THE NURSE'S LIVED EXPERIENCE OF TRANSFERRING NUTRITION KNOWLEDGE TO PATIENTS: A DESCRIPTIVE PHENOMENOLOGY

by

Kendrah Lynne Cunningham

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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ABSTRACT

This descriptive phenomenological qualitative study aimed to gain insight into the nurse's lived experience of transferring nutrition knowledge to patients. Nurses play an important role in assisting the patient to become more proficient in health and nutrition literacy to make proper choices related to their nutrition. It is necessary to evaluate the lived experience of the nurse in transferring nutrition knowledge to patients. There is a gap in the literature on nurses' experience in providing nutrition knowledge to their patients. This descriptive phenomenological qualitative study examines the lived experience of nurses in transferring nutrition education to their patients. This was done through recorded, semi-structured interviews with 10 registered nurse participants, completed via video conferencing software. The data were then analyzed through open coding and theme identification. Judd's theory of generalized experience was used as a guide to this study. Data analysis found three main themes in this study: confidence, barriers, and interdisciplinary collaboration. Despite nurses feeling confident in their ability to transfer nutrition education to patients, they often face barriers. In order to overcome the barriers they often use the interdisciplinary team to ensure completion of the needed nutritional care of the patients they serve.

Keywords: qualitative, phenomenology, undergraduate nursing education, nutrition, transfer of learning, confidence, barriers, interdisciplinary collaboration

Copyright Page

Dedication

This work is dedicated to my family, my biggest supporters. They say it takes a village and I have been blessed with the best one out there. This journey had an impact on each and every one of us, and despite the hardships, I received nothing but support and encouragement in return. I am forever grateful for your love and support. Ryan, Achsah, and Nash, I love you more than I could ever express and I'm sorry for all that I've missed during this pursuit. I hope you can see my absence at times as a testament to the work I put into achieving my goals. Thank you for always being understanding and even picking up my slack at times. Mom and Dad, thank you for raising me to never give up and to always believe that I can do anything I set my mind to. You have supported me and cheered me on even on my worst days. I love you so much. Jess and Zack, thank you for being great role models, I love you. Without all of you and many others, the completion of this degree would never have been possible. Thank you!

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List of Abbreviations

American Association of Colleges of Nursing (AACN)

Associate Degree in Nursing (ADN)

Body Mass Index (BMI)

Bachelor of Science in Nursing (BSN)

Centers for Disease Control (CDC)

Intensive Care Unit (ICU)

Institutional Review Board (IRB)

Licensed Practical Nurse (LPN)

Medical-Surgical (Med-Surg)

National Council Licensure Examination- Registered Nurse (NCLEX-RN)

CHAPTER ONE: INTRODUCTION

Overview

The nurse plays a significant role in assisting individuals in improving their health and health literacy by providing competent care, which includes patient education. Nutrition education is one major component of the comprehensive teaching expected from nurses, but the nurse must be prepared to provide the education. With the appropriate preparation, the nurse can teach and direct individuals to improve their nutritional health. This research explores the nurses' lived experience of transferring nutrition knowledge to patients through a descriptive phenomenological qualitative study. Chapter One entails the background, including the study's historical, social, and theoretical contexts, which will be described, leading to the purpose and significance of the study. The research questions this study sought to answer will be defined, and the researcher will be introduced. The experience of the nurse in working with nutritional components of nursing care, such as screening, assessment, and implementation of a care plan when caring for individuals, will be explored in relation to the present study.

Background

Nutrition plays a significant role in both health and wellness. An individual's health literacy level can help determine their nutrition patterns and ability to have good health outcomes (Office of Disease Prevention and Health Promotion, 2020). Health literacy refers to the power of an individual to find, understand, and make good decisions for their health based on research and the recommendations of experts (Centers for Disease Control and Prevention, 2022). It has been identified that a low health literacy level is often an indicator of poor general health and poor health outcomes (McDonald & Shenkman, 2018). Unfortunately, the health literacy level of the people of the United States is poor (Carbone & Zoellner, 2012). For example, one of the

groups noted to have low health literacy levels is older adults living with chronic health issues (Muvuka et al., 2020). While older adults are only one subset of the population, this group frequently utilizes the healthcare system. Thus, older adults represent a large group of individuals using the healthcare systems with low health literacy levels.

Nutrition literacy is another term that is found in the literature. Nutrition literacy refers to the individual's ability to find, use, and understand nutrition information, allowing them to make informed decisions regarding nutrition (Velardo, 2015). This term was coined to represent the specific concerns related to an individual's ability to make proper nutrition choices based on previous knowledge, separate from the general health literacy references (M. K. Taylor et al., 2019). As the nurse provides information to patients, it is necessary to consider the patient's health and nutrition literacy levels to provide meaningful education. The nurse should also be nutrition literate to educate others.

Those who inquire about more information on nutrition may be more nutritionally literate. Research indicates that individuals who seek health information on the internet have improved levels of health and nutrition outcomes (Chae, 2019). Diet and nutrition was the third most common health topic searched on the internet (Carbone & Zoellner, 2012). Conversely, those individuals that relied on health information portrayed through social media had decreased levels of nutrition (Chae, 2019). Even though nutritionists and dieticians are in the hospitals, their capacity is limited to provide care and support to a wide range of patients (Laur et al., 2018). Nurses are in a prime position to help improve a patient's health and nutrition literacy levels and provide individualized instruction on proper nutrition choices based on the patient's health status.

Historical Context

The food choices for the American people have evolved over time. In the past, people consumed home-cooked meals and wholesome foods, which transitioned over time to the standard diet of today with fast food and processed options (Saksena et al., 2018). Eating away from home at fast food and sit-down restaurants more frequently results in high body mass indexes (BMI; Bhutani et al., 2018). This often results because quicker meal options or fast food choices are of poor nutritional quality and high in calories (Wani & Sarode, 2018). Alternatively, when people eat more meals prepared at home each week, they have healthier eating habits (Wolfson et al., 2020). The increase in the behavior of eating away from home requires an additional need to raise awareness about improved nutritional literacy for individuals to make healthy choices when eating at home and away.

The prevalence of obesity in the United States indicates that many Americans are not getting proper nutrition. The Centers for Disease Control and Prevention (CDC) have identified that 49 out of the 50 states have an obesity rate greater than 25% for adults (CDC, 2021b). Further, the obesity rate in children and adolescents was 19.7%. Obesity and its consequences often lead to increased comorbidities, decreased quality of life, and lower life expectancy (Abdelaal et al., 2017). Conversely, the percentage of children aged 2 to 19 in the United States who were underweight in 2017–2018 was 4.1% (Fryar et al., 2020). Assisting patients to improve their nutrition literacy could help prevent under- and over-nutrition and improve outcomes.

In addition to obesity, there are many other nutrition-related chronic illnesses. Most notably are diseases potentially preventable through proper diet and exercise. Heart disease and diabetes, listed as two of the top 10 causes of death in the United States, are considered

preventable (National Center for Health Statistics, 2022). Despite the need for prevention, the U.S. healthcare system continues to focus on managing the disease. With proper lifestyle changes, nutrition being a significant aspect of this, the incidence of these chronic illnesses can be minimized. To accomplish this minimization, knowledgeable healthcare personnel must educate patients at every point of contact.

President Barack Obama instituted the Affordable Care Act in 2010, which included a document titled *National Prevention Strategy*. The document details the steps that should be taken to improve the healthcare culture in the United States (National Prevention Council, 2011). Healthy eating is one of the main priorities for creating this cultural change. One of the ways cultural change can be accomplished is by enabling people to make healthy food and beverage choices (National Prevention Council, 2011). However, people must understand how to interpret the options and what constitutes a good choice.

The National Council of State Boards of Nursing (NCSBN) indicates that nutrition should be a skill held by the novice nurse and expects the individual to demonstrate their nutritional knowledge by passing the National Council Licensure Exam-Registered Nurse (NCLEX-RN; National Council of State Boards of Nursing, 2019). A novice nurse should be able to monitor nutritional status, understand how a diagnosis can impact nutritional status, assist with special diets, and provide proper food choices to meet nutritional requirements. These skills are in addition to the direct care provided by nurses related to nutrition, such as tube feedings, parenteral nutrition, nutrition assessments, and calculating BMI. Thus, it is evident that nurses are pivotal in transferring nutrition information to their patients as they assume the registered nurse role.

Unfortunately, there is minimal research identifying the appropriate amount of nutrition education for undergraduate nursing students. The quality and amount of nutrition education taught to nursing students were questioned in 1950 due to nutrition education's inability to adapt to the changes during that period (Rynbergen, 1950). With continued changes in food choices and offerings, the National Research Council sought to identify guidelines for nutrition education in medical schools, reporting its findings in 1985 (Kris-Ehterton et al., 2014). The new guidelines indicated those in medical schools should receive at least 25 hours of education in nutrition. Further, this research should be ongoing to ensure currency with population needs, yet there have been no new reports. In addition, there are no specific guidelines set for nursing schools.

The National Research Council (1985) report was prescriptive of medical schools to provide 25 hours of nutrition education. However, there were no recommendations for nursing schools. The recommendation for only 25 hours of nutrition education in medical schools indicates medical doctors are also unprepared to assist patients in choosing proper nutrition for their best health outcomes (National Research Council, 1985). This lack of alignment of nutrition education guidelines for healthcare majors may impede the quality of interprofessional collaboration and care planning.

Social Context

Nurses have long been voted the most trusted profession (Gaines, 2022). When patients trust their nurses, they are likely to accept the information the nurses share. The trust earned between nurses and patients represents one of the philosophical underpinnings of this research: ontology. Ontology references the acceptance that there are multiple realities to any given situation (Creswell & Poth, 2018). When both the patient and the nurse recognize they are likely

viewing the same situation differently, mutual respect and trust can be found. This trust leads to greater information sharing between both parties. Efforts should be put into ways to improve the health literacy of the masses, which will help lead to improved health and wellness in the United States. While this effort should take a multi-faceted approach, the accessibility of nurses during times of illness and wellness enables them to provide education when needed. This accessibility should not be overlooked for the opportunity to provide education related to nutrition and help them to improve outcomes.

Trust in the nursing profession places nurses in a unique position to teach patients about nutrition, resulting in improved health outcomes for communities and populations. Research indicates more than 11 million premature deaths can be prevented through improved nutrition quality across the world (Wang et al., 2019). The premature deaths indicated are related to chronic nutrition-related diseases that are preventable with proper nutrition. Improving health and nutrition literacy can impact nutrition outcomes, thereby preventing these disease processes.

Using the trust between the nurse and patients to build nutrition and health literacy levels can further assist in reducing the public health impacts of the presence of undernutrition. Undernutrition, while less prevalent in the United States, continues to be a concern, particularly in areas where food insecurities are prominent (Moradi et al., 2019). Food insecurities can also occur in the older adult population, who are further noted to be at risk of malnutrition, creating a complex concern for the community (Pooler et al., 2019; Ten Cate et al., 2020). As the population of older adults is on the rise in many communities, improving the quality of foods provided through community initiatives can assist in preventing or managing malnutrition (Eicher-Miller, 2020).

Theoretical Context

Numerous theories support the importance of good, balanced nutrition, including Maslow's theory of human motivation, Virginia Henderson's need theory, and Betty Neuman's systems model, which will be discussed within the literature review (Current Nursing, 2020; Maslow, 1943; Petiprin, 2016). However, the foundation of theory chosen to guide this research is Judd's theory of generalization of experience (Judd, 1927). Judd addresses the concept of the transfer of learned information into a similar context in life. This research reviews the transfer of the nurse's nutrition knowledge to their patients.

The transfer of learning is a concept that has long been studied in education and psychology to understand how the material taught can be transferred to life situations by the recipient (Galoyan et al., 2021). The psychology community indicates that this is an accurate evaluation of learning (Haskell, 2001). According to this belief, students can often reiterate information to pass a test, but this is not where evaluation should end. The student's ability to then apply what is learned to a different situation in life is an accurate indicator of whether learning has occurred. For example, the nurse's ability to take the information they have learned about nutrition during their undergraduate training and use it to assist patients in making good nutritional choices based on their patient's diagnosis or life circumstance indicates that learning has occurred. The ability to transfer knowledge from the classroom to the bedside is an example of a far transfer (Roumell, 2018). The ability to accomplish the far transfer, which requires the individual to take what is learned and apply it in a situation unlike the one it was learned, speaks of authentic learning. The transfer of knowledge should occur regardless of the life situation faced by the patient, representing an even more remarkable feat for the transfer.

When the learning that occurs in the classroom is transferred to any context, true learning has taken place. The ability to transfer knowledge to professional contexts is essential in healthcare (Baldwin & Ford, 1988). It is impossible for all scenarios to be accounted for during training, necessitating the need to recognize how the learned information can be transferred to various scenarios. This ability to transfer the learned knowledge to another situation is described as a positive transfer (Haskell, 2001). A positive transfer is most likely to occur when the training provided is most similar to experiences noted in the workplace (Latham & Wexley, 1981). In this study, knowledge transfer to the patient care context is an example of a positive transfer of learning from the classroom to the workplace setting.

Situation to Self

This research became a passion following an issue in my personal health journey. After practicing as a bedside nurse for about 10 years, I was diagnosed with an autoimmune disorder which can be markedly exacerbated by variations in my nutritional intake. I gathered data and spoke with my care providers, acknowledging that the information was new to us, and none of us were well versed in how nutrition can ultimately affect a patient's outcomes. As a registered nurse, having earned both a baccalaureate and master's degree, connecting an autoimmune disorder to diet was a foreign concept to me. Further, when I approached my care providers, I was blatantly told that my diet would not affect my disease process or how I felt. My situation is one of the millions of narratives of patients' experiences with how food affects their illness or wellness. As a nurse, if I feel incapable of caring for my own disease process, how could I possibly be equipped to provide education and direction to patients? Enhancing the delivery of nutrition content to undergraduate nursing students can start a shift towards improved nutrition awareness and thereby wellness of all individuals. This research is the first step of what will

likely be lifelong research within my career field of nursing education. Therefore, it is necessary to understand the lived experiences of bedside nurses regarding their transfer of nutrition education to patients.

Advocating for and promoting change within the school of nursing, where I am personally involved in curriculum development and review, is a start to improving the health of my local community. Conducting this research can provide insight into how the program should change and adjust to better prepare nurses for assisting patients with nutritional management. As mentioned, understanding the experience of the transfer of learned concepts is one the most critical components of understanding if training has been effective for knowledge development. During this process, I remained objective by following an ontological approach to the research to avoid premature or incorrect interpretations of the study's findings.

The ontological philosophical assumption denotes the researcher understands that there are many ways to interpret the same phenomenon (Creswell & Poth, 2018). This understanding of varying perspectives will help to reduce bias from the researcher. The reduction of bias is further addressed through the additional foundation of postpositivism. Postpositivism requires the researcher to understand that there are multiple realities to each situation that must be considered in the review of a phenomenon (Creswell & Poth, 2018). Through postpositivism, the researcher understands the presence of other realities despite having their preconceived notions influencing what is being observed in the study (Usman & Bulut, 2021). Due to this bias, the researcher must practice bracketing, where the bias is recognized and bracketed during data analysis, for the sake of presenting impartial findings (Patton, 2020). Bracketing and using ontological assumptions are appropriate in a descriptive phenomenological study since the focus

is to understand the phenomenon under study through various levels and perspectives (Al-Ababneh, 2020).

Problem Statement

The problem is the experience of transferring nutrition knowledge by nurses to patients is unknown. While special nutritional needs are common, and regular nutritious intake is essential for health promotion, disease prevention, health maintenance, wound healing, and quality of life, literature on the experience of nurses' transfer of nutritional concepts to clinical settings is scant (DiMaria-Ghalili et al., 2014). Nurses must be adequately equipped to transfer nutrition education to patients that can help them make decisions to improve their health and quality of life. Nurses have the unique privilege of being present in times of illness and wellness of individuals, enabling them to assist the patients in their health journey when given the proper tools ((Phillips et al., 2021; X. Xu et al., 2017). This descriptive phenomenological qualitative study examines the lived experience of bedside nurses regarding the transfer of nutrition knowledge to patients.

Educational preparation of undergraduate nurses on nutritional concepts varies among institutions. A solid foundation of nutrition education provided to nurses during their undergraduate nursing program will help them transfer that knowledge to patients (Amoey et al., 2017). The gap in research exists on the extent of nutrition information provided to undergraduate nursing students, with no standard set by accrediting or testing agencies. Additionally, there is no research on whether the transfer of content following learning has occurred. The problem is nurses' experience of the transfer of nutrition information is lacking in the literature.

Purpose Statement

The purpose of this descriptive phenomenological qualitative study is to gain insight into the nurse's lived experience of transferring nutrition knowledge to patients. Nutrition education should be provided to undergraduate nursing students in such a way to prepare them for guiding patients in proper nutrition choices regardless of their current state of health to assist in improving outcomes (Kemppainen et al., 2012). This transfer of knowledge was examined using Judd's theory of the generalization of experience by defining what it means to transfer learned information to relevant life situations (Judd, 1927).

Significance of the Study

The findings of this study may assist nurses and nurse educators as the study has identified the issues of nutrition training received by undergraduate nursing students. Understanding the nurse's lived experience regarding the transfer of nutrition education to patients can assist researchers in identifying gaps in education and practice and implementing measures to address them. Further, examining the experience of the bedside nurse will help nurse educators review their curriculum and determine the adequacy of nutrition content and effectiveness of delivery. Curriculum reviews can be performed internally to ensure educators equip their graduates well for practice (Pallikkara et al., 2022). This research can assist them in identifying gaps in the curriculum and making modifications.

The study is significant for practicing nurses as well. Findings from the study can allow the hospital leadership to evaluate their staff nurses' preparedness to transfer nutrition knowledge and equip them to provide such focused education to patients through professional development activities. While nutritionists and dieticians may be available in hospitals, they may focus on the critically ill or patients in extreme situations (Institute of Medicine Committee on Nutrition

Services for Medicare Beneficiaries, 2000). The introspection for those in nursing practice, or those who oversee them, can help to improve continuing education efforts or adjust processes for the delivery of nutrition information (Mitchell et al., 2018). Enhancing the ability of nurses already in practice to provide nutrition information to patients will help to improve the health of the population they serve, as the patients build their knowledge base on making healthy food choices. Additionally, organizations can determine the need for continuing education for practicing nurses and develop strategies to better assist patients in improving their health literacy. Improved nutrition knowledge of the general public will help the overall nutritional status of Americans. The most effective means of evaluating all these areas was to utilize a step-wise approach, gathering more information along the way.

Nursing schools can also evaluate the effectiveness of their program by understanding their graduates' ability to transfer knowledge into practice. Understanding their graduates' ability to transfer nutrition education once in practice can help educators to identify what nutrition information students need to know, how much time should be devoted to nutrition education, and how the instruction should be delivered for effectiveness (Shea et al., 2021; Yuste et al., 2021). Despite what was chosen to be taught, it is necessary to evaluate whether learning has occurred as planned, demonstrated by the ability to use the learned information in practice (Oermann, 2022). The evidence of knowledge transfer is the ultimate evaluation that learning has occurred (Haskell, 2001).

The study findings have created a foundation for nursing researchers to build upon. The study has begun to identify the breadth of the issue at hand in one small sample group. At the same time, continued research will be necessary to determine how much nutrition information should be provided, how to deliver it, and how to evaluate the learning. Overall, multiple areas of

research are needed to find the optimal dose of nutrition education and the ideal measure of transfer of knowledge.

Research Questions

In qualitative research, the researcher seeks to answer one central question (Creswell & Poth, 2018). Using the descriptive phenomenological approach requires the question to pertain to the participants' lived experiences, as this is the basis of this research style. While the follow-up questions can expand on the concepts related to the research, the central question must encompass them.

The primary research question asked, What is the lived experience of the bedside nurse regarding the transfer of nutrition education to patients? There is minimal research on the experience of nurses in regard to transferring their nutritional knowledge to patients. This question explores the gap in the research literature and raises awareness about the need for nutrition education for nursing students.

A related research question asked, What is the perceived preparation that the nurses received in their undergraduate nursing education program on nutrition education? Exploring the experience from the nurse's perspective for the far transfer of concepts can help to evaluate the level of learning that occurred through their undergraduate nursing program (Roumell, 2018). This exploration adds another perspective to whether enough nutrition education is being provided to undergraduate nursing students (Laing & Crowley, 2021). It can further help explain how much nutrition education is enough by comparing their experience in the workplace with the amount of nutrition education they have received in their undergraduate nursing education program.

