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# Mealtime Situations among Surgical Patients

Validation of an observation tool – A literature review

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The purpose of this final project is to find more research evidence to validate the already existing observation tool used to record mealtime situations among surgical patients. The aim is to develop mealtime situations in order to support good dietary intake and reduce malnutrition among surgical patients. The study question is: what research evidence shows that the observation tool is valid?

This final project was a literature review. Research articles where searched from databases including CINAHL, MEDLINE, Nursing Database, Joanna Briggs Institute Database and manual search through reference lists. A total of 15 articles were selected and analyzed using deductive content analysis.

Findings revealed that factors such as hand hygiene, environment, comfortable position, menu, meal preference, removal of lid from tray and assistance constitute surgical patients' mealtime situations. Hence, they are essential part of good nutritional care.

Based on these findings, it could be suggested that for nurses and healthcare workers to be able to provide good quality care for surgical patients, they should undergo further education and training to strengthen their knowledge and attitudes of nutritional care.

It maybe common wisdom to assume that the right adherence to the observation tool items would support good dietary intake thus reducing risks of malnutrition and improving health outcomes. However, there is not enough evidence supporting its implementation as it has only been used in one study. Further research is required to evaluate nutritional outcomes using the observation tool.

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| Keywords | mealtime situation, surgical patient, nursing |

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Tämän opinnäytetyön tavoitteena on löytää lisää tutkimustuloksia vahvistamaan näyttöä jo käytössä olevasta havainnointi työkalusta, jota käytetään nauhoittamaan kirurgisten potilaiden rukailutilanteita. Tarkoituksena on kehittää myönteisesti ruokailutilanteita, jotta voidaan vahvistaa hyvää ravinnonsaantia ja vähentää aliravitsemusta kirurgisten potilaiden parissa. Tutkimuskysymys on: osoittaako tutkimusnäyttö, että havainnointi työkalu on validi?

Opinnäytetyö on kirjallisuuskatsaus. Tutkimusartikkeleita etsittiin seuraavista tietokannoista: CINAHL, MEDLINE, Nursing Database, Joanna Briggs Institute Database ja käsinhaun kautta. Deduktiivista sisällön analyysia varten valittiin käsiteltäväksi 15 artikkelia.

Tulokset osoittavat, että seuraavat tekijät, kuten käsihygienia, ympäristö, miellyttävä asento, ruokalista, aterioiden valinnanmahdollisuus, ruokatarjottimella olevan kannen avaaminen ja ruokailutilanteissa avustaminen määrittävät kirurgisten potilaiden ruokailutilanteita. Siten ne ovat osa hyvää ravitsemushoitoa.

Näiden löydösten perusteella voitaisiin suositella hoitajille ja teveydenhuollon työntekijöille, että tarjotakseen laadukasta hoitoa kirurgisille potilaille, tulisi heidän perehtyä tarkemmin ja harjoitella enemmän vahvistaakseen omaa osaamistaan ja asenteitaan koskien ravitsemushoitoa.

Voi olla yleinen olettamus olettaa, että oikea hoitoon sitoutuminen käyttämällä havainnointi työkalua tukisi hyvää ravinnonsaantia ja vähentäisi riskiä aliravitsemukseen. Asiasta ei ole kuintenkaan riitävää tieteellistä näyttöä tukemaan tämän havainnointi työkalun käyttöä, sillä sitä on käytetty vain yhdessä tutkimuksessa. Tarvitaan jatkotutkimuksia arvioimaan ravitsemuksellista näyttöä hyödyntämällä havainnointi työkalua.

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| Avainsanat | ruokailutilanne, kirurginen potilas, hoitotyö |

**Contents**

# 1 Introduction

According to statistics derived from the Hospital District of Helsinki and Uusimaa (HUS) annual report, the HUS provides treatment for over 500 000 patients in Finland each year and nearly 87 000 surgeries were performed in 2013 (HUS 2013).

The HUS serves to patients 5 meals per day which includes morning breakfast, afternoon lunch, afternoon snack and evening dinner and snack all designed to support patients' nutritional status and recovery. The menus are based on hospital food recommendations and the types of meal served to patients depend on their age, medical conditions and nutritional status. (HUS 2013.)

Previous research has shown that the nutritional status of a patient may be compromised due to hospital admission, metabolic consequences of illness, inadequate food and fluid intake or nil by mouth and improper assessment and documentation of the patients' dietary intake by nurses. In addition, surgical patients may experience great difficulties accessing their meals during hospital stay, served meals not conforming to their wish, eat in an uncomfortable position and maybe frequently interrupted during mealtimes by hospital staff. (Kim & Choue 2009:335; Dunne 2013: 670-671.)

As primary care providers, nurses are therefore expected to provide holistic care during hospital admission. They must understand the impact of a good hospital meal on physical and emotional wellbeing of their patients, hence must provide the required support needed to help enjoy their meals during hospital stay (Kim & Choue 2009:334).

