>Religion(n=275)</b>	Christian	249	90.5
	Hindu	11	4
	Muslim	3	1.1
	Other	12	4.4
	<b>Total</b>	<b>275</b>	<b>100%</b>

The findings presented in Table 4.2 show that majority of the patients (62.2%) in the study were female. The higher percentage of females is due to the high female occupancy rate in the various wards at the three private hospitals. This is attributed to the fact that Hospital A had a maternity ward, a female general ward, and a new wing female general ward. Hospital B had a maternity ward and a female medical ward, and Hospital C had a maternity ward and a female general ward.

In terms of the age of respondents, 37.4% of the patients were between the ages of



21 to 30 years old, 26.2% were between 31 to 40 years old, and 10.2% were between 51 to 60 years old. Only 2.9% of the patients were over the age of 60 years. In terms of the highest educational level of respondents, most patients (77%) had completed a tertiary education, of which 3.3% were doctoral graduates, whilst 18.2% of patients completed secondary school education, and only 1.5% had primary education. With regards to the religious profile of patients, the majority (90.5%) were Christian, 4% were Hindu, 1.1% were Muslim and 4.4% were from other religions. Religion is important to this study because patient's food choices can be influenced by their religious background. Moira, Mylonopoulos, and Kondoudaki (2012:140) maintain that religious ideologies do not only affect the spiritual lives of people, but impact on their choices of food as well. D'Haene, Desiere, D'Haese, Verbeke, and Schoors (2018:4) further asserted that religion has an impact on patient's behaviour.

In terms of the racial composition of patients in the study, the data shows that majority of the patients were Black (88%), followed by Coloured (8%), Indian (2.2%), and Whites (1.8%). Race can influence food perceptions of patients. Williams, Bartoshuk, Fillingim, and Dotson (2016:449) noted that nutritional intake varies substantially as a result of demographic variables such as race and gender. Mahdavinia, Fox, Smith, James, Palmisano, Mohammed, Zahid, Assa'ad, Tobin, and Gupta (2017:357), and Larson, Eisenberg, Berge, Arcan, and Neumark-Sztainer (2015:43) concur that race and ethnicity influences choices for nutritional intake amongst patients.

#### 4.3.2 Duration of stay in hospital

Table 4.3 presents the results on the duration of stay in hospital of the patients that participated in this study.

**Table 4. 3: Duration of stay in hospital**

	Frequency	Percent
1 day	22	8.0
2 to 3 days	112	40.7
4 to 7 days	118	42.9
8 to14 days	17	6.2
15 to 28 days	6	2.2
<b>Total</b>	<b>275</b>	<b>100%</b>

The data indicates that 42.9% of patients stayed for between 4 to 7 days, 40.7% for between 2 to 3 days, 8% for just 1 day, 6.2% for 8 to 14 days, and 2.2% for 15 to 28 days. Evidently, the majority of patients (83.6%), stayed in hospital for a period of between 2 to 7 days. Uyar, Dikmen, Kizil, Tengilimoglu, Bilici, Tavasli and Saglam (2012:348) found that the relationship between length of stay and food satisfaction was positive in a study conducted in Turkey. Fallon et al. (2008:41) noted that the hospital in the study provided long-stay patients ( $\geq 14$  days), with a different menu with about eight additional choices for lunch and evening meals. According to Fallon et al. (2008:41), this may have been the reason for the positive relationship between food satisfaction and length of stay. Similar observations were made by Aminuddin, Vijayakumaran and Razak (2018:93) in a study in East Malaysia, where the relationship between length of hospital stay and patient satisfaction remained positive. However, other studies conducted by Stanga, Zurfluh, Roselli, Sterchi, Tanner and Knecht (2003:241) in Switzerland, and by Wright, Capra and Aliakbari (2003:70) in Australia, have reported that patient's dissatisfaction increases with an increase in length of stay in the hospital, especially when they had a repeated menu. Despite the fact that the majority of the patients were satisfied with hospital food, a study by Ghanbari, Khammarnia, Jafari and Sotodeh (2014:185) in India showed that 38.3% of them were discontented with repetitive food which was linked to duration of hospital stay.

#### **4.3.3 Patients diet**

Table 4.4 provides data on the different diets of patient's that participated in the study and confirms that majority of the patients (78.2%) were on a normal diet, 11.3% were on a diabetic diet, 1.8% were on a low cholesterol diet, 1.5% were on a low salt and low fat diet, 1.1% were on a low calorie diet, liquid diet, a high fibre and clear fluid diet, 0.7% were on a high protein diet, and 0.4% were on a low protein and clear fluid diet. Kaplan, Kasnakoğlu, Yigitbasi, and Kaplan (2013:68) maintain that prescribed diets for medical conditions usually has an inverse relationship with the overall food satisfaction, but the correlation between the body reaction and prescribed diets is positive. The authors maintain that, appearance and presentation are very important variables of meals that can induce patient satisfaction (O'Hara et al., 1997). Sahin et al. (2006) share a similar view in a study conducted in Turkey.

**Table 4. 4: Patients diet**

Type of diet	Frequency	Percent
Normal	215	78.2
Diabetic	31	11.3
Low cholesterol	5	1.8
Low protein	1	0.4
High protein	2	0.7
Low salt	4	1.5
Low calorie	3	1.1
Low fat	4	1.5
High fibre	3	1.1
Liquid diet	3	1.1
Soft diet	3	1.1
Clear fluids	1	0.4
<b>Total</b>	<b>275</b>	<b>100%</b>

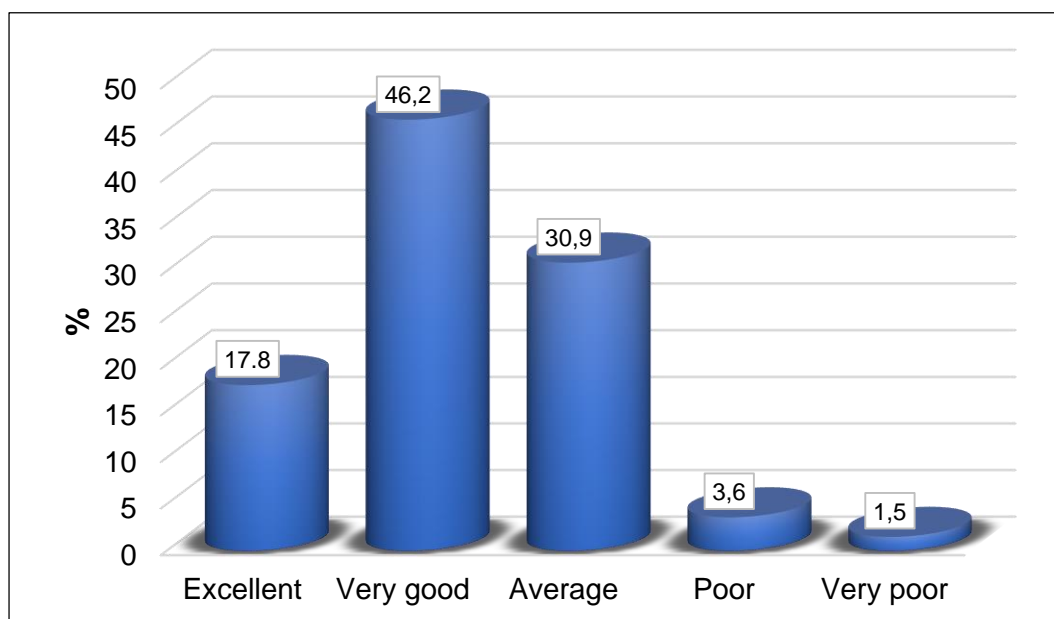
A comparative study was done in Switzerland over a period of ten years, between patient food intake before and after the corrective measures were implemented to improve patient nutritional outcome (Thibault, Chikhi, Clerc, Darmon, Chopard, Genton, Kossovsky and Pichard 2011). Changes in meal serving times, duration of cooking, the application of food recommendations, decreased use of restrictive diets and patient self-menu selection were the measures implemented. Thibault et al. (2011) maintain that the results of the measures did not improve patient nutritional intake.

According to Miyoba and Ogada (2019:4), the dietetics and the catering department must work together and create menus for the therapeutic and regular diet patients as the recovery of the inpatients is influenced by the dietary and meal service delivery. Dieticians and nutritionists must analyse other aspects of food satisfaction and dietary adequacy of patients to ensure that the nutritional intake is enough for the inpatient (Miyoba and Ogada, 2019:4). Stanga et al. (2003:245) suggested that the cooks and dieticians work closely to plan and design nutritious meals. The menu and food plan must provide a range of meals with adequate protein, energy and nutritious value.

