

Preoperative anxiety in children and their parents

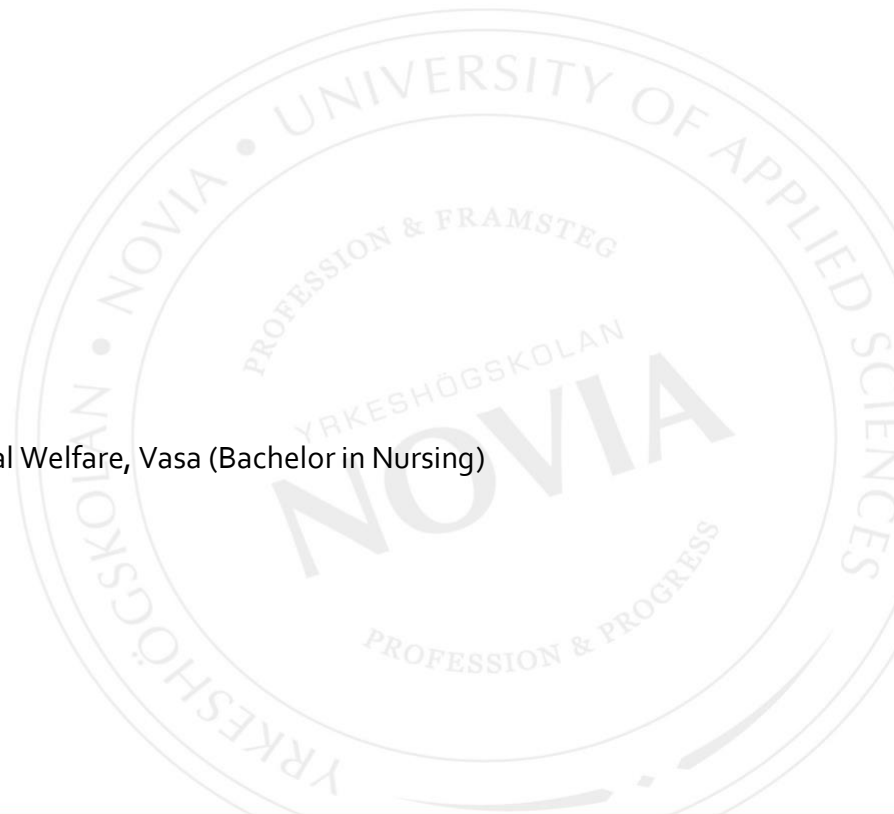
The parents' perspective of the anxiety experienced by a child prior to surgery, the emotional effect on the parent and the care a nurse can provide; a qualitative study.

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Abstract

The overall aim of this thesis is to investigate the pre-operative anxiety experienced by children and the emotional effect the situation has on their parents. The study focuses on the effects that parental presence in the operating room has on the child as well as what actions a nurse can take to effectively support and reduce anxiety in the child and the parents. The desired outcome of this study is to raise awareness within the target group (healthcare professionals, nursing students and the general public) of the possible emotional needs of the child and the parents prior to surgery. The background of this study is focused on three areas; preoperative anxiety in children, parental presence in the operating room and the nurse's role in reducing anxiety in the child and their parents. Orlando's (1990) Nursing Process Discipline Theory which discusses the *nurse-patient relationship* and the various aspects of a patient who is expressing a *need*, was utilized as the theoretical framework.

In this empirical study, semi-structured interviews, with the aid of a topic guide (see Appendix 1), were conducted. The data from five parents were then transcribed and a table (see App. 2) was created, facilitating the analyzation of the data through qualitative data analysis using an inductive approach. Three themes were discovered; *Pre-operative anxiety in a child*, *Pre-operative anxiety reduction in a child* and *Parental experience of a child undergoing surgery*. Multiple manifestations of anxiety in children were discovered. Various emotions and effects of the surgery on the parents were also identified and discussed. Finally, multiple methods were found that a nurse can employ to reduce anxiety in both parents and their children.

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1 Introduction

Caring for a patient undergoing surgery involves many different areas in which a nurse must be skilled in. For example, there are practical, hands-on tasks such as taking vital signs, helping the patient to manage their pain and providing care in other ways, such as psychological support. When the patient happens to be a child, the way that the nurse approaches and cares for them differs from an adult because they, as Metz (according to DeJohn, P., 2012) states, "*are not simply little adults*". Not only does their physical anatomy, body function, and vital signs differ from a fully developed adult human, but their psychological needs are also dissimilar. Moreover, as De Sevo (2014, 113) explains, the response from a child who is ill, is different from the way an adult would react.

Kain, Caldwell-Andrews and Wang (according to Boles, J., 2016, 147) state that preceding the commencement of the surgery, 40% to 60% of children demonstrate increased levels of both behavioral and emotional anxiety. The fact that they are young and that they have not developed the level of confidence and rational thinking that an adult usually has, can trigger different emotions. Feelings of fear, uncertainty and helplessness are some examples that are quite likely to occur. Himes, Munyer and Henly (2003, 293) have stated that the intellectual and psychological skills that are needed in coping with anxiety and fear have not been developed in the majority of children prior to surgery. This is especially true with infants and toddlers, due to their dependency on and closeness with their parent/caretaker. Justus, Wyles, Wilson, Rode, Walther and Lim-Sulit, (2006, 40) report that children in this age group can suffer severely from separation anxiety and from encountering medical professionals dressed in surgical attire, which in their eyes, could be very frightening. According to Wennström, Hallberg and Bergh (2008), a child can experience anxiety due to factors such as them not knowing what is going to take place, encountering things that are outside of their usual daily events and their inability to control the situation. Therefore, the preoperative experience for a child can be very nerve-racking and the nurse should be able to provide calming assurance and support through various ways along with the other essential tasks.

Negative feelings, emotions and anxiety may also not only be experienced by the child but also by the child's parents, family or relatives accompanying that child. They may experience

feelings of helplessness and the inability to control the situation. Most parents can relate, in some way, to these feelings. If, for example, their child becomes hurt, the parent may experience an "inner pain" and try to console the child. Similarly, if the child must go for an operation, the parent may feel anxiety especially if their child is displaying negative emotions and unwillingness to cooperate. These feelings of anxiety in the parent may also be magnified if they are not allowed into the operation room with the young patient. Additionally, Henderson et. al (according to Himes et. al, 2003, 293) state that some believe that if the parent is being affected by anxiety, the child can sense this and become more anxious themselves.

My interest in this topic stemmed from my experiences as being both a nursing student and a father. While being on clinical studies, I have learned and seen what it is like to care for patients preoperatively. Although I have not had the experience of having one of my own children having gone through surgery, I can somewhat relate to and imagine what it would be like for the young patient's family and what emotions that may arise for them. If I was placed in this situation, I would want the best care possible for my child and for me, especially if one or both of us had high anxiety. Moreover, the number of children who suffer from preoperative anxiety is high. Graves (according to Martin, Chorney, Tan, Fortier, Blount, Wald, Shapiro, Strom, Patel and Kain, 2011) reports that *"approximately 4 million children in the United States experience a significant level of preoperative anxiety and distress"*. Since children react more or less the same worldwide, one can assume that this number would also be reflected globally. I believe this amount is unacceptably high and that awareness to this problem needs to be raised.