Hospital meal is an essential part of a patient's care. The processes surrounding mealtime in a hospital setting can positively influence the patients' nutritional, physical and emotional wellbeing. (Dunne 2013:670.) The purpose of this final project is to find more research evidence to validate the already existing observation tool used to record mealtime situations among surgical patients.

## 2 Background

The observation tool Table 2 (Appendix 2) has been used and tested in the final project (Kahelin & Saarela 2014). The tool was categorized into clear and distinct sections, yet broad enough to cover all possible target phenomenons. Eight questions where chosen to be answered as a checklist on the tool.

The first question was; by whom food was served? And answer options were; nurse, hospital cleaner or other. Second question; was if patients' hand hygiene is taken care of before the meal? Third question; was if the environment is undisturbed? Fourth question; was the patients' comfortable mealtime position ensured? Fifth question; was the patient told what is on the menu? Sixth question; was the patient asked on meal preferences? Seventh question; was the lid removed from the tray? And the eighth question; was the patient offered assistance during mealtime? Questions 2 to 8 required the answer options; "YES", "NO", "N/A" (not applicable) and "Other comments. There were also clarification statements such as; "Patient independently" meaning patient completed the task themselves, "Patient asked" meant patient opted or requested for clarification and "Beforehand" meant the action was performed before it reached the patient.

The processes surrounding mealtimes such as nutrition, hygiene, environment, preference, positioning, planning and preparation and consumption is a daily routine for many. However, these processes may become compromised when health deteriorates. (Dunne 2013: 670.)

Good nutritional care is vital to a patient's wellbeing. It is essential for optimal preparation and recovery from surgery, immune functions and wound healing enhancement and improvement of the patient's overall wellbeing. Poor nutritional status on the other hand can lead to malnutrition, which can seriously impact a patient's quality of life. (Huckleberry 2004:671.) Everyone directly involved in patient care must have good theoretical and practical knowledge of nutrition, implication of malnutrition and how to implement good nutritional care. Making sure patients receive adequate nutrition during hospitalization is an essential part of clinical care and every registered nurses responsibility. (Wilson & Best 2012:17.)

# 3 Purpose, aim and study question

The purpose of this final project is to find more research evidence to validate the already existing observation tool used to record mealtime situations among surgical patients. The aim is to develop mealtime situations in order to support good dietary intake and reduce malnutrition among surgical patients. The study question is: What research evidence shows that the observation tool is valid?

# 4 Data collection and data analysis methods

## 4.1 Data collection method

The research method used in this final project is a literature review. A literature review is an extensive study, evaluation and integration of previously published literatures relating to a particular topic (Aveyard 2010: 6). It is not a mere description or summary of what has been published before, but rather a critical analysis of the available literatures on the current topic showing insight and awareness of different arguments, theories and approaches (Burns & Grove 2005:93). The main goal therefore is to generate knowledge from a body of research and present its findings in a well written and scientific manner to bring the reader up-to date with current literatures on the topic (Aveyard 2010: 6).

The review should show what has already been known about the subject matter, identify the research question and find answers to the research question. It should also show relationships among key concepts, compare and contrast various researchers' view points on the topic, highlight inconsistencies and contradictions in the body of knowledge and identify areas for future research study. (Aveyard 2010: 6; Burns & Grove 2005 93 - 94.)

Literature reviews are important in healthcare because they provide a summary of critically analysed literatures and findings from existing scientific knowledge. This provides healthcare workers with up-to-date information on recent developments in their practice

and also saves time and effort of having to read several individual reports on any given topic. (Aveyard 2010: 6.)

## 4.2 Database search

The search database included CINAHL via EBSCO, MEDLINE (Ovid), Nursing Database (Ovid), Joanna Briggs Institute Database (Ovid) and manual search through reference lists. Inclusion criteria; articles and materials published between 2004 and 2014 in English language. Search terms, number of hits and articles selected for review are summarised in Table 1 (Appendix 1). The references obtained from the search were analysed by looking at articles containing keywords in the title and/or abstract. After the analysis, a total of fifteen (15) articles were found to be relevant for this final project based on full text; organization and consistency of their content, hence were selected for further review.

## 4.3 Data analysis

Data analysis is aimed at collectively putting together, subjectively interpreting and making sense from the collected data through a systematic classification process that aims at identifying core uniformity and meanings (Polit & Beck 2010: 463). In qualitative research, data are often analysed using content analysis. Content analysis is a method used in many nursing research and it involves the classification of words into categories based on their theoretical importance. (Burns & Grove 2005: 554.)

Content analysis exists in two forms; inductive and deductive content analysis. Both inductive and deductive content analysis process involves three main phases: preparation, arranging and reporting of results. The purpose of study determines which form is used in processing data. (Polit & Beck 2010: 463-464.)

A type of content analysis whereby materials are analysed based on the data where there is no theoretical background is called inductive content analysis. In contrast, deductive content analysis implies studying previous research and existing theories and then testing hypotheses that arises from those theories. (Gillis & Jackson 2005: 253-255.) In this final project, data was analysed by using deductive content analysis method and the classification was based on the observation tool.