Fernando and Wijesinghe (2015:13) stated that the hospital diet is an important aspect of a patient's recovery, and therefore the diet that is consumed during the patient's hospital is essential to the patient's recovery. Therefore, every hospital must ensure that the foodservice provider aims to provide food that meets the nutritional requirements, are microbiologically safe and satisfies the patient's needs (Fernando and Wijesinghe 2015:13).

#### 4.4 Patient satisfaction with food in hospitals (Section B)

Section B of the questionnaire contained questions pertaining to patient's overall satisfaction with the food in hospitals. Data pertaining to factors such as the temperature of food and beverages, food quality and menu design are discussed under this section.



**Figure 4. 1: Overall perception of hospital food**

The findings indicate that 17.8% of respondents found the hospital food to be 'excellent', 46.2% found it to be 'very good' and 30.9% found the hospital food to be 'average'. A fairly small proportion of respondents found the hospital food to be 'poor' (3.6%) and 'very poor' (1.5%). Research undertaken by Stanga et al. (2003:241), revealed similar results, where 78% of patients were satisfied with hospital food in Switzerland. Likewise, a study by Abdelahafez et al. (2012:123) in Saudi Arabia, found

that over 78% of the patients were content with the quality of hospital food. According to Fernando and Wijesinghe (2015:13), the food quality in a hospital makes a significant contribution to the patient’s satisfaction and total experience in the hospital. Hospital foodservice is also known to be an important element in determining a patient’s overall perception and component in the hospital management of patients (Aminuddin et al., 2018:90). Mentziou, Delezos, Nestoridou and Boskou (2014:383) indicated that if patients are satisfied with hospital food, then their overall hospital experience will improve.

#### 4.4.1 Patients satisfaction with the temperature of food and beverages

Table 4.5 presents the results related to patient’s satisfaction with the temperature of food and beverages.

**Table 4. 5: Patients satisfaction with the temperature of food and beverages**

		Frequency	%
<b>Meals served at the correct temperature(n=275)</b>	Strongly Agree	75	27.3
	Agree	148	53.8
	Neutral	18	6.5
	Disagree	27	9.8
	Strongly Disagree	7	2.5
	<b>Total</b>	<b>275</b>	<b>100%</b>
<b>Beverages served at the correct temperature (n=275)</b>	Strongly Agree	75	27.3
	Agree	154	56
	Neutral	15	5.5
	Disagree	27	9.8
	Strongly Disagree	4	1.5
	<b>Total</b>	<b>275</b>	<b>100%</b>

Table 4.5 presents the data on patient’s satisfaction with the temperature of food and beverages in hospitals. It is noted that majority of patients (81%) confirmed that the meals were served at the correct temperature, while 12.3% disagreed and 6.5% were neutral. Correspondingly, majority of patients in the study (83.3%) agreed that beverages were served at the correct temperature, 11.3% disagreed, and 5.5% were neutral.

Food temperature has been identified as a contributor to foodservice satisfaction (Fallon et al., 2008:41), and according to Troutner, Gregoire, Lafferty and Stone (2012:149), food temperature is often the lowest rated variable among the foodservice variables. It could be advantageous for hospital management to provide heated trolleys to keep the food warm, get service lifts that would help the trolleys get to the wards on time so as to maintain food temperature, and have more hostesses to help with serving so that patients can receive the food on time.

Stanga et al. (2003:241) noted that patients in Switzerland consider food temperature to be very important. A study conducted by Warren (2015:17) in South Africa, showed that patients were very satisfied with the temperature of food and beverages. Wright, Connelly and Capra (2006:181) conducted a study in Australia on acute care patient's satisfaction with hospital foodservice and foodservice characteristics. The study discovered that that foodservice satisfaction is related to flavour, variety, vegetables, meal tastes, texture and temperature.

#### **4.4.2 Patient satisfaction with food quality**

The data pertaining to patient satisfaction with food quality focused on: food meeting patient expectations, healthy meal options, food taste, and the flavour of food.

Table 4.6 presents the results on patient's perception on food quality. Patients were asked to rate their level of satisfaction on a five-point Likert scale, with 1 being 'strongly agree' and 5 being 'strongly disagree'. Overall, majority of patients indicated that the attribute that most positively affected their perception of food quality, was the distinct flavour of the food (mean=2.14). This was followed by the fact that the meals tasted good and the meals were of a good quality (mean=2.08). The least favourable perception of the food quality was being able to choose a healthy meal from the menu (mean=1.96). Majority of the patients (78.1%) agreed that the food had met their expectations in terms of quality. Only 11.7% of the patients disagreed that the food had met their expectations in terms of quality, and 10.2% of respondents were neutral.

**Table 4. 6: Patients satisfaction with food quality**

Food attributes	Perception	%	Mean
The food has met my expectations in terms of quality.	Strongly agree	27.6	2.08
	Agree	50.5	
	Neutral	10.2	
	Disagree	9.5	
	Strongly disagree	2.2	
I am able to choose a healthy meal from the menu.	Strongly agree	27.6	1.96
	Agree	56.0	
	Neutral	9.1	
	Disagree	6.5	
	Strongly disagree	0.7	
The meals taste good.	Strongly agree	22.5	2.08
	Agree	58.2	
	Neutral	10.5	
	Disagree	6.2	
	Strongly disagree	2.5	
The meals have good and distinct flavors.	Strongly agree	21.1	2.14
	Agree	50.9	
	Neutral	21.5	
	Disagree	5.5	
	Strongly disagree	1.1	

A study conducted by Aminuddin et al. (2018) in East Malaysia, observed that patients were not satisfied with the food quality, because there was less variety on the menu. In another study conducted by Messina, Fenucci, Vencia, Niccolini, Quercioli and Nante (2013:730) in Italy, it was concluded that food quality was the least positively rated, where 56.6% of patients indicated that hospital food was rarely as good as expected. Research undertaken by Naithani et al. (2008:297) in England, concluded that 18% of the patients were displeased with the quality of food, considering it as unhealthy, not cooked to their desirable taste, and not smelling appetising.

Majority of patients in this study (83.6%) agreed that they were able to choose a healthy meal from the menu, whilst only 7.2% of the patients disagreed, and 9.1% were neutral. There are various categories of hospital patients. The first category is

the 'nutritionally vulnerable', meaning that these patients require normal nutritional requirements but have a poor appetite and consume small portion sizes. The second category is the 'nutritionally well', and includes patients that require a diet with healthier eating principles and have a normal appetite. The third category is the 'special or personal dietary requirements', which comprise of patients who consume meals according to their religious or ethnic beliefs. The fourth category is the 'therapeutic diet', where patients prefer a modified textured diet, a renal diet or an allergy free diet (Thomas and Bishop 2007:39). Therefore, it is important for hospital menus to consider all these categories in their menu design, so that patients have a healthy and suitable variety to choose from. It is important that appropriate diets, such as renal diet, gluten free, vegetarian diet and texture modified diets, be provided by the hospital to meet patient's nutritional need. Moreover, children, older people and maternity patients might prefer different menu requirements compared to other patients (Wright, Cotter, Hickson and Frost 2005:213). Studies conducted by Moran, Krepp, Johnson and Lederer (2016:1847), and Singer, Werther and Nestle (1998:41) in the USA showed that regular-diet patient menus do not meet dietary guidelines and are high in sodium.

In terms of the taste of hospital food, 80.7% of the patients agreed that the meals served in the hospitals tasted good, and most of the patients (72%) agreed that the meals have good, distinct flavours. According to Stanga et al. (2003: 245), the medical staff should be aware of the negative influence that pain killers and medication can have on the patient's appetite and the taste of the food. Therefore, it is necessary for the nursing department to inform the dietician of the patient's medical chart. The use of drugs can create side effects of nausea and gastrointestinal symptoms which can influence the taste of the food and the patient's appetite. Dieticians must work with the catering staff and ensure that the emphasis must be placed on the flavour and presentation of the food to stimulate the patient's appetite (Stanga et al., 2003:241).