Definitions

1. *Undergraduate Nursing Education*: pre-licensure nursing education program at any level to include diploma, associate degree, or baccalaureate degree program of study (LaRocco, 2010).
2. *Nutrition Education*: teaching provided regarding food intake, vitamins, or minerals and how the body responds to this intake (Deshpande, 2003).
3. *Health Literacy*: an individual's ability to find, understand, use, and comprehend health information to effectively make proper decisions for one's health (CDC, 2022).
4. *Nutrition Literacy*: Refers to an individual's ability to find, read, use, and understand material and advice related to proper nutrition choices (Velardo, 2015).
5. *Ontology*: a philosophical assumption in research that indicates that there are multiple ways to view reality, accounting for a different perspective on the reality (Creswell & Poth, 2018).
6. *Phenomenology*: an approach to qualitative research that seeks to obtain the lived experience of the participants through their description (Creswell & Creswell, 2018).
7. *Descriptive Phenomenology:* a qualitative phenomenological study that seeks to better understand areas of experience that are not well understood (Matua & Van Der Wal, 2015).
8. *Postpositivism*: an interpretive framework used in qualitative research that indicates that the researcher does not believe in direct cause and effect but that through logical steps, multiple perspectives of reality can be demonstrated (Creswell & Poth, 2018).
9. *Far Transfer*: the transfer of information from an environment such as the classroom to an utterly unrelated life circumstance (Barnett & Ceci, 2002).

10. *Near Transfer*: the transfer of information learned to a very similar, though not identical, situation in life (Haskell, 2001).
11. *Positive Transfer*: refers to the ability to take learned information and apply it to a situation (Baldwin & Ford, 1988).
12. *Malnutrition Screening*: Tools used to identify presence of malnutrition through a series of questions (Reber et al., 2019).

Summary

The experience of nurses in transferring nutrition knowledge to patients is unknown. This research examined the lived experience of the nurse in transferring learned nutrition information to patients. The nurses' perceived level of educational preparation to impart such knowledge was also explored. While it has been indicated that the transfer of information is the accurate evaluation of learning, it presents a picture of the nurses' preparedness (Galoyan et al., 2021). The study's results have helped identify the need to equip nurses to meet this educational need in healthcare. Identifying the problem was the first step to guiding the way toward a shift in nursing focus from disease management to health promotion.

CHAPTER TWO: LITERATURE REVIEW

Overview

Nutrition education is a key aspect of the nurse's role. Information on the nurse's experience in transferring nutrition knowledge to patients in the hospital is unknown. This chapter examines the literature to identify what research has been conducted to date and what gaps exist in the literature. The chapter begins with a description of the theoretical framework for the study. Charles Hubbard Judd's theory of generalization of experience can be a guide to the transfer of learning among nurses (Judd, 1927). This study focuses on the experience of the bedside nurse in transferring nutritional concepts to patients; therefore, concepts related to this phenomenon are explored. A thorough review of the literature includes the theoretical framework, the role of nutrition in health, the role of nutrition in nursing, the role of the nurse in educating patients, how nurses are prepared for their role in nutrition education, how the nurse transfers concepts of nutrition to patients, and identified gaps in the literature.

Theoretical Framework

Theory can assist in forming a foundation for qualitative research. Though there has been some debate about the effective use of theory in qualitative research, it can provide a solid foundation when used correctly (Collins & Stockton, 2018). A theory can offer a means to shape the researcher's preconceived notions into a recognizable framework for review (Usman & Bulut, 2021). Thus, the theory guides and supports the research study.

Judd's theory of generalization of experience is found to be an appropriate framework to examine the nurses' experience of knowledge transfer to the practice of nursing after schooling (Judd, 1927). The generalized experience theory refers to the importance of transferring learned information into a real-life situation. The transfer of learning is defined as an individual's ability

to take the information learned in any setting and apply it to a similar context later (Macaulay & Cree, 1999).

The transfer of learning has existed for over 100 years, yet a complete understanding of all aspects continues to be researched due to its complexity (Andrews, 2002). Transfer, specifically, began to be evaluated in 1901. However, the concept that the mind is used and strengthened through learning, which some note as an early understanding of transfer, was noted to have occurred during ancient times. In 1913, E.L. Thorndike indicated that learning could only be transferred when the learning and life situations directly aligned (Andrews, 2002). Charles Hubbard Judd introduced his theory of the generalization of experience in 1927 with the idea that teaching general concepts would transfer to a broad range of situations. Other theories on the subject have been identified through the years, each becoming more specific or focusing on one area of the concept (Hajian, 2019).

Perkins and Salomon (2012) introduced the theory of low and high road transfer as a component of the transfer of learning. Through their interpretation of the transfer of learned concepts, there is a relation to the high road where individuals can take what they have learned and apply it to a situation. Conversely, they could take the low road and recognize an easy solution by looking at the problem without using previously learned information. Perkins and Salomon further introduced concepts for a means of teaching that will improve an individual's ability to transfer information. They described the use of hugging and bridging, with hugging leading the learner towards the use of high road transfer, whereas bridging leads the learner towards the use of low road transfer (Perkins & Salomon, 1988).

Skemp introduced the idea that abstraction contributes to the ability to transfer learned material to life situations (Hajian, 2019). This concept is presented in the teaching of

mathematics to enable the learner to see the similarities between what is being learned and other life circumstances (White & Mitchelmore, 2010). By teaching through abstraction, the learner is better able to transfer the learned information at a later time, despite the information being seemingly unrelated.

In 1988, Lave introduced the situated learning theory, which introduced the idea that much of learning is solidified when individuals are present in a social context with others of the same discipline (Hajian, 2019). The immersion within a social context allows for creating a form of apprenticeship where learning can continue after the information has been presented (Lave & Wenger, 1991). As nurses begin their careers, they go through orientation and become surrounded by other nurses. In being surrounded by other nurses, the learner becomes immersed in a group of individuals with similar knowledge and skills for solidification of learning.

Transfer of learning has been evaluated from the perspectives of higher education, the workforce, and beyond (Galoyan et al., 2021; D. Jackson et al., 2019; Latham & Wexley, 1981). Regardless of the setting, the transfer of information occurs in the lives of individuals in some fashion. These previous evaluations closely pertain to this study due to the exploration of the transfer from what is learned in higher education, most notably, nursing education, to the workplace.

The theory of generalized experience posits that for learning to occur most effectively and transfer, learning should be delivered in large generalizations (Judd, 1927). Large generalizations of concepts are compared to memorizing facts and details often seen in some learning environments. Having individuals learn through this method will make the information learned more transferrable to situations that are not identical to the learning environment. The ability to make these transfers of information from where it was learned to a relevant situation is

considered a positive transfer (Baldwin & Ford, 1988). Positive transfer of knowledge indicates the individual sharing the information has a good grasp of the material. It is noted that for positive transfer to occur in the workplace, the information should be taught to individuals and then further reinforced in the workplace (Baldwin & Ford, 1988). Thus knowledge transfer can only occur if the individual has learned and retained the information.

Researchers in academics address the transfer of learning to life situations as the ultimate evaluation of whether learning has effectively occurred (Haskell, 2001). It is noted that without the ability to transfer knowledge to different life situations, individuals would not be capable of functioning due to the many scenarios that can be faced in daily life. Instead, transfer from general concepts makes the world and the situations encountered more manageable. The transfer is the means by which all individuals can classify information and make connections based on previous experience or learning (Haskell, 2001). The exact means of transfer would be noted as novice nurses use their training in nutrition received during their undergraduate nursing education program to educate patients. Students are learning the information in a classroom setting and can then transfer that foundational knowledge to patients with various disease processes and states of health. This transfer is an example of far transfer due to the ability to take the learned information and transfer it to a distant scenario or concept, such as the varying degrees of the health of the individuals cared for (Barnett & Ceci, 2002). Far transfer differs from near transfer in that near transfer focuses on the transfer of information learned to a situation that is similar or near-identical to the situation in which it was learned and understood (Haskell, 2001). For the sake of this study, the focus was on far transfer due to the unlikelihood of the learning environments matching the life situations the participants face in transferring nutrition knowledge.

The existing literature supporting this study does not state direct connections to Judd's theory of generalized experience and the transfer of learning, yet in some instances, implies its concepts. One example is the research completed by Ross et al. (2017), describing despite nurses demonstrating an understanding of wellness concepts, they often cannot translate that to self-care behaviors (Ross et al., 2017). It can be debated that this research has described the failure of the transfer of learning. Further, research has been conducted that reviews nurses' nutritional knowledge levels to determine effectiveness in specific environments such as the COVID-19 pandemic, home care, and schools (Amin et al., 2018; Holdoway & Anderson, 2019; Laing & Crowley, 2021). While these studies could advance the information within this theory had they been connected to it, the lack of connection makes the advancement of the theory impossible without further review. This study examined nutrition knowledge transfer from nurses to their patients. The findings have helped to advance the research on the transfer of learning by applying the theory to a particular topic of learning within undergraduate nursing education. The study explored a new aspect of the transfer of learning to benefit the generalizability of the theoretical concepts. The information obtained through the literature review and data collection methods offers additional knowledge that has supported the assumptions and foundation of the theory of generalized experience (Durach et al., 2021). While the study is not about testing a theory, examining the phenomenon of knowledge transfer has helped validate the theory of knowledge transfer.

In addition to the theoretical framework, this research was shaped through its descriptive phenomenological approach. A descriptive phenomenological approach indicates that the researcher seeks to have thorough descriptions of the phenomenon of interest in the study, notably through recognizing the lived experiences of those who have experienced the

phenomenon in question (Sundler et al., 2019). This approach was chosen because it connects with the research question this study wished to answer.

Descriptive phenomenology, also known as transcendental phenomenology, is noted as a means to review the lived experiences of individuals within a nursing realm and other disciplines (C. Jackson et al., 2018; Patton, 2020). Examining lived experiences in descriptive phenomenology differs from another form of phenomenology, interpretive or hermeneutic phenomenology. Interpretive phenomenology has more of a philosophical foundation, considering that an individual's experiences are affected by the individual's environment and can be interpreted as such (Neubauer et al., 2019).

As the role of the researcher as a registered nurse can cause some bias and preconceived notions, due to the researcher having their own lived experiences on the subject, it is necessary to consider the role of bracketing. Bracketing is the means of the researcher setting aside preconceived notions and biases to represent objective data findings from the present research, even when the biases are unconscious (Tufford & Newman, 2012). Bracketing is a common practice found in phenomenological research to reduce the inclusion of bias in research findings. The use of bracketing allows the researcher to see the data through a clear lens despite their previous feelings towards the subject.

Related Literature

It is essential for nurses to understand the role of nutrition in health in order for them to provide effective nutrition education to patients. Nutrition in health refers to how the human body responds to the nutrients it receives from what is ingested, resulting in wellness or disease (Ross et al., 2014). The role of diet in disease development or exacerbation, along with how it pertains to disease progression and quality of life, represents the area where the nurse can play a

role. There is significant research available related to how individual nutrients affect the body, along with what the body needs (Ross et al., 2014). For the sake of this research, general nutrition was considered as opposed to specific nutrients, vitamins, or minerals. Frameworks on nutritional knowledge were examined as well.

Theoretical Foundations on Nutrition

While conducting a study on nutrition-related concepts, it is essential to examine theories related to nutrition. These theories are cornerstones for health promotion and the nutritional management of well and ill people. Theories related to nutrition have grown over time as a science in itself, and communities have learned how food is used and what the body needs (Maslow, 1943). In fact, all disciplines, including health care disciplines, should have adequate nutrition literacy to assist patients in need. The importance of nutrition correlated with the patient's needs helps to address the proper nursing care (Current Nursing, 2020; Petiprin, 2016). The theories most integral to this study are Maslow's theory of human motivation, Virginia Henderson's need theory, and Betty Neuman's systems model.

Maslow's Theory of Human Motivation

In 1943, Abraham Maslow developed the theory of human motivation. Within this theory, he identified a hierarchy of needs for the human race (Maslow, 1943). The theory of human motivation was developed as a premise as to how the human body will work to maintain homeostasis. Maintaining homeostasis is most predominantly accomplished through meeting physiological needs. The human body will alert the individual of unmet needs, such as hunger, cravings for the proper vitamins and nutrients, and thirst. Maslow (1943) indicated that the human body will seek to fill the most basic need before moving to more advanced needs.

Maslow (1943) identified the most basic needs as the physiological needs for human survival. Such needs include food, water, shelter, sleep, and homeostasis. The theory of human motivation suggests that further needs will not be addressed until the physiological needs have been satisfied. With food being indicated as one of the most basic needs required by all humans before any other needs can be sought, it is necessary to consider how food impacts the body, with proper diet and nutrition being a priority to provide the body with the vitamins and nutrients that it seeks (Maslow, 1943).

Nurses should be aware of how food and proper nutrition affect the body, enabling individuals to make good choices for health (X. Xu et al., 2017). To effectively provide this information, nurses should be trained in what constitutes proper nutrition. This research helps identify whether novice nurses understand the concepts to transfer that knowledge to their patients.

Henderson's Need Theory

Nurses focus on the holistic care of individuals, considering their patients' basic and more advanced needs for overall health. Nursing theorists, through the years, have viewed the patient through various lenses, seeking to provide the foundation of care that is most suitable to all. Virginia Henderson regarded the patient as a whole being and sought to provide care to the patient when needed but also enable them to improve their health and care for themselves as quickly as possible following illness (Current Nursing, 2020). This is presented with the understanding that nurses should be effectively trained to provide the necessary information to help patients improve their health as the patient feels is best suited for their life. Henderson's need theory focuses on 14 main components that the patient should focus on for health or to meet basic needs. The components include proper hydration and nutrition, proper elimination,

exercise, good posture, adequate sleep and rest, suitable body temperature, proper hygiene, and comfortable dress, protection of the skin, avoiding dangers, worship within one's chosen faith, play and work, and seek out learning while also utilizing available health facilities (Current Nursing, 2020). Henderson's advice comes with the caveat nurses should be ethical, trustworthy individuals focused on making a difference in others (Henderson, 1990).

In many ways, Henderson's need theory reflects the physiological needs identified as the basic needs in Maslow's theory of human motivation. Henderson indicated that nurses should be adequately trained to care for the basic needs of individuals, such as nutrition, hydration, and sleep (Current Nursing, 2020). When nursing students are trained to care for individuals in such a way that Maslow's basic physiological needs have been met, the individual can focus on attaining more advanced needs (Maslow, 1943).

Henderson's (1977) need theory further emphasized the need for nurses to be prepared to assist individuals in making good choices for proper nutrition to improve health. As nurses use their training to educate patients, they must understand whether they are adequately trained. This research worked to understand the nurse's perspective on their ability to provide nutrition education to individuals so that they can assist them in making good health choices for their self-improvement.

Neuman's Systems Model

Neuman's systems model, introduced by Betty Neuman in 1982, continued the theoretical basis that extended the means for caring for individuals while understanding their basic needs (Petiprin, 2016). Neuman took this one step further as the theory explored the idea of wellness within the holistic care of individuals, in addition to understanding how the body responds to stressors and describing the three layers of prevention that can assist in maintaining

wellness. Nurses often care for individuals after they have experienced some form of stress, through illness, trauma, mental health crisis, or otherwise (Meleis, 2018). Neuman's system model assists in identifying how individuals respond so that the nurse can understand how to treat them.

Neuman described the stress response through defense shields that form concentric circles around the individual (Meleis, 2018). Each circle indicates a level of defense against the stressor, providing a layer of protection and preventing direct access to the individual. It is noted that these circles are unique to the individual and are ever-changing based on the individual's experiences. The stressors affecting individuals are identified in three levels: intrapersonal, interpersonal, and extra-personal. While the nurse cannot assist in preventing all of these, Neuman's systems model helps the nurse in their understanding of how to care for the individual when experiencing stress by identifying how these pieces work together (Meleis, 2018). One component of this process is assisting the patient to manage their nutritional status. This study helps to explore the transfer of nutritional information to patients from a nurse's perspective to begin to review if preparation and knowledge are sufficient for novice nurses.

Nutrition in Health

The CDC regularly reviews the leading causes of death in the United States. In 2020, the top 10 list included numerous disease processes directly caused by diet or where diet plays a role in its development (National Center for Health Statistics, 2022). Heart disease, some cancers, and diabetes are often considered diet related, meaning they are caused by poor nutritional intake (CDC, 2021a). Ultimately, numerous common disease processes within the United States have increased the morbidity and mortality rates that could be prevented through proper nutrition (Mokdad et al., 2018).

In addition, other diseases in the top 10, such as strokes, Alzheimer's disease, acute illnesses like COVID-19, influenza, and pneumonia, along with chronic kidney issues, have significant risk factors that include diet (Furman et al., 2019). For example, following a healthy lifestyle and following a healthy diet have been shown to reduce the risk of stroke by up to 80% (Spence, 2019). While further research continues to be conducted, evidence supports a connection between heart disease, stroke, and high blood pressure, all of which are diet-related, leading to the development of Alzheimer's disease (National Institute on Aging, 2019).

Chronic inflammation has been noted as an underlying concern in many disease processes, including cancer, diabetes, cardiovascular disease, autoimmune disorders, inflammatory lung diseases, and chronic kidney disease (Furman et al., 2019). Poor dietary intake is one of several factors that lead to chronic inflammation, along with other lifestyle habits such as sleep hygiene, stress, and sedentary lifestyles. Chronic inflammation creates pathways for disease development in a variety of means (Furman et al., 2019).

Further, some food choices themselves lead to poor health outcomes. For example, ultra-processed foods are known to lead to obesity, cardiovascular disease, diabetes, and cancer (Pagliai et al., 2021). Along a similar note, there continues to be ongoing research on the effects of preservatives in food and the resulting health outcomes (Javanmardi et al., 2019). Researchers also continue to review the impact of foods such as red meats and sugar substitutes as areas of concern that require additional review (Qian et al., 2020; Toews et al., 2019). With the number of resources available, the general public needs help understanding what information is accurate and what to follow for their health.

Cost of Poor Nutrition Choices

The number of disease processes resulting from poor nutrition choices ultimately leads to an increase in overall healthcare costs associated with modifiable risk factors (Bolnick et al., 2020). Modifiable risk factors cost the U.S. healthcare system close to 4 billion dollars in 2016 alone, which equates to 27% of the overall cost of healthcare for the year. Modifiable risk factors such as smoking, diet, high blood pressure, obesity, and a sedentary lifestyle place an individual at increased risk of disease development but could be controlled (Adams et al., 2019). Improving the healthcare choices and habits of communities can assist in reducing the overall healthcare costs of the country.

Health Literacy and Nutrition Literacy

The uncertainty of how certain foods impact the body and overall health is an excellent example of how health literacy plays into an individual's health status. Health literacy refers to an individual's ability to obtain, understand, and use health information they read or have been provided to make good health choices (CDC, 2022). When information is conflicting or continues to be under review, individuals must be able to sort through findings to determine what is most accurate and which sources are most reliable. This ability to decipher information requires a good level of health literacy, which has not been widely noted in the United States.

Yet, to create a culture of health within the United States, it is essential to improve the health literacy level of individuals and communities (Barton et al., 2018). Populations of concern regarding health literacy levels include older adults, minorities, those of low socioeconomic status, and people who are medically underserved (Health Resources and Services Administration, 2022). Low health literacy places these populations at an increased risk for poor health outcomes. It is the healthcare provider's responsibility to provide information to assist in

improving an individual's health literacy level at all interactions to support them in making good decisions for their health. It is necessary for the healthcare provider first to identify those with limited literacy levels to recognize the need, as they may be unable to ask for assistance due to not understanding their own need. It may be necessary for the healthcare provider to ask questions to evaluate the level of understanding and potentially request a return demonstration of the material the provider has presented to evaluate understanding (Health Resources and Services Administration, 2022). The screenings for prior knowledge can assist the healthcare provider in delivering education at a level that the patient can comprehend (Chen et al., 2018).

Nutrition literacy, the specific component of health literacy that refers to the individual's ability to find, read, use, and understand information related to proper nutrition choices, is one area where the nurse can assist in improving health outcomes by providing information about appropriate nutrition. Nurses need an education that prepares them to address issues such as nutrition literacy, boost their confidence to address these issues, and provide the best education for the patient (Keyworth et al., 2019). Through this, nurses can begin to improve patient outcomes, reduce the number of illnesses caused by poor nutrition, and increase the population's nutrition literacy levels.

Malnutrition

Over and Under Nutrition

Malnutrition includes both over- and undernutrition. Malnutrition is an area of nutritional concern encompassing all disorders that result when the ingested vitamins and minerals are disproportionate to the body's needs (World Health Organization, 2021). Malnutrition can lead to disease or result from disease (Saunders & Smith, 2010). The resulting disorders range from undernutrition leading to wasting or stunting to overnutrition leading to overweight and obesity

(Hawkes et al., 2019). Over- and undernutrition are both concerns; however, related to prevalence, overnutrition is more prominent, affecting 1.9 billion adults compared to 462 million adults who are underweight (Menon & Penalvo, 2019). Further, overnutrition is the culprit for many nutrition-related diseases listed as the leading causes of death in the United States, such as heart disease, diabetes, and stroke (National Center for Health Statistics, 2022).

Malnutrition is a concern in many areas worldwide and varies in severity. In the Unites States, concerns about food insecurity are most prevalent in rural areas, communities of Black and Latinx cultures, and the southern states (Food Research and Action Center, 2021). Children and the elderly within these populations of concern are particularly problematic for malnutrition due to their dependency on others. The healthcare provider should evaluate the risk in all individuals, with the necessity of paying particular attention to these areas of increased risk. This is especially true for older adults with chronic illnesses who have been identified as one population with low health literacy within the United States (Muvuka et al., 2020).