Both authors of this final project analysed all 15 chosen articles by selecting words, sentences or entire paragraphs that were relevant to the research question. The selected text and sentences were further categorized into groups based on similarities. The groups were named according to the statements on the observation tool for instance “hand hygiene” or “environment”. Seven distinct statements were identified and summarized in Table 3 (Appendix 3).

# 5 Results

The purpose of this final project is to find more research evidence to show that the observation tool used to record mealtime situations among surgical patients is valid. The results obtained from the articles reviewed were classified in the following way: hand hygiene, environment, comfortable mealtime position, menu, meal preferences, lid removed from tray and assistance.

## 5.1 Hand hygiene

A UK study showed 60% hand hygiene compliance in the medical ICU and 40% compliance in the surgical gastrointestinal ward in a London hospital. Frequent movement and staff ratio in the surgical gastrointestinal ward resulted in low compliance rate while in the ICU; rate of compliance was higher due to less movement of staff and one-nurse-per-bed ratio policy. (Fitzgerald, Moore & Wilson (2013: 28.) Another research carried out on general patient populations in several industrialised countries showed that compliance rate was lower among physicians but higher amongst nurses. However, the study did not reveal why this is so. Median hand hygiene compliance rate amongst all healthcare workers was about 21% before patient contact and about 47% after patient contact. The study further showed that compliance rate was high in situations involving heavy activities/dirty tasks, initiation of hand disinfectants and performance feedback. (Erasmus et.al. 2010: 285-287.)

According to Dancer, White and Robertson (2008:362), healthcare workers often underestimate the dangers associated with surfaces and hospital surroundings in general. Pathogenic microorganisms and infections could be transmitted from one patient to

another through hands of healthcare workers that have been in contact with contaminated sites within the ward environment if not properly decontaminated.

Fitzgerald et.al (2013: 28-29) is of the opinion that most missed hand disinfection often occurred after touching patients surrounding e.g. bed, equipment trolley, door handles, computer keyboard, and between patients.

It has been reported that lack of time, too much workload, poor knowledge, poor role model and lack of organisation support are some of the factors that may cause poor hand hygiene compliance amongst healthcare workers. Several suggestions have been made to improve compliance rate, such as creating and reinforcing education programs on the need for proper hand hygiene practice and its importance in preventing infections as well as providing posters and stickers to remind healthcare workers on techniques and opportunities of hand hygiene. (Gluyas 2015:41.)

## 5.2 Environment

Mealtimes are usually the highlight of the day for hospital patients. However, they have not been acknowledged by healthcare workers due to routine medical rounds and nursing observations being performed during meals. To promote adequate nutritional intake, all healthcare workers including nurses must examine and ensure that ward environments are conducive for eating. (O'Regan 2009: 38.)

The atmosphere in which an individual eats is an important factor in supporting good mealtime experience. Meals should be served to patients' in a clean, safe, odorless and quiet environment that encourages positive participation in eating. (Xia & McCutcheon 2006:1222.)

A study conducted in the UK to examine hospitalized patient's own experiences of hospital mealtimes revealed that about 70% of all wards observed were described as noisy. Most patients recalled noise problems from hospital equipment and utensils, patients transfer and healthcare workers movement within the ward environment at mealtimes coupled with unpleasant smells had a negative effect on mealtime experience. The study further indicated that both physical and environmental factors affecting hospital mealtime are widespread and includes cleaning, noises, smells and frequent

interruptions by healthcare workers. (Naithani, Whelan, Thomas, Gulliford & Morgan 2008: 300-301.)

It has been reported that about 8% of hospital meals were often missed because patients' were having medical examination at the same time meals was being served O'Regan (2009: 38). Ullrich, McCutcheon and Parker (2013: 1849) also found out that nurses often carry out care activities such as taking patients' observation, medication administration and checks, documentation and patient transfer instead of preparing patients' and ward environment for meals. Xia and McCutcheon (2006: 1226) and Fletcher and Carey (2011: 619) added that these activities often prevent patients' capacity to access, eat and enjoy their meal hence, may put them at risk of malnutrition.

Recognizing the importance of eating in a clean, calm and quiet environment on a patient's wellbeing, The UK launched the "Protected mealtime scheme" which is a period where by healthcare workers put on hold all non-urgent clinical activities to allow patients eat without interruption and get necessary assistance during mealtimes (Hickson, Connolly & Whelan 2011: 371). However, O'Regan (2009: 38) reported in their article that the scheme is not uniformly implemented in many healthcare settings and there is lack of sufficient evidence to show if it actually improved mealtime experience. They however stressed the need for healthcare workers to adhere to the guidelines of protected mealtimes despite its limitations and that a patient shouldn't be disturbed during these periods except in cases of emergency.