In this empirical study, information was gathered from five parents of children, ages two to thirteen, who have undergone surgery. This data was obtained through semi-structured interviews via live video and was focused on the emotions, reactions and needs of the child and the parent. Additionally, the duty of the nurse in caring for these individuals was also discussed. The information gathered was analyzed through qualitative data analysis, organized and placed into a table which the author created (see Appendix 1) to facilitate the interpretation of the data.

2 Aim and Problem definition

The overall aim of this study is to investigate the anxiety and emotional needs of the child prior to surgery and the effect that the situation has on the parents. The study focuses on the effect of parental presence in the operating room on the child and what actions a nurse can take to alleviate the anxiety and meet the needs of the child and their parents. The desired outcome of this study will be to enrich the knowledge and raise awareness of the possible needs and emotions of the child as well as his or her family prior to the child's surgery among the target group; healthcare professionals, students and the public. The following questions are therefore asked to investigate these concepts.

1. How does the child exhibit, from the parent's perspective, preoperative anxiety?
2. What emotions does a parent experience prior to their child's surgery?
3. How does parental presence in the operating room affect the child and the parent?
4. What actions can a nurse take to reduce anxiety and meet the needs of both the child and the parents?

3 Background

In order to grasp the main ideas in this study, information was gathered from previous articles written and studies conducted. The data then was narrowed down into concepts and placed in this background. Not only does this help to specify and illuminate the main ideas behind this study, but it also assists the reader to gain more knowledge in this area. In the background, three concepts were decided upon; preoperative anxiety in children, parental presence in the operating room and its effects and finally, the nurse's role in reducing anxiety in the child and their parents. These concepts will be discussed below.

3.1 Preoperative anxiety in children

In this section of the background, the definition of anxiety and the different levels of it will be discussed. Furthermore, how it affects the child in the moments leading up to their surgery will also be considered. By illuminating these concepts, the essence of this study can be better understood.

3.1.1 Definition of Anxiety

Throughout life, people encounter many situations that can induce stress. A reaction that frequently occurs and is felt by individuals in response to this stress, is anxiety (Berman & Snyder, 2012, 1082). The Encyclopedia of Psychology's (according to the American Psychological Association, 2017) definition of anxiety is *"an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure."* Berman and Snyder (2012, 1082) also provide an explanation of what characterizes anxiety; *"a state of mental uneasiness, apprehension, dread, or foreboding or a feeling of helplessness related to an impending or anticipated unidentified threat to self or significant relationships"*. However, not all anxiety creates a negative effect. The psychological symptoms and significance on an individual is dependent on how much anxiety he or she is coping with. For example, lower levels of anxiety can help a student prepare and finish an assignment on time. On the other hand, excessive amounts of anxiety can cause negative effects on an individual. Berman and Snyder (2012, 82) suggest that there are four levels of anxiety; the first level, *mild anxiety*, can be seen as a positive reaction due to stressors on a healthy individual. As shown in the example earlier, lower levels or mild anxiety can increase the productivity and perception. It also raises the curiosity which drives the individual to gather more information and expand their knowledge. *Moderate anxiety*, the next level, is manifested in an individual through feelings of tension, concern and nervousness. This increased level of anxiety also narrows the person's perception abilities. In other words, the individual's capacity to understand a situation or a specific concept is more limited than in mild anxiety. The third level, *severe anxiety*, is experienced when a person's perception is reduced even more. In this case, the individual cannot perceive or "see" a specific situation in its totality. The anxiety in

which they are feeling is stemming from their focus on one particular part in the situation. Although *panic* is the least common level of anxiety, it is the most intense. It is characterized through frightening emotions which can cause the individual to lose control. It is so severe that the individual cannot view a situation as it truly is, therefore, in their minds, distort it.

3.1.2 Preoperative anxiety in children

It is quite common that children experience anxiety prior to undergoing a surgical procedure. Scully (2012, 26) suggests children of all ages are affected by this phenomenon. The reasons for anxiety to develop in a child can vary. For instance, a 6-month old infant may be affected by stranger anxiety while separation anxiety may be experienced by toddlers and preschoolers due to the absence of well-known persons, such as their primary doctor, in the situation. Romino et. al (2005, 780) add that preschoolers may misunderstand the reason for surgery and may believe that it is a form of punishment. Anxiety may be brought on in children of adolescent age who are going through physical changes in their body due to their fear of their image being altered and their privacy being invaded. Also, Munro and D`Errico state that (according to Romino et. al, 2005, 781) adolescents may fear that they will be injured or even die during the operation and this can bring about emotions such as anxiety.

Anxiety is many times experienced in the child due to the placement of an anesthetic face mask. If the anxiety levels are high enough, the individual may begin to react to the situation in a negative way, complicating the procedure. Anxiety can manifest itself in children in a variety of ways. Kain (according to Romino et. Al, 2005, 781) offers some examples of these; becoming agitated, ceasing activities in which they are doing, expressing fear, crying, trembling and even trying to avoid the unknown healthcare professionals. Munro and D`Errico (according to Romino et. al, 2005, 781) explain that this may then lower the effectiveness of the anesthesia induction and result in the child holding their breath, increasing their risk of laryngospasm, raising their level of pain and increasing their risk of negative behavioral changes such as shown in emergence delirium, postoperatively. At times, due to the uncooperativeness of the child, he or she must then be physically held in place by the healthcare professionals in order for them to effectively anesthetize the individual (St. Onge, 2012, 15). Munro and D`Errico (according to Romino et. al, 2005, 781) add that difficult

anesthesia induction, coupled with anxiety preoperatively, may also cause long-lasting psychological effects after the surgery for the young individual. Moreover, Kain, Mayes, Caldwell-Andrews, Karas and McClain (2006) report that children who experience pre-operative anxiety also encounter increased amounts of pain. More analgesics are needed in these children than in those who were not anxious pre-operatively.

3.2 Parental presence in the operating room and its effects

One large factor which affects the smoothness of the operation and the anxiety levels in children as well as their parents, is the presence of the parents in the operation room. Romino et. al (2005, 780) suggest that if an adult, such as a parent or someone who offers them the feeling of protection, guidance, comfort and encouragement is in the operating room, the child's fears can be alleviated. Additionally, not only may the child benefit from the presence of their parents during the surgery, but also the parents themselves. Blesch and Fisher (according to Romino et. al, 2005, 785) state that higher amounts of stress are felt by parents when their child undergoes surgery, whether or not they are in the room while the child is sedated. Still, allowing permission of a parent into the operating room can help lower the anxiety in the parent (Romino et. al, 2005, 785). These aspects will be discussed in more detail below.

3.2.1 Effect on the child

According to Himes et. al (2003, 293), much research has been done on a child's responses to their parents being present during the anesthesia induction. Romino et. al (2005, 781) report that a child's anxiety level can decrease if they are able to remain calm. This is due to the decrease of catecholamine secretion and raised levels of oxygen. The presence of a parent in the operating room can help foster this positive reaction in the child. Due to the fact that a parent provides love and support for the child, the child is dependent on them (Romino et. al, 2005, 781-782). However, McGraw (according to Zuwala and Barber, 2001, 21) argues that although separation anxiety is reduced in children when their parents are present

preoperatively, the amount of anxiety that the parent experiences and manifests is reflected in the child and his or her own level of anxiety. If the parent is experiencing high levels of uncontrollable stress and anxiety, the child will also demonstrate increased levels of negative emotions and anxiety.