The community represents an area where malnutrition can be noted frequently. The nurse needs to be comfortable approaching the topic of nutrition and offer support to their patients (Holdoway & Anderson, 2019). Support may come in the form of assisting the patient and caregivers in finding food choices that coincide with the dietary plan provided by a nutritionist or suggesting a different eating pattern. It is noted that the nurse should be screening for nutritional needs and addressing them when noted. This is necessary despite the difficulties noted when initiating a conversation about nutrition. It has been found that 60% of nurses surveyed indicated that they struggled to start a conversation about nutrition, especially when they did not adhere to diet or exercise regimens themselves (Bright et al., 2021). Improving the nutrition education

level of nurses can assist in reducing this concern by providing the confidence needed to approach the subject regardless of personal health status.

Health Promotion

Diet and nutrition are means to improve health when making good choices. Health promotion can refer to general wellness, the prevention of disease, or improving quality of life while living with a chronic disease (World Health Organization, n.d.). Health promotion can include promotion on an individual level or a larger scale, such as a community or population, and has many factors to consider outside of healthcare (Kumar & Preetha, 2012). Other components of health promotion include concepts such as the sociopolitical climate, health systems, environment, patterns of consumption, and public policies. In this way, health promotion is a means of improving global health initiatives (Kumar & Preetha, 2012). Improving an individual's health literacy level can enhance the outcomes of the individual while improving health policies can assist from a broader perspective. Regardless of the method, the nurse can significantly improve health through these efforts (Anders, 2021).

Following a healthy diet is one way to prevent health risks such as diabetes, stroke, and cancer and promote wellness (World Health Organization, 2020). Further, a proper diet can help to prevent disease processes such as hypertension, cardiovascular disease, and diabetes (Butkus et al., 2020). A healthy diet is identified as limited in intake of added sugar, saturated fats, sodium, and alcohol (U.S. Department of Agriculture and Health and Human Services, 2020). A healthy diet should consist of nutrient-dense foods while being mindful of portion sizes and caloric intake. Nutrient-dense foods should encompass approximately eighty-five percent of daily intake (U.S. Department of Agriculture, 2015). These guidelines are regularly reported to the general public by various federal departments in the United States. Yet, the information

provided can continue to confuse some of the population. The confusion likely stems from low health literacy levels and difficulty understanding the information provided. Assisting in this understanding and improving the health literacy levels of individuals is a way that nurses can help to improve the health of their communities.

Role of the Nurse in Nutrition Care

Nutrition is a required component in the holistic care of patients, required of all nurses. The nurse is often in a position to identify the nutritional needs of patients through nutritional screenings (Reber et al., 2019). Nutrition is not solely the nurse's responsibility but a component of interprofessional collaboration (Hestevik et al., 2019). Through collaboration, nurses will assist in identifying nutrition concerns, providing education and training to patients, assisting in diet planning, and monitoring nutritional intake. Despite the recognized need for collaboration, it has recently been noted that all health programs must do better at providing nutrition education to provide the best outcomes (Sacks, 2017).

The American Nurses Association defines the nurses' scope of practice to include illness prevention, optimization of health, and facilitation of the healing (American Nurses Association, 2011). It is stated that this should occur with any patient in need during any interaction with them. By maintaining this stance, nurses can assist in improving patient outcomes at all opportunities. Nurses can provide this care through nutrition counseling, nutrition screenings, and giving nutrition advice through collaboration with other healthcare providers (X. Xu et al., 2017).

Some of these areas for nurses to intervene can be noted through nursing diagnosis options. Noting an imbalance in nutritional requirements, representative of either over- or undernutrition, is an area that should be addressed through appropriate nursing interventions

(Ackley et al., 2021). The nurse should implement interventions to improve health through proper nutrition and lifestyle changes.

Nutrition Screenings

Nutrition screenings are a vital role for the nurse as they act as the patient's advocate and recognize patient needs (National Council of State Boards of Nursing, 2019). Screenings can help to identify concerns before they are apparent, allowing for early intervention. Once nutrition screenings have been completed, there should be a process in place to follow up with the findings and address any concerns to reduce complications and assist where needed (Sriram et al., 2017). Screenings can also help to identify problems such as food insecurity (Utech et al., 2021). Food insecurity is noted when an individual has limited or uncertain access to food that meets their nutritional needs, which can ultimately lead to concerns with undernutrition.

Nurses can accomplish screenings through their access to patients in several settings, including inpatient, outpatient, community, and schools. Each of these settings provides a unique position for nurses and should be treated as such. Each setting requires a distinct perspective and management of nutritional needs for the clients receiving care. Regardless of the setting or need, nurses should be capable of adapting and following through for the best outcome for the patient in each location. When in the hospital setting, nurses often perform condensed versions of a malnutrition screening, asking only a few questions to identify the presence of malnutrition for follow-up by the dietician.

Unfortunately, when polled, only 52.5% of home care nurses indicate they routinely perform screenings for malnutrition in older adults (Ten Cate et al., 2020). This statistic is relatively lower than the 95% of inpatient nurses that report routinely screening for malnutrition. Regardless of the setting, 81% of the nurses polled indicated they wanted further nutrition care

training. Screening with a validated screening tool should be routine for all nurses caring for patients in any setting to identify concerns early for easier management.

It is recommended that nurses perform a routine malnutrition screening on all patients at the time of admission to the hospital. Examples of the screening tools available for nurses include Nutritional Risk Screening 2002, Malnutrition Universal Screening Tool, and the Mini Nutritional Assessment (Reber et al., 2019). Tools are unique to specific care environments and should be used appropriately and regularly.

Another area to consider with screenings is the increased use of telehealth. Telehealth refers to a medical appointment with a provider virtually instead of an in-person visit (U.S. Department of Health and Human Services, 2022). Though early research indicates that nutrition screenings through telehealth appointments have been a positive addition, they should continue to be evaluated to ensure that regular screenings occur regardless of how the appointment takes place (Brunton et al., 2021). Combining the proper screening tools with telehealth can increase the span of patients who can be reached and educated on proper nutrition.

Just as nurses have been noted to have difficulty addressing nutritional concerns with patients when they do not effectively adhere to proper diets themselves, it is necessary also to consider the possibility of bias from the nurse (Ross et al., 2017). Nurses and nursing students have reported biases toward caring for individuals who are obese (Poon & Tarrant, 2009). The bias noted in this study stems from the negative perception held of obesity. Negative perceptions such as this should be addressed during an undergraduate nursing education program to assist novice nurses in preparing for holistic nutritional care of all patients.

Nutrition Counseling

Nutrition counseling refers to the patient's interaction regarding nutrition following a nutrition assessment (Vasiloglou et al., 2019). During this interaction, the patient and the healthcare provider discuss their dietary needs, goals, and future steps. The nurse can play a part in this process by assisting with any component. The nurse will also reinforce the teaching provided and help the patient meet their nutritional goals by following the plan set in place (Vasiloglou et al., 2019). Even small conversations and bits of information encouraging a minor change, provided to patients regularly, can assist in improving their overall nutritional state (Kahan & Manson, 2017).

Social Determinants of Health

Social determinants of health are defined as the environment and conditions regarding where individuals reside, work, and live that affect their health in some way (Sokol et al., 2019). Things that should be considered regarding the social determinants of health are age, education level, access, local economic stability, access to healthcare facilities, neighborhood, and social context (U.S. Department of Health and Human Services, n.d.). Understanding the social determinants of health can assist the nurse in understanding the needs of the community they serve. Social determinants of health should be evaluated in all settings to assess the needs best and address them appropriately.

Areas considered to be social determinants of health that affect nutrition include concepts such as food insecurity, access to nutritious foods, financial constraints, knowledge level mainly related to nutrition or nutrition literacy, and access to community and healthcare resources (U.S. Department of Health and Human Services, n.d.). Each area requires a unique response that best enables the patient to experience a good nutritional outcome. Determining how to assist each

patient begins with understanding what the patient is dealing with to ensure proper resources are provided (Kirsch & Ball, 2018).

Food Insecurity. Food insecurity refers to the inconsistent access to the food necessary for a healthy lifestyle, which affected roughly 15 million Americans in 2017 (Brown et al., 2019). Food insecurities can affect individuals from all walks of life, from children to young adults to older adults (Denney et al., 2020; Innis et al., 2020; Pooler et al., 2019). Further, there are instances, such as a pandemic, when food insecurity can be more pronounced for many individuals (Gundersen et al., 2021).

Unfortunately, it has been noted that food insecurity can often go hand in hand with chronic diseases (Gregory & Coleman-Jensen, 2017). Connections between food insecurity and chronic diseases were more prominent than the connection between poverty and chronic illness. As many chronic disease processes have a nutritional component or are even considered directly related to dietary intake, consideration of the availability of nutritious foods is necessary (Liu & Eicher-Miller, 2021). As the nurse and other healthcare providers are assisting patients with proper food choices related to their disease process, they must consider the patient's access to food.

Food insecurity can result from the individual's lack of resources such as money to pay for food or can be a concern based on the environment where that individual lives, having poor availability of nutritious foods (Bierman & Dunn, 2006). Healthcare personnel must manage each of these situations differently to provide the appropriate resources. Food inaccessibility can become cumbersome due to the need to improve the communities in which the individuals live to combat the issue at hand (Chodur et al., 2018).

The Interconnectedness of Social Determinants of Health. Financial constraints can be noted as a component of food insecurity or stand alone as a social determinant of health (U.S. Department of Health and Human Services, n.d.). Further, the impact of dietary intake from accessibility to food, the likelihood of chronic disease, and access to proper healthcare services can all be interrelated. Unfortunately, many of these factors can build on one another to create a more complex environment of needs for individuals. As the healthcare provider seeks the best resources based on the individual's scenario, it is necessary to consider that there are likely multiple issues that lead to their current situation and future outcomes (Gomez et al., 2021).

Outpatient Settings and Home Health

The outpatient setting refers to locations of care where it is not necessary for the patient to be admitted to the hospital but still requires the care of the healthcare team, including a nurse. For the outpatient setting, the nurse can be employed in places such as the provider's office, an outpatient surgery center, or a specialty clinic. Home health refers to nursing care provided to patients within their own homes. Through each of these areas, nurses will encounter patients in various places in their health journey, and the education that the nurse provides should be tailored to fit each patient.

Regardless of the setting, nutrition care is often inadequate in outpatient areas. For example, upon reviewing cancer care centers in the United States, it was found that only 53% screen for malnutrition (Trujillo et al., 2019). Of the 53% screened for malnutrition, less than 65% used a validated screening tool. With oncology patients at increased risk of complications such as malnutrition, this is a population where proper nutrition care must be addressed (Ravasco, 2019). Other patients noted to have increased nutritional risk, such as those with

cardiovascular disease, can also be assisted in an outpatient care environment such as a clinic (Reiter-Brennan et al., 2021).

School Nursing and Pediatrics

School nurses are in a prime position to recognize nutritional concerns in pediatric patients. The school setting provides a means to employ education about proper nutrition habits and increase nutrition literacy (Alexander, 2020). Unfortunately, numerous barriers for school nurses have been noted due to an already heavy workload and limited resources (Powell et al., 2018). As school nurses indicate their wish to provide more education to their patients in this setting, shifting to a focus on providing any bit of education when able is ideal. Despite children gaining most of their knowledge regarding nutrition from home, additional reinforcement and education at school are ideal for improving their nutrition literacy (Amin et al., 2018).

The school setting is a great location to screen for food insecurities as a social determinant of health in a vulnerable population (Schroeder et al., 2018). As children cannot always recognize a need for nutrition and cannot seek their own assistance in many cases, the school nurse can perform screenings, identify the need, and implement improvement processes. Nurses can act as the child's advocate, offering existing resources or placing referrals where necessary for the best outcomes (Flores & Amiri, 2019).

Emerging Roles for Nurses in Nutrition

Undergraduate nursing programs are responsible for training students to become nurse generalists who can demonstrate competence through successfully completing the NCLEX-RN exam (American Association of Colleges of Nursing, 2021). The American Association of Colleges of Nursing (AACN) Essentials domain for person-centered care indicates that new nurses should have the ability to provide teaching, individualized to the patient with

consideration of the determinants of health (AACN, 2021). Once in practice, nurses can step into specialty nursing roles with unique characteristics and demands. Some of these roles may require the nurse to have a good foundation in nutritional concepts to build upon for the sake of the role. Depending upon the role, nurses may need additional training or education, while others may rely on facility training. Regardless, the foundation of nutritional knowledge obtained during an undergraduate education program will benefit the nurse transitioning to a specialty role. Examples of specialty nursing roles that would require a foundation in nutrition include a diabetic educator, lactation consultant, and wound care nurse.

Diabetic educators can come from various educational backgrounds depending on where individuals practice but have a goal of providing holistic care to patients with diabetes mellitus (Rinker et al., 2018). The holistic care of these individuals reviews and assists with their physical, psychological, nutritional, and social needs (Pearson et al., 2019). Diabetic educators are also responsible for teaching patients about the care of their disease process in areas such as blood glucose monitoring, proper adherence to medication regimen, including how to administer all medications, and instruction on how to perform carbohydrate counting (Rinker et al., 2018). By providing proper nutritional care for diabetes, patients can improve their outcomes or even reverse their disease process (R. Taylor et al., 2021). While the nurse can act as the diabetic educator, the nurse can be involved in collaborating with professionals caring for diabetic patients. For example, when a patient with diabetes is admitted to the hospital, they may not receive care from their diabetic educator. Instead, the nurse caring for them in their inpatient unit will likely provide the care necessary regarding their chronic condition. In either situation, the nurse needs nutritional knowledge to transfer to patients to improve outcomes.

Lactation consultants are nurses specially trained to educate new mothers and newborns in breastfeeding (Cleveland Clinic, 2021). One significant component of this education is ensuring proper nutrition for the newborn through breastfeeding. However, it also considers the mother's milk supply, which can be affected by her nutritional status (Cortes-Macias et al., 2021). The specialty nurse role as a lactation consultant can assist both the mother and the newborn in maintaining proper nutrition to ensure the best outcomes for both.

Wound care nurses are specially trained to care for individuals with chronic wounds (Monaco et al., 2020). One consideration for managing chronic wound healing is the proper use of nutrition for tissue viability (Royall, 2019). It is important to note that during wound healing, patients need 250% more protein than the average recommended intake, depending on the phase of healing of the wound (Ghaly et al., 2021). As the wound nurse cares for the wound, education is provided to the patient on proper nutrition for wound healing (Bishop et al., 2018). While these specialty nurses are uniquely equipped to teach to the specific population's needs, the nurse generalist must be able to impart basic nutrition education to their patients.

Nutrition Components in Nursing Education

Requirements

The amount of nutrition education that undergraduate nursing students should be provided is not explicitly stated. The National Council of State Boards of Nursing (2019) identified topics where new graduate nurses should be knowledgeable and could be tested on the NCLEX-RN exam. Further, the AACN (2021) has identified the competencies that undergraduate nursing students should acquire, describing areas related to educating patients and understanding concepts of the nursing care.

The NCLEX-RN test plan blueprint is a document created by the National Council of State Boards of Nursing (2019) listing topics and concepts necessary for the new graduate nurse to know at the time of licensure as a novice nurse. The test plan is divided up into overarching categories of the care provided by a nurse. Nutrition is noted as a topic needing to be understood by novice nurses in various categories within the NCLEX-RN test plan. The health promotion and maintenance category focuses on the areas in which the nurse assists the patient in promoting wellness, preventing disease, and maintaining a good state of health regardless of diagnosis. Health promotion and maintenance include nurses' need to perform regular nutrition screenings. Basic care and comfort represent a category where nurses should be prepared to provide care and comfort measures to assist the patient at any given time. It is within the basic care and comfort category where most nutrition components are housed for novice nurses. Examples include monitoring nutritional and hydration status during patient care, assisting with proper food choices, and evaluating ways that diagnosis will affect nutrition status. Nurses also monitor all aspects of parenteral nutrition and tube feedings. In addition, the nurse should evaluate the patient's sheer ability to eat. These requirements are a sampling of what is necessary understanding for the novice generalist nurse at the time of entry into the practice (National Council of State Boards of Nursing, 2019). As the nurse grows within the field and enters specialty areas, it is quite likely they will experience additional requirements to provide for their patients.

The AACN (2021) Essentials document consists of a detailed list of competencies necessary for a prelicensure nursing student. The Essentials document is intended to be the standard for the basis of the undergraduate nursing curriculum. It is noted that nursing education will require a shift from focusing on acute clinical needs to looking at four spheres of care. The

first sphere focuses on prevention and health promotion, including physical and mental health needs. Secondly is managing chronic disease, the third is disease recovery, and finally, end-of-life care. This document notes the shift to a focus on prevention and wellness where proper nutrition and other preventative measures will come into play (AACN, 2021). The emphasis on wellness places the nurse in a position to provide patients with tools to improve their health and nutrition literacy and allow them to make good choices to improve their health.

The NCLEX-RN test plan and the AACN Essentials are a means for undergraduate nursing programs to understand the content that should be delivered to students. Further, the National Research Council (1985) reviewed and provided recommendations for medical schools to provide nutrition education in medical education programs. The resulting recommendation from this study indicated medical schools should provide at least 25 hours of nutrition education to students to provide comprehensive patient care. This represents a cumulative 25 hours of direct content delivery to students for nutrition education. This recommendation was provided to medical schools in 1985 with the further recommendation that this area should continually be reviewed for currency in practice and updates in the field (National Research Council, 1985). Unfortunately, no additional reviews have been completed to evaluate whether this directive continues to be appropriate for today's world.

Even though the directive of 25 hours of nutrition education was intended for medical education programs, it is noted that the guidance provided by this report has been followed by nursing education programs due to the lack of specific direction provided to them (Chao et al., 2020). How this nutrition education is provided varies significantly from one program to the next. The most common route of including nutrition for undergraduate nursing students is to

require a stand-alone nutrition course or integrate nutrition content across the program (Eaton et al., 2022; Shea et al., 2021; Yuste et al., 2021).

It is noted when undergraduate nursing students have at least one required nutrition course during their nursing education program, they have improved nutritional knowledge over their peers who did not complete a nutrition course (Chepulis & Mearns, 2015). Those who completed a nutrition course scored 60.5% on a general nutrition knowledge survey, whereas their counterparts who did not take a nutrition course scored 52.5% (Chepulis & Mearns, 2015). Though the nurses who completed a nutrition course scored higher, both results are concerning as the overall knowledge level is not high.

Nursing educators are working to find methods to improve the way nutrition information is provided to students to best prepare them for practice (Bailey et al., 2020; Shea et al., 2021; Yuste et al., 2021). Each proposed method seeks to improve the students' understanding of nutrition while integrating the learning within the program for better retention and later transfer. Proposed methods include a collaborative approach to integrating content throughout the program, utilizing nurse educators and nutrition educators to provide an improved delivery and encourage collaboration in practice (Shea et al., 2021). Active learning methods are another means of improving later recall of learned materials in nutrition (Bailey et al., 2020). Further, the use of debate in the classroom has been compared to standard lecture delivery and has been evaluated for effectiveness (Yuste et al., 2021). Each of these methods has demonstrated promise in their small research samples. Continued research will add to how nursing educators can help students retain learned information for later transfer.

Transfer of Nutrition Knowledge to Practice

The transfer of knowledge in any situation is difficult to ascertain. Much of this difficulty stems from the concept that without a solid knowledge base on a topic, individuals are unaware of what they do not know or what questions they should ask on a topic (Haskell, 2001). This phenomenon limits how the transfer of knowledge can be reviewed. In some instances of far transfer, the individual is likely unable to identify what knowledge is being transferred or what information they are applying to the situation at hand. For example, concepts as broad as critical thinking can be challenging to pinpoint where the knowledge began, as it was likely not one instance of learning that created the individual's critical thinking skills (Barnett & Ceci, 2002). Studies have further indicated that far transfer is difficult to confirm in short research studies with an intervention (Henry et al., 2014; Lange & Sub, 2015). As this research is focused on a distinct category of learned information, it becomes easier to discuss with the participants as they describe their experience of transferring their learned information to patients.

Despite the difficulty in identifying where a transfer occurs at times, it is necessary to understand how information is used and transferred. As undergraduate nursing students are taught material related to nutrition components, the information needs to be taught so that students recognize the significance of the material and how it will be used in practice. The transfer of material from the learning environment to one in an unrelated life situation is regularly the context of transfer in nursing (Lauder et al., 1999). The transfer of learned information in nursing can be noted from the classroom to the clinical setting, from one clinical setting to the next, or beyond education to the bedside. One method to accomplish this ability to transfer is through action learning. Action learning is an educational technique where students

collaborate with others and put their learning into action by practicing real-life situations to find real-time solutions (Olivares et al., 2020).