The physical appearance of a hospital ward environment is proportional to infection risk. A ward environment may appear clean, but may still harbor a variety of microorganisms some of which may be harmless while some maybe capable of spreading infections. An experiment conducted by Dancer et.al (2008) to monitor environmental cleanliness on two surgical wards in the UK revealed insignificant difference in the overall microbiological growth between both wards. However, one ward harbored more microbes than the other and some of which were antibiotic resistant microbes. Areas harboring major growth were patients' beds, lockers and over-bed tables. Other areas included nurse's desk, computer keyboards, door handles, infusion pumps, patients' case note etc. (Dancer et.al. 2008:360)

A Study conducted by Xia and McCutcheon (2006:1226) revealed that doctors, nurses and other staff members often interrupt patients' during mealtimes by conducting ward

rounds, dispensing medications and asking patients' for example about their bowel movements. They also noticed some flaws in the hygiene practices by staff such as hand washing and the ward environment was not as clean, peaceful and pleasant as they had expected.

Dancer et.al. (2008:362) and Xia and McCutcheon (2006: 1226) concluded that hospital environment may look clean in appearance, yet may harbour a wide variety of microorganisms which may be harmful to both patients' and their care providers. They highlighted the importance of clean hospital environment on patients' mealtime experience and subsequent prevention of hospital acquired infections, hence stressed the need to keep it clean using the right cleaning tools and equipment.

### 5.3 Comfortable mealtime position

It has been reported that physical barriers to eating created difficulties to a lot of post-surgical and elderly patients. These difficulties included uncomfortable seating and trolley placement which ultimately resulted in poor access to food and patients' having difficulties in conveying food to their mouth. (Naithani et.al. 2008: 299.)

Comfortable sitting and trolley positioning and getting a patient ready before arrival of meal would ensure easy access to meals as delay in food access could result in a cold meal that might be less appealing to consume (Xia & McCutcheon 2006: 1222- 1225).

### 5.4 Menu

Analysis of 60 different menus in about 80 hospitals in Australia to evaluate the various trends in hospital menu nutritional quality showed a trend gearing towards a healthier and more quality menu. Majority of the hospitals served a minimum of two hot meal choices for dinner. Keeping in mind that hot choices may not truly represent healthier options, but it supports existing dietary guidelines that hold up the view that increased variety in meals eases patients' ability to make choices that appeal to them. The provision of varieties in menu which are of high nutritional standards that supports healthy and well-balanced feeding is a vital step to ensuring patients' nutritional needs and satisfaction are met. (McClelland and Williams. 2003:246.)

The nursing role is getting more complex which makes more traditional nursing activities such as serving meals to patients to be delegated to other staff such as hospital cleaners, nurse aides etc. which consequently has led to a neglect or improper assessment and monitoring of patients nutritional status. Nowadays, many hospitals and healthcare establishments employ individuals who may or may not have adequate knowledge of nutrition to collect patient's meal menu and have them delivered to their bedsides. (Jefferies, Johnson & Ravens 2010:317.)

Patients have the right to good quality meal during periods of hospitalization. Therefore, they should be provided with options and varieties that would meet both their nutritional needs and wishes. Adequate information and description of meal menu to patients will also give an insight on what they should expect thus improve appetite. (O'Regan 2009: 39-40.)

## 5.5 Meal preferences

The understanding of patients' food preferences and their incorporation are vital in improving nutritional intake thus positively influencing nutritional status (Vivanti et.al. 2008:36). Jefferies et.al. (2011:318) discovered that when an individual becomes ill and subsequently admitted to a hospital, familiar meals may serve as a source of comfort and security to that individual. They added further that a patient's notion of hospital meal quality correlates his/her contentment with both treatment and overall hospital stay.

Findings from research carried out by Mahoney, Zulli and Walton 2009 as well as Vivanti et.al. 2008 showed that personalized food services enhanced both patients' satisfaction and nutritional intake. Hence adequate consideration and provision of additional meal options such as non-alcoholic beverages, fruits, cakes etc. in between meals will not only provide a variety to choose from, but rather will increase patients' appetite.

The strongest influences on patients' meal preferences are cultural background or tradition. Patients often would like to eat meals they are used to when sick and in an unfamiliar environment such as a hospital. (O' Regan 2009: 36.) Making sure patients have a choice and autonomy over what they eat will enhance the satisfaction they get from the food and the resultant energy intake (Mahoney et al. 2009:214). Attempt

should be taken to ensure patients get meals that are familiar to them, food that do not interfere with their cultural beliefs and at the same time being nutritionally balanced. Therefore, nurses must take into consideration different nutritional practices and have good knowledge of cultural diversity. (O'Regan 2009: 36; Mahoney et.al. 2009: 214-215.)

### 5.6 Lid removed from tray

In a study conducted to examine activities of nurses at mealtimes in an acute care setting, it was observed that the kitchen staff delivered all meals and that they rarely engaged in any sort of interaction with the patients. One of the nurses interviewed in the study said that the kitchen staff brings the meal in a trolley, puts the meal in front of the patient and leave it there. (Xia & McCutcheon 2006:1223.) Simple tasks such as delivering food trays to a patient in a respectful, calm and polite manner as well as taking time out to describe the meal content to the patient will positively enhance his or her satisfaction. (o' Regan 2009: 39.)