3.2.2 Effect on the parent

Parents are also negatively affected when their child undergoes surgery. Li, Lopez and Lee (according to Boles, 2016, 147) declare that they demonstrate increased anxiety before the operation begins and during anesthesia induction. This is especially true if the child is in need of a high amount of care from the parent pre- and postoperatively or if the child will be required to stay for a longer period at the healthcare institution.

Chahal, Manlhiot, Colapinto, Van Alphen, McCrindle and Rush (according to Boles, 2016, 147) suggest that there is a greater chance of a child's anxiety to decrease when his or her parent is able to control their own stress. In addition, if the stress levels are lower in the parent, there is a higher possibility that they can provide better care for their child. Certain care and responsibilities that a parent provides is taught by the operating room or anesthesia personnel. Results from research (Romino et. al, 2005,782) show that if the parents are sufficiently instructed and prepared, their presence in the operating room can be advantageous, both to the child and to themselves. Wright et. al (according to St. Onge, 2012, 17) assert that by being allowed into the operation room, this increases the parent's satisfaction and their self-recognized duty to be present along with increasing their acceptance of the medical care. Wright et. al (according to St. Onge, 2012, 17) report that there are results from studies however, that contradict this idea and show that by allowing the parent into the room actually can have negative effects. Higher levels of anxiety in parents, increasing the amount of work for the staff, creating complications in the procedures in the operating room and increasing the chance of legal problems are some of the disadvantages.

3.3 Nurse's role in reducing anxiety in the child and their parents

A number of hospitals provide preoperative preparation programs to help reduce anxiety in children and their parents. According to Justus, Wyles, Wilson, Rode, Walther and Lim-Sulit (2006, 35), preoperative preparation programs allow the child and their parents the chance to visit and familiarize themselves with the hospital environment and procedures, some days before the operation. By doing this, they can increase their knowledge, learn coping strategies and lower anxiety.

Fortier, Bunzli, Walthall, Olshansky, Saadat, Santistevan, Mayes and Kain (2015) state that due to health care organizations' efforts to save financially, the priority of preoperative preparation for children and their parents has been decreased. Most hospitals that do offer comprehensive behavioral preparation usually offer this service on the day that the surgery takes place. This in turn, allows only a limited amount of time for the child who must undergo surgery to grasp coping techniques and receive proper preparation to be able to manage their anxiety effectively. Time is also a factor which limits the ability to prepare a child and their parents effectively. A surgical ward is usually a busy environment, therefore only a minimal amount of time is available to assist in the preparation of the child and his or her parents. The experience of going through surgery can be emotionally devastating to the child. With such a limited amount of time, a nurse's role, and what actions in which a nurse can carry out, is therefore vital in decreasing the anxiety of both the patient and their parents (St. Onge, 2012, 15). St. Onge (2012, 16) asks the question, "*What strategies can nurses use in their everyday practice in order to reduce pre-operative anxiety in children?*" and offers four different approaches in which a nurse can employ; a Child-focused Approach, Medical Play and Medical Re-interpretation, Distraction and Informed Parental presence.

3.3.1 Child-Focused Approach

The Child-Focused Approach strategy is employed when the nurse delivers information of the procedure to not only the parents but also the child (St. Onge, 2012, 16). According to a study that Smith and Callery (2005, 230) conducted, children have reported that they did not receive

information directly, neither from the hospital or health professionals. Instead, the information which they acquired was through leaflets meant for the parents, television and the experiences of family and friends. There is also a limited amount of time preoperatively to prepare a child for a surgery. As Smith and Callery (according to St. Onge, 2012,16) explain, this means that in the available time that the nurse does have, he or she must do as much as possible to build a relationship with the child and to lower their anxiety. By speaking to the child personally and in age appropriate terms about the forthcoming experience, the nurse can help reduce anxiety in the child. This tactic assists the child in understanding what is going to occur, offer ways in which to behave and allow them to feel more in control of the situation.

3.3.2 Medical play and Medical re-interpretation

Medical play and Medical Reinterpretation are some more strategies in which a nurse can use to reduce anxiety in a child. An example of the former tactic is when the nurse acknowledges a toy, such as a doll, (which many times is the child's own) and performs an assessment on it, in a playful way. This helps the child to not only see the nurse as a playful and fun person, but also to see the actions performed on the doll, link that to their own upcoming assessment and prepare them for it (St. Onge, 2012, 17).

While both medical play and medical re-interpretation's main goal is to reduce the child's anxiety, the way in which they accomplish this differs. Medical re-interpretation is when procedures that are performed and equipment that is used during the operation are described in a playful way (Martin et. al, 2011). For example, a playful and instructional way to introduce an anesthesia mask would be to pretend that they are going to use a "firefighter mask" (St. Onge, 2012, 17). By becoming familiar with the equipment and procedures and viewing them in a different "light", the whole situation and environment may not seem so ominous, therefore lowering the anxiety in the child.

3.3.3 Distraction

Distraction is the third technique in which St. Onge (2012,17) offers to help reduce anxiety. Martin et. al (2011) state that reports from studies that have been conducted show that if the

parents and medical staff distract the child, converse about other things not related to the operation and bring humor into the conversations, this can help to lower the child's negative emotions. Oppositely, it has been proven that if I are made by the medical professionals or parents, or allowing the child excessive amounts of control over the situation, can result in higher anxiety levels. A nurse can therefore help to lower this anxiety by distracting the child through conversation, humor and by reducing the time the child has to actually dwell on the current situation.

3.3.4 Informed Parental presence

If it is in the hospital's policy to allow the parents into the operating room with the child, the nurse should assist the parent, especially if they are anxious. This assistance can come in the form of educating and informing the parent as to what their role should be and how they can support the child emotionally. The nurse should also ensure that adequate amounts of time is allowed to teach, prepare and guide the parent. By carrying out these tasks efficiently and effectively, not only does this help to lower the anxiety in the child but also in the parent (St. Onge, 2012, 17-18).

Three main concepts have been discussed here in the background; preoperative anxiety in children, the effects of parental presence in the operating room, and the nurse's role in reducing anxiety in the child and their parents. These concepts provide foundational information in this study.

4 Theoretical Framework

The theoretical framework will be discussed in this section. The framework is based off of Orlando's Nursing Process Discipline Theory, which was written in 1961 and reissued in 1990. Parker (2006, 4) defines a theory as "*a notion or an idea that explains experience, interprets observation, describes relationships, and projects outcomes*". Theories serve multiple purposes such as assisting in understanding a situation or event, finding meaning

from that event, allowing knowledge to be formulated and presented, and raises inquiries which helps bring about new understandings (Parker, 2006, 4).

Orlando's theory is mainly focused on an immediate *need* a patient may have and how a nurse reacts to it. The theory describes the nurse-patient interaction in an immediate setting and how each party's actions, thoughts and reactions affect the other individual. These ideas will be discussed below in more detail.