Gap in Research

The gap in research refers to the area that the research plans to address, based on an area identified with scant literature available. The lived experience of the nurse in transferring nutrition education to patients is not known. Additionally, understanding the preparedness of nurses must be understood to examine the transfer of information. This research examined the nurse's perspective in transferring nutrition education to patients.

This review will further assist in filling the gap related to the guidance on how much nutrition information should be provided to undergraduate nursing students best to prepare them for the collaborative nutritional care of patients. All healthcare providers are responsible for delivering small amounts of nutrition information at every encounter to improve health and nutrition literacy levels and to improve the overall health of individuals through their proper nutrition choices (Kahan & Manson, 2017). However, all involved must be adequately equipped to provide the necessary education (Hestevik et al., 2019). This will have a cumulative effect on the nutrition education the patient receives. This study has paved the path for this topic of research, enabling nurse educators and other researchers to continue to fill the gap in the literature in the future. Most notably, undergraduate nursing curricula can be evaluated to ensure nurses are properly equipped to provide nutrition education to their patients.

Summary

The nurse plays a significant role in screening, counseling, monitoring, and managing patients' nutritional needs when in the hospital and planning for life with a disease process. These processes occur in various settings such as inpatient, outpatient, school, community, and

otherwise. Despite this integral component of nursing practice, there are no definitive guidelines on how much nutrition information should be provided to nurses during their undergraduate nursing education program. Instead, regulatory bodies simply indicate the need for education by describing the nursing role following licensure (AACN, 2021; National Council of State Boards of Nursing, 2019). With the most recent guidelines written for medical schools and originating in 1985, more research should be done to determine the necessary level of education appropriate for the nursing profession (National Research Council, 1985).

The experience of the nurse in transferring nutrition education to patients is examined using Judd's theory of generalized experience (Judd, 1927). Transfer of information is achieved effectively when the student takes what is learned and applies it to situations encountered in life (Haskell, 2001). This research sought to understand how the nurse has accomplished this transfer of information to their patients.

CHAPTER THREE: METHODS

Overview

The purpose of this descriptive phenomenological qualitative study was to explore the nurses' lived experiences regarding the transfer of nutrition education to patients. To reduce healthcare costs, the Patient Protection and Affordable Care Act of 2010 indicated that healthcare must begin to focus on wellness and prevention rather than treatment (Benjamin, 2011). To begin this focus, healthcare staff should increase the level of health literacy in the United States so that individuals are in a position to help themselves. One logical route to improve the health literacy of individuals is for nurses to educate them during any interactions. This research focused on examining nurses' experience transferring nutrition education to patients. Additionally, the level of nutrition education received by the participants was explored to better understand the nurses' ability to transfer nutrition knowledge to others. Due to the outdated recommendations for how much education should be provided, it is necessary to review the preparedness from various perspectives.

This research used a descriptive phenomenological qualitative approach to understand the nurses' lived experiences of transferring nutrition education to patients in various settings. Data were gathered through recorded interviews using semi-structured questions. The research participants consisted of nurses who have 36 months or less of nursing experience. Including new nurses in the study helped gather recent reflections on their undergraduate nursing program compared to the requirements of bedside practice regarding nutrition preparedness. Further details of the research design will be described within this chapter. This chapter will also provide details on the research study. The research design will be defined and described. The setting for

participant recruitment and participation will be identified. Finally, data collection procedures and data analysis processes will be described.

Design

A descriptive phenomenological qualitative method was used to study the lived experience of nurses in transferring nutrition knowledge to patients. Phenomenology reviews the lived experiences of a specified group of individuals (Creswell & Poth, 2018). Using descriptive phenomenology allows the researcher to obtain an in-depth understanding of the phenomenon of interest through the eyes of the participant (Lopez & Willis, 2004). This research design allowed me to converse with bedside nurses about their experiences. Unlike quantitative research, the descriptive phenomenological approach enabled me to explore the phenomenon through the interpretation of others' experiences (Qutoshi, 2018). Gathering data in a phenomenological approach can take a variety of forms. For this research, the best method is a semi-structured interview with the participants. Interviews are the most appropriate to explore the participant's experience (McGrath et al., 2019). The phenomenon under review was the nurse's lived experience of transferring nutrition knowledge to patients.

The descriptive phenomenological qualitative approach allows the researcher to gain an in-depth understanding of a phenomenon through the description rather than the numerical data (Creswell & Poth, 2018). Gaining a perspective of the lived experiences of nurses can assist researchers in identifying future needs for improvement in undergraduate nursing education. Nurse educators have identified that they feel enough nutrition education is being provided to undergraduate nursing students. Yet, the experience of the student, or the resulting nurse, should be evaluated to determine whether it is genuinely effective (Chao et al., 2020).

Further, the study is based on an ontological philosophical assumption. The ontological philosophical assumption indicates that the researcher knows there are multiple ways to view reality within the same phenomenon. This assumption reduces the researcher's bias during the interviews, allowing for a more open-minded approach to the differing perspectives of the participants. The ontological approach allows for the truth of a situation to be understood through the subjective views of the participants (Bleiker et al., 2019). The researcher must recognize their conscious and unconscious biases. Maintaining a foundation of an ontological philosophical assumption is one means of reducing, or at least acknowledging, the biases of the researcher (Creswell & Poth, 2018).

In addition to the ontological approach, the research maintained a foundation of postpositivism. Similar to the ontological approach, postpositivism requires the researcher to understand that there are multiple realities to every topic (Creswell & Poth, 2018). A foundational understanding of this phenomenon prepared me for the various viewpoints that were received. I accepted the varying realities of the issue under study to grasp an overall understanding of the issue, and I worked to understand all the realities that existed to reveal the depth of the problem so that solutions could be proposed (Creswell & Poth, 2018).

Research Questions

Research Question 1: What is the lived experience of the bedside nurse regarding the transfer of nutrition education to patients?

Sub-Question 1: What is the perceived preparation that the nurses received in their undergraduate nursing education program on nutrition education?

Setting

Interviews were completed through the use of teleconferencing software with the ability to record audio and video. Teleconferencing was used by participants in their homes on a personal device while speaking to me in my home/office. The use of teleconferencing software enabled broad participation regardless of location, allowing participants throughout the United States. Based on this ability, participants came from Ohio and Virginia, completing the interviews remotely. The teleconferencing software was user-friendly and could be utilized on a computer or through a mobile device for participants with limited internet access.

Participants

To qualify for participation, the participants must have completed a diploma, associate's, or baccalaureate degree program in nursing. Further, they must have successfully completed the NCLEX-RN and be licensed as a registered nurse. The participants must have acquired gainful employment where they practiced as registered nurses at the bedside of patients for 36 months or less. Participants were screened for previous work related to nutrition experience or previous degrees related to nutrition, which could skew results. Those indicating previous work or degrees related to nutrition were excluded from participation in the study.

Nurses were encouraged to participate through social media posts, word of mouth, flyers, and snowball recruiting. Upon demonstrating an interest in participation in the study, they were asked to complete the Demographic Data questionnaire to determine whether they met the inclusion criteria. The sample size consisted of 10 participants, allowing me to gain in-depth information while gathering collective power (Creswell & Poth, 2018; Malterud et al., 2016). I maintained the confidentiality of data by assigning pseudonyms to the participants so that their identity remains confidential.

Flyers were shared with the management team of a local community hospital to be posted in areas that were frequented by individuals who would meet the inclusion criteria, further alerting eligible participants to participate in the study. I addressed the participants of the nurse residency program at this community hospital during one of their educational sessions, alerting them of the upcoming research and providing a more personal approach to recruitment with the hope of increasing participation (Bonisteel et al., 2021; see Appendix A for recruitment materials). Individuals who expressed interest in participation were provided a QR code to complete the demographics survey to confirm eligibility. Once completed, I used the provided email address to contact the participants and arrange a time for the interview.

The participant group was selected based on their time since graduation, combined with their time at the bedside. Their position as a bedside nurse with 36 months or less of experience allowed for easy recall of the undergraduate nursing education process; having bedside nursing practice required the transfer of nutrition knowledge to patients. The combination of recent education experience with current bedside practice enabled the participants to provide the lived experience sought by this study.

Demographic information for the participants was diverse, with the only inclusion criteria was they are registered nurses with less than 36 months of experience. Demographic information (see Appendix B) was gathered during the interviews for reporting but did not determine eligibility. Due to this, participants varied in age, cultural background, economic status, and gender. The only commonality of all participants was the shared adherence to the inclusion criteria.

Researcher Positionality

Following about 10 years of nursing practice at the bedside, I went through a significant health journey and I realized that I was sorely unprepared to understand the breadth of how nutrition affects health. Due to this, I have a mild bias towards the assumption that nurses are not adequately prepared to provide nutrition education to patients. In addition, I have regularly promoted the need to do more than integrate nutrition into existing nursing courses in undergraduate nursing education. While this promotion was done on a personal level, it had the potential to create a bias as interviews were completed. To ensure this personal conviction did not seep into the research findings, I had experts review the findings to ensure that alternative meanings were not given to the data. I am well aware of the present biases and have practiced reflexivity to evaluate personal feelings and motives. During the interviews and data review, I frequently asked myself if my findings were verbatim from the participants or with my views inserted. All data have been maintained verbatim to ensure accuracy and remove any bias.

Interpretive Framework

The interpretive framework used for this study was postpositivism. By assuming the postpositivist view on the study, I acknowledge that I have personal beliefs and biases about the topic of study, which have been accepted and bracketed. Postpositivism recognizes this personal belief system as a component of the study, allowing the researcher to explore the differing perspectives on the topic of study (Usman & Bulut, 2021).

Postpositivism relates to this study in that each of the participants came from a different background and level of experience, presenting differing beliefs on nutrition. Researchers who hold a postpositivist view will allow for acceptance of these differing beliefs through the use of

bracketing. Bracketing in this study was necessary due to my preexisting beliefs on nutrition in nursing and my experiences as a nurse and through my personal health journey.

Philosophical Assumptions

Philosophical assumptions describe a set of beliefs held by the researcher in a study that can have an impact on the way they review their findings. Based on my experiences, nurses are not well prepared for the effective transfer of nutrition knowledge in a way to improve an individual's health status through proper nutrition. These views are required to be bracketed to avoid bias in the findings, as they are often representative of our innate behaviors and beliefs (Creswell & Poth, 2018). Based on my personal beliefs, this study represents a philosophical assumption of ontology. Through ontology and bracketing, my biases were put aside to review the perspectives of the nurse participants. With each participant bringing a unique background, the experiences were distinct and contributed to the overall findings of the study.

Ontological Assumption

Ontology indicates that there are multiple ways to view the same reality, which can be described through individuals' depictions of their experiences (Bleiker et al., 2019). Due to this, each individual and participant had varying perspectives on nutrition. Having this assumption allows for acceptance of differing thoughts and opinions which are revealed when researching a topic. Throughout the study, I bracketed my personal thoughts and opinions obtained through my experience, accepting the experience of others even when it differed from my own, which it often did. The process of bracketing is necessary to avoid bias in the results (Creswell & Poth, 2018). Setting aside personal beliefs and truly listening to the experiences of others helped me recognize that not all nurses have endured the same experience. This recognition was evident in the themes identified through data analysis.

Researcher's Role

As the researcher, I was the primary investigator as well as the sole investigator. Due to this, I was responsible for all aspects of the research project. The duties began with seeking IRB approval and then recruiting qualified participants and having them complete the informed consent. I then conducted the interviews and performed transcription of the interviews. The transcriptions were used for open coding and data analysis until saturation was obtained. Through these actions, I acted as the human instrument to personally recruit, then gather and analyze data (M. A. Xu & Storr, 2012). Due to this, it is necessary to review how the instrument may have any bias or assumptions. I have maintained an open mind, accepted differing opinions, and consciously bracketed any preexisting biases through these methods.

My current role as the Nursing Programs Administrator at a college of nursing, along with previous work in local facilities, could indicate some form of relationship with some of the participants. Some of the nurses who participated completed their undergraduate education at the institution where I work. While there is generally minimal direct interaction with the students, it is possible that the participants may know me or understood my role in the institution, causing them to have concerns over full disclosure of their opinions of their preparation. However, this did not cause an interference in the participants' willingness to discuss the questions openly and honestly.

Procedures

Institutional Review Board (IRB) approval was obtained through Liberty University, the institution with which I am affiliated (see Appendix C). I reached out to individuals through social media posts, flyers, word of mouth, and face-to-face presentations of the study. Upon contact, potential participants were asked to complete a demographics survey confirming their

eligibility to participate and providing contact information for scheduling purposes. When a qualified individual agreed to participate, an informed consent (Appendix D) was completed. Once the informed consent was signed, a time to meet for an interview was scheduled.

Interviews were scheduled at a mutually convenient time for both myself and the participant. The interviews were conducted virtually in remote locations utilizing a video conferencing application with audio and video recording functions. Due to the time necessary for each meeting, as well as time for recruitment efforts, data collection occurred over the span of 4 months.

Permissions

IRB approval was received through Liberty University (Appendix C) prior to beginning the project. Minor updates that were needed throughout the study process were submitted to the IRB for approval prior to initiating the change. Further, approval was received from the local community hospital for me to recruit participants and advertise the study with their staff. This facility does not have its own IRB, but approval was granted from the Board of Trustees and communicated through management via email.

Recruitment Plan

Recruitment of participants began by addressing a group of new nurses completing the nurse residency program at the local hospital through a face-to-face discussion of the study. Flyers were posted throughout the nursing units of this facility for further visualization. Due to the nature of this group and the way I was speaking to them in person, an IRB amendment was obtained to include the option for completion of face-to-face interviews. As participants began to complete interviews, they were encouraged to refer their peers for the sake of snowball sampling, though this method did not result in any additional participants. Due to the inability to complete

the interviews as needed from this population, another IRB amendment was obtained to update the study to include any nurse at this facility with 36 months or less of nursing experience and to add social media as a means of recruitment. Information about the study was posted to my personal social media pages and shared by my peers. At this point in time, participants were still being recruited from the local hospital in my region. This method of recruitment for participants was not effective and an IRB amendment was approved to allow participants from anywhere. Social media recruitment continued, resulting in exposure to a large number of nurses across the United States. Finally, this network of peers reached out to nurses that they knew fit the inclusion criteria and may be willing to participate to enable a total sample size of 10 participants. Social media was ultimately my best means of recruitment. Based on the means of recruitment, this sample is representative of a convenience sample.

While a convenience sample is not generalizable by nature, it can still provide insight from the participants in regard to the research question (Mweshi & Sakyi, 2020). A convenience sample consists of individuals that are easily accessible to the researcher and meet the inclusion criteria within a population to meet the needs of the study (Stratton, 2021). While the participants in this study were not geographically convenient, each was referred to the study through my peer network. Convenience samples can be limited due to the accessibility of the participants excluding individuals that would be valuable to the research (Etikan & Babatope, 2019). The bias associated with a convenience sample was reduced in this study by including individuals from varying educational backgrounds, in different states, and with a variety of nursing experiences.

Data Collection

Data collection represents a significant component of the qualitative research process as the researcher seeks to gather information on the lived experiences of the participants (Creswell & Poth, 2018). As a component of data collection, a concept called data triangulation was used. Data triangulation is a means of using multiple sources of data collection for improved results and to ensure saturation (Fusch et al., 2018). This study utilized interviews, field notes, and observation of the participants during the interview. Each method will be described in detail below. These specific methods were chosen due to their appropriateness for a qualitative review of nurses' lived experience in transferring nutrition education to patients.

Interviews

Interviews were conducted by utilizing semi-structured, open-ended questions of the participant, gathering responses, and allowing the participant to elaborate based on their lived experience (Creswell & Creswell, 2018). Interviews are a common means of data gathering for qualitative research so that the participant's lived experience can be described to the researcher (McGrath et al., 2019). Therefore, the bulk of data came from the information obtained in each interview, supplemented by information in field notes and observations of the participants during interviews. Review and coordination of the three data collection methods provided robust results (Noble & Heale, 2019). The interview appointment consisted of asking semi-structured questions to gain the nurse's perspective on their preparedness to teach patients about nutrition. Completing the interviews via video conferencing at a convenient time for the participant allowed them to conduct the interview in a comfortable environment, which allowed them to speak more freely than if they were in a different environment (Peters & Halcomb, 2015). The questions were semi-structured to allow for some deterrence dependent upon the needs of the

participant (Creswell & Poth, 2018). The typical processes of qualitative research allow for minor adjustments based on responses from the participants, which enabled the questions to be adjusted slightly to best accommodate everyone (Creswell & Poth, 2018). The semi-structured interview process allowed for in-depth conversation regarding the phenomenon of interest as long as the questions were presented in a way to encourage conversational flow (Bearman, 2019). The interviews occurred via video conferencing software and were both video and audio recorded for later transcription.

Interview Guide

The interview was semi-structured to assist me in guiding the participants to answer the research question, yet allowing for flexibility depending upon the participant's answers, which is ideal for the qualitative research (Creswell & Poth, 2018). The outline encouraged deep topic discussion and allowed for creativity from the participant to interject items that were not otherwise considered. Questions were included to assist in obtaining demographic information, including information on the undergraduate nursing program that the participant completed. This information allowed me to compare program levels with the amount of nutrition education provided/received to compare the nurse's perceived preparedness further. The demographic questions also informed me if the participant has had any nutrition-specific training other than what was provided in their undergraduate nursing program. The core questions of the interview reviewed the nurse's lived experience of transferring nutrition knowledge to patients based on their diagnosis or treatment plan.

When writing questions for qualitative research, especially as a novice researcher, it can be beneficial for an expert to review the questions to ensure the quality and appropriateness of

content (Yeong et al., 2018). The expert for this project has background knowledge of the issue at hand and an extensive foundation in qualitative research.

Standardized Open-Ended Interview Questions (Appendix E)

1. Describe your nursing career thus far. Where do you work?
2. In your workplace, describe your role as the nurse in providing nutrition teaching, counseling, screening, or other nutritional assistance.
3. Describe the level of importance of providing nutrition assistance to patients.
4. In your opinion, how does nutrition affect health regarding illness and wellness?
5. Describe the way you believe that the nurse can assist the patient in good nutrition choices.
6. How well equipped do you feel to provide teaching to patients about nutrition, in regard to their illness?
7. Tell me about your experience as a bedside nurse with transferring learned nutrition information to patients?
8. What education have you received in nutrition? This can range from a college-level nutrition course to certifications or other degrees.
9. Describe the nutrition education you received during your undergraduate nursing education program.
10. How did you answer the nutrition-related questions on the NCLEX?
11. What is your perception of your preparedness for transferring learned nutrition information to patients? Describe any concerns or successes you have with this.
12. What sort of resources do you have in your unit to give to the patients? Please give examples.

13. What sort of nutrition-related teaching do you give at discharge?
14. What sort of nutrition screening do you do for your patients? What follow-up is given (based on the malnutrition screening? Dietician consult?)
15. In your personal life, what sort of nutrition knowledge do you apply? How often do you read nutrition labels? For patients on canned fluid, how will you understand the labels?
16. What barriers do you face to imparting nutrition education to your patients?
17. How can nursing schools equip you better to fulfill this important aspect of patient care?
18. How can healthcare organizations help equip you better to impart nutrition education?

The questions were arranged in a way that allowed participants to reflect on their experiences, followed by a discussion on their preparation in nutrition. Arranging them in this way made it so that their focus was greater on their experience and not being skewed by a focus on what their preparation had been. The interview began with simply asking about the participants' nursing career and the current unit where they are working. This was followed by a question about their role expectations as a nurse in regard to nutrition to better understand what is required of them. This question referenced the nurse's ability to transfer the nutrition knowledge learned to practice self-care behaviors (Ross et al., 2017).

Next, the questions reviewed their thoughts and opinions on the impact nutrition has on health and wellness and how they feel that the nurse has a role in helping the patients in this aspect of their care. These questions sought to identify the participant's knowledge about the subject and their ability to use the knowledge to make decisions for themselves (Ross et al., 2018). From here, participants were asked how equipped they felt to transfer nutrition knowledge to patients, followed by providing examples of those transfer incidents. The next several questions asked for details regarding the nutrition education that was received during their

undergraduate nursing education and how they felt about their level of preparedness as a result of this training.

Questions then began to focus in on specific aspects of nutrition knowledge transfer such as what is done at the time of discharge, the resources that are available to give to patients, and any kind of screenings that are done. The participants were also questioned on the challenges that they face in imparting this nutrition knowledge to patients, followed by how they feel that nursing schools and healthcare systems can help to improve this area. The other question helping to provide some insight into the participants' feelings towards nutrition asked about their personal nutrition habits, whether they read nutrition labels, and how this spills over into their nursing practice.

Data were stored digitally on the researcher's locked laptop. Upon completion of the interviews, transcriptions were made through the video conferencing tool used for recording. The transcriptions were reviewed along with the videos to ensure proper transcription occurred. All documentation was updated and stored electronically using pseudonyms with all identifying material removed.