### 5.7 Assistance

Hospitalized patients especially the aged, post-surgical and those with some form of physical disabilities need more assistance in feeding than any other group of patients. This group of patients often express discontent with inadequate support during mealtimes. (Naithani et.al. 2008: 299.)

During periods of hospitalization, most patients are unable to neither feed themselves nor assess their meals; therefore, they may require some assistance with feeding. Without such assistance, it will be difficult for these patients to eat their meal, leaving them vulnerable not only to hunger but also to developing risks of malnutrition. (Jefferies et.al. 2010:317.)

The level of assistance needed by patients' during mealtimes varies. Some patients' required assistance with positioning over-bed tables in preparation for meals, while others may require assistance in opening food packages. Unfortunately, nurses were often not available to render such assistance to this group of patients, instead nurses engaged themselves with other activities such as medication administration, asking

patients' about bowel movements and observing and monitoring vital signs during mealtimes thus neglecting patients' needs. (Ullrich et.al. 2013: 1849.)

A study conducted by Tsang (2008: 225) showed that nurse assistants and visiting relatives provided most of the assistance during mealtime. Fletcher and Carey (2011: 619) added that nurses often do not provide the required assistance to patients at mealtimes and even if they do, it is usually not enough and in a timely manner.

Another study conducted in Australia to know what nurses do at mealtimes showed that 57.4% out of the 47 patients' observed had difficulties in eating, opening food package, using cutlery and adding seasoning. 23 patients (48.9%) received feeding assistance from nurses at the beginning and during their meal. Nurses were seen assisting patients with opening their food packages more frequently at the beginning and during patients' meal and most patients received more than one type of assistance. Even though nurses provided the required assistance, it is generally not sufficient due to shortage of staff and nurses engaging in other clinical activities during mealtime. (Xia and McCutcheon 2006: 1223.)

## 6 Discussion

There is evidence from articles used in this final project to show that the existing observation tool Table 2 (Appendix 2) used in the previous final project (Kahelin & Saarela 2014) is valid.

There are a number of problems within current nursing practice in relation to surgical and hospitalised patients during mealtimes. Studies conducted by Dancer et.al. (2008: 362), Fitzgerald et.al. (2013: 28) and Gluyas (2015: 40) showed that healthcare workers underrate environmental surfaces in infection control and transmission thus making hand hygiene a low priority amongst healthcare workers in hospital environment and other healthcare settings. During patient care, hands of healthcare workers can become contaminated with some harmful microbes and transmission from one patient to another can occur if hands are not properly disinfected.

The most interesting part from Fitzgerald et.al. (2013: 28) and Gluyas (2015: 40) study is that the patients' environment such as bedsides, over-bed table, door handles was the most heavily contaminated. Unfortunately, these areas are often overlooked; hence have the lowest levels of hand hygiene compliance by healthcare workers. Most of the authors agreed that compliance and effective hand hygiene practices is key to preventing hospital acquired infections. They stressed the need for full compliance by all healthcare workers. Dancer et.al. (2008: 362) emphasized the need for adequate cleaning in hospitals with special attention to hand touch sites.

According to the WHO (2009: 6-9), Hospital acquired infections poses a health risk for patients' and it's prevention must be a first priority in all health care settings to ensure patients' safety. Improper hand washing has been identified as one of the major causes of spread of infection amongst patients'; hence the importance of proper hand hygiene cannot be overemphasized in preventing the spread of harmful microbes from healthcare personnel to patients and vice versa. The WHO (2009:6-9) therefore recommends the use of antimicrobial soap and water or alcohol-based gel or waterless antiseptic agent to cleanse hands when entering or leaving patients' room, after contact with patients' care environment, after using the toilet and when serving meals.

The nursing career has grown tremendously due to advanced technology and professionalism. Hence, it has transformed nursing practices from a traditional one to a more technical practice and calls for nursing flexibility. The way nurses depict their flexibility to comprehend their duties and obligations during mealtimes affects patient's mealtime experience. (Ullrich 2013: 1851.) Nurses often consider mealtimes as added workload, hence it is often neglected. They should realise that feeding isn't just another routine task but rather an opportunity to assess, monitor and evaluate their patient's physical, mental and physiological progress. (O'Regan 2009:39.)

Previous evidence shows that the time spent by nurses in providing assistance at mealtimes is not enough and is not provided on time (Ullrich et al. 2013). Jefferies et.al. (2011:323) suggest that mealtime breaks should be reorganized in some wards to increase the number of nurses available to assist patients' during mealtimes. Another considerable measure could be to recruit and train volunteers such as family members to assist patients' with feeding under close supervision of nurses to ensure patients' safety is not compromised.

Several reasons have been identified as to why nurses are unable to provide needed assistance to patients at mealtimes, Fletcher and Carey (2011: 619) and O'Regan (2009 : 39-40) attributed some of the reasons to be insufficient nursing staff, prioritization of nursing duties, timing of meals, etc. Xia and McCutcheon (2006: 1226) disagreed somehow that the problem is not mere shortage of staff, but rather nurses' attitudes and perceptions about the importance of assisting patients at mealtimes.