4.1 Orlando's Nursing Process Discipline Theory

"The purpose of nursing", states Orlando (1990, 9), *"is to supply the help a patient requires in order for his needs to be met"*. In her theory, she explains what the role of nursing actually is and how a nurse executes it. A nurse must gain knowledge and learn many different skills such as recognizing symptoms of diseases or how to handle and use technical equipment along with other necessary tasks. Although these medical and applied science skills are important and essential *within* a nurse's scope of work, these are only tools in which a nurse uses to support her main role, nursing. There is a distinction between medical/practical skills and an immediate *nursing* situation. There is nothing negative about a nurse holding a wealth of medical knowledge; it is a positive quality and only supports her in her role. Nevertheless, if the nurse is lacking sufficient knowledge and is required to gain more information in order to help the patient in an immediate situation, that is completely acceptable. During a nurse-patient interaction, a competent nurse would endeavor to comprehend the situation according to the patient in that specific time and place context and executes her professional role in connection with it. In addition, the nurse is also aware of the effect of her own actions and verbal communication on the patient. Within the nursing process, the nurse attempts to "read" and understand what the requirement of the patient is, in reality. The need that a patient has may not be obvious, such as physical symptom, and it is this understanding that a nurse needs to carry out the nursing process. As stated earlier, the main focus of the nurse is to insure all of the patient's needs are met, both obvious medical ones and "hidden, deeper" needs (Orlando, 1990, 1-4). As Orlando states (1990, 5), *"Learning how to understand what is happening*

between herself and the patient is the central core of the nurse's practice and comprises the basic framework for the help she gives to patients."

In her theory (Orlando, 1990, 6), Orlando describes the term *need* as being "*situationally defined as a requirement of the patient which, if supplied, relieves or diminishes his immediate distress or improves his immediate sense of adequacy or well-being.*". If a patient is unable to execute personal tasks, even basic daily ones, while being subjected to some type of medical supervision or treatment, he becomes distressed. It is the services of a nurse which are then required to help the patient to avoid or alleviate the distress of unmet needs (Orlando, 1990, 5-6). Orlando suggests (1990, 11) three different reasons why patients become distressed when they are unable to meet their needs alone. These ideas will be discussed below.

4.1.1 Physical Limitations

Physical limitations can be described as when a patient cannot carry out his own needs as he normally would if he were well or was in familiar surroundings in which he felt comfortable to perform different tasks. The following instances can be considered as physical limitations: when a child's maturity level has not developed enough for him to comprehend a situation, temporary or permanent disability, the setting in which the care is given in, the misinterpretation of the setting by the patient, when the nurse is unable to fulfill the patient's needs due to time constraints, along with others (Orlando, 1990, 12-13).

4.1.2 Adverse reactions to the setting

Distress may be initiated in a patient due to his or her flawed perspective of a situation in a setting. This negative reaction is due to the patient's misunderstanding and incorrect assumptions of one or many different aspects within the healthcare scene. The disease in which the patient has contracted, the surrounding environment, the authority or responsibility of the individuals around them and actions or treatments carried out by healthcare professionals, can all be viewed erroneously by the patient (Orlando, 1990, 17). Although the main goal of healthcare professionals is to assist the patient achieve a higher degree of health,

the actions in which personnel carry out may actually affect the patient negatively (Orlando, 1990, 20). Any element within the situational environment can spark distress. Orlando (1990, 17) states that *“The important point for consideration is that a patient may react with distress to any aspect of an environment which was designed for therapeutic and helpful purposes.”*

Although the main goal of healthcare professionals is to assist the patient achieve a higher degree of health, the actions which personnel carry out may actually affect the patient negatively (Orlando, 1990, 20). The term *personnel* are used deliberately in this context to emphasize that it is not only nurses who affect a patient but also doctors and other colleagues. However, it is the nurse who is responsible for the overall care of the patient. Therefore, he or she is obliged to assist the patient in relieving the distress the patient is experiencing. Nonetheless, the nurse is not accountable for distress which is brought on by other coworkers (Orlando, 1990, 21).

4.1.3 Inability to communicate needs

One may believe that a patient, when in distress, would immediately call for the services of a nurse and explain exactly what is wrong in order to receive the assistance that they require. However, this is not always the case. Sometimes, it may not be possible for a patient to effectively communicate and explain the need for help to the nurse. In order for the nurse to provide adequate help, she or he must first build an assistive relationship with the patient while also observing the patient's presenting behavior, which may not point clearly to the reason for distress. Therefore, the nurse is then obligated to investigate further and discover the meaning of the situation according to the patient and his or her resulting behavior, in order to determine the cause for anxiety (Orlando, 1990, 24-25). There are two aspects within a nurse's role in assisting the patient in communicating his or her need. The initial action in which a nurse performs is in taking *“the initiative in helping the patient express the specific meaning of his behavior in order to ascertain his distress”* (Orlando, 1990, 27). The nurse then must assist the patient to *“explore the distress in order to ascertain the help he requires for his need to be met”* (Orlando, 1990, 27).

4.2 Major concepts in Orlando's theory

Orlando proposes three basic elements which construct, in what she defines, as a nursing situation (Orlando, 1990, 36). Marriner (1986, 207) suggests that these three aspects are major concepts within Orlando's theory which are as follows; the way that the patient acts or his behavior, the nurse's reaction to it and finally, the actions that the nurse takes to benefit the patient (Orlando, 1990, 36). These concepts will be discussed in further detail below.

4.2.1 The patient's behavior

In discussing this concept, Orlando (1990, 37-38) clarifies the patient's behavior as from a nurse's perspective and within an immediate nurse-patient situation. In her work, she explains in further detail that a nurse's observations and perceptions of a patient's behavior is gathered through the basic senses; sight, touch, smell, taste and hearing. For example, a patient's motor activity, such as eating, trembling and stumbling along with physiological exhibitions, such as sweating, changes in skin color, urinating and blood pressure readings can be observed by a nurse with her eyes. These are behaviors which can be placed under the category of the nurse's sight perception. A patient's behavior which is manifested vocally and may be verbal (complaints, questions, requests, refusals, demands, etc.) and/or nonverbal (moaning, grunting, crying, yelling, etc.) is an observation made by a nurse through her hearing perception (Orlando, 1990, 37-38).

A specific behavior demonstrated by a patient may be interpreted incorrectly if perceived at "face value" by the nurse and if he or she does not investigate any further. A patient, when manifesting a type of behavior that attracts the nurse's attention, especially if it is "out of the ordinary", is indeed a basis for the nurse to explore the reason for the activity. Even if a nurse investigates and discovers that a patient does not require assistance, the nurse should not consider her actions as a "waste of time". It is impossible for a nurse to determine if the patient is in need of help or not unless she explores, more deeply, the situation (Orlando, 1990, 40). As Orlando (1990, 40) states, "*the presenting behavior of a patient, regardless of form in which it appears, may represent a plea for help.*"