Researcher Field Notes

Field notes were taken via paper and pencil during and after every interview process (see Appendix F for template). Field notes allowed the researcher to record thoughts, feelings, or other ideas related to the interview that were then considered during data analysis (Creswell & Poth, 2018; Deggs & Hernandez, 2018). Field notes were completed during and after each interview to compile information related to each participant (Wolfinger, 2002). The information gathered through field notes helped to support the compiled recorded data. Field notes are

appropriate for phenomenological study to best represent all aspects of the individual while under study, contributing contextual data (Phillippi & Lauderdale, 2017).

Observations

Observations for qualitative research can include any level of physical observation of participants (Creswell & Poth, 2018). For this study, participants' mannerisms, non-verbal behaviors, and other cues were observed during the interview process. Observing behaviors can provide additional information from the spoken word, potentially changing the interpretation of the interview (Smit & Onwuegbuzie, 2018). Through observation of the participants' behavior, I looked for additional meanings to the data that were not previously considered (Busetto et al., 2020). Any observations noted during the interviews were taken as field notes using paper and pencil. Appropriate abbreviations were used for future reference and to avoid making the participant uncomfortable if notes were read during the interview (see Appendix F for template). All interviews were audio and video recorded for later review and observation of the participants during the interview.

Member Checks

The means of using member checks can differ among research studies (Thomas, 2017). For this study, member checks required the participants to review the themes identified for confirmation and clarification. If a quotation by a participant was used in the manuscript, the participant was able to review that as well as a direct transcription from the interview. Using member checks in this fashion helped to increase the validity of the findings (Kornbluh, 2015).

Audit Trails

Audit trails are a means of increasing confirmability by tracking all steps of the research process, thereby increasing the rigor of the study (Wolf, 2003). The use of audit trails can allow

someone to read and understand why and how various decisions about the research study were made (Cutcliffe & McKenna, 2004). Audit trails can also assist in describing how decisions were made based on the research approach. For example, as a descriptive phenomenological study, the audit trails will define how themes were based directly on the transcripts rather than consideration of the environment.

Data Analysis

Data analysis was performed using an open coding method as the interviews progressed while maintaining information security through pseudonyms and locked digital files. The open coding method allowed me to begin identifying themes in the data of each interview as more interviews continued (Creswell & Poth, 2018). The open coding process began by identifying related data across interviews that later developed into themes. As themes were identified, transcripts were reviewed repetitively to ensure the accuracy of findings, with all data considered (Creswell & Poth, 2018).

Thematic analysis was completed by pouring over each transcript and highlighting areas for coding. These were done through Word files on the locked computer where files were stored. A key to the codes was maintained in a separate Word file along with sample quotes from the transcripts that stood out related to each code. This table was then used to identify themes in the data. When saturation was achieved, data collection was stopped.

After data collection and analysis and after all themes had been identified and content saturation had been accomplished, the findings were reviewed by the participants (Goldblatt et al., 2011). Asking the participants to review the findings allowed the participants to comment on the identified themes, especially when discrepancies were noted between what the participant

stated and what was understood. The participant review of findings increases the reliability of the results (Creswell & Poth, 2018).

Trustworthiness

Credibility

Credibility ensures that the information in a study is truthful and believable (Nassaji, 2020). The study addressed credibility by having the participants review the findings and ensure that they had been interpreted and reported appropriately. Another method used to increase the credibility of the findings was the use of quotes from the participants in the manuscript whenever possible. The main focus of ensuring credibility within a study is for the researcher to be transparent with reporting their findings and any personal biases or conflicts (Johnson et al., 2020). Transparency ensures the reader that honesty has been demonstrated throughout the study.

Dependability and Confirmability

Dependability is the idea that an individual reviewing the findings would come to similar conclusions in the data (Nassaji, 2020). To achieve dependability, I provided enough detail to readers to allow them to make an informed decision. The details were provided not only from the data but also from the methodology that was used. By providing this detail, individuals may make conclusions that should align with those identified by me as the researcher. Further, it allows the reader to critique the study from the details provided (Moon et al., 2016).

Confirmability builds on dependability by reviewing the degree that another individual's interpretation of the material aligns with the researcher's findings (Nassaji, 2020). This confirmation can be attained by providing all steps taken in the study to allow the reader to repeat and confirm them (Nguyen et al., 2021). I have addressed confirmability by providing enough detail in the manuscript so that another researcher could recreate the study in the same

manner and have access to enough data to come to similar conclusions. In addition to the information disseminated regarding the study findings, I kept meticulous notes and audit trails during the data gathering and analysis process to ensure full disclosure of information in the manuscript.

Transferability

Transferability refers to the degree that the conclusions made by the researcher can transfer to other contexts (Nassaji, 2020). For transferability to occur, it is necessary to note where the data were collected, including location, timing, and details about the participants (Johnson et al., 2020). Providing specific information about the study process can assist another researcher in completing the research, though they may gain different results (FitzPatrick, 2019). One means to increase the transferability of the findings from this study was to include nurses with various educational backgrounds. However, the limitation of the sample size may restrict the transferability of findings. The sample size limitation is often noted in qualitative research regarding transferability (Nassaji, 2020). Disseminating details of results and methods can assist in remedying the small sample size for transferability.

Ethical Considerations

Institutional Review Board

The IRB must review all research studies involving human subjects to ensure their safety and that best practices are followed (Grady, 2015). Due to the use of human subjects in this research, no work was initiated on the study before full IRB approval. Full IRB approval indicates that a team of qualified individuals from the affiliated institution, Liberty University, have thoroughly reviewed all study aspects to ensure safe practice with participants. In this way, the IRB ensures that ethical principles are followed during all research activities (American

Psychological Association, 2019). IRB approval is the best means of ensuring human subjects are treated ethically during research studies (Morina, 2021). The IRB worked with me to find the best compromise to ensure the ethical treatment of subjects while allowing academic freedom for the researcher (Maxwell, 2019).

Informed Consent

The informed consent consists of a document informing participants of all the details of the study which they review and sign (see Appendix D; Creswell & Poth, 2018). Informed consent is necessary for the participant to understand all aspects of the study before making a commitment to participate (Arifin, 2018). It further identifies the ability to withdraw and describes the participation requirements. I included my contact information on the document so that participants could ask me questions during the consent process if any arose.

Withdrawal

Participants were notified within the informed consent document that participation was entirely voluntary, and they had the right to withdraw their participation at any time throughout the study. While this allowance can cause complications during the study, it is necessary to allow participant freedom without retaliation (Ngozwana, 2018). If participants had chosen to withdraw themselves at any point, their data and any responses provided would have been removed from all data collection materials. Fortunately, no participants withdrew from the study. No compensation was provided for this study.

Preexisting Relationships

Participants with a direct relationship to me were not allowed to participate. Some of the participants may have had an indirect connection with me due to my role as the administrator of the local nursing education program; however, I had minimal connection to the students in the

administrative role. I was open and honest about my role and allowed participants to make an informed decision regarding whether they chose to participate in the study.

Data Security

The confidentiality of the participants was facilitated through strict management of all documents and data (Creswell & Creswell, 2018). Records were secured electronically on a locked device with identifying information removed, being replaced by a pseudonym. Using pseudonyms in research data security allowed me to work with the data with no information that would enable the participant to be identified (Kohlmayer et al., 2019). Field notes were the only physical document; these were scanned or typed following the interview and uploaded to a digital file, after which the physical copies were shredded. Each participant was assigned a pseudonym to allow me to connect demographic information with interview responses within the data. The use of pseudonyms was continued in field notes and aggregate data. How confidentiality would be maintained was described to the participant through the informed consent process (Lin, 2009). All files will be destroyed 3 years after the start of the research process.

Summary

This study examined the lived experience of the bedside nurse in transferring nutrition education to patients. It helps to bring the perspective of the nurse to light regarding the nutrition education provided in undergraduate nursing education programs. This study utilized interviews, observations of participants during interviews, and field notes to triangulate data collection for a descriptive phenomenological qualitative examination. The data collection methods were appropriate to gather in-depth information on the participants' experiences, answer the research questions, and better inform the theory of generalized experience. The use of open coding of the

transcripts created from the recorded interviews was an excellent means of identifying themes in the data as the interviews continued. Consideration was given to any ethical dilemma associated with the study to provide the best possible protection for the participants. Ultimately, the methods provided the best means of obtaining the information necessary to answer the research questions and identify the nurse's experience in transferring nutrition education to patients.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this descriptive qualitative study was to explore the lived experience of the nurse in transferring nutrition knowledge to patients. The phenomenological approach was appropriate to fully explore what the nurse participants have experienced at the bedside in their area of practice. Data were collected using interviews, observations, and field notes and analyzed. The participants of the study will be described in this chapter, using pseudonyms, through demographic data gathered. Following the demographics of the participants, the findings of the study will be presented. The findings of this study will be described through the development of the identified themes, which provide answers to the research questions, followed by a summary of the findings.

Participants

Ten registered nurses with less than 36 months of experience, who work in a variety of settings, participated in the study. Out of the 10 participants, two were male and eight were female. Four of the nurses were registered in the state of Virginia and six were registered in the state of Ohio. Their areas of practice were split evenly with five in the Intensive Care Unit (ICU) setting and five in the medical-surgical (Med-Surg) setting. The nurses had diverse educational backgrounds where three completed an associate degree in nursing (ADN), three completed a Bachelor of Science in Nursing (BSN), two completed an accelerated BSN, and two completed a Licensed Practical Nurse (LPN) to RN associate degree completion program. The nurses had a range between 6 months and 36 months of nursing experience. Table 1 shows a breakdown of the demographic data of the participants using their assigned pseudonyms.

Table 1

Nurse Participants

Nurse Participants	Degree Earned	State of Licensure	Current Unit of Specialty	Gender
Jill	ADN	Ohio	Med-Surg	Female
Mindy	BSN	Virginia	ICU	Female
Amy	BSN	Ohio	ICU	Female
John	ADN	Ohio	Med-Surg and Surgery	Male
Taylor	LPN to ADN	Ohio	Med-Surg	Female
Jen	ADN	Ohio	Med-Surg	Female
Tim	BSN	Virginia	ICU	Male
Heidi	Accelerated BSN	Virginia	ICU	Female
Nicole	Accelerated BSN	Virginia	ICU	Female
Betty	LPN to ADN	Ohio	Med-Surg	Female

Results

The study was completed using a qualitative descriptive phenomenological approach obtaining data through recorded one-on-one virtual interviews via teleconferencing software. The 18 interview questions led to discussions of the nurse's experiences when attempting to transfer nutrition knowledge to patients. Throughout the interviews and analysis, I practiced

bracketing by maintaining an open mind, listening intently to understand the lived experience of the nurse, and asking questions for further clarification of the essence of their perspective without the risk of insertion of my own biases.

Consideration for Observations and Field Notes

Observations and field notes were considered with the question responses from each participant. The observations and resulting field notes reviewed the non-verbal behaviors and emotional responses of the participants, along with thoughts and feelings I felt during the interview. These additional pieces of data allowed me to gain a perspective of the participants' views towards nursing in general, to better understand their views on the questions. For example, if a participant was clearly frustrated with a particular aspect of their nursing position and this frustration was voiced several times throughout the interview, rather than listing the voiced concerns as repeated descriptions of a phenomenon, the responses were considered in areas most relevant to answering the question at hand, rather than during each presentation.

The majority of the nurses interviewed were excited about their role as bedside nurses and happy to promote various areas in nursing that could expand their practice and help patients. There was one participant who had been working numerous shifts in a row, with the resulting exhaustion being apparent in some of the responses to questions. Further, another participant expressed frustration with poor staffing and resulting poor care of patients in some scenarios. The resulting responses often went off-topic, requiring me to consider the responses appropriately based on the questions being asked, rather than the concern being expressed.

Notes from observation, used during the data analysis phase, me to appreciate the circumstances the nurses faced in their lived experience. Recognizing the data within this context

ensured that the data were not interpreted without consideration for the unique context in which it was experienced.

Theme Development

Data analysis occurred through an open coding process as I analyzed each interview upon completion. I created an automatically generated transcript at the completion of each of the interviews using the teleconferencing program. This transcript was used as each interview was reviewed to ensure the accuracy of the transcript. Once accuracy was confirmed, the interview was listened to again, cleaned, labeled, and saved prior to reviewing the transcript for initial codes. Each transcript was read several times as codes were noted and also later as categories were formed. Codes were noted by color-coding each document in a pencil/paper format, with the information transferred to a digital format for easier viewing. The first two interviews were coded and reviewed by consultants prior to pursuing other interviews.

Codes were maintained in a separate document with sample quotes for better visualization as additional transcripts were coded. This separate document was used to review groupings of information to place codes into categories and later into themes. In addition, this document enabled me to visualize when new codes were being added, or when older codes were becoming saturated. Upon completion of 10 interviews, it was determined that data saturation had been achieved. This was further reviewed by consultants (mentors), debated, and streamlined to solidify the themes that emerged. This took several cycles of review, discussions, and debates.

Similar codes were grouped into categories (Appendix G), then themes and subthemes were identified and defined (Appendix H). Three themes were identified: confidence, barriers, and interdisciplinary collaboration. The subthemes were also recognized, labeled, and identified.

Such a process helped to answer the research questions. Table 2 presents the categories grouped into the creation of themes and subthemes.

Table 2

Themes

Theme	Subtheme	Theme Defined
Confidence	Knowledge acquisition Experiential knowledge Resource identification	Confidence is a feeling of self-assurance of one's own abilities or qualities to do something well. Nurses experience confidence with the transfer of nutrition information to patients. Confidence was often achieved through knowledge gained in school or workplace, and the use of resources.
Barriers	Nurse readiness Patient readiness Competing priorities (time)	Barriers are factors that prevent or block something. In this context it can be policy, knowledge, context, time, or mental readiness of the nurse or patient.
Interdisciplinary Collaboration	Nutrition screening Content reinforcement	Interdisciplinary collaboration is defined as practice and education where individuals from two or more professional backgrounds meet, interact, learn together, and practice with the client at the center of care (Prentice et al., 2015). Nurses collaborate with other disciplines such as the dietician or diabetic educator for nutritional screenings and to assist in the nutritional care of patients for improved outcomes.

The data analysis process described above resulted in the identification of three main themes to answer the research questions: What is the lived experience of the bedside nurse regarding the transfer of nutrition education to patients? What is the perceived preparation that the nurses received in their undergraduate nursing education program on nutrition education? Each theme will be defined, described, and supported with evidence from participants.

Theme 1: Confidence

Confidence is a feeling of self-assurance of one's own abilities or qualities to do something well. Seven out of 10 participants indicated they felt confident to transfer nutrition information to patients. Confidence was often achieved through knowledge gained in school through formal education or by hands-on experience in the workplace, and by identifying and using the right resources. The three subthemes include knowledge acquisition, experiential knowledge, and resource identification, which are discussed in detail below.

Knowledge Acquisition

Knowledge acquisition for the sake of this study refers to the nurses' acquisition of knowledge related to nutrition and health, to form an understanding of the importance of nutrition. Jill described that she gained general nutrition knowledge from her undergraduate nursing education program, "But I also know having on-the-job learning definitely made me more comfortable with it," while Jen discusses how having the lived experience of providing nutrition assistance helped her to retain the information: "I don't even remember [nutrition information] until you're working on the floor with it and then you keep it with you." The nurses reiterated the knowledge they have gained through immersion in their current nursing roles, coupled with the foundational knowledge they gained in their undergraduate nursing education program, equipped them with the confidence to effectively transfer nutrition knowledge to patients.

The knowledge they gained either from formal schooling or on-the-job training allowed them to be aware of the benefits of nutrition on health and healing. The nurses in this study described the ways they have experienced improved patient outcomes with proper nutrition. Improved outcomes were noted from improved healing, prevention of illness, or management of

illness through nutrition. All 10 participants reported that nutrition is an important component of healing and feeling well. As Mindy stated, “I think nutrition definitely has a huge impact on staying healthy.” Further, Betty explained, “But I think diet is the first line of defense for unhealthy lifestyles and unnecessary diagnoses.” With the knowledge that proper nutrition is important for healing and feeling well, nurses recognize their role in assisting the patient with proper nutrition choices. Nurses therefore utilize the resources that are available to them, along with the skills learned in their undergraduate nursing education program to provide nutrition assistance to patients. For example, John described the importance of nutrition in healing for his patients in the surgical area stating: “Just recommend eating healthy and take away the junk food, as hard as that is for all of us to do ... when they’re trying to recover, that’s what they need.” Heidi further questioned how she could assist her patient in urgent care: “What can I do to help support the healing process [through nutrition]?” John and Heidi understand that a patient will have improved outcomes in the healing process when eating a proper diet with the nutrients necessary for healing.

Nicole indicated, “[Nutrition is] definitely heavily intertwined into health. There’s a million things that go into it, but without proper nutrition you can’t fully be healthy, no matter how much you compensate with all the other things that contribute to it.” She recognized the importance of nutrition to the overall picture of health for a patient. Betty even indicated the ability for nutrition to change the course of an illness: “There’s a lot of things we could turn around, the obesity issues, diabetics, even the ones that have kidney problems.” Nurses are in a position to recognize the role nutrition has on patients battling illness. They can use this recognition to make nutrition education a priority despite barriers faced. Table 3 provides quotes from participants that describe knowledge acquisition.

Table 3

Participant Quotes Describing Knowledge Acquisition

Participant	Quote
Betty	"Now I learn as I go."
Mindy	"I got a lot of education on how to teach. I think that was one of the biggest emphasis in my program."
Amy	"When I took my nutrition class in college, I definitely was more aware of looking at labels."

Experiential Knowledge

Experiential knowledge is the knowledge that the nurse has received through their role as a bedside nurse. The knowledge could have been attained through a personal experience with a patient situation, learning from another member of the team, or looking up information on their own to provide better care for their patients. Regardless of the method of learning, the nurse has improved their practice and increased their knowledge in the area in which they work through experiential learning.

Tim alluded to the phenomenon of how nurses become the most proficient in the area where they work and receive ongoing training when he stated, "I guess it depends on where you work, you know." Nurses become immersed in a specific area of nursing based on where they work, become the most proficient in this area, and then provide the best quality of care to that patient group (McHugh & Lake, 2011). Heidi reinforced this by saying, "I think if you end up somewhere that you're going to be teaching that a lot, you might learn how to do that from other people." The nurses indicated that they were more confident in teaching about the diets their patients most frequently consumed. Jen talked about her previous work in a cardiac area, prior to

moving to med-surg: “I’m pretty comfortable with the cardiac end of it. I haven’t had very many renal patients and stuff like that. I’m getting exposure to it now on this med-surg unit.”

In addition to the knowledge gained through exposure, nine of the nurses reported that they are comfortable asking questions for a better understanding. Jill stated, “I’m definitely comfortable, if they ask me a question, if I don’t know the answer, I’m comfortable enough saying that I don’t know but I will find out and I’ll do as much research into it as I can.” Heidi credited this confidence in researching information when needed to the knowledge she received in her accelerated BSN program: “My research skills are very strong and I feel like that is 100% based on my nursing degree.” Due to the recognition of the importance of proper nutrition for healing and feeling well, nurses will do what is necessary to provide the care necessary for their patients’ best outcomes. Table 4 includes quotes from participants describing their experiential knowledge.

Table 4

Participant Quotes Describing Experiential Knowledge

Participant	Quote
Tim	“Now I can educate myself first and then my patients.”
Taylor	“I feel like a lot of it I kind of learned out of school, on the floor and working in the environment.”
Mindy	“I’m also very careful about if I don’t feel confident in my answer, I always go ask somebody who knows better than I do.”
Heidi	“I think some areas, some specific instances that I have been more experienced in, like diabetic education, I feel pretty strong on stuff like that.”

Resource Identification

The nurses in this study indicated they often utilize the resources available to them where they work to assist in the transfer of nutrition information to patients. Resources identified varied from things like pamphlets, more experienced nurses, and access to information on the internet or intranet. Seven of the participants indicated that they have ready access to printed materials that they could send home with the patient to use as a reference following any teaching. Heidi detailed the resources they have available at her facility: "We call it patient education and we can actually attach it to their after-visit summaries whenever we check them out." The most frequently noted time for transferring nutrition information and providing written resources to the patients was at the time of discharge. Jill explained, "If I'm discharging somebody … we print out if they've got dietary recommendations that they've decided on, we'll print that out and explain it to them and send that printout with them."

The nurses admitted that they often find themselves teaching to the provided materials when they are unfamiliar with the diet order or nutrition information. For example, Jen stated, "AVS [After Visit Summary] when that prints out, it has everything, nutrition or diet-wise, it tells you what their diet is and what to avoid." By including the pertinent information related to the prescribed diet, the nurse is able to use the document as a teaching tool before providing it to the patient to take home. Sending information home with the patient that reinforces the information that was taught at the time of discharge helps the patient with later recall of the information (Hoek et al., 2020).

Table 5

Participant Quotes Describing Resource Identification

Participant	Quote
Betty	"So I can also print those out [diet related policies] and include them with their discharge and that's where a lot of the information and a quick fix comes from."
Taylor	"So we have pamphlets."
Heidi	"I kind of give it to the patient and hit the high points and send them on their way."