Fletcher and Carey (2011: 619), O'Regan (2009:39-40) and Xia and McCutcheon (2006: 1226) all suggested that nurses need to focus their attention on providing necessary assistance to patients' in need at mealtimes rather than engaging themselves in non-emergency tasks. Simple tasks such as; ensuring patients' sit upright and in a comfortable position, have easy access to food tray, help to open food packages, food looks hot, appetising and suits their wishes and showing positive attitudes towards patients will increase enjoyment and patients' satisfaction. Ulrich et.al. (2013:1851) emphasized the crucial role of nurses to recognizing and assisting those patients who are unable to feed themselves as well as their unique position as tools to providing solutions which will improve nutritional care.

Patients satisfaction is often related with meal service received. There is enough evidence to support the notion that hospital meals can improve both satisfaction and nutritional intake of patients. (Mahoney et.al. 2009: 214-215.)

Patients have a right to good quality meal. It has been reported that many patients experienced difficulty ordering meals as most hospital menus does not provide sufficient information and description of ingredients used to prepare the meal nor its nutritional value for them to be able to make informed choices (Naithani et.al. 2008: 298). Hospitals should provide menus that give patients a variety of food to choose from and help should be given when patients are making their choices. The meals should be well described accurately so that patients know what to expect and must be ordered and served same day. Meals ordered same day would encourage patients to eat rather than those ordered the day before. When patients' conditions change, it also affects their food choices. Patients with literacy problems and learning disabilities will need supervision in choosing their meals. (O' Regan 2009: 40.)

The overall appearance of a meal should be taken seriously as this can impact patients' ability to eat their meal especially when they have low appetite. Patients' needs,

wishes and preferences represent a sense of identity which must be recognized and cared for in order for the patient to have control over his or her life. When foods are repeated, it can become mundane and boring which could lead to reduced oral ingestion. (O' Regan 2009: 39-40; McClelland and Williams. 2003:246- 247.)

Proper positioning will help a patient eat, swallow and digest food easily. Maintaining the patient's ability to feed themselves should be taken seriously as some of these patients maybe be having difficulties feeding themselves due to physical or psychological disability. Failure to do so affects the patients' dignity and morale. It can also be a source of frustration for a patient to be fed by another individual e.g. a nurse because it might signify a state of complete dependence. (O' Regan 2009: 39-40.) It is important for nurses to maximize independence for the patient by ensuring proper positioning. Patient should be positioned upright, with feet on the floor firmly planted and head upright, tilted slightly forward. Bed bound patients should be placed in the best possible feeding position to minimize the risk of choking and aspirations associated with bad feeding positions. (Dunne. 2013: 762.)

## 7 Ethical consideration

The works and achievements of earlier researchers must be acknowledged in every phase of the research, particularly in all cases of quotations, paraphrasing and references. Good scientific practice such as honesty, integrity and accuracy, truthfulness openness inherent to scientific knowledge in data collection, analysis and presentation of results must be followed. (TENK 2009.)

For this final project, all research articles were carefully selected and read by both authors. The findings and sources were described accurately, correctly and clearly written in a scientific manner. Credit was given to original writers of all articles used both in text body and reference lists. The Turnitin program, a tool designed to check for plagiarism was used to assess this final project several times until both authors were satisfied it is completely free of plagiarism.

## 8 Validity

From a nursing researcher's view point, validity is simply defined as the degree of accuracy of a claim or assessment tool to produce consistent results. It bounds the whole experimental idea and establishes whether or not the results gotten meet scientific research requirements. It is important to both researcher and its readers. (Burns & Grove 2005:214.)

The trustworthiness of a research depends on a number of features such as study question, how, when, where and by whom data was collected, analysed and what conclusions are drawn. It is imperative therefore, to evaluate and analysis every phase of the research separately to be able to ensure validity. Data collection and data analysis should be complete, clear, well presented and reliable. Answers to the study question must be derived from the project. (Roberts, Priest & Traynor 2006:41.)

The data collection tool must be carefully chosen, well-constructed and should be able to measure accurately the intended question/item or reflect the abstract concept being examined to a great extent hence it is said to be valid. However, no data collection tool is completely valid and the validity varies from one sample to another and from one situation to another. (Burns & Grove 2005:274.)

The validity of this final project is strengthened because articles where sourced from reliable databases such as CINAHL via EBSCO, Joanna Briggs institute, Medline and Nursing database via OVID were used to search for articles and both authors read through all selected articles thoroughly before selection. Only peer reviewed articles not more than ten years old and in English language with relevant title and covers the research topic comprehensively were selected. CINAHL is a vital tool for nursing research as it provides an index of top quality and up-to-date nursing and healthcare journals, books and publications (EBSCO 2014). Ovid on the other hand, offers more than 100 core databases to support research needs in various healthcare disciplines such as nursing, clinical medicine, pharmacology etc. (OVID 2014).