#### **4.4.3 Patient satisfaction with menu design**

The data presented in Table 4.7 focuses on aspects of the menu available to patients in the three hospitals. Menu considerations discussed here pertain to: meal portion choices, meal variety, meal portions, cultural considerations, availability of snacks and



dietary requirements. Patients were asked to rate their level of satisfaction with attributes pertaining to menu design, on a five-point Likert scale, with 1 being 'strongly agree' and 5 being 'strongly disagree'. Overall, in terms of menu design, patients were most satisfied with the fact that meals were well-suited to their dietary requirements (mean=2.13). This was followed by a high level of satisfaction with adequate food portions (mean=2.17), a great variety of meals on menu (2.25) and being able to choose different meal portions (2.27). Lesser levels of satisfaction were noted with cultural considerations given to menu design (mean=2.29) and with snacks being available in between meals (mean=2.94).

Most of the respondents in the study (70.2%) were able to choose different meal portions. Majority of the patients (73.1%) agreed that the menu has plenty of variety to choose from. Similarly, 79.3% of respondents agreed that the food portions are adequate. A large proportion of patients (77.8%) agreed that meals were well-suited to their dietary requirements, and majority of respondents (66.8%) also agreed that cultural considerations were present in the menu design. Less than half of the respondents (42.6%) agreed that snacks are available in between meals, while 39.2% disagreed that snacks were available in-between mealtimes.

**Table 4. 7: Menu design**

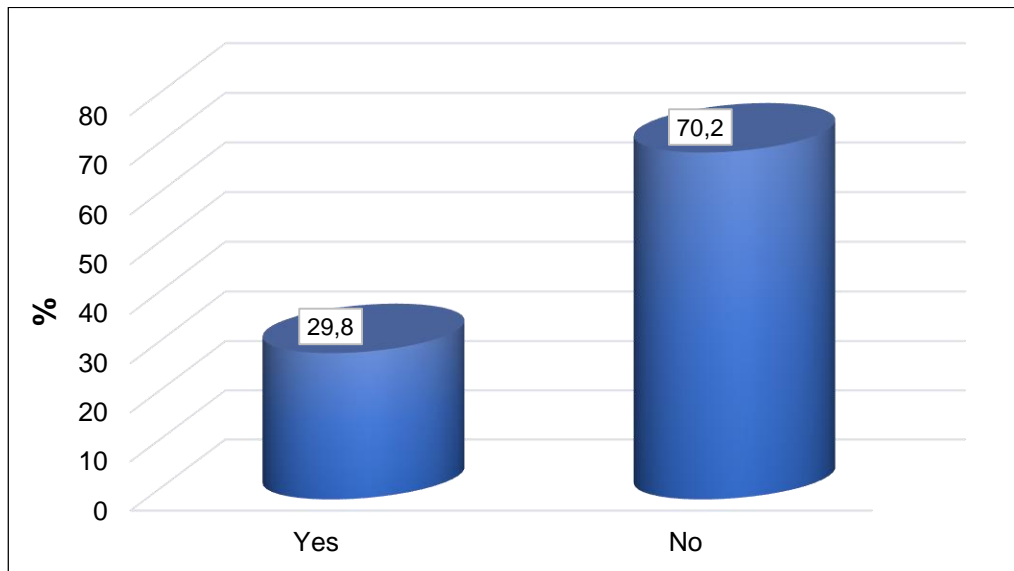
<b>Menu design attributes</b>	<b>Perception</b>	<b>%</b>	<b>Mean</b>
I am able to choose different meal portions	Strongly agree	25.5	2.27
	Agree	44.7	
	Neutral	10.9	
	Disagree	14.5	
	Strongly disagree	4.4	
The menu has plenty of variety	Strongly agree	22.9	2.25
	Agree	50.2	
	Neutral	9.8	
	Disagree	12.7	
	Strongly disagree	4.4	
Food portions are adequate for breakfast, lunch, dinner and snacks.	Strongly agree	23.3	2.17
	Agree	56.0	
	Neutral	6.2	
	Disagree	9.1	
	Strongly disagree	5.5	
	Agree	4.4	
	Neutral	9.1	
	Disagree	23.3	
	Strongly disagree	4.0	
	Agree	57.7	
	Neutral	7.7	
	Disagree	5.8	
	Strongly disagree	1.5	
Cultural considerations are given to menu design	Strongly agree	19.0	2.29
	Agree	47.8	
	Neutral	21.2	
	Disagree	8.4	
	Strongly disagree	3.6	
Snacks are available in between meals	Strongly agree	12.4	2.94
	Agree	30.2	
	Neutral	18.2	
	Disagree	28.7	
	Strongly disagree	10.5	
Meals are well-suited to my dietary requirement	Strongly agree	22.9	2.13
	Agree	54.9	
	Neutral	12.4	
	Disagree	5.8	
	Strongly disagree	4.0	

Assell, Skipper, Gregoire, and Lafferty (1998:103) stated that menu design plays a very pivotal role in patient satisfaction while impacting on the nutritional value of meals provided to patients in the hospital setting. The menu must be able to provide choice for all patients, if it is likely to help patients improve their intakes (Bannerman et al., 2008:1174). A study by Chang, Kwak, and Mattila (2006:53) in Korea, confirmed that patients were more satisfied when they had the option to make selections from a variety of food choices. Another study conducted by John, Hartwell and Morgan (2010:181) in England, found that almost half of the food served in hospitals is wasted because of the taste, portion size, patient's appetite, or staff service. Research conducted by Williams, Hazlewood and Pang (2014:467) in Australia, validated that patients may have different cultural preferences and therefore the hospital menu must accommodate for the Muslim and Asians religious beliefs. For example, during Ramadan, Muslim patients can only consume food after sunset and prior to dawn for the month, even though sick people are usually exempt from this, some patients may fast regardless of their illness. Also, Indian patients have varied mealtimes during certain festive seasons and only specific foods can be consumed, mostly vegetarian (Williams et al., 2014:467).

According to Theurer (2011:11), a snack menu is served between mid-day, evening meal and just before bedtime. A patient's snack menu is based on the patient's diet order e.g. diabetic, low cholesterol or renal diet. Common snacks include dairy products, baked confectionery items, savoury items or canned and dried fruit. Research conducted by Williams et al. (2014:469) in Australia, indicated that hospital menus offer three meals and three mid-meal snacks to patients to obtain energy and nutrients. The snacks are introduced to the menu to ensure the patients protein and energy intake is maintained, as the snacks are served in between meals.

#### 4.4.4 Ordered takeaway food whilst in hospital

Figure 4.2 presents the data regarding patients that ordered takeaway food whilst in hospital.



**Figure 4. 2: Ordered takeaway food whilst in hospital**

The findings confirm that 70.2% of patients did not purchase takeaway meals from outside suppliers during their stay in hospital, whilst 29.8% of the patients confirmed that they did purchase take away meals from outside food establishments. Research conducted by Mentziou et al. (2014:383) in Greece, stated that the patients preferred the hospital menu than ordering outside food during their stay in hospital. Conversely, Miyoba and Ogada (2019:25), confirmed that more than 50% of patients substituted hospital meals with outside food. Vijayakumaran, Eves, and Lumbers (2018:50) argued that patients choose food from outside instead of the hospital food, as they prefer to eat food from home which is brought in by family members during visiting hours. These patients mentioned that the hospital meals were too bland, and that there was a lack of variety as well as lack of confidence in the safety and cleanliness with the hospital food preparation (Vijayakumaran, Eves, and Lumbers 2018:50). According to Vijayakumaran et al. (2018:50), consuming food from outside the hospital can also be connected to a culture of bringing meals to the patient from the family during the patients visiting hours.

## 4.5 Satisfaction with foodservice (Section C)

Section C of the questionnaire focused on patient satisfaction with mealtimes, preferred mealtimes, the timeous serving of meals, patient satisfaction questionnaire received for the foodservice, general satisfaction with foodservice, complaints regarding foodservices addressed swiftly and timeously, visited by the patient liaison officer from the kitchen each day, foodservice satisfaction in terms of gender, level of satisfaction with hospital food with regards to race, level of satisfaction with food with regards to religion, level of satisfaction with the food by ward categories.

### 4.5.1 Patient satisfaction with mealtimes

The data presented in Table 4.8 discusses responses regarding patient's satisfaction with mealtimes whilst in hospital.

**Table 4. 8: Patients satisfaction with mealtimes**

Mealtime attributes	Perception	%
Meals are consistently served each day at the same time	Strongly agree	22.9
	Agree	53.8
	Neutral	11.3
	Disagree	6.5
	Strongly disagree	5.5
Breakfast is served at a suitable time	Strongly agree	28.4
	Agree	57.5
	Neutral	6.5
	Disagree	5.1
	Strongly disagree	2.5
Lunch is served at a suitable time	Strongly agree	30.5
	Agree	56.7
	Neutral	5.5
	Disagree	5.5
	Strongly disagree	1.8
Dinner is served at a suitable time	Strongly agree	28.0
	Agree	54.5
	Neutral	7.6
	Disagree	8.0
	Strongly disagree	1.8

A large proportion of respondents in the study (76.7%) agreed that meals are consistently served each day at the same time. In terms of the specific meals served, 85.9% of patients agreed that breakfast was served at a suitable time, 87.3% agreed that lunch was served at a suitable time, and 82.5% agreed that dinner was served at a suitable time. A recent study conducted by Young, Allia, Jolliffe, de Jersey, Mudge, McRae and Banks (2016:1616) in Australia, found that mealtime interruptions did not impact on meal intake. Huxtable and Palmer (2013:904) conducted a study in Australia, which indicated that to introduce protected mealtimes would increase the mealtime interruptions; however, this would upscale the proportion of patients that received appropriate feeding assistance. Hence, this proposes that mealtime interruptions may not be a problem, and instead it may influence the availability of staff on the ward to provide assistance during mealtime. A study conducted by HSE (2018) in Dublin, confirmed the introduction of Mealtime Matters for Naas General Hospital, which is aligned to the national HSE Food, Nutrition and Hydration Policy. The aim of this new quality initiative, is to promote and maintain an environment where patients can enjoy their meals and have appropriate assistance to safely consume their food and drinks.

Protected mealtimes services operate as: breakfast from 08h15 to 08h45; lunch from 12h30 to 13h00; and dinner from 17h00 to 18h30. 'Protected Mealtimes' provide an environment conducive to patients enjoying and being able to eat their food. Protected meal times are set times in which the patient is encouraged to eat without any interruptions including, and not limited, by routine observations, routine therapy or administration of medications, non-emergency tests and visits from carers or family members, who are not assisting the patients who is eating.

The data presented in Table 4.9 discusses the respondents preferred serving times for meals during their stay in hospital.

**Table 4. 9: Preferred serving times**

Preferred serving times	Actual serving times	Preferred serving times	
		Time	%
Preferred breakfast serving time	07h00	06h00	3.64
		07h00	23.64
		08h00	65.82
		09h00	6.9
Preferred lunch serving time	11h00	11h00	3.6
		12h00	65.1
		13h00	31.3
Preferred dinner serving time	16h30	16h30	4.4
		17h00	33.5
		18h00	48.4
		19h00	13.8

In terms of the serving of breakfast, majority of the respondents (65.8%) preferred breakfast to be served at 08h00, instead of it currently being served at 07h00. About 23.6% of the patients preferred to have breakfast at 07h00, whilst only 6.9% of the patients requested for the breakfast to be served at 09h00 and 3.64% of the patients preferred breakfast to be served at 6am. Although the current serving time for lunch is 11h00, majority of the respondents (65.1%) preferred lunch to be served at 12h00, and 31.3% preferred that lunch be served at 13h00. Only 3.6% of the patients preferred the existing serving time for lunch at 11h00. Whilst dinner is served at 16h30 in all hospitals, 48.4% of the respondents preferred dinner to be served at 18h00, and 33.5% of the patients preferred the serving time for dinner to be 17h00. A small proportion of respondents (13.8%) preferred dinner to be served at 19h00.

Research conducted by Messina, Fenucci, Vencia, Niccolini, Quercioli, Nante (2013:730) in Italy, found that meals were served three times daily: breakfast from 07h30 to 08h30, lunch from 12h00 to 12h30, and dinner from 19h00 to 19h30. Nurses don't serve other foodstuff out of mealtimes, except hot tea in some wards in the afternoon, and yoghurt or fruit late in the morning. Mealtimes in a London hospital in England revealed that breakfast was served in the morning between 07h30 and 08h00, lunch service began at 12h00 and lasted for forty-five minutes and the evening

meal service began at 18h00 (Naithani et al., 2008:298). The fact that breakfast was served early was not a problem to because it was not regarded as the most important meal of the day.

#### 4.5.3 Patient satisfaction with foodservice staff and equipment

The data presented in Table 4.10 presents the responses regarding patient satisfaction with foodservice staff and equipment whilst in hospital.

**Table 4. 10: Patient satisfaction with foodservice staff and equipment**

Foodservice staff and equipment attributes		%	Mean
Hostesses are neat and tidy	Strongly agree	48.0	1.60
	Agree	47.6	
	Neutral	1.8	
	Disagree	1.5	
	Strongly disagree	1.1	
The hostess is helpful when taking menu orders	Strongly agree	42.5	1.66
	Agree	52.0	
	Neutral	2.5	
	Disagree	2.5	
	Strongly disagree	0.4	
The staff who remove the meal trays are friendly and helpful	Strongly agree	38.2	1.80
	Agree	50.05	
	Neutral	6.2	
	Disagree	2.9	
	Strongly disagree	2.2	
Crockery and cutlery are clean and in good condition	Strongly agree	48.4	1.62
	Agree	45.1	
	Neutral	3.6	
	Disagree	1.8	
	Strongly disagree	1.1	
The meal trays are clean and in good condition	Strongly agree	36.7	1.82
	Agree	53.1	
	Neutral	3.3	
	Disagree	5.1	
	Strongly disagree	1.8	



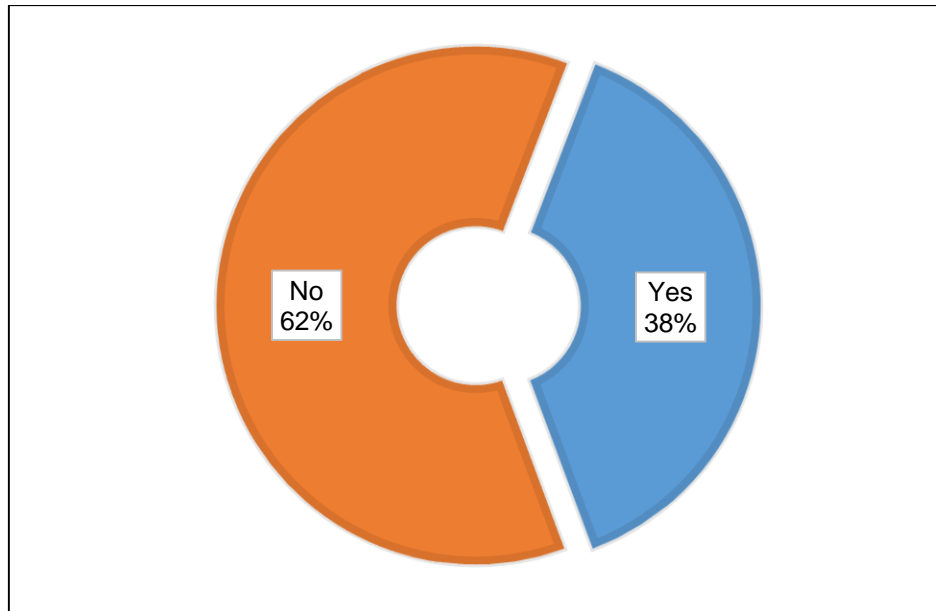
Patients were asked to rate their level of satisfaction with attributes pertaining to foodservice staff and equipment, on a five-point Likert scale, with 1 being 'strongly agree' and 5 being 'strongly disagree'. With regards to foodservice staff and equipment, respondents were most satisfied with the fact that hostesses were neat and tidy (mean=1.60), followed by clean crockery and cutlery (mean=1.62), the hostess was helpful when taking menu orders (mean=1.66), the staff who remove the meal trays were friendly and helpful (mean=1.80) and meal trays were clean and in a good condition (mean=1.82).

More specifically, 95.6% of respondents agreed that the hostess who delivered the meals were neat and tidy, and 94.5% agreed that the hostess was helpful when taking menu orders. Majority of respondents (94.5%) also agreed that the hostess explained the menu clearly when taking orders, and 88.7% of the patients agreed that staff that removed the meal trays after meals were friendly. With regards to crockery and cutlery, majority of respondents (93.5%) agreed that the crockery and cutlery were clean and crack-free and 89.9% maintained that the meal trays were clean and in good conditions.

Aminuddin et al. (2018:97) suggested that to measure the patient's level of satisfaction is to be able to define the acceptability of the service provided. A study conducted on patient satisfaction in Pakistan by Kitapci, Akdogan, and Dortyol, (2014:161) indicated that the most important factors that impact on foodservice quality dimensions is physical facilities, equipment, appearance of personnel and empathy. Similarly, Sahin et al. (2006), noted that taste, warmth of food, variability of food, time of food distribution cleanliness of cutlery and serving staff attitude were the most important factors that determine dissatisfaction. In particular, serving staff's attitude play a pivotal role in the patient's perception of the foodservice quality. Foodservice staff should be aware that patients may develop some feelings of fear and anxiety when delivering meals. Hence, effective communication is very necessary especially when patient's demand cannot be met, like when there is a change in diet prescription (Belanger and Dube 1996:534).

#### 4.5.4 Patient satisfaction feedback

The data presented in Figure 4.3 relates to patient satisfaction feedback questionnaires for foodservice.



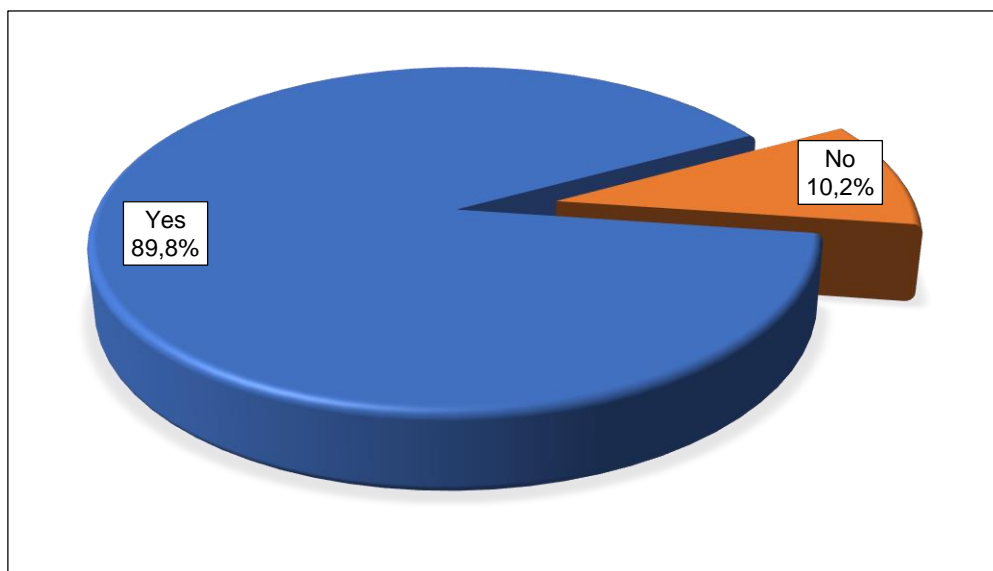
**Figure 4. 3: Patient satisfaction questionnaire received for foodservice**

According to the data presented in Figure 4.3, 62% of respondents indicated that they did not receive a patient satisfaction questionnaire, while 38% indicated that they received a patient satisfaction questionnaire for foodservice. A study by St Mark's hospital in Salt Lake City, Utah, revealed that patients were surveyed just once during their stay in hospital, especially during the early days of admission. This could be bias, as their opinion would have changed as they stayed longer. Watters et al. (2006:1347) emphasize the importance for a thorough patient survey to address the main dimensions of foodservices. For example, the nursing team must communicate with the patients to ensure that feedback is received from the patients on the meal satisfaction, as well as suggestions to assist in further menu planning with the catering and dietetic team (Stanga et al., 2003: 245). There must be continuous assessments and evaluations carried out, as well as customer surveys to identify the areas of concern and the areas that need improvement. The hospital should have a norm for such food standards (Fernando and Wijesinghe 2015:19)

Al-Torky, Mohamed, Yousef and Ali (2016: 38) argued that catering service providers carry out patient satisfaction surveys in hospitals to monitor the patient satisfaction. The surveys evaluate the quality, meal selection and meal service delivery. Al-Torky et al. (2016:39) maintain that the results of such surveys can assist with identifying the patient complaints and solving the patient's challenges as well as prevent malnutrition. Lee et al. (2018:103) confirmed that Hillside Hospital in England depended highly on the patient surveys to improve the quality of foodservice, as it is high priority to keep the patients satisfied.

#### 4.5.5 Addressing complaints regarding foodservice

The data presented in Figure 4.4 pertains to the patient's complaints regarding foodservice been addressed swiftly and timeously.



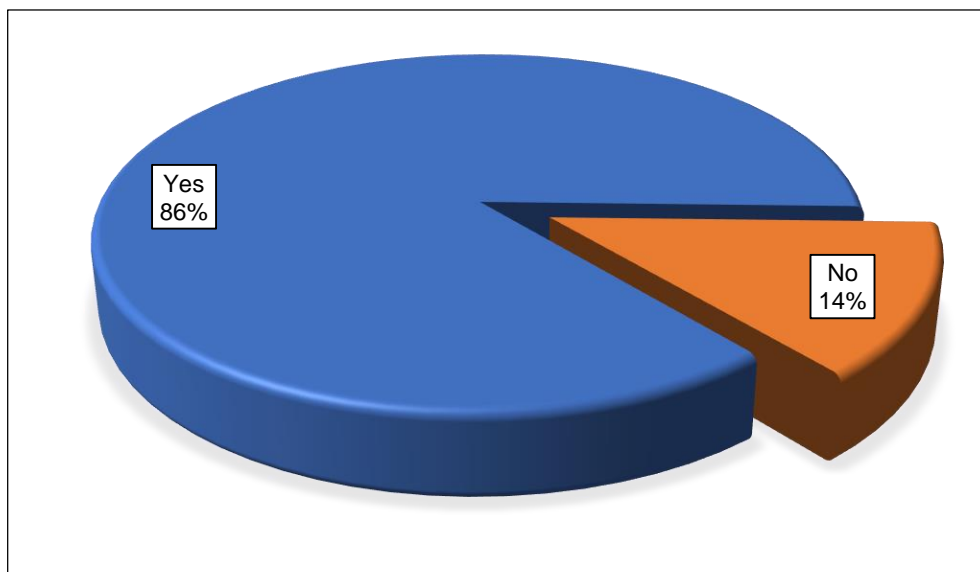
**Figure 4. 4: Complaints regarding foodservice**

A large proportion of respondents (89.9%) confirmed that their complaints on foodservices were responded to promptly, whilst 10.2% respondents indicated that their complaints on food was not promptly addressed. The data from the surveys assists the caterer to review and improve on the foodservice quality and to ensure that the patient satisfaction is achieved (Keller et al., 2006:45). Hartwell, Edwards, and Symonds (2006:226) believe that the main issue regarding foodservice management was the fragmentary nature in communication between the kitchen and the wards. It is important for foodservice managers to depend on kitchen porters for food delivery

to the wards. Ward staff find it difficult to communicate with foodservice staff while dieticians depend on nurses to communicate any concerns regarding patients. An association of patients and other kind of patient settings, and complaints generate detailed information on how they feel about some specific aspects which can build a commitment to change and lead to developments (Coulter, Roberts and Dixon 2013:15). The North bank hospitals trust in England discussed some good ideas on how to facilitate access to the hospitals for outpatients. The initiative came from the informal discussion with patients and their complaints about communication on telephone (Lee et al., 2017:106).

#### 4.5.6 Patient Liaison Officer

The data presented in Figure 4.5 relates to whether respondents were visited by a Patient Liaison Officer from the kitchen during their stay in hospital.



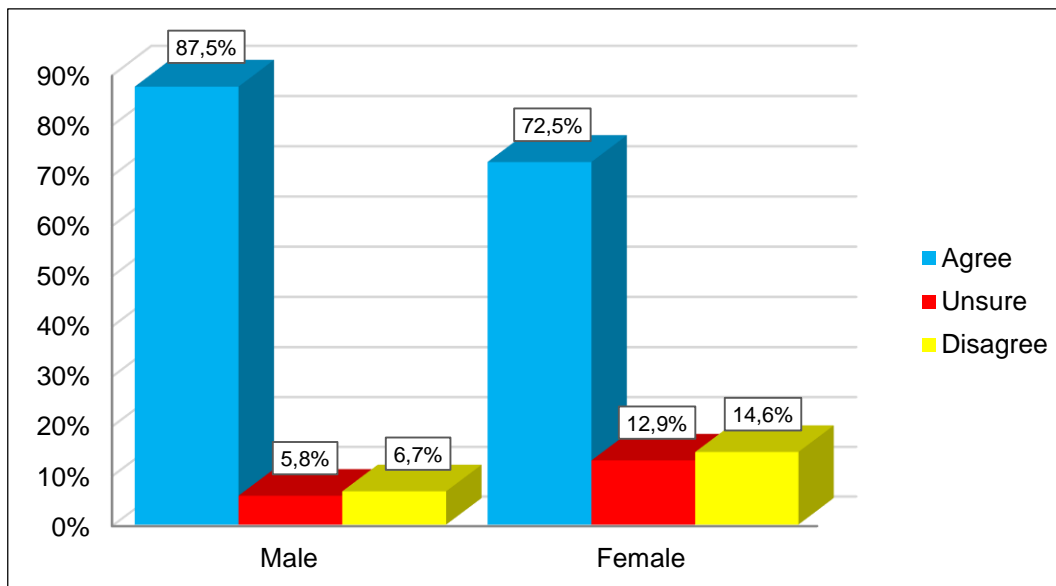
**Figure 4. 5: Visit from a Patient Liaison Officer visitation**

The data reflects that 86% of the patients indicated that they were visited by the Patient Liaison Officer (PLO) who is employed by the outsourced catering company to visit the patients and discuss their feedback with regards to their meals in the hospital. Fourteen percent of the patients stated that they were not visited by the PLO during their hospital stay. Keller, Gibbs-Ward, Randall-Simpson, Bocock and Dimou (2006:8:43) indicated that it is important to observe meal rounds and have feedback with regards to the meals as it can improve the meal service standards. The meal

rounds indicate the patient's comments on the taste, appearance of the food, tray setup and the patient's perception on the service from the catering staff. Watters, Sorensen, Fiala and Wismer (2003:1347) believe that the feedback from the meal rounds assisted in pinpointing the problem areas, such as the foodservice staff require additional training in special and therapeutic diets as well as improvement of communication between the foodservice staff and the patient.

#### 4.5.7 Overall satisfaction with foodservice by patient/hospital characteristics

This sections presents the data on various cross-tabulations between overall satisfaction with foodservice and patient demographics and hospital characteristics.

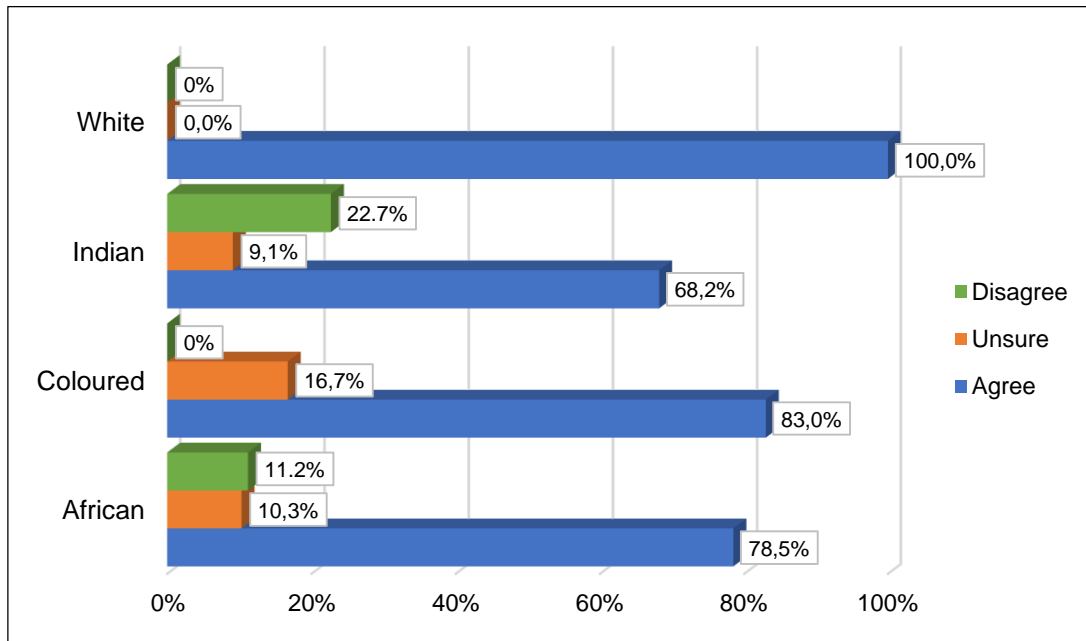


**Figure 4. 6: Cross-tabulation: Foodservice satisfaction and gender**

The data presented in Figure 4.6 discusses responses on foodservice satisfaction in terms of gender. Evidently, a higher percentage of male patients (87.5%) indicated that the hospital food had met their expectations compared to female patients (72.5%). Research suggests that overall, men have a different food quality perception from women (Johns et al., 2010:185). It advisable to consider this when planning menu for example, females in a maternity ward. Kennewell and Kokkinakos (2001:37), in a study in Australian teaching hospital, noted a huge difference in food preferences among genders. It was found that most women like salads, fresh fruits and vegetables, while men like poultry egg, and red meat (Kennewell and Kokkinakos 2001:37).

However, a study conducted by Sahin et al. (2006:381) in Turkey, indicated that characteristics such as age and gender were found to be of no consequence to patient's satisfaction.

Figure 4.7 presents the data on the cross-tabulation between foodservice satisfaction and race.



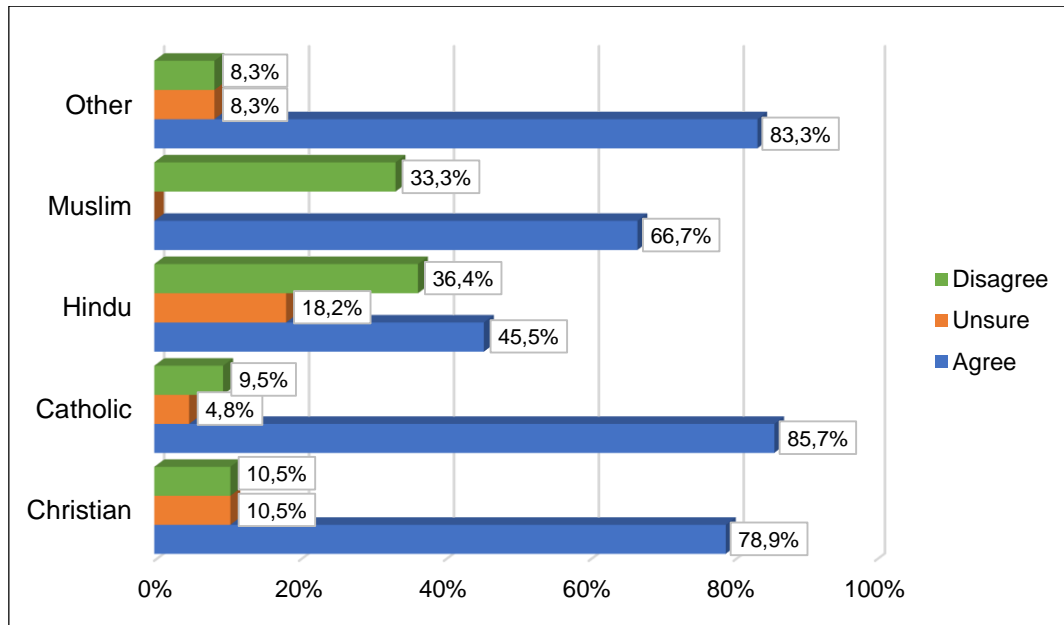
**Figure 4.7: Cross-tabulation: Foodservice satisfaction and race**

The data reflects that all White patients were satisfied with the hospital food as they claimed it met their expectations. A large proportion of the Coloured patients (83%) agreed that the hospital food met their expectations, and 78.5% of the African patients agreed that the food met their expectations. Indian patients were the least satisfied race, with only 68.2% of patients indicating that their expectations with foodservice were met.

In a study done by Young, Meterko and Desai (2000:333) on patient food satisfaction in the USA, the variable “race” had a consistent statistical significance on the effect of food satisfaction. All races, except Whites, experienced lower satisfaction levels with foodservice. Sitzia and Wood (1997:1829) studied more than one hundred journal articles which are published in the field of patient food satisfaction, and discovered

that race and ethnicity plays a pivotal role in satisfaction ratings. Since ethnicity relates to cultural values, it may influence menu planning in the hospital.

The data presented in Figure 4.8 reflects responses on the cross-tabulation between foodservice satisfaction and religion.



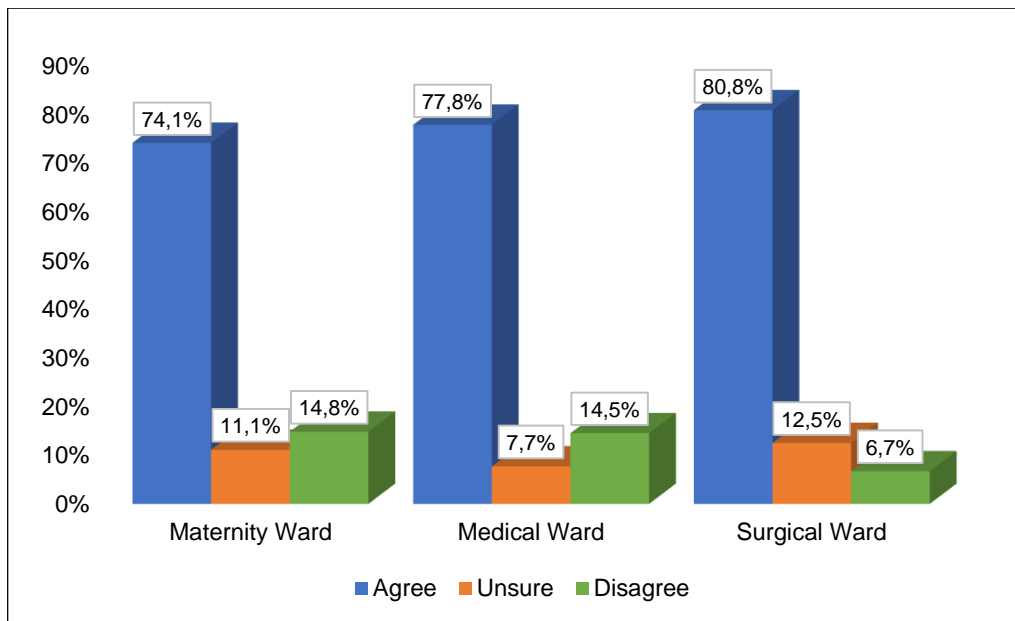
**Figure 4.8: Cross-tabulation: Foodservice satisfaction and religion**

According to the data, high levels of foodservice satisfaction were evident amongst Catholics (85.7%), followed by other religions (83.3%), and Christians (78.9%). Lesser levels of satisfaction with foodservice was noted by Muslims (66.7%) and Hindus (45.5%). Many religions have guides about specific foods which should not be eaten, or which may be restricted at certain periods of the year. Although a standard hospital menu meets most patient’s religious and cultural food needs, there are some group of patients with alternative needs. A patients’ personal dietary need must be met when they also require a therapeutic diet (The Scottish Government, 2008:55).

A study conducted by Johns, Edwards and Hartwell (2013:41) in the USA, indicated that the moderating variable that harnesses the relationship between patient satisfaction and perception with foodservice concept is either religion or ethnic background. Jews eat kosher food and Muslims do not eat pork. As a result, menu choices may be limited, and food acceptability and patient satisfaction may be

reduced. Benjamin (2006:91) discovered that higher levels of religious prominence are related to a higher satisfaction with healthcare.

Figure 4.9 presents the data on the cross-tabulation between foodservice satisfaction and ward categories of patients.



**Figure 4.9: Cross-tabulation: Level of satisfaction with foodservice by ward categories**

Figure 4.9 displays the data for the cross-tabulation on the level of satisfaction with foodservice by ward categories. Majority of the patients in maternity wards (74.1%) agreed that the hospital food had met their expectations, while 11.1% were unsure, and 14.8% disagreed that the hospital food met their expectations at ward level. Majority of the patients (77.8%) in the medical ward agreed that the hospital food met their expectations, 7.7% were unsure and 14.5% disagreed that the hospital food had met their expectations. Majority of patients in the surgical ward (80.8%) agreed that the hospital food met their expectation, 12.5% were unsure, and 6.7% disagreed. The highest satisfaction level with foodservice at the hospital was therefore evident in the surgical ward (80.8%), followed by the medical ward (77.8%), with the least level of satisfaction found in the maternity ward (74.1%).



## **4.6 Conclusion**

The overall perception of hospital food from this study on the three private hospitals in KZN indicated that the patients were generally satisfied with the meals and the services that they had received. Literature from previous researchers on this topic was integrated into the discussion, to substantiate and justify claims made in the study. This chapter presented the findings and interpretation of the quantitative data analysis. Data was analysed using a quantitative data analysis tool (SPSS version 23.0 for windows). The discussion of the data will provide the basis for fundamental conclusions to be made from this study, and to put forward justifications for recommendations, which are presented in the next chapter.

## **CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

The previous chapter presented a detailed discussion on the findings of the data collected for this study. In this chapter, conclusions on each objective of the study will be drawn. Based on the key conclusions, recommendations will be made, and areas for future research will be identified. The main aim of this study was to investigate the food satisfaction levels amongst patients in three private hospitals in KwaZulu-Natal. The quality of foodservice can influence the overall patient satisfaction level during their stay in the hospital, and therefore the factors that affect foodservice satisfaction in the hospital is identified and discussed within this chapter. Suitable recommendations in this study will be made available to the management in the three private hospitals in KZN. Even though this study was carried on three selected hospitals in the KZN province which may limit the generalization of the findings, the result does provide a deep insight into the impact of foodservice on patient satisfaction levels in private hospitals.

### **5.2 Characteristics of patients and hospitals in the study**

Majority of the patients in the study were females and this can be attributed to the selected hospitals comprising of both maternity wards, female medical wards and female general wards. More than half of the patients that were included in the study were between 31 to 40 years old. Majority of the patients were Christians. In terms of racial composition, an overwhelming majority of respondents were Blacks. A large proportion of patients in the study stayed in hospital for between 2 to 3 days and between 4 to 7 days. Although patients in the study were subjected to various diets based on their medical conditions, majority of patients were on a normal diet.

### **5.3 Patient satisfaction with food in hospitals**

In terms of the overall perception of hospital food, whilst majority of patients found the food to be very good, a fair proportion of patients considered the food to be of an average standard. The study used variables such as temperature of food and

beverages, food quality, menu design, and the need for outsourced food, to determine level of satisfaction with hospital food amongst patients. Overall, patients were satisfied with the temperature at which food and beverages were served. The study found that hospital food had met the expectations of patients in terms of quality. More specifically, the distinct flavour of the food and its taste largely contributed to the high levels of satisfaction with the food quality. However, patients found that the lack of suitable healthy meal choices, reduced satisfaction levels amongst patients. There were reduced satisfaction levels amongst patients due to there not being suitable healthier meal options available to choose from.

Variables such as meal portion choices, meal variety, meal portions, cultural considerations, and availability of snacks and dietary requirements were used to obtain information on how menu design affected levels of satisfaction with food in hospitals. Patients were found to be most satisfied with the fact that meals were well-suited to their dietary requirements, the food portions were adequate and the variety of choice on menus. It was noted that satisfaction levels were lower due to the fact that there was little cultural consideration given to the menu design, and when there was a lack of snacks between each meal for the patients that were admitted to the three private hospitals in KZN.

Although majority of the patients, did not order take-away food during their stay in hospital, a fair amount of patients stated that they did eat food from outside the hospital in the form of takeaways or home-cooked meals brought in by family members.

#### **5.4 Satisfaction with foodservice**

A number of variables were used in the study to assess satisfaction levels with foodservice. Such variables include preferred mealtimes, the timeous serving of meals, patient feedback, and the handling of complaints regarding foodservices. In particular, foodservice satisfaction was measured against variables such as gender, race, religion, and ward category. Patients agreed that meals were served timeously each day, and most of patients confirmed that all three meals (break, lunch and dinner) were served at a suitable time. However, a number of patients preferred breakfast to

be served at 08h00 instead of 07h00; lunch to be served at 12h00 instead of 11h00, and dinner to be served at 18h00 instead of 16h00.

Variables to measure patient satisfaction with foodservice staff and equipment included the neatness of food hostesses, the helpfulness of hostesses, and the state of crockery, cutlery and meal trays. Patients were most satisfied with the neatness and tidiness of the food hostesses, and their helpfulness when taking orders. Patients were also satisfied with the condition of the crockery, cutlery and meal trays.

In terms of feedback obtained from patients, majority of patients in the study confirmed that they did not receive any patient satisfaction feedback surveys. Essentially, patients are not provided with the means to assess and comment on hospital foodservice. However, patients indicated that they were frequently visited by the Patients Liaison Officer, and most patients stated that when complaints were made about food and foodservices, their complaints were promptly addressed.

The study concluded that overall, male patients were more satisfied with the foodservice in hospitals compared to female patients. In terms of race, the foodservice at the hospitals met the expectations of all white patients, and the least for Indian patients. Religion played a factor in this study with regards to meeting the expectations of foodservices levels in hospitals. The results showed that the Hindu and Muslim patients were less satisfied with the hospital foodservice compared to Christian patients. Also, highest levels of satisfaction with foodservice was found in patients from the medical and surgical wards, compared to those from the maternity ward.

## **5.5 Recommendations**

Based on the data obtained from the study, and the conclusions drawn, the following recommendations are made in respect of patient satisfaction with foodservice in hospitals.

- It is recommended that hospital staff identify and assess patients' dietary needs, and discuss with the caterers, as well as the dieticians, on the menu plan and meal

design that is required for patients with special diets. Hospitals should also provide the necessary ongoing training for ward hostesses to ensure that they are aware of all the special dietary requirements that are needed in the hospital.

- Since the planned menus play a role as standard in evaluating meals served to inpatients, careful menu planning should be emphasized. Menu changes must be considered to improve food quality and to address a wide range of factors, such as religious considerations, healthy meal choices, special dietary needs, and wider food choice. Each hospital's foodservice institution is unique, and interventions must be customized to the specific patient population's needs and perceptions. Greater choice should also be made available for groups such as vegetarians and vegans. An evaluation process of the menu planning should be followed, to monitor satisfaction and challenges.
- Quality improvement programs should be developed from a holistic point of view, in terms of investigating hospital foodservice quality at all stages, from menu planning to meal service. Feedback surveys on foodservice should be conducted on a regular basis to identify and address any challenges to improve the food quality and service standards in the private hospital environment. Patients should have the opportunity to become involved in their meal planning decisions, and have some control over food selection while in the hospital.
- It is recommended that all foodservice staff receive new uniforms each year, to ensure that the hostesses are neat and groomed at all times. Also, regular stock checks must be done weekly on crockery, cutlery, serving linen and meal trays, in order to prevent any chipped or cracked trays from going out of the kitchen. This process will also ensure that if there are any shortages of cutlery, crockery and serving linen, they are replaced immediately, to ensure that service delivery is not affected, and that patient satisfaction is met at all times.
- Quality control should be improved to respond to fluctuations on meal demands, and to control production portions, since over production can lead to food wastage.
- Special attention should be given to menu preference and quantity of meals produced to minimize waste.
- Special attention should be given to the meal serving times of patients. Food times should be revised, more especially the serving times for supper and the breakfast so that the time gap between supper and breakfast can be reduced. There should

be some flexibility with the food serving schedule. Even though it is appropriate to set a food serving schedule, when dealing with human beings and especially patients, there is a need to apply some flexibility for unforeseen circumstances.

### **5.6 Limitations and recommendations for future research**

This study was done at three private hospitals in the Kwa-Zulu Natal province. The result provides a deep insight into the impact of foodservice on patient satisfaction level in private hospitals. The patients that were only admitted to the three private hospitals were allowed to participate in the research. Future research must be undertaken to ascertain the level of satisfaction of patients in public hospitals in South Africa. Also, patients were only surveyed at one time during their hospital stay, typically within a couple days of admission and it is possible that patients' opinions of food service satisfaction changed over the course of their stay.

Future research should focus on foodservice instruments that provide detailed patient feedback on food quality. Patients' suggestions regarding the betterment of foodservice will be helpful in making decisions for continual improvement of hospital food services. The results can also be used in benchmarking the hospital's food services quality with other hospitals.

### **5.7 Conclusion**

The aim of this study is to investigate levels of satisfaction with foodservice amongst patients in private hospitals in KwaZulu-Natal. It is hoped that the findings of this study would help in improving the level of overall satisfaction with hospital food and food services and in directing hospital managers for making thorough and appropriate decisions about hospital foodservices. The results of this study suggest that improving the quality of taste and appearance would result in an increase in patient satisfaction with hospital food and foodservices in private hospitals in KwaZulu-Natal. Hospital managers can also use the results of this study in the future to measure or decide whether there is an improvement in the quality of food services at their respective hospitals. Finally, this study has a potential to making contribution to enable dieticians

monitor the likely effects of changes made on food and food services as well as the aspects to be changed.

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# APPENDICES

## SURVEY QUESTIONNAIRE

**SECTION A: BIOGRAPHICAL DATA**

**SURVEY NUMBER:**

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Please answer the following by making an “X” in the appropriate block where the options are provided.

**A.1 What is your job category?**

Lawyer	
Doctors	
Operations Manager	
Paramedic	
Wedding Planner	
Hair Stylist	
Home Executive (Housewife)	
Manager	
Veterinarian	
Judge	
Flight Attendant	
Chef	
Mine Worker	
Teacher	
Matron	
Sales and Marketing	
Unit Manager	
South Africa Police Force	
South African National Defence Force (SANDF)	
Others Specify	

**A.2 What is your gender?**

Male	
Female	

**A.3 What is your age group?**

20-29	
30-39	
40-49	
50-59	
60+	

**A.4 Please indicate your highest qualification**

Master's Degree	
Bachelor's Degree	
Diploma	
Certificate	
Other, Please Specify	

**A.5 What is your home language?**

English	
Afrikaans	
Zulu	
Venda	
Xhosa	
Swati	
Tsonga	
Other, Please Specify	

**SECTION B: INDIVIDUAL FACTORS**

**B.1 How long have you been admitted in hospital?**

Less than 1 Week	
1-2 Weeks	
2-4 Weeks	
1-2 Months	
More than 2 Months	

**B.2 What type of diet have you been on for the majority of your hospital stay?**

Normal diet	
Diabetic diet	
Low Cholesterol diet	
Renal Diet	
Liquid Diet	
Soft Diet	

Clear Fluid diet	
Not sure	
Other, Please Specify	

**Please answer the following by making an “X” in the appropriate block where the options are provided.**

TEMPERATURE	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
The cold beverages are at the correct temperature					
The hot beverages are at the correct temperature					
The hot meals are served at the correct temperature					
The desserts are served at correct temperature e.g. jelly and custard					

FOOD QUALITY	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
The hospital food has met my expectations					
I am able to choose a healthy meal option off the menu					
I like the way the vegetables are cooked					
The meals taste good					
The menu has a wide variety of meal options for me to choose from					
The meals have excellent and distinct flavours					
The meat is tough and dry					

SERVICE	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
Were the dishes and utensils clean and chip free					
The Hostess who deliver's your meals are neat and tidy					



The hospital smells prevent me from enjoying my meals					
I am disturbed by the noise levels that are created by the hostess and nurses.					
The staff who deliver the menus are helpful					
The staff who clear out my meals tray after my meal are friendly					

MENU	Strongly agree	Agree	Unsure	Disagree	Strongly Disagree
I like to be able to choose different meal portions					
The menu has enough variety for me to choose meals that I prefer to eat					
I receive enough food					
I still feel hungry after my meals					
I am offered a teatime snack					
There is sufficient tea service during the day and night					
The diabetics are offered sufficient snacks					

**SECTION C: PLEASE ANSWER THE FOLLOW OPEN ENDED QUESTIONS**

1. Do you prefer Western or Eastern meals? if so give an example:

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2. Have you ever ordered take out while in hospital?

Yes	
No	

If Yes, please specify what:

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3. Does the presentation of your meals have any impact on your appetite?

Yes	
No	

If Yes, please specify what:

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**ETHICS APPROVAL**

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

---

[REDACTED]

[REDACTED]

[REDACTED]

**Student : Durban University of Technology : working towards a Masters of Technology in Hospitality.**

**Re: Approval granted from [REDACTED]**

Dear Mr. Saus

We acknowledge receipt of your request for [REDACTED] approval to undertake the above surveys at [REDACTED]. Permission is hereby granted from the [REDACTED]

**OBJECTIVE OF THE STUDY:**

To examine the views of patients towards catering services within private hospitals in the Greater Durban Area, with particular attention on current satisfaction levels, challenges currently experienced and opportunities to improve the current offering within these institutions.

We further acknowledge receipt of the survey questionnaire tool that will be utilized for the study. The results of the survey will be shared with the management of the hospitals.

We trust that this is in order  
Thanking you  
Yours faithfully

Dear Chad

**FOOD SATISFACTION LEVELS AMONGST PATIENTS IN PRIVATE HOSPITALS  
IN KZN**

I refer to your letter [REDACTED] wish to confirm that we are able to grant you consent to carry out your survey in the above regard, subject to my perusal and confirmation prior to publication of same.

Kindly let us have a copy of the questionnaire that patients will be required to complete and ensure that patients are advised of your intention to use the information for research purposes only and, that their details will not be publicized. The hospital names should also not be mentioned.

We wish you everything of the best during your research.

Thanking you.