Theme 2: Barriers

Barriers are factors that prevent or block something. In this context it can be a policy, knowledge, context, time, or mental readiness of the nurse or patient which hinders the nurse from transferring nutrition knowledge to the patient. As the participants discussed their experience in the transfer of nutrition information to patients, every discussion led to the identification of barriers faced. For the results of this study, barriers are identified as issues or factors affecting the transfer of knowledge to patients. Numerous barriers were identified by participants which caused difficulty in the transfer of nutrition knowledge to patients. Within the theme for barriers, subthemes were identified as nurse readiness, patient readiness, and competing priorities. The subthemes assist in grouping the identified barriers faced by the nurses.

Nurse Readiness

For this study, nurse readiness is defined as the nurses' perceived readiness to transfer nutrition education to patients. Their readiness was indicative of their own internal characteristics of preparedness or the capability of transferring nutrition information to patients. The majority of the nurses related this to the education they received related to nutrition. Internal

characteristics included the phenomenon of the nurse feeling underprepared to transfer nutrition education to patients. As Heidi stated, “I think overall, I feel pretty underprepared for that [transfer of nutrition knowledge].” The feeling of being underprepared was related to the nurses’ identifying that they received limited nutrition education during their undergraduate nursing education program. As Betty stated,

> I think if we learned more about it [nutrition], like I now learn as I go, I’m very hands-on, but if I knew more about it to begin with, I wouldn’t feel so behind the 8 ball, like I still have to look up a lot of things.

When the nurses must spend the limited time they have on performing their own research to provide nutrition education, it acts as a barrier to them delivering this information.

Nine of the participants indicated the nutrition training they received during their undergraduate nursing education program consisted of only basic, generalized nutrition concepts and did not meet the needs of a nurse by making the information practical to what is needed in the care of patients at the bedside. As Jill described the general information provided, “I didn’t really feel like it helps a whole heck of a lot for nursing.” This concept emerged despite eight participants completing an independent nutrition course and eight participants indicating nutrition information was integrated into their nursing courses. The information learned in school often left the nurses feeling apprehensive about their ability to transfer nutrition knowledge, with Heidi concluding, “I think overall I feel pretty underprepared for that.” Table 6 includes participant quotes describing nurse readiness.

Table 6

Participant Quotes Describing Nurse Readiness

Participant	Quote
John	"Very faintly, it was not in depth, it was like a dusting."
Jen	"From school just the basic knowledge that you needed to know half of it."
Nicole	"It was a pre-req for nursing school."
Amy	"I would definitely say on the lower side of preparedness only because we just had generic classes and education on nutrition."
Tim	"I don't know if I was too prepared during school."

Patient Readiness

Patient readiness is defined as the components placing the patient in a position to either be receptive to or unable to process the transfer of nutrition knowledge. The readiness of the patient to receive the transfer of nutrition knowledge is dependent upon their personal characteristics as well as their condition/situation at the time of transference. Characteristics of the patient creating barriers can include low nutrition literacy, language differences between the nurse and the patient, food insecurity, or patient reluctance to accept the information or use the information to change their lifestyle.

These barriers were unique to the patient, their diagnosis, and hospitalization. One scenario is related to the willingness of the patient to receive the information, as Jen described, "They eat what they eat and you're not going to talk them into doing things differently than what they've done." The other scenario is related to the patient's condition at the time of teaching. For example, in the ICU setting, Amy explained, "More of the teaching comes outside of the ICU."

Teaching outside of the ICU due to patients being intubated or having more acute health concerns takes priority when the patient is admitted to the ICU. As Amy further explained, "Being in the ICU, we have minimal [teaching]. Most of our patients are intubated and on tube feed nutrition and from my understanding, we have a nutritionist that comes in."

Seven participants indicated they experienced concerns with the patient not understanding the purpose or need for nutritional education or a proper diet. Amy even suggested the patient's lack of following a proper diet could be leading to their frequent ICU admissions: "The patients who consistently come back into the ICU, probably because they're not compliant with either their diet or meds." The root of the patients' not understanding the need for proper nutrition is likely the nutritional literacy level of patients. Low nutritional literacy was specifically noted by four participants as a concern for patients in their area of practice. Mindy stated, "We have a lot of admissions that come from lower socioeconomic areas and sometimes the health literacy level to begin with is very low."

Low nutrition literacy was noted from the participants as a barrier in that patients were unable to understand the nutrition information provided. In an example provided by Taylor as she recalled an experience of teaching a patient about proper food choices, the patient indicated that they had never been given direct instruction on the right foods to choose. In later caring for this patient, Taylor described the interaction as the patient telling her, "

> Thank you so much for actually sitting down and taking the time. Nobody actually has ever sat down and taken the time to really show me what the options or what food choices I should really be making for myself.

Taylor was describing a situation where the patient had limited nutrition literacy as they were unable to determine the proper food choices after being instructed on a diet to follow based on their diagnosis (Vettori et al., 2019).

Language barriers between the nurse and the patient make communication difficult and can reduce the quality of care provided to the patient (Al Shamsi et al., 2020). If the patient is unable to understand the education provided by the nurse and there is no effective means for interpretation available, the transfer of information cannot occur. Jen described an experience of trying to get an interpreter for her patient due to a language barrier:

> I can get a translator faster for Spanish, but when we use the [video remote interpreter] for Somalian, especially during the night shift, I waited 20 minutes last night, because I got an admission at 4:00 in the morning and nobody answered for 20 minutes, and in the meantime, two of my other patients needed something so I had to hang up.

Without a means to effectively communicate with patients, the transfer of nutrition information is impossible as patients are unable to comprehend what is being provided to them.

Food insecurity is defined as a household having a lack of resources to effectively provide appropriate food to all members of the household (Coleman-Jensen, 2020). Nicole described the area she serves: “Geographically, we have some who live in really rural areas where it’s like a food desert where they are.” Heidi defined a food desert as the following:

> There is not a lot of fresh produce available, the places that most people would get their groceries from would be like a Dollar General or Dollar Tree. There was one Walmart, and I think a Food Lion in the area, and per capita, they determined that was not enough to sustain the number of people frequenting that place.

Nicole further stated that finances are a barrier to proper nutrition for her patients. If nurses recognize that patients have food insecurity concerns, this acts as a barrier to transferring nutrition education as the nurses understand that patients are incapable of following the advice due to their personal circumstances.

Nurses described patients as having a reluctance to accept the information that was being transferred to them or use it to change their lifestyle. Nicole described a patient's reluctance to change: "I always know that there are some people that do not intend to modify their lifestyle and diet choices even when you know it's probably what's hurting them." Taylor further explained, "You never know what you're gonna get, typically it's the ones that are set in their ways." The nurses found that the patients' reluctance to change based on what was transferred to them was a barrier to providing the education because they were frustrated in spending the time to educate when it would not be followed.

Patients may be unable to receive the transfer of nutrition knowledge simply due to their current condition/situation. Mindy stated, "In terms of being able to teach patients in the ICU, it can be a little bit difficult in terms of realizing that they may not be at a place where they can be receptive to learning and education." Amy further concluded that in the ICU setting, many of her patients are physically unable to receive teaching: "Being in the ICU, most of our patients are intubated." When a patient is intubated, they are often receiving medications that will make nutrition education irrelevant. Therefore, patient condition and situation will limit the nurses' ability to provide any teaching. Table 7 contains participant quotes describing patient readiness.

Table 7

Participant Quotes Describing Patient Readiness

Participant	Quote
Jill	"I've had patients who just don't understand the purpose of a fluid restriction, or why they shouldn't eat salty foods, or any of the above."
Heidi	"I feel like so many things we talk about in nursing, like you've got to improve your diet and exercise, and we don't really tell patients how to do that."
Jen	"They eat what they eat and you're not going to talk them into doing things differently than what they've done."
Betty	"They order, they [patients] don't understand, then I educate."

Competing Priorities (Time)

Competing priorities are defined as a barrier to the participants in transferring nutrition information to patients because other needs often take precedence. For example, Mindy, from an ICU setting, stated, "Nutrition sometimes takes a back burner because there are other things more important to educate on." In the ICU, life-saving measures will take priority over education on nutrition as the patients are generally in more life-threatening circumstances.

Within this study, competing priorities are defined as interventions and tasks that consume the time of the nurse, making the transfer of nutrition knowledge difficult. For Jen, in a med-surg unit, "I work night shift too, so there's not as much [teaching], I'm more lassoing (wrangling) sun downer's patients at night, I can't teach anything." In this situation, time to complete teaching in addition to nursing tasks on the night shift in a med-surg unit was difficult.

In the med-surg area, Jen indicated a concern about the time to complete something such as nutrition education because "I can't manage all of that, I never get done." Jen went on to share

her experience with being newer in the med-surg area and not being used to caring for a large number of patients each shift; she was unable to find the time to provide nutrition education. The nurse must prioritize care to their assigned group of patients, completing the most urgent tasks first (Tonnessen et al., 2020). If nutrition education is not one of the most urgent tasks, which it generally would not be, it does not get completed.

Finally, the priorities of care differ between nursing shifts. Jill, a night shift nurse, stated, "During the day it's probably a bit different, but I don't have that [on night shift]," referencing the need to complete nutrition education on her shift. The nursing priorities during the night shift would differ as the patients are most often sleeping and teaching is not generally taking place. The services and resources also vary between day and night. For example, Amy stated, "Our nutritionist, I see her up there on day shift," but they are not available to patients during the night shift. Further, Jill identified, "We don't call in-house [physicians] at night, we call telehealth for patients at night." Amy and Jill noted that resources are restricted during the night shift, creating a barrier for the nursing staff in transferring nutrition information to patients. Table 8 contains participant quotes describing competing priorities.

Table 8

Participant Quotes Describing Competing Priorities (Time)

Participant	Quote
Mindy	"It [nutrition teaching] falls down on the less acute floors to manage."
Mindy	"On more of a progressive care or step-down unit, or med-surg, that is definitely a very important piece of the puzzle to improving a patient's well-being."
Jen	"For me it's not very [important priority] right now on night shift in the unit I'm on."

Theme 3: Interdisciplinary Collaboration

Interdisciplinary collaboration is defined as practice and education where individuals from two or more professional backgrounds meet, interact, learn together, and practice with the client at the center of care (Prentice et al., 2015). Nurses collaborate with other disciplines such as the dietician or diabetic educator for malnutrition screenings and to assist in the nutritional care of patients by performing nutrition assessments and providing nutrition education to patients. As nurses face barriers in the nutritional care of patients while still recognizing the need to provide this important aspect of patient care, nurses will rely on the interdisciplinary team to assist. As John stated, “More complex things, I would leave that to the professionals.” In reference to the need to teach nutrition subjects that were not well known to him, he would request a consult for the dietician to come and speak with the patient.

Malnutrition Screening

Upon admission to the hospital, patients are screened for malnutrition, through the use of nutrition screening tools, in an attempt to detect nutritional issues (de van der Schueren & Jager-Wittneaar, 2022). The screenings generally consist of only a few questions focused on difficulty eating, weight loss, and BMI (van Vliet et al., 2021). If the screening indicates any type of concern, the dietician is consulted for further nutritional assessment (Reber et al., 2019). Five of the nurse participants discussed their awareness and use of the malnutrition screening tools at their facility. Two other participants indicated that completion of the malnutrition screening is completed by the dieticians. Amy indicated, “I know we do have on admission up to the ICU, we do malnutrition screenings.” Mindy further defined the malnutrition screening, “It’s sort of like, have you lost weight unintentionally in the past 3 months? How much? That sort of thing.” Many

of the nurse participants perform this function, while others indicate that it is the role of the dietician. Tim explained that screenings are performed by the nutritionist and recalled, "Actually, this week this happened [the nutritionist] asking a patient like, how much do you usually eat at a normal meal? How much weight loss have you had because of your said disease in the last month?" Either way, if positive findings are noted, the dietician is consulted to see the patient. Table 9 contains participant quotes representing malnutrition screenings being completed with patients.

Table 9

Participant Quotes Representing Malnutrition Screening

Participant	Quote
Betty	"Like with admissions, we have to ask them if they've had any unplanned weight loss in the last several months, if they're having trouble chewing or swallowing."
John	"[Malnutrition screenings] would probably be more with our dieticians in the hospital setting."

Content Reinforcement

For this study, content reinforcement refers to ways the nurse will provide a reiteration of the explanation of personalized nutritional practices provided to the patient by another member of the team. When the patient is receiving their initial teaching from the dietician or diabetic educator, the nurse will reinforce the education that has been provided. Reinforcing the material creates a cohesive and consistent educational practice amongst the interdisciplinary team. The repetitive and consistent delivery of the material may help the patient comprehend the content and also be more likely to follow the advice.

Mindy explained this process: “I have to go in and say, so tell me what they told you so that I make sure that I’m reinforcing what they’ve told the patient, and that we’re sort of having a united front.” Nicole described it as follows: “Working with them and helping reinforce topics and themes to help people.” Taylor discussed how this process works well because “the nurses are the primary set of eyes. They’re the ones that are there the whole entire time.” The nurse provides reinforcement of the education for better comprehension of the information provided by the dietician or diabetic educator. Reteaching small bits of information can assist the patients in retaining the learned information rather than having to remember a large bulk of information given at once (Raman et al., 2010). Table 10 includes participant quotes representing content reinforcement.

Table 10

Participant Quotes Representing Content Reinforcement

Participant	Quote
Tim	“Yeah, absolutely [reinforce teaching], the nurse kind of teaches them most things because they’re at the bedside 99.9% of the time.”
Nicole	“Working with them [dieticians] and helping reinforce topics and themes to help people.”

Research Question Response

The central research question asked, What is the lived experience of the bedside nurse regarding the transfer of nutrition education to patients? This has been answered through the nurses’ description of their experience with the transfer of nutrition knowledge at the bedside. Bedside nurses have described their confidence in the transfer of nutrition knowledge to their patients. They have grown confident in this area through their undergraduate nursing education program, experiential learning, and the identification and use of the resources available to them.

The resources can be educational materials available through their workplace, more experienced nursing staff, or members of the interdisciplinary team. The use of resources has allowed the nurses to continue to provide nutrition education to patients despite many barriers faced. The confidence of the nurses in this study enabled them to find ways to ensure that proper nutritional care is provided to all patients.

Nurses have described experiencing many barriers that can impede their ability to transfer nutrition information to patients. The barriers faced can be related to the nurses' readiness to transfer nutrition information, the patient's readiness to receive nutrition information, or other priorities competing for the nurses' time. Some barriers are specific to the unit, such as the acuity of the patient served. Some can be related to the shift that the nurse is working since some disciplines are unavailable overnight. Other barriers are more generalized, such as readiness or internal characteristics of the nurse, or the readiness or willingness of the patient to receive and use the provided information.

Due to the nurses' understanding of the importance of nutrition for health and healing, they work closely with the interdisciplinary team to provide this aspect of care to their patients. The interdisciplinary team consists of dieticians and diabetic educators that can assist in nutrition screenings, performing nutrition assessments, and providing nutrition education to patients. Through a collaborative team approach, nurses will reinforce any teaching provided by the interdisciplinary team to demonstrate a unified front with patients.

Further findings answer the research sub-question: What is the perceived preparation that the nurses received in their undergraduate nursing education program on nutrition education? This answer is primarily noted under the subtheme of nurse readiness. Within this subtheme the nurses described limited preparedness to teach nutrition information from their undergraduate

nursing education programs. Despite many of them completing an independent nutrition course and indicating that nutrition information was integrated into their nursing courses, the information delivered was described as “basic” or even “skipped over.” The limited nutrition education resulted in the nurses having a perception of limited preparedness. Nurse readiness was identified as a subtheme as the nurses described their limited knowledge of nutrition that caused a barrier to the transfer of nutrition information to patients. Regardless of preparation, the nurses found ways to become confident and ensure their assigned patients receive the care that is needed related to nutrition. Given the essential areas to be incorporated in the nursing curriculum, some schools may or may not have a specific nutrition course and even if there is a specific nutrition course, the students may not know how to integrate that information into patient care.

Outlier Findings

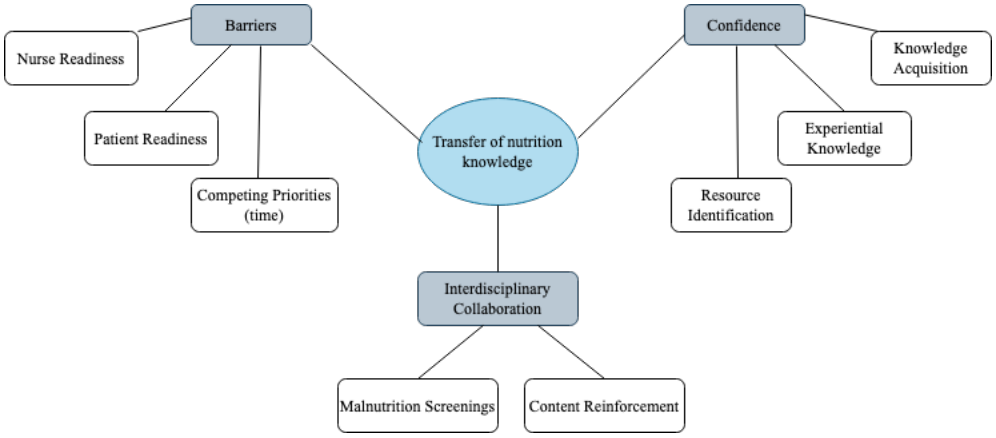
While many of the findings were consistent, a few outliers in the data were identified. For example, Jen described the nutrition information obtained during her undergraduate nursing education program as “too much to retain.” Through further prodding, Jen described the difficulty in retaining the details required within the nutrition course; her perspective differed from the other participants as they felt that minimal and basic information was provided. Another outlier was Mindy’s indication one of the best ways for the nurse to assist the patient in making proper nutritional choices was to model the behavior. This was identified as an outlier due to the difficulty of this task; the patient does not often see what the nurse consumes. Finally, other noteworthy data were the participants’ experiences shared regarding food available in the hospital. As Tim noted,

> Something that kind of confuses me a lot of times is we offer a lot of sweet drinks, ice cream, and snacks like that in the hospital, and these people are sick, and a lot of the reason they're probably sick is because of the foods and the way that they've eaten.

Figure 1 identifies the connectedness of the themes identified.

Figure 1

Depiction of Themes



Note. This figure was created by me to visually represent the relationship between the themes that emerged during this study.

Summary

This phenomenological qualitative study to explore the lived experience of transferring nutrition knowledge to patients used data from the interviews of 10 registered nurse participants with less than 36 months of nursing experience. Characteristics of the nurse participants were provided and explained to include eight females and two males, five from Ohio, five from Virginia, as well as five from the ICU setting and five from the med-surg setting. The data analysis of the interview transcripts identified the three main themes of confidence, barriers, and interdisciplinary collaboration. These further led to eight subthemes supported by participant quotes. The central research question was answered by identifying the nurses' confidence level,

their experience with barriers faced, and the way they overcame these barriers through the use of interdisciplinary collaboration. The research sub-question was primarily answered within the subtheme of nurse readiness where the participants described feeling underprepared for nutrition knowledge transfer.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this qualitative phenomenological study was to explore the lived experiences of the bedside nurse in transferring nutrition education to patients. The study also reviewed the nurse's perception of preparedness to transfer nutrition knowledge to patients. This chapter provides a summary and interpretation of the study findings as they relate to the research questions. Further, findings are examined in the light of existing literature. The implications of the findings, along with delimitations and limitations, and recommendations for future research are also presented.

Summary of Findings

This descriptive phenomenological qualitative study was conducted by interviewing 10 registered nurses who volunteered their time to discuss their experiences in transferring nutrition education to patients. The research question asked, "What is the bedside nurses' lived experience in regards to the transfer of nutrition education to patients?" The research sub-question asked, "What is the perceived preparation that the nurses received in their undergraduate nursing education program on nutrition education?" Through the use of open coding, the data revealed three main themes and eight subthemes answering the research questions. The three themes include (a) confidence, (b) barriers, and (c) interdisciplinary collaboration.

The nurses felt confident in their ability to transfer nutrition education to patients yet identified a perceived limited nutritional education throughout their undergraduate nursing education program. Confidence was built through their nursing training, experiential knowledge, and the identification and use of available resources. Though confident, the nurses expressed they were routinely faced with barriers that impeded their ability to transfer nutrition information

to patients. Barriers were related to their own preparedness, the readiness of the patient to receive and use the information provided, and competing priorities vying for their time. The nurses described ways they work with the interdisciplinary team to collaborate on the nutrition care of their patients, tearing down barriers to provide this important aspect of patient care.

Discussion

The findings of this study are best described through the lens of the identified theoretical framework and empirical research guiding this study. This study explored the lived experience of the bedside nurse in transferring nutrition knowledge to patients and focused on nurses with 36 months or less of bedside nursing experience. The data collected from 10 interviews led to three themes and eight subthemes. The results were described in sections relating the findings, detailed in Chapter Four, to the theoretical framework guiding the study and the relationship to the empirical literature on the topic.