4.2.2 The nurse's reaction

The nurse's reaction, the second element of a nursing situation, can be further broken down into three sub-aspects. These are as follows: the perceptions or understanding by the nurse of the behavior exhibited by the patient, the nurse's thoughts that come as a result to his or her perceptions and the emotions that are stimulated due to these perceptions and thoughts (Orlando, 1990, 40). Orlando reports that the way a nurse perceives and thinks along with emotions that are stirred within her due to a patient's behavior, mirrors her individuality. While one nurse may be more prone to recognize a verbal type of behavior, another nurse may be more likely to recognize behavior which can be perceived through sight. Perception and thoughts (and consequently feelings), are naturally difficult to separate. However, it is a beneficial skill if a nurse is able to successfully perform this, because the nurse can then explore how one aspect of his or her own reaction influences other areas of the situation. Usually, a nurse's thoughts which stem from perceptions of a patient's behavior are at least partly incorrect. This is because each individual is unique and one person cannot know exactly the emotions or thoughts of another person (Orlando, 1990, 41). Still, even if the nurse's thoughts about the patient's behavior are inaccurate, the resulting actions are of more importance. Although a nurse's perceptions and thoughts occur, for the most part, automatically, a responsive discipline can be learned, allowing the nurse to present her thoughts and wonderings to the patient in a question form. This allows the patient to reply and express his perspective of the nurse's thoughts (Orlando, 1990, 42). In addition, before performing any reaction to a patient's behavior, "*the nurse does not assume that any aspect of her reaction to the patient is correct, helpful or appropriate until she checks the validity of it in exploration with the patient*" (Orlando, 1990, 57).

4.2.3 The nurse's activity

Any action that a nurse performs is considered the third element within a nursing situation. This includes anything that is meant to benefit the patient, whether in spoken word or something physically carried out. Also, the participation of the patient may or may not play a role in the nurse's actions. Two forms of said actions exist: those which the nurse has made a decision to intentionally perform in order to fulfill the patient's immediate need and those

which the nurse intentionally performs in order in carrying out some other task. These actions may be the result of a demand from a doctor, routine care of the patient or with the intention of generally supporting people's health (Orlando, 1990, 62).

The patient may not have any participation in an action that a nurse decides to perform. This does not mean that it is not intended to benefit the patient. In fact, many activities which a nurse carries out, whether automatically or deliberately, are meant to better the patient's situation (Orlando, 1990, 62). Orlando (1990, 62) offers some examples such as *“instructing, suggesting, directing, explaining, informing, requesting, questioning, making decisions for the patient, by handling the body of the patient, administering medications or treatments or by changing the patient's immediate environment”*.

Not all actions, however, benefit the patient's immediate need. As Orlando (1990, 63) states, *“A distinction needs to be made here between the purpose an activity actually serves and its intended purpose of helping the patient.”* To reiterate; although an action, which is carried out by a nurse, achieves its goal, it may not actually help meet the patient's need (Orlando, 1990, 63). For instance, a nurse may bottle feed an infant in hopes of relieving the hunger of the crying baby, when in all reality, the infant may have a stomach ache due to another reason.

Often times, when a need in which a patient has, arises, a nurse may begin to carry out actions based only off of his or her experiences in the past, doctor's orders, protocols, routines or may just “jump to conclusions”. The resulting action may not actually achieve the goal of relieving the patient's need due to absence of cooperation with the patient. Therefore, it is important that a nurse explores the thought, perception or emotions with the patient prior to carrying out any action. This helps to avoid any useless, or possibly harmful, action toward the patient and the nurse can then determine the right response (Orlando, 1990, 63). Of course, this does not mean that the doctor's order, routines or policies should be disregarded. Instead, these automatic thoughts and actions should be used in conjunction with the patient's participation (Orlando, 1990, 64).

4.3 The Dynamic Nurse-Patient Relationship and the nurse's professional role

In Orlando's theory, *The Dynamic Nurse-Patient Relationship* (1990), person A's (for example, the patient) perceptions, thoughts and feelings, when converted into a reaction/action, then causes person B (for example, the nurse) to perceive that action in their own individual way. Thoughts and feelings then arise which give way to a reaction/action. Person A then perceives this action and the cycle begins again. It is in this relationship that a nursing situation takes place and the nursing process, by the nurse, is carried out. When the nurse perceives an action or behavior manifested by the patient, a disciplined thought process is carried out. The nurse assesses how a specific action would be perceived by a patient and if it would be beneficial in meeting his or her needs. Once the nurse decides upon and carries out the action, he or she then observes the patient's reaction and resulting behavior. Through this observation, the nurse can then evaluate if his or her own action was the correct one. The following figure (*Figure 1*) portrays the cycle of a nurse-patient relationship and the specific aspects within it.

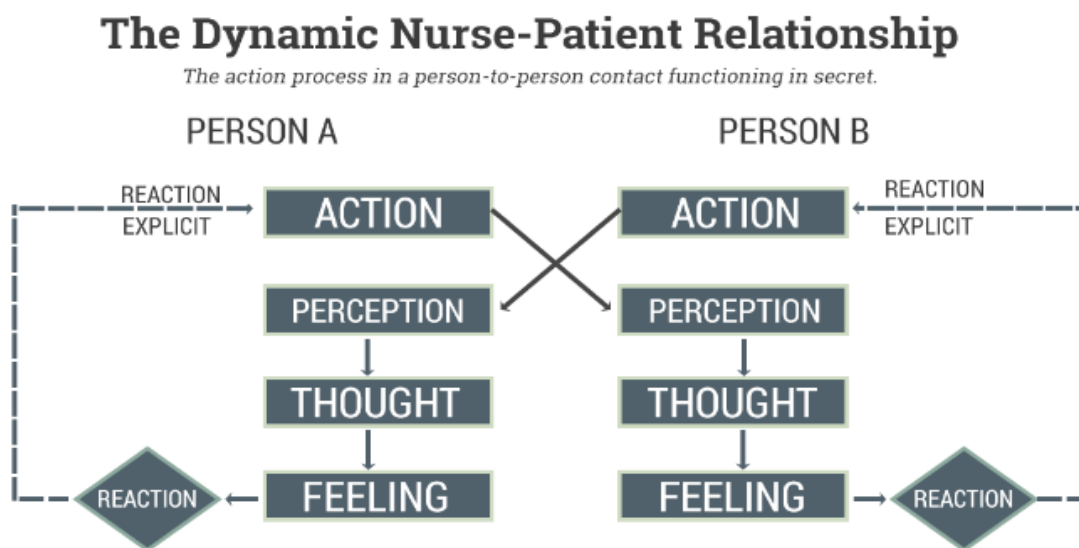


Figure 1. Illustration of Orlando's Dynamic Nurse-Patient Relationship. Source: <https://nurseslabs.com/ida-jean-orlandos-deliberative-nursing-process-theory/>

Orlando (1990, 69) offers three possible resulting outcomes of a nurse's actions with, or for, a patient: it may benefit the patient, it may not benefit the patient or the result may be unclear.

If the patient's specific presented behavior (which is caused by a need of the patient) ceases, then the nurse understands that the action she carried out with or for the patient, was effective. If the behavior continues, the three elements which have been discussed earlier (the patient's behavior, the nurse's reaction and the nurse's subsequent action) and the professional role that the nurse carries out or the *nursing process* within these elements, begins again (Orlando, 1990, 69). When a nurse adapts a disciplined approach, and utilizes this nursing process throughout an immediate nursing situation, he or she is then performing their nursing role professionally.