## 9 Conclusion

Provision of nutritional care such as feeding during mealtimes is one of the primary responsibilities of all registered nurses. However, due to the complex and varied needs of patients, it has become very challenging for nurses to meet these demands. That notwithstanding, Nurses should understand the importance of healthy meals as a fundamental requirement for postoperative recovery, hence must strive to ensue patients not only eat healthy but rather eat in a conducive environment and given needed assistance and support.

Further education and training is needed to strengthen the knowledge and attitudes of all healthcare workers involved in patient care to enable them provide accurate, consistent and quality care to patients.

Although one may assume that adhering to the items listed in the observation tool would support good dietary intake thus reducing risks of malnutrition, there is however not enough evidence supporting its use in practice. Further research is required to evaluate nutritional outcomes using the observation tool.

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**Table 1. Database search result**

| Database and limitations | Search terms | Hits | Selected based on title | Selected based on abstract | Selected based on full text |
|---|---|---|---|---|---|
| CINAHL: 200-2014 English language | mealtime AND surgical ward | 6 | 1 | 1 | 1 |
| | mealtime AND surgical patients | 91 | 3 | 2 | 2 |
| | mealtime AND surgical nursing | 51 | 2 | 1 | 1 |
| | nutrition AND surgical patients | 140 | 4 | 2 | 1 |
| | nutritional care AND surgical nursing | 2433 | 5 | 5 | 2 |
| | hand hygiene AND surgical nursing | 1 | 0 | 0 | 0 |
| OVID (including JBI, MEDLINE, Nursing Database 2004-2014 English language | mealtime AND surgical ward | 4262 | 0 | 0 | 0 |
| | mealtime AND surgical patients | 3709 | 5 | 5 | 1 |
| | mealtime AND surgical nursing | 3671 | 0 | 0 | 0 |
| | nutrition AND surgical patients | 3778 | 10 | 9 | 2 |
| | nutritional care AND surgical nursing | 3741 | 5 | 5 | 1 |
| | hand hygiene AND surgical nursing | 4306 | 1 | 1 | 1 |
| Manual search through reference list | | | 3 | 3 | 3 |
| Total | | | | | 15 |

**Table 2. Observational tool**

Observational tool / Meal time situation

Date:

Number of observations:

| | Nurse | Hospital cleaner | Other |
|---|---|---|---|
| 1. Food served by | | | |

| | Yes | No | N/A | Other comments: |
|---|---|---|---|---|
| 2. Is the patients' hand hygiene taken care of before meal? | | | | Patient independently: |
| 3. Is the environment undisturbed? | | | | |
| 4. Is patients' comfortable mealtime position ensured? | | | | Patient asked: |
| 5. Is the patient told what is on the menu? | | | | Patient asked: |
| 6. Is the patient asked on meal preferences? | | | | Patient asked: |
| 7. Is the lid removed from the tray? | | | | Beforehand: |
| 8. Is the patient offered assistance during mealtime? | | | | Patient asked: |

**Table 3. Articles validating observation tool**

| Authors, year, country | Title | Evidence found to support items | Items |
|---|---|---|---|
| Dancer et.al. 2008. UK | Monitoring environmental cleanliness on two surgical wards | Healthcare workers often underestimate dangers associated with surfaces and hospital surroundings. Infections can be transmitted from patients to patients or patients to healthcare workers through contaminated hands that have not been properly disinfected. | Hand Hygiene |
| Erasmus et.al. 2010. Netherlands | Systemic Review of Studies on Compliance with Hand Hygiene Guidelines in Hospital Care | The noncompliance rate in hand hygiene practice is a worldwide issue; hence requires a concerted effort in both research and monitoring. | |
| FitzGerald et.al. 2013. UK | Hand hygiene after touching a patient's surroundings: the opportunities most commonly missed | Hand hygiene practice was generally low amongst healthcare workers. More education and interventions are needed to improve these practices. | |
| Gluyas, 2015. Australia | Understanding non- compliance with hand hygiene practices | Effective hand hygiene practice is the key to prevent infections. Human factors have been identified as the main culprit in low compliance rate amongst healthcare workers. | |

| | | | |
|---|---|---|---|
| Dancer et.al. 2008. UK | Monitoring environmental cleanliness on two surgical wards | Hospital environment harbours a variety of microbes irrespective of how clean or dirty they may appear. Routine cleaning with special attention to hand touched sites, doorknobs, bedsides, tables, lockers, computer keyboards etc. is key to effective infection control. | Environment |
| Fletcher and Carey, 2011. UK | Knowledge, attitudes and practices in the provision of nutritional care | Nurses prioritized other care activities over nutrition. | |
| Hickson et.al. 2011. UK | Impact of protected mealtimes on ward mealtime environment, patient experience and nutrient intake in hospitalized patients | No marked improvement in nutritional intake after implementation of protected mealtime. To ensure positive nutritional and clinical outcomes, its implementation needs further evaluation. | |
| Naithani et.al. 2008. UK | Hospital inpatients' experiences of access to food: a qualitative interview and observational study | Physical and environmental factors affecting hospital mealtime are widespread and includes cleaning, noises, smells and frequent interruptions by healthcare workers. | |
| O'Regan, 2009. Ireland | Nutrition for patients in hospital | Hospital environment can impact on patients' nutritional intake. Nurses play a vital role in assessing, assisting and providing a comfortable mealtime environment for patients. | |
| Ullrich et.al. 2013. Australia | Nursing practice in nutritional care: a comparison between a residential aged care setting and a hospital setting | The way nurses depict their flexibility to comprehend their duties and obligations during mealtimes affects patients' mealtime experience. | |
| Xia and McCutcheon, 2006. Australia | Mealtimes in hospital - who does what? | Frequent interruptions by nurses and healthcare workers have led to poor access of food by patients. | |