Summary of Thematic Findings Through Theoretical Framework

The theoretical framework used for this study was Judd's (1927) theory of generalization of experience. Judd addressed the concept of transferring learned information to a similar context in a life situation. For this study, this concept is reflected in the ways the nurse can transfer nutrition information to patients based on the information they were taught in their undergraduate nursing education program. My findings indicated that nurses used various skills obtained during their undergraduate nursing education program to ensure nutrition care was provided to their patients. Some examples provided indicated that there was an obvious far transfer of information occurring for these nurses. Betty provided an example of this far transfer when discussing a cardiac patient where she taught them, "If you ate this instead of this, then you would be able to urinate better; you wouldn't be retaining the salt, and then your feet wouldn't be

as swollen as they are." Other times, the participants referred to the transfer of other skills, such as research or the ability to ask questions, that enabled them to overcome barriers standing in the way of nutrition knowledge transfer. The participants agreed that their research skills and comfort level with asking questions of other members of the interdisciplinary team improved their confidence in advocating for the patient's nutritional care. For the research participants, a transfer of knowledge to the patient's life situation did occur.

Summary of Thematic Findings Through the Lens of Empirical Literature

The findings of this study help to support the existing literature related to the nutrition knowledge level of nurses based on their undergraduate nursing education program. Nurses often feel underprepared or lack knowledge related to nutrition (Chepulis & Mearns, 2015; Mancin et al., 2023; Patil & Balai, 2021; Vasconcelos et al., 2020). However, the findings are unique in identifying that despite the feeling of being underprepared, the nurses feel confident in their transfer of nutrition education to patients. The findings are reflective of barriers that have been identified in the literature in regards to transferring education to patients (Briggs et al., 2019; Lauder et al., 1999; Nikitara et al., 2019; Sherman, 2016). Further, this study supports the literature on the use of the interdisciplinary team for improved patient outcomes related to nutrition (Cresci et al., 2022; Derouin et al., 2021; Kieft et al., 2014; Matpady et al., 2021; Sokos et al., 2023; M. A. Xu & Storr, 2012).

Interpretation of Findings

The study findings indicate the transfer of nutrition education to patients is not an easy task for many nurses. Nurses described the barriers faced when attempting to transfer nutrition education. The resilience of the nurse was indicated in the ways the participants described how they work around these barriers to provide nutrition care to patients. The experience gained

through working as a nurse, in addition to their undergraduate nursing education programs, has given them the confidence needed to provide teaching or ensure it is provided. To accomplish this, the nurses often rely on the interdisciplinary team to assist in the nutrition care of patients.

Confidence

Despite nine of the participants indicating they only received basic nutrition education during their undergraduate nursing education program, seven of them continue to report confidence in their ability to transfer nutrition education to patients. Their confidence was described due to a variety of reasons, often resulting from their undergraduate nursing education. They indicated confidence in their ability to perform research on nutrition topics, teaching themselves the information before providing it to their patients. They expressed confidence in knowing this information was adequate based on their learned research skills.

Due to the nurses' ability to identify reliable resources, they understand where they can find appropriate options for their patients. Many of the identified resources are available through their employer for use with patients and consist of education materials provided by the organization or collaboration with other members of the interdisciplinary team. When these options are not available through their institution, they have confidence in finding appropriate tools from external sources, such as the internet. As Jill explained, "I'm definitely comfortable, if they ask me a question, if I don't know the answer, I'm comfortable enough saying that I don't know but I will find out. I'll do as much research into it as I can."

The nurses indicated that they felt more confident in transferring nutrition education to patients in their particular area of practice as they gained knowledge through their work experience. The nurses with greater time in a particular unit indicated their confidence in nutrition education transfer for the types of nutritional needs most often experienced by their

patient population. The nurses indicated that they would need to use their research skills when they encountered patients from a population or specialty outside their area of expertise. However, this experiential knowledge then furthered their confidence for future encounters with similar situations.

Barriers

Nurses continually described the barriers they faced in the transfer of nutrition education to patients. Seven of the nurses indicated their lack of preparedness in nutrition education was a major barrier to providing the education to patients. While many of them indicated ways they have overcome this barrier through their own research and use of resources, it was further complicated by their competing priorities. Nurses have many tasks that must be accomplished throughout their shift and all must be prioritized based on the time available. When time becomes restricted, it can become more difficult to provide nutrition education when the participants need to first teach themselves the material. Even when nurses do not need to search for more nutritional information, having the time to devote to teaching about nutrition can be difficult due to other priorities in their workday.

When nurses attempt to transfer nutrition education to patients, the patient must be willing to receive the information. Patient readiness is a barrier in many situations as patients are reluctant to change their lifestyle. It can become further complicated when the patient has a low health literacy level and has difficulty understanding or interpreting the material being provided by the nurse. Finally, if the patient is in a situation where their mental capacity is diminished or their current health status is unstable or critical, it may not only be difficult but sometimes impossible for them to understand the material being presented.

Interdisciplinary Collaboration

Another way that the nurses found to overcome the barriers they experience with the transfer of nutrition education was to collaborate with their interdisciplinary team. The team often consisted of dieticians and diabetic educators in the hospital setting. Nutrition education and assistance is a major portion of the role for these positions, allowing them to assist the nursing staff in providing this aspect of patient care. If one team member was able to provide the initial teaching of a nutrition topic, the nurse could then continue to reiterate the information they provided to allow the patient to hear it on more than one occasion for better comprehension and retention.

The interdisciplinary team also assisted the nurse in the nutritional care of a patient by ensuring that the malnutrition screenings were completed on patients. At times, the screening was completed by the nurse with a follow-up performed by the dietician where appropriate, or the screening could be completed initially by the dietician. The screenings were a means of identifying concerns as early as possible during the patient's hospitalization to allow for intervention by the dietician.

Implications for Policy and Practice

This study presented findings relevant for a change of both policy and practice for nursing. Policies should be implemented to assist in guiding nursing faculty in the amount of nutrition education to provide to students. The best location for these policies would be within state boards of nursing or nursing accrediting bodies. These policies can help to transform nursing education for improved inclusion of nutrition education. Changing the way nurses are trained to include more nutrition will shift their thinking toward the need for improved nutritional care of patients. When nurses are provided with the knowledge to properly educate

their patients, nursing practice can begin to change the nutrition literacy levels of communities. Performing change in this manner will assist in improving the nutritional outcomes of patients, further preventing disease advancement.

Implications for Policy

There are no explicit policies or general guidelines on how much nutrition education should be provided to undergraduate nursing students. The state boards of nursing in each state provide guidelines on the nursing curriculum, and some states may require some nutrition within the curriculum, but the guidance is often vague. The only explicit guidance on this topic is based on a study performed in 1985 to guide the education of medical students and has not been updated (National Research Council, 1985). Because these are the only recommendations that have been put forth through this research process, many nursing programs follow this guidance despite its intention for medical schools (Chao et al., 2020). Guidance should be provided in the form of policy to be held by the state boards of nursing to help guide nurse educators and ensure all nursing students are provided with sufficient training to properly educate patients on nutrition. Nurses in this study suggested the requirement of a nutrition course that is specific for nursing students and includes information related to disease-specific diets, improving outcomes through nutrition, and direction on how to teach patients about nutrition.

Implications for Practice

The findings of this study have implications for practice as it presents information for healthcare organizations that employ nurses. As healthcare organizations are working towards improving the health of their communities, they should be aware of the experience of the nurse in transferring nutrition education. The nurses of this study indicate they feel unprepared to transfer nutrition education to patients despite it being an expectation of their nursing role. When

nurses are unable to effectively transfer nutrition education to patients, it will result in continued low nutrition literacy levels and poor compliance with treatment plans. If patients are unable to understand the proper diet for their disease process, continued readmissions are likely, along with continued progression of their disease.

There are numerous ways that nurse educators can improve their delivery of nutrition content to undergraduate nursing students. Most of the nurses in this study indicated that nutrition was integrated throughout their nursing programs; however, they were unable to identify how this integration can be improved for better understanding of nutrition. Nurse educators can include assignments in the clinical setting such as adding nutritional care to the patient's care plan, calculating the macronutrients in their patient's meal that was delivered, or reviewing a food diary with the patient. Depending on the requirements of the state board of nursing for clinical requirements, students could even be placed with a dietician for a shift to better understand their process and what they look for in the patient's nutritional status. Any of these items would assist in promoting awareness of nutrition as the student is learning holistic care of the patient.

The nurses in this study indicated they believed it would be beneficial for the healthcare organization where they are employed to offer the nursing staff professional development related to nutrition. Suggestions included making the information a part of the annual skills practice that is mandated by the facility, including the information during the nurse residency program, or offering online education for continuing education credit. When the organization can assist in increasing the nursing staff's nutrition knowledge level, they can assist in further building their confidence in their ability to transfer nutrition education to patients. Their confidence will allow

them to perform this task easier and more frequently, working to improve the nutrition literacy levels of the patients they serve.

If professional development is not an option for healthcare organizations, consideration should be given to an alternative process for the delivery of nutrition information to patients. As discussed, the interdisciplinary team has a large impact on the nutritional care of patients, but policies for this process are not always in place. Implementation of policies for the most beneficial use of the interdisciplinary team for nutritional care is ideal. In addition, all facilities should ensure that appropriate resources are available for nurses to access and provide patients regarding nutrition education specific to their situation.

An additional alternative for boosting the nutrition educational level of nurses by organizations is to provide nutrition training during orientation. As nurses are oriented to the unit where they will be working, they should be provided with information on the nutrition that is appropriate for the patients they will serve. By providing nutrition information to nurses at the time of orientation, the material can be adapted as research continues to identify best practices.

Theoretical and Empirical Implications

The findings of this study further confirm the theoretical framework from which it was based on Judd's theory of generalization of experience. Further, the findings are both reflective of existing empirical evidence and add to the existing evidence. This section identifies the theoretical and empirical implications noted through the data analysis process.

Theoretical Implications

Judd's (1927) theory of generalization of experience identifies the way in which humans learn and later use learned information in life situations. As undergraduate nursing students learn about nutrition information in their nursing programs, they are in the classroom learning from a

faculty member or their course materials. When entering the nursing profession, the nurse must take this learned information and apply it to a variety of patient situations where they have to determine what nutrition information is best for their patient's specific situation. The nurse needs to further understand how to interpret the information being presented and how to present the material to the patient in a way that can be understood. All of these components are examples of information transfer as the nurse is taking what they have learned and applying it to a situation in their work environment. According to Haskell (2001), transferring information is effectively achieved when the nurse is able to take the education they have gained and apply it to a life situation in this manner.

The examples demonstrated in this study of information transfer were examples of far transfer. A far transfer occurs when an individual is able to take what is learned in one environment and transfer it to a situation in a completely unrelated environment (Roumell, 2018). The nurses in this study demonstrated several ways that they transferred learned information from their undergraduate nursing education program to patients at the bedside during their nursing practice. Some examples were direct while others were more indirect as they used other areas of education to supplement their work. Prior studies have indicated that it is difficult to confirm the use of far transfer as they attempted to use an intervention during a short study (Henry et al., 2014; Lange & Sub, 2015). This study was able to observe far transfer due to the participants' nature of recall from their undergraduate nursing education to their time in nursing practice.

The nurses described their experience in transferring nutrition information to patients, including examples. Taylor detailed an experience she had with a patient where she was able to

assist them in making proper nutrition choices for themselves when ordering a meal while hospitalized:

> One day I had her as a patient … going in to do my general assessment and she was getting ready to order breakfast and I was like, "What are you gonna eat?" She said, "Oh, I don't know" and was naming off the worst things to possibly get. I just kind of sat down and was like, "Okay, well, why don't we take a peek at your menu; your sugars are high because these are the things that you're choosing. Your body is not happy with these choices, that's why your sugars are so high."

This example required Taylor to transfer and use several pieces of previously learned information. Taylor would have used information related to understanding the illness for the patient, how certain foods affect the illness, and what food choices are appropriate, through an understanding of healthy diet choices. It would be impossible to teach to every patient scenario during an undergraduate nursing education program; therefore, generalized information will require a far transfer to the situation experienced by the nurse, such as this example. Taylor's example is one of a far transfer due to the need to connect the content to a distant scenario or concept, noted by the relation of the material to the patient's health situation and health literacy level (Barnett & Ceci, 2002).

Lauder et al. (1999) indicated the transfer of learning creates a cycle of continuous learning for the nurse. As the nurse transfers information to the patients, the nurse improves their knowledge on the subject and seeks additional knowledge. The newly gained knowledge will then be transferred to patients, furthering the cycle. In turn, this process creates a pathway for lifelong learning for the nurse (Lauder et al., 1999).

Other examples of the transfer of knowledge were less direct. However, the positive transfer of knowledge is found when individuals can take previously learned material and have it reinforced by experience in the workplace (Baldwin & Ford, 1988). Heidi credited her skill in researching materials to the knowledge she obtained during her undergraduate nursing education program, stating, "We had a research-specific class that taught us how to research and how to look things up effectively as a nurse …. so I feel pretty confident in that." The nurses indicated that they could confidently research nutrition information when necessary to provide for their patients. In this scenario, nurses are using far transfer to take the skills they learned in performing research to their hospital unit and using it to find nutrition information appropriate for their patients.

These examples of transfer further demonstrate the underpinnings of Judd's theory of generalization. Judd (1983) described the transfer of knowledge as having its greatest potential when the method of using information learned becomes the greater focus than the details of the content being studied. The nurses in this study have corroborated this by identifying the limited nutrition education received, stating it was only general information, yet are able to use the information learned to transfer nutrition education to their patients. Having learned the general principles of proper nutrition, the nurses can find the materials needed and provide them to their patients for effective management of their nutritional needs.

Empirical Implications

The empirical implications of this study are the ways in which the findings relate to or build upon the existing empirical evidence on the subject. The themes of barriers and interdisciplinary collaboration, along with their five subthemes, primarily build upon the existing research. The theme of confidence and its three subthemes add to the minimal evidence available

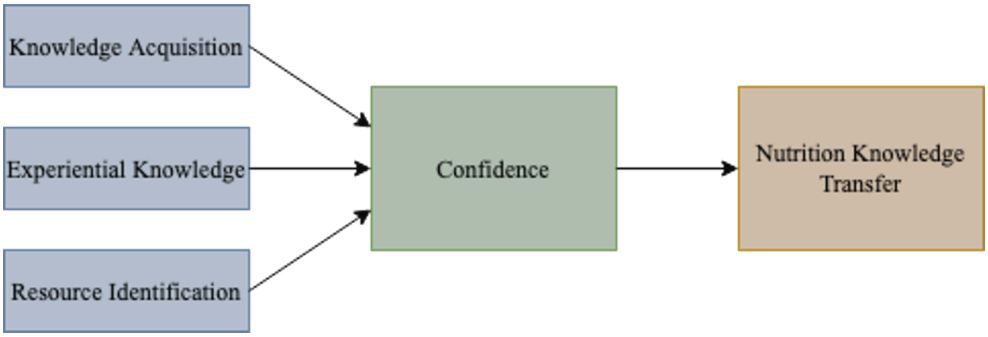
but also help to fill the gap in research. In this section, the findings are examined with the relevant literature.

Confidence. The nurses expressed that their level of confidence in transferring nutrition education to patients was gained through knowledge acquisition, experiential training, and resource identification. The findings of this study show a unique perspective in that nurses indicated a lack of preparedness but also a sense of confidence when it comes to the transfer of nutrition education to patients. This differs from existing empirical evidence as it has been identified that skill proficiency is often a source of confidence (Zieber & Sedgewick, 2018). Further, prior knowledge makes individuals more independent in their actions, often as a sign of confidence (Tsai & Tsai, 2005). It is additionally noted that providing nutrition education to nursing students improved their attitudes on providing nutritional care to patients (Bollo et al., 2019).

Nurses help patients to decipher the educational resources provided (Hogan et al., 2023). However, nurses need to be properly trained to provide patient education (Hestevik et al., 2019). Improving the training provided to nurses can generally help improve their confidence level and their ability to provide patient education effectively, despite the findings of this study. It is necessary for nurses to feel confident talking about nutrition with their patients in order to assist them with concerns for malnutrition (Holdoway & Anderson, 2019). Though the confidence of the nurses in this study in their ability to transfer nutrition education to patients is a unique perspective, their confidence can lead to an improved ability to provide much-needed education to their patients. Figure 2 connects the subthemes to the theme of confidence, which leads to the transfer of nutrition knowledge.

Figure 2

Depiction of Theme for Confidence



Note. This figure was created by me to visually represent the experiences identified by the participants in this study that led to their confidence in transferring nutrition knowledge.

Barriers. The nurses faced barriers to the transfer of nutrition education to patients related to three main areas of nurse readiness, patient readiness, and competing priorities such as time. Nurse readiness is related to their personal level of preparedness and comfort in transferring nutrition knowledge to patients. Patient readiness refers to the patient's situation at the time of transfer, their willingness to hear and accept the transfer, and their health literacy level. Competing priorities refer to any other priorities in a nurse's day that makes finding time for nutrition education transfer difficult.

Nurse Readiness. Seven of the 10 nurses in this study indicated they do not have the experience needed to understand nutrition properly. Further, nine of the participants described limited nutrition education being provided during their undergraduate nursing education program. The nurse's lack of preparedness, or readiness, acted as a barrier to the transfer of nutrition education to patients.

It has been noted that the nutrition knowledge level of nurses is not well researched (Zeldman & Andrade, 2020). However, limited information is available on the subject indicating

nurses need more nutrition education during their undergraduate nursing education programs. Studies have shown the lack of knowledge of nurses as a barrier to the full delivery of nursing care on various levels (Briggs et al., 2019; Nikitara et al., 2019). When evaluated, nurses demonstrated a low level of nutrition knowledge (Patil & Balai, 2021). More specifically, nurses lack knowledge of both general and specific nutrition information (Mancin et al., 2023). However, when nurses complete at least one course in nutrition during their undergraduate nursing education program they demonstrate a higher level of nutrition knowledge than their peers who did not complete a nutrition course (Chepulis & Mearns, 2015).

The nutrition knowledge level of the nurses in this study was not evaluated but rather relied on personal perception of preparedness. Regardless, their perception of preparedness builds on the existing evidence of limited nutrition knowledge for nurses. The lack of preparedness can play into the barrier nurses face regarding patient readiness as the nurse may be unprepared to effectively approach teaching the patient in a manner they can understand due their own lack of preparedness. To help alleviate this, the curriculum should be aligned between nurse educators and the front line workers to ensure that training is more relevant (Meyer et al., 2007). Improved preparedness can also help to alleviate the concern that nurses often overestimate the health literacy level of their patients and provide education that is ineffective when they are unable to comprehend the teaching (Hogan et al., 2023).

Patient Readiness. Patient readiness refers to the components placing the patient in a position to either be receptive to or unable to process the transfer of nutrition knowledge. Components that can affect the patient's level of readiness include health/nutrition literacy levels, health situation at the time of teaching, willingness to learn or be receptive to the content, and willingness to change their behavior based on the education provided. Patient factors have

been identified previously as a barrier to the care of patients (Briggs et al., 2019). Situational factors in the clinical setting have further been identified as making knowledge transfer difficult (Lauder et al., 1999).

Low health literacy is the patient readiness barrier most commonly noted in the literature. Low health literacy was also one of the most common barriers for the nurses in this study. Many patients demonstrate low health literacy, making it difficult for them to make appropriate decisions for themselves related to health (Chang et al., 2020; Chehuen Neto et al., 2019). This barrier is often noted in the hospital setting as older adults with chronic illnesses have been found to be one of the groups with low health literacy and are often a group that is frequently managed in the hospital setting (Muvuka et al., 2020). Other studies have indicated specifically that the low health literacy level of patients impedes their ability to effectively care for their particular illness, such as diabetes or eye health (Boadi-Kusi et al., 2020; Vasconcelos et al., 2020). However, it is necessary to continue to work towards improving patient health literacy levels as it is found that when patients demonstrate a higher health literacy level they also demonstrate a higher level of adherence to medical advice (Coskun & Bagcivan, 2021). When patients have a low health literacy level and do not understand the education provided, it often results in avoidable hospital readmissions, further increasing healthcare costs (Feo et al., 2023). In turn, poor nutrition leads to an increase in healthcare costs on several levels (Bolnick et al., 2020).

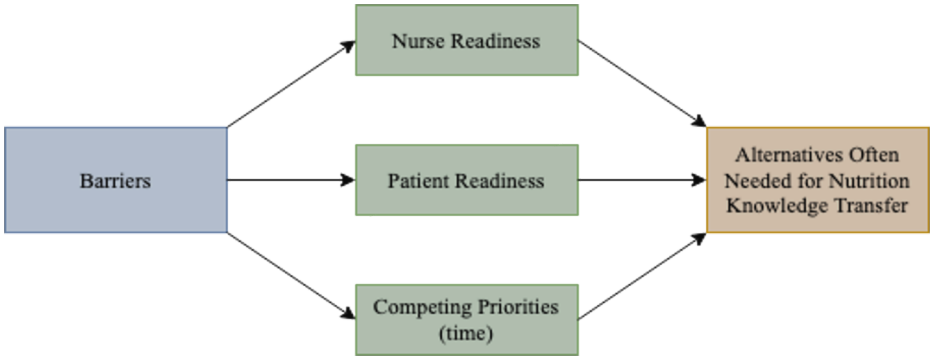
The findings in this study of low health literacy and patient situation build upon the existing empirical evidence. Though studies did mention a general umbrella of patient situations, they did not provide significant details on the totality of the situation (Briggs et al., 2019; Lauder et al., 1999). For example, this study found that aside from the patient's health status and health situation as a barrier, things such as personal financial situation and food security also played a

role. Additional review would need to be completed to identify the breadth of the problem in regard to these additional patient situations.

Competing Priorities (Time). Competing priorities are defined from the findings of this study as a barrier to the participants in transferring nutrition information to patients because other needs often take precedence. Tasks and interventions can often take priority over providing patient education, but the major barrier is ultimately a lack of time to perform all tasks (Nikitara et al., 2019; Yen et al., 2018). Competing priorities and lack of time is such a concern that nurse participants in one study reported that they often leave their shift with work left undone, with 52% of them citing patient education is not completed (Ball et al., 2014). As patient tasks take priority for limited time available, the nurses' ability to provide education to patients is often hampered (Sherman, 2016). Unfortunately, it often results in education being undervalued at the bedside due to time constraints (Odetola et al., 2018). Figure 3 represents the barriers identified by the participants and how they overcome them to continue to transfer nutrition knowledge to patients.

Figure 3

Depiction of Theme for Barriers



Note. This figure was created by me to visually represent the barriers to the transfer of nutrition knowledge that emerged from this study.

Interdisciplinary Collaboration. Working within the interdisciplinary team was a common way for the nurses in this study to continue to ensure the provision of nutrition assistance to their patients. The use of the interdisciplinary team allows patients to receive a higher quality of care when done effectively (Kieft et al., 2014). In the findings of this study, the team consisted of dieticians and diabetic educators. It has been found that it is integral to include dieticians in the interdisciplinary team in the ICU to provide effective care to patients (Cresci et al., 2022; Derouin et al., 2021). The interdisciplinary team assists with the performance of malnutrition screenings, nutrition counseling, and nutrition teaching. The use of an interdisciplinary team approach has shown improved patient outcomes (Matpady et al., 2021; Sokos et al., 2023; M. A. Xu & Storr, 2012).

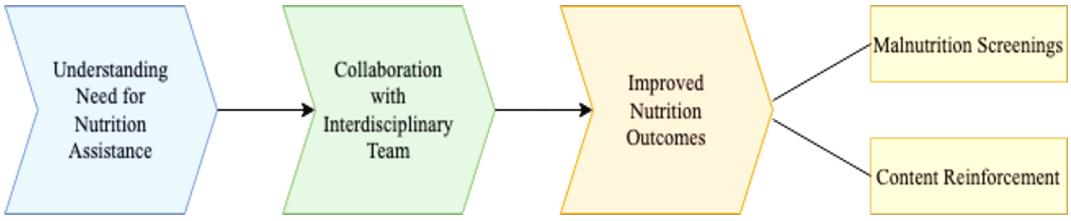
Following the team providing nutrition counseling and teaching to the patients, the nurses would reinforce the material on a regular basis to improve understanding. This process is reflective of the best practices noted in the literature. All healthcare providers should provide small amounts of nutrition education to patients at every encounter to improve nutrition literacy (Kahan & Manson, 2017). These small amounts of information can be provided to patients during the performance of other tasks or interventions (Reynolds et al., 2020). When materials are presented in this manner, patients report improved confidence in their ability to follow the directions once they are discharged (John & Englund, 2020).

Nurses can play a role in assisting patients in improving their health through proper nutrition (Ross et al., 2014). However, nutrition is not just the responsibility of the nurse, but rather of the entire interdisciplinary team (Hestevik et al., 2019). The nurses can help by reinforcing teaching and helping patients to follow the plan developed by the rest of the team (Vasiloglou et al., 2019).

Though Ten Cate et al. (2020) found that 95% of the nurses in their study perform malnutrition screenings on their patients, this study found that completion of this task often falls to the dieticians. Regardless of how the task is completed, malnutrition screenings should be completed on all patients due to malnutrition causing poor outcomes in patients (Sharma et al., 2019). While malnutrition can cause disease or be caused by disease (Saunders & Smith, 2010), it is necessary to perform screenings to identify concerns early to help prevent complications (Trujillo et al., 2019). Further, early identification of malnutrition can reduce healthcare costs and improve patient outcomes (Meehan et al., 2019). Using the team approach to ensure this aspect of patient nutrition care is completed can assist in improving patient outcomes. Figure 4 indicates the progression of the need to use interdisciplinary collaboration to provide effective nutritional care of patients for improved outcomes through screenings and content reinforcement.

Figure 4

Depiction of Theme for Interdisciplinary Collaboration



Note. This figure was created by me to visually represent the steps to interdisciplinary collaboration that emerged from this study.

Delimitations and Limitations

Delimitations are set by the researcher through inclusion/exclusion criteria for participants, allowing focus on the research question while keeping the study manageable (Coker, 2022). I included registered nurses with 36 months or less of bedside experience. The delimitation of 36 months or less as a nurse allowed them to easily recall their undergraduate

education program while also possessing enough bedside experience to provide robust experiences. Participants were excluded if they had obtained specialty education in nutrition. The exclusion for previous nutrition training or specialty was to avoid any nurses who had a significantly different training background from the other participants. It is likely that this additional training would have better prepared nurses to transfer nutrition knowledge over nurses who did not receive additional training.

Limitations are identified as things outside the control of the researcher that can affect the results of the study (Akanle et al., 2020). Limitations for this study included the sample size and type as well as interview responses. With nurses having only 36 months or less of work at the bedside, their experiences with nutrition knowledge transfer were limited. It is further possible that the participant's responses were limited due to my position as the head of a local nursing program where several of the participants graduated. Due to the nature of phenomenological research, the sample size was small to allow one-on-one interviews with participants. The participants were recruited primarily through a personal social media account, creating a convenience sample of nurses connected to my social circle. The small sample size, with limited geographical differences, limits the transferability and generalizability of the study results.

Recommendations for Future Research

Additional research should be continued to further the knowledge in the area of the transfer of nutrition education by nurses. A gap in research existed in this area and this study has limited generalizability due to sample size, indicating the need for further research to understand the full picture. The limited research completed corroborates with this study to identify that this is an area for improvement. Nurses are feeling underprepared and often lack the knowledge

necessary to provide effective nutrition education to patients. Further identification of this issue through research on nurse knowledge levels is appropriate.

In addition, research should be completed to determine the appropriate amount of nutrition education and type of education provided to undergraduate nursing students. Guidance on what nutrition information and how much nutrition information should be provided to undergraduate nursing education should be represented through state boards of nursing and accreditation standards. The ability to identify how much education should be provided in this area will assist nurse educators in curriculum development to produce holistic novice nurses (Pallikkara et al., 2022). Nurses should be able to enter practice with the knowledge necessary to properly instruct their patients on nutritional care for themselves in regard to their personal situation.

Conclusion

This descriptive phenomenological study aimed to explore the bedside nurses' lived experience regarding the transfer of nutrition education to patients. There is minimal existing literature on the bedside nurses' knowledge of nutrition and the ability to transfer the knowledge to patients. This study addressed the gap through the exploration of the lived experience of the nurse. Ten registered nurses from Ohio and Virginia participated in one-on-one interviews with me, describing their experiences with the transfer of nutrition education to patients. The data collected revealed three main themes: confidence, barriers, and interdisciplinary collaboration.

The findings demonstrate a need for improved nutrition education in undergraduate nursing education programs to better prepare nurses for their nursing careers. To accomplish this, nurse educators need guidance on what nutrition education needs to be provided. An increase in structured nutrition education can further improve the nurses' confidence level in transferring

nutrition education to patients, leading to improvement in patient nutrition literacy and outcomes related to nutrition. In the meantime, nurses should continue to utilize the interdisciplinary team and work around the barriers faced to provide nutrition care for patients to ensure the best possible outcomes.

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APPENDICES

Appendix A: Recruitment

Verbal Recruitment

Hello [Potential Participant],

As a doctoral candidate in the School of Nursing at Liberty University, I am conducting research as part of the requirements for a Ph.D. The purpose of my research is to explore the lived experience of the bedside nurse in transferring nutrition education to patients. If you meet my participant criteria and are interested, I would like to invite you to join my study.

Participants must be registered nurses, who have successfully completed the NCLEX-RN, and are working as acute care bedside nurses. Furthermore, they must not have earned a previous degree in a nutrition-related field or worked in a nutrition-related field. If willing, participants will be asked to participate in an interview through video conferencing software (video recorded) or in person (audio recorded). Participants will then be asked to review the researcher's findings and offer suggestions or confirmations of the material. It should take approximately one hour to complete the interview and approximately 30 minutes to review the data findings. Names and other identifying information will be requested for this study, but the information will remain confidential.

Would you like to participate? [Yes] Great, could I get your email address so I can send you the link to the survey? [No] I understand. Thank you for your time. [Conclude the conversation.]

An online screening survey will be sent to your email to determine eligibility. If eligible, a consent survey will be sent to you one week before the interview as a Qualtrics survey. The consent survey contains additional information about my research. If you choose to participate, you will need to complete the consent online and provide an electronic signature by the time of the interview.

Thank you for your time. Do you have any questions?

Social Media Recruitment

ATTENTION NURSES: I am conducting research as part of the requirements for a Ph.D. in Nursing Education at Liberty University. The purpose of my research is to explore the lived experiences of the nurse in transferring nutrition education to patients. To participate, you must be 18 years of age or older, be licensed as a Registered Nurse, be working at the bedside, and have been a nurse for 36 months or less. Participants will be asked to participate in a recorded interview through video conferencing software and review the findings upon completion of data collection which should take about 1.5 hours to complete. If you would like to participate and meet the study criteria, please click here to complete the screening tool which provides your contact information to the researcher.

Recruitment Flyer

Research Participants Needed

The Nurse's Lived Experience of Transferring Nutrition Knowledge to Patients; A Descriptive Phenomenology

- Are you a registered nurse?
- Working at the bedside of acute care patients?
- Have you been a nurse for 36 months or less?
- Have you not earned a previous degree in a nutrition-related field, or worked in a nutrition-related field?

If you answered **yes** to each of the questions listed above, you may be eligible to participate in a research study.

The purpose of this research study is to explore the lived experiences of the nurse in transferring nutrition education to patients.

Participants will be asked to participate in a recorded interview with the researcher through a video conferencing application or in person and then later review the researcher's findings for accuracy. Total time commitment is approximately 1.5 hours.

If you would like to participate, complete the screening document at the QR code below.

A consent survey link will be sent to you before the interview.

Kendrah Cunningham, a doctoral candidate in the School of Nursing at Liberty University, is conducting this study.

Please contact Kendrah Cunningham at [redacted] for more information.

Appendix B: Demographic Questionnaire

Demographic Data Questionnaire (delivered via Qualtrics survey)

Have you completed an undergraduate nursing education program?

Have you successfully passed the NCLEX-RN?

Are you licensed as a registered nurse?

Have you been working as a bedside nurse for 36 months or less?

Have you earned a previous degree in a nutrition-related field or have nutrition training in excess of your undergraduate nursing education degree?

What is your educational preparation in nursing?

a. Diploma
b. Associate's degree
c. Baccalaureate degree
d. Master's degree

Month and year when nursing licensure was earned:

Month and year when you began working as a bedside nurse:

Type of unit where presently working:

Please provide your email address so that the researcher may send the informed consent and schedule the interview:

Thank you for your interest in my research. If you qualify for participation, I will contact you soon to arrange an interview.

Appendix C: IRB Approval

IRB #: IRB-FY22-23-371
Title: THE NOVICE NURSE'S LIVED EXPERIENCE OF TRANSFERRING NUTRITION KNOWLEDGE TO PATIENTS; A DESCRIPTIVE PHENOMENOLOGY
Creation Date: 10-1-2022
End Date:
Status: Approved
Principal Investigator: Kendrah Cunningham
Review Board: Research Ethics Office
Sponsor:

Study History

Submission Type Initial Review Type Limited Decision Exempt - Limited IRB
Submission Type Modification Review Type Limited Decision Exempt - Limited IRB
Submission Type Modification Review Type Limited Decision Exempt - Limited IRB
Submission Type Modification Review Type Limited Decision Exempt - Limited IRB

Key Study Contacts

Member Rachel Joseph Role Co-Principal Investigator Contact [redacted]
Member Kendrah Cunningham Role Principal Investigator
Contact
[redacted]
Member Kendrah Cunningham Role Primary Contact
Contact
[redacted]

Appendix D: Informed Consent

Consent

Title of the Project: The Nurse's Lived Experience of Transferring Nutrition Knowledge to Patients; A Descriptive Phenomenology
Principal Investigator: Kendrah Cunningham, Doctoral Student, Liberty University

Invitation to be Part of a Research Study
You are invited to participate in a research study. To participate, you must be a registered nurse, have earned licensure through successful completion of the NCLEX-RN, and working in a hospital, caring for patients at the bedside. Furthermore, you must not have earned a previous degree in a nutrition-related field, or worked in a nutrition-related field. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?
The purpose of the study is to explore the lived experience of the bedside nurse when transferring nutrition education to patients. This will be explored in the context of the nutrition education received during your undergraduate nursing education program.

What will happen if you take part in this study?
If you agree to be in this study, I will ask you to do the following things:

1. Participate in an interview with the researcher through a video conferencing app (video recorded) or in person (audio recorded). Expect the interview to take about an hour.
2. Review the researcher's findings, offering suggestions for any areas that need updates. This process should take about 30 minutes and can be accomplished remotely.

How could you or others benefit from this study?
Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include the ability to understand the experience of the novice nurse in providing nutrition teaching to patients during times of illness. This can allow for the evaluation of processes in undergraduate nursing education, as well as continuing education for nurses. This will create a foundation for nursing researchers to continue exploring the nutrition education provided to undergraduate nursing education students.

What risks might you experience from being in this study?
The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?
The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential through the use of pseudonyms. Interviews will be conducted through video conferencing at a location of the participant's choice where others will not easily overhear the conversation.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.
- Interviews will be recorded and transcribed. Recordings will be stored on a password-locked computer for three years and then erased. Only the researcher will have access to these recordings.

Does the researcher have any conflicts of interest?
The researcher serves as the Nursing Programs Administrator at Central Ohio Technical College. This disclosure is made so that you can decide if this relationship will affect your willingness to participate in this study. No action will be taken against an individual based on his or her decision to participate or not participate in this study.

Is study participation voluntary?
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or the researcher. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?
If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?
The researcher conducting this study is Kendrah Cunningham. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [redacted] or [redacted]. You may also contact the researcher's faculty sponsor, Dr. Rachel Joseph, at [redacted].

Whom do you contact if you have questions about your rights as a research participant?
If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects

research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records. The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

The researcher has my permission to audio/video record me as part of my participation in this study.

_____

Printed Subject Name

_____

Signature & Date

Appendix E: Interview Guide

Standardized Open-Ended Interview Questions

1. Personal connection ‘smalltalk’
2. Describe your nursing career thus far. Where do you work?
3. In your workplace, describe your role as the nurse in providing nutrition teaching, counseling, screening, or other nutritional assistance.
4. Describe the level of importance of providing nutrition assistance to patients.
5. In your opinion, how does nutrition affect health regarding illness and wellness?
6. Describe the way you believe that the nurse can assist the patient in good nutrition choices.
7. How well equipped do you feel to provide teaching to patients about nutrition in regard to their illness?
8. Tell me about your experience as a bedside nurse with transferring learned nutrition information to patients?
9. What education have you received in nutrition? This can range from a college-level nutrition course to certifications or other degrees.
10. Describe the nutrition education you received during your undergraduate nursing education program.
11. Do you recall having nutrition-related questions on your NCLEX? How did you answer them? Did you feel confident with the material?
12. What is your perception of your preparedness for transferring learned nutrition information to patients? Describe any concerns or successes you have with this.

13. What sort of nutrition resources do you have in your unit to give to the patients? Please give examples.
14. What sort of nutrition-related teaching do you give at discharge?
15. What sort of nutrition screening do you do for your patients? What follow-up is given? (Based on the Malnutrition screening-3 question screening-what is the follow-up after this? Dietician consult)
16. In your personal life, what sort of nutrition knowledge do you apply? How often do you read nutrition labels? Do you feel comfortable reading things like tube feed labels?
17. What barriers do you face to impart nutrition education to your patients?
18. How can nursing schools equip you to better fulfill this important aspect of patient care?
19. How can healthcare organizations help equip you better to impart nutrition education?

Thank you for sharing your experience. I will be reaching out to you to share my findings if you would please provide feedback.

Any of the questions above could be responded to with probing questions such as the examples below to allow for greater description from the participants:

Tell me more . . .
I need more detail. . .
Provide me an example of. . .
Could you please explain your response more so I can have a greater appreciation. . .

Appendix F: Field Notes Template

Field Notes Date: Time:

Interview location:

Participant emotional description:

Non-verbal behaviors displayed:

Researcher thoughts/feelings during the interview:

Reflections at the end of the interview:

Appendix G: Codes to Categories

Codes Assigned	Category Assigned	Category Defined
Independent nutrition course	Limited training on nutrition	Nurses express limited training in nutrition concepts
Nutrition integrated into nursing courses		
Just basic nutrition information provided		
Nutrition on the NCLEX		
I don't know the difference		
Codes Assigned	**Category Assigned**	**Category Defined**
Unprepared due to lack of experience	Perception of preparedness	Nurses describe their perception of their level of preparedness for teaching nutrition
Feels pretty confident with teaching		
Codes Assigned	**Category Assigned**	**Category Defined**
Low health literacy	Patients don't understand	Nurses experience that patients have difficulty in understanding the nutrition concepts as well as their importance
Patients don't understand the purpose		
Codes Assigned	**Category Assigned**	**Category Defined**
I don't have time for that, not a priority	Someone else provides that, while important topic, I don't have time	With the nurses indicating that they often don't have the time or ability to teach, the responsibility often falls to another discipline with information being reinforced by the nurses.
Important topic, but not for me		
I'm not really involved in that		
Discuss with another member of the interdisciplinary team		
Interdisciplinary care includes consideration for nutrition		
Reinforcing teaching provided by another team member		

Codes Assigned	Category Assigned	Category Defined
Apprehension of patients	Barriers	Nurses face numerous barriers to transferring nutrition information to patients.
Physical barriers		
Codes Assigned	**Category Assigned**	**Category Defined**
Not afraid to ask questions for better understanding	On the job or self-directed learning	Nurses indicate that a lot of their knowledge on nutrition has come from either on-the-job training or personal research
On the job training		
Teaching to the provided resources		
Becoming most familiar with the nutrition needs in the area that you work		
Codes Assigned	**Category Assigned**	**Category Defined**
Patients know they can trust their nurse and the information they provide, the nurse knows them best	Patients trust their nurse	Patients have a trusting relationship with their nurse
Patients are receptive to the teaching provided by the nurse		
Codes Assigned	**Category Assigned**	**Category Defined**
Provide the patient with written materials to reference at home	Resources	Nurses have access to resources for patients related to nutrition
Unaware of available resources		
Codes Assigned	**Category Assigned**	**Category Defined**
Poor nutrition choices for myself	Personal understanding of nutrition	Nurses have a general understanding of proper nutrition for themselves
Improving nutrition choices at home due to family member needing a change		
Try to make good nutrition choices for self		
Codes Assigned	**Category Assigned**	**Category Defined**

Improved nutrition course	Improvement of nursing programs	Ways to improve the way nutrition information is provided to nursing students
Improved integration of nutrition content		
Codes Assigned	**Category Assigned**	**Category Defined**
Malnutrition screening	Improved patient outcomes with proper nutrition	Nurses see improved patient outcomes when they receive proper nutrition
Nutrition is important for healing and feeling well		
Should focus on prevention		
Codes Assigned	**Category Assigned**	**Category Defined**
Suggestions for healthcare organizations	Suggestions	Nurses suggest ways to improve training available to nurses related to nutrition in school and the workplace
Suggestions for schools		

Appendix H: Categories to Themes

Categories Assigned	Theme and Subthemes Assigned	Theme Defined
Barriers	Barriers	Nurses face barriers in transferring nutrition information to patients, whether physical barriers or patient barriers
Patients don't understand		
Limited training in nutrition		
Perception of preparedness	Confidence	Despite feeling that they could be better prepared in nutrition information, nurses are confident in transferring nutrition information to patients.
Resources		
Personal understanding of nutrition		
On the job or self-directed learning		
Improved patient outcomes with proper nutrition		
Someone else provides that, while important topic, I don't have the time	Interdisciplinary Collaboration	Since nurses understand the importance of nutrition for health and well-being, they collaborate with other disciplines such as the dietician or diabetic educator to assist in the nutritional care of patients for improved outcomes
Patients trust their nurse		