5 Research Method

In this chapter, multiple elements of this study are considered. The design characteristics of a *Qualitative research method* will be discussed. A definition of an *Ecologic psychology* approach will also be offered. Various aspects and reasons for the chosen data collection method are explained and the chosen method of analyzation, *Qualitative content analysis* with an inductive approach, is deliberated on. The last section of this chapter, *Ethical consideration*, revolves around the moral duty of the author when conducting this study.

5.1 Qualitative research method and its design characteristics

A qualitative research method is the type of method employed when the desire is to investigate more deeply, a phenomenon (Polit & Beck, 2017, 741). This type of research accepts various realities by examining a limited amount of detailed cases. In these cases, qualitative data is investigated and can be defined as data which is expressed through pictures, words or icons (O'Leary 2010, 104-105). Qualitative research involves collecting detailed narrative data and utilizes a flexible design. Various factors, such as new information and decisions made by the researcher throughout a study, influence the composition and outcome. This is known as an emergent design. (Polit & Beck, 2017, 741, 463). Lacey (2015, 22) suggests that the purpose of qualitative research is exploratory but can also assist in understanding phenomena or establish theory.

The qualitative research method also contains other characteristics. One of these characteristics is that it has a tendency to be holistic. This means that its purpose is to understand the subject in its entirety and not only specific parts of it. An additional aspect of a qualitative approach is that the researcher must become deeply involved with and in their study. Finally, the data is constantly being analyzed in order to make changes in the process and to decide when the data collection is complete (Polit & Beck, 2017, 463).

5.2 Ecologic psychology approach

Ecologic psychology was chosen as the design approach in this study. Polit and Beck (2017, 466) state that “*Ecologic psychology focuses on the influence of the environment on human behavior and attempts to identify principles that explain the interdependence of humans and their environmental context.*”. This type of approach investigates, in detail, how different factors in the surroundings of a person affect that individual. An individual may be affected by multiple elements such as family, the immediate environment and the activities being carried out around them and so on (Polit & Beck, 2017, 466).

5.3 Data collection

The data collection method chosen in this study is conducted through interviews (empirical) with parents in which the author utilizes a semi-structured approach. Various aspects of, as well as the reasons for, choosing these methods will be discussed below.

An empirical method was chosen to collect data as opposed to collecting data through existing literature (indirect data). Both types of data collection have advantages and disadvantages, but since the information for this study was collected from direct data, the positive and negative aspects of only this type of data collection is focused on. Some advantages of collecting data directly (e.g., through interviews) is the ability to gather more information from the respondent (if desired), the ability to custom formulate questions to gather only relevant data and being

able to recognize any hints or cues, such as a change in tone of voice. However, disadvantages do exist, such as when collecting direct data, there is a risk of other factors influencing the data gathered which, consequently, could affect the result of the research. Some factors may be that the researcher becomes too involved in the researched subject itself through emotions or opinions, affecting the individual being interviewed through some way or affecting the situation somehow else (O'Leary, 2010, 208-209). Also, when interviewing, some interviewees can offer extra information which would actually pertain to another question further down the topic guide list. Although not a clear *disadvantage*, the researcher should be aware of gathering repeated and an excessive amount of unnecessary information (Polit & Beck, 2017, 510).

Utilizing a semi-structured approach allows the interviewee to respond how they desire, expound on their statements and enable them to describe the topic in rich detail. When conducting a semi-structured interview, the preset questions are used to guide the interview, rather than holding the interview in a rigid design. This way, when more information is needed, the author is able to further question the interviewee to provide more details, etc. (O'Leary, 2010, 195). Also, the interview question sheet, or topic guide (see Appendix 1), can contain "sub-questions" underneath each "main" question. These assist the interviewer in gathering extra, richer information when required (Polit & Beck, 2010, 510). Therefore, the correct and desired data can be obtained (O'Leary, 2010, 195).

5.4 Qualitative content analysis

In an empirical study, the data which is obtained through interviews can be analyzed through qualitative content analysis. Qualitative content analysis is a thorough investigation and scrutiny of obtained qualitative data with the purpose of discovering patterns and themes. This is performed by reducing a high amount of data into smaller, more compressed groups (Polit and Beck, 2017, 741, 537). A very important part of the study, this phase is concerned with organizing data so that it is possible for conclusions to be discovered (Lacey, 2015, 27). This is known as inductive content analysis. Saldana (2011, 93) describes induction as "...*what we explore and infer to be transferable from the particular to the general...*". In other words,

general conclusions are drawn from the specific raw data that is gathered from the interviews. The inductive approach is conducted through three processes; open coding, creating categories, and abstraction (Elo & Kyngäs, 2007, 109). Open coding is the first phase in which the researcher writes headings and notes pertaining to certain ideas within the raw text. McCain and Burnard (according to Elo & Kyngäs, 2007, 111) state that the next step is when headings which are connected through their meaning are grouped together and categories are created. However, Dey (according to Elo & Kyngäs, 2007, 111) declares that it is not only headings with similar meanings which are constructed into categories, but also data which belong to the same category for comparison purposes. Cavanagh (according to Elo & Kyngäs, 2007, 111) explains that describing an idea or phenomenon is the main reason for categorizing. Therefore, the method of creating categories must not be held to a rigid design, but rather, according to the interpretation of the author (Dey, according to Elo & Kyngäs, 2007, 111). The third phase, abstraction, consists of grouping and placing constructed categories under a descriptive heading or title (Dey, 1993, Robson, 1993, Kyngäs & Vanhanen, 1999, according to Elo & Kyngäs, 2007, 111). This process is performed until it is unreasonable to continue (Elo & Kyngäs, 2007, 111).

5.5 Ethical Consideration

In this study, attentiveness to the ethical portion is an important aspect to the author. To understand how the author employed the ethical considerations, the term *ethics* must first be understood. There are various ways in which the term *ethics* is used. Three examples are:

"a method of inquiry that helps people understand the morality of human behavior (i.e., it is the study of morality), the practices or beliefs of a certain group (e.g. medical ethics, nursing ethics) and the expected standards of moral behavior of a particular group as described in the group's formal code of professional ethics. (Berman and Snyder, 2012, 82)".

Lemone et. al (2011, 11) describes ethics as principles of conduct and that moral duty, obligations, values, and the distinction between right and wrong is associated with ethical behavior. The National Advisory Board of Research Ethics (2009,5) states that *"All research*

must comply with the guidelines...", therefore in this study all rules set forth by the advisory board were adhered to. However, the ethical responsibility of the author was not only motivated by the guidelines of the Board but also by the inner moral duty of the author. Throughout the study, awareness was maintained in order to avoid ethical dilemmas which could have possibly arose (Polit & Beck, 2017, 152). Three main guidelines/rules set by the National Advisory Board of Research (2009) and which the author complied with will be discussed below.

5.5.1 Autonomy of research subjects

During this study, the author respected "*the autonomy of the research subjects*"(National Advisory Board of Research Ethics, 2009,5). During the study, all participants were treated as their own individual and their participation was voluntary. The author/researcher provided the following information to the participants; the research topic, an explanation of the topic being studied, the purpose of the interview, the data collection process, the estimated time required for the interview, the manner in which the provided data will be stored, the intended subsequent use of information gained from the interview, the author/researcher's contact information, the clarification of the participant's voluntary participation and the right to cease the interview at any time.

Only after receiving informed consent along with providing a detailed explanation of what the study consists of, did the author interview the participant (National Advisory Board of Research Ethics, 2009, 5,7). In the event that an ethical committee was required to review the study and interview questions prior to an interview of a participant, which was not, the author/researcher would have complied with all rules and guidelines (National Advisory Board of Research Ethics, 2009, 7-8).

5.5.2 Avoiding harm

The author/researcher endeavored to prevent harming the participant in any way. This means that all precautionary measures were taken to avoid mental, financial and social harm. These measures were applied throughout the whole study; during the data collection phase, while archiving the information and during the subsequent publication phase (National Advisory Board of Research Ethics, 2009, 8-10).

5.5.3 Privacy and data protection

The author/researcher ensured that the privacy of every informant within the research along with their data (for example, contact and personal information) was protected. This was done in such a way that the possibility of tracking data back to the informant, by others, is nonexistent. Ensuring protection of personal and research data was performed in various methods; through protection of the research data, by ensuring the informant's confidentiality, through the data handling, storing and disposing phases, and during the printing and publication stages. The author/researcher desired to obtain and present the information found during the study in an interesting and provoking manner, however, this was done in such a way that the informant's privacy was not put at risk (National Advisory Board of Research Ethics, 2009, 10).

5.5.4 Honesty and carefulness

Although honesty and carefulness are not specifically stated as a main category in the National Advisory Board of Research Ethic's *Ethical Principles Of Research In The Humanities And Social And Behavioural Sciences* (2009, 5-17), they are also important aspects to consider while undertaking a research project (Resnik, 2015). These facets and how they guided the author will be discussed shortly below.

All information which is presented was expressed truthfully. The author endeavored to avoid falsification, deceive other colleagues or readers and reported honestly all data and results.

Misrepresentation of the information was also refrained from. Moreover, the author avoided careless mistakes to the best of his ability. When data was examined and interpreted from interviews, cautiousness was practiced so as not to make unnecessary errors. By doing this, data was not misconstrued and the privacy of the participant was protected (Resnik, 2015).

6 Conduction of the study

In the data collection phase of this study, the author searched for a specific target group within the general population. In order to interview an individual for the study, they first had to meet a specific criterion. Firstly, they had to be a parent of a child who had undergone surgery when their child was young. Secondly, individuals who had English as their mother-tongue were preferred, although if they spoke another language, a translation to English could have been organized.

The chosen participants were found by word of mouth and tips from family and friends. Ultimately, five parents were chosen to be interviewed and these interviews were conducted over a few weeks. After interviewing all participants, one interview was not included in the study, due to the child not having undergone surgery, but rather receiving medicinal treatments in a hospital. Therefore, a total of five interviews were utilized in the study. All interviewees were living in the United States and spoke English as their mother-tongue. Also, all participants had children who had undergone surgery with their ages ranging from two to thirteen years old. On a side note, at least one of these parents commented on an injury that one of their children experienced which did not require surgery but the author felt the information gained from this was important. Therefore, it was included in the study. Prior to one of the interview meetings, the interview questions were sent via email (see Appendix 1), per the participant's request. Contact was made with each individual through social media and a specific time was agreed upon to conduct the interview via live video. Before beginning the interview, information about the study, the participant's right to end the interview, how the interview will be recorded and transcribed, the methods which would be used to protect the privacy of the participant as well as other ethical aspects were provided. All the interviews went well and the data was recorded and transcribed. The time length of the interviews ranged

from approximately seventeen to forty-eight minutes. During the interviews, a semi-structured method was utilized; if more information was needed, more questions were asked regarding that topic, in order to obtain the desired information.

After all data was gathered via interviews, it was transcribed and analyzed thoroughly. Both manifest (what the narrative data means literally) and latent (“hidden” meaning within the narrative data) content was studied and applied (Polit & Beck, 2017, 538). During this analysis, the author searched for specific data which answered the aim questions in this study. A table was created, separating the data into various columns and rows, thereby helping the author, as well as the reader, to understand how the results of the study were discovered (see Appendix 2). Four columns were created, each level being more general in topic, than the next. The “first” level was named *Citations* and text from the transcribed data was placed, verbatim, into this column. Each citation was assigned a letter and a number, for example, *A1*; the *A* standing for a specific informant and the *1* meaning from what transcription page the citation was obtained. These quotations were then grouped according to their meaning (both manifest and latent). Afterward, these groups were assigned a more general definition, which is placed in the *Subcategory* level. Each subcategory was then organized with other closely related meaning subcategories and given an even more general term, which can be found under the *Main Category* level. Finally, in similar fashion, each category was grouped together with other categories with comparable interpretations and assigned a name, which can be found under the fourth level, *Theme*. An example of the inductive data analysis process which resulted in the construction of the second theme, *Pre-operative anxiety in a child*, is illustrated in *Figure 2*. In the figure, the first level, *Citations*, was skipped to provide clarity.

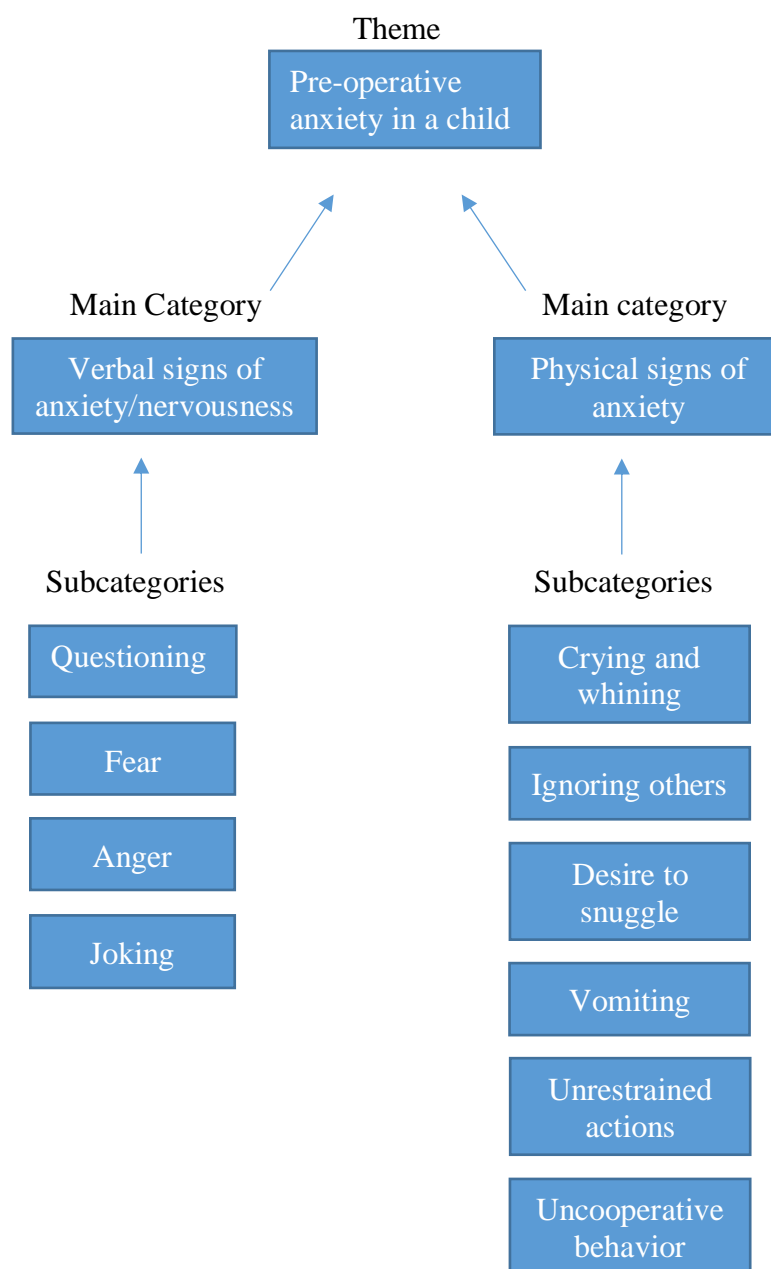


Figure 2. Data analysis process for the second theme, *Pre-operative anxiety in a child*.

7 Results

In this section, the resulting findings of this study will be presented. After analyzing the obtained data, three themes were found; *Pre-operative anxiety in a child*, *Pre-operative anxiety reduction in a child* and *Parental experience of a child undergoing surgery*.

7.1 *Pre-operative anxiety in a child*

Under this theme, two categories exist. Firstly, the way the child manifests anxiety or nervousness through *Verbal signs* will be examined. Secondly, the *Physical actions* which the children of the interviewed parents displayed, will be discussed.

Verbal signs of anxiety/nervousness

In this category, four verbal methods were found in which a child can display anxiety or nervousness; *Questioning*, *Fear*, *Anger* and *Joking*. The level of anxiety varied between the children, from being worried to showing clear anxiety.

Questioning

Although the following example shows that the child was not clearly *anxious*, he did show at least some nervousness, which can negatively affect the child. It may be that, in this case, the questions asked by the child stemmed from pure curiosity and he only desired to know more about the upcoming event. However, if a child's inquiries go unanswered curiosity may build up and transform into anxiety.

He was worried...He just had a lot of question and stuff... "How long am I going to be there, do I get a treat afterwards?"... He wasn't really that anxious from what I remember. A1

Fear

The second verbal method which manifested anxiety, was fear through statements. One child manifested this emotion through crying and stating that she was afraid. Even after accepting the situation and agreeing to undergo the operation, the child expressed that she was still fearful. In one case, one parent discussed how her daughter manifested fear/nervousness. When the mother inquired what was bothering the child, her reply reflected fear. Another parent was aware of her child's anxiety because of the statement the child made when

discussing a specific medical procedure. Although the child did not explicitly say that she was “fearful”, the topic and meaning of her conversation suggests she experienced this emotion.

She says...that she's going to have to be awake for the needle. She has a lot of anxiety about that. B4

Anger

Anxiety was also manifested in children through different types of verbal anger. An older child became upset when the physician offered the option of amputating her affected extremity. Anger and unacceptance of the situation was displayed when she stated, “*I don't know why you would change the way God made me*”. (B1). Another, much younger child, showed emotions of anger through non-speech methods.

We finally just laid her in the crib and let her work it out until she calmed down. And it took a good, probably 20 minutes of just her being mad. D1

Joking

Anxiety was also present through making jokes. One fifteen-year-old child attempted to hide her anxiety about an upcoming procedure by making light of the situation. Many weeks prior to the planned surgery, the anesthesiologist notified her that her body weight is above the range in which allows her to be generally anesthetized via only an induction mask. Therefore, a cannula would have to be inserted also, unless she lost approximately ten pounds. The child, having a fear of needles, jokingly stated that she would have to lose enough weight. The mother could “read” this as a way that she was worried about the upcoming procedure.

Physical actions of anxiety

Six different physical manifestations of anxiety were discovered; *Crying and whining, Unrestrained actions, Vomiting, Uncooperative behavior, Ignoring others and Desire to snuggle*. Although the results of some exhibitions were more numerous than others, all pointed to some degree of nervousness or anxiety. This is the reason why all forms of physical signs are presented.

Crying and whining

Crying and whining is a quite common demonstration of pre-operative anxiety in children. This is due to various reasons. One child began crying due to extreme nervousness of an upcoming umbilical surgery. Another child, having experienced the same surgery in the past, remembered how the post-operative pain felt and because of this, started to cry. Crying was also exhibited due to another reason. In one case, pre-operative anxiety, coupled with the fact that the presence of friends and family was forbidden, caused one child to sob. However, full-out crying was not the only manifestation of sadness or grief. Sometimes, weepiness or whininess rather than a full crying episode was presented. One child began to whine, possibly due to her ability to sense the negative emotions of her parents.

Our boy cried some before his last one because his previous one coming out, it hurts his ears really bad. E1

Unrestrained actions

Children also showed anxiety through out-of-control or unrestrained actions. Sometimes, the actions were voluntary and at times, involuntary. One child began to uncontrollably shake due to nervousness; this was obviously a reaction in which she could not control. Another child, after a surgery, exhibited aggressive physical actions such as hitting, kicking, clawing and scratching to the point that she possibly could have injured herself. Although this was a *post-operative* example, it is highly likely that any child can act out in such a way *pre-operatively*.

When she came out they had done a heart cath. She was an absolute bear. I mean hitting and kicking and clawing and scratching. I mean, just out of control, like she was going to hurt herself, thrashing around. D1

Vomiting

Other types of uncontrolled symptoms of anxiety also exist. Sometimes, rather than manifesting willful aggressive behavior, a child can endure internal physiological symptoms. For one girl, the anxiety was so great, she began to vomit due to nervousness.

She has vomited a few times, with nervousness. B2

Uncooperative behavior

Uncooperative behavior was also displayed in other ways. For example, when healthcare professionals attempted to carry out a specific procedure, when transferring the child to the operating room and when introducing the anesthetic induction mask, this was shown. In one case, when the nurses attempted to insert an IV line on a worried child, she resisted and made an effort to escape the healthcare professionals. This resulted in the physical restraint of the child. Although the insertion of the cannula was successful, the child was unwilling to comply with the nurses' instructions afterward.

They had her on a table to try to put an IV in and she tried to get away from them, roll away. They had to have a couple people hold her down because she had to have it done. C1

Ignoring others and Desire to snuggle

Not all physical signs of anxiety were loud and rambunctious. Children also exhibited anxiety by becoming quiet or even calm. One child completely ignored the healthcare professional who was caring for her. The parent stated that she believes the child acted this way in attempt to emotionally ignore the nervousness within her. Although a calm demeanor often denotes a relaxed emotional state in a person, this is not always true. Another child, who usually would not be willing to get close or snuggle with his parent, manifested this behavior prior to his operation.

It's not like he typically snuggles with mom anymore but he kind of did before. He was a little bit more apprehensive. E2

7.2 Pre-operative anxiety reduction in a child

This theme is divided into three categories; *Intrinsic factors*, *The nurse's task in reducing pre-operative anxiety in a child* and *The nurse's inability to relieve pre-operative anxiety in a child*. The positive aspect of a child not experiencing anxiety due to their incomprehension and other internal coping methods, will be presented. Secondly, the external factor, in this

case, the means by which nurses decrease or can decrease the child's anxiety, is also displayed. The factors why a nurse is unable to do this, is also presented in these results.

Intrinsic factors

The title *Intrinsic