| | | | |
|---|---|---|---|
| Naithani et.al. 2008. UK | Hospital inpatients' experiences of access to food: a qualitative interview and observational study | Inappropriate seating and trolley positioning presented difficulties that arose where patients were not able to reach food or manipulate utensils. | Comfortable mealtime position |
| Xia and McCutcheon, 2006 Australia | Mealtimes in hospital - who does what? | Assisting patients to get ready before the food arrives would ensure easy access of meal after delivery. | |
| Jefferies et.al. 2011. Australia | Nurturing and nourishing: the nurses' role in nutritional care | Delegation of nursing duty of serving meals to patients to hospital cleaners, nurse aides has consequently led to neglect or improper assessment and monitoring of patients nutritional status. | Menu |
| McClelland and Williams, 2003. Australia | Trend to better nutrition on Australian hospital menus 1986 - 2001 and the impact of cook - chill food service systems | The provision of varieties in menu which are of high nutritional standards that supports healthy and well balanced feeding is a vital step in ensuring patients' nutritional needs and satisfaction are met. | |
| O'Regan, 2009. Ireland | Nutrition for patients in hospital | Giving adequate information on meal menu to patients will give an insight to what they should expect hence will increase appetite. | |

| | | | |
|---|---|---|---|
| Jefferies et.al. 2011. Australia | Nurturing and nourishing: the nurses' role in nutritional care | Familiar meals serve as a source of comfort and security during hospital stay. | Meal preferences |
| Mahoney et.al. 2009. Australia | Patient satisfaction and energy intakes are enhanced by point of service meal provision | Giving patients choice and autonomy over what they eat will enhance their food satisfaction, appetite and optimal energy intake. | |
| O'Regan, 2009. Ireland | Nutrition for patients in hospital | Patients like to eat food that they are accustomed to when in a strange environment of a hospital. | |
| Vivanti et.al. 2008. Australia | Meal and food preferences of nutritionally at-risk inpatients admitted to two Australian tertiary teaching hospitals | Understanding patients' food preferences and their incorporation are vital to positive nutritional care. | |
| O'Regan, 2009. Ireland | Nutrition for patients in hospital | Tasks such as delivering the tray politely, showing positive attitudes towards patients and explaining the meal content to the patient will ultimately increase a patient's appetite and satisfaction. | Lid removed from tray |
| Xia and McCutcheon, 2006 Australia | Mealtimes in hospital - who does what? | Positive nursing practice did not happen when delivery was done by a kitchen staff who delivered meals without engaging in any sort of interaction with the patients. | |

| | | | |
|---|---|---|---|
| Fletcher and Carey, 2011. UK | Knowledge, attitudes and practices in the provision of nutritional care | Nurses often do not provide the required assistance to patients at mealtime and even when they do, it is usually | Assistance |

| | | | |
|---|---|---|---|
| | | not enough and in a timely manner. | |
| Jefferies et.al. 2011. Australia | Nurturing and nourishing: the nurses' role in nutritional care | Most patients are unable to feed themselves during periods of hospitalization; hence they may require some assistance with feeding. Without such assistance, it might be impossible for patients' to access their food, hence they might stand the risks of malnutrition. | |
| Naithani et.al. 2008. UK | Hospital inpatients' experiences of access to food: a qualitative interview and observational study | Due to difficulties in accessing foods, hospital inpatients often feel hungry because they are reluctant to ask for assistance and nurses fail to notice. | |
| Tsang, 2007. Australia | Is there adequate feeding assistance for the hospitalized elderly who are unable to feed themselves? | Assisting patients at mealtimes by nurses presents a lot of problems. Further reviewing of feeding policies is needed. | |
| Ullrich et.al. 2013. Australia | Nursing practice in nutritional care: a comparison between a residential aged care setting and a hospital setting | How nurses choose to implement and execute their actions in the care of their patients' will ultimately affect patients' mealtime experience. More research is needed to investigate these processes that affect delivery of care across role functions. | |
| Xia and McCutcheon, 2006. Australia | Mealtimes in hospital - who does what? | Nutrition was less prioritised over other nursing activities in the observed wards and nurses often did not give enough assistance to patients at mealtime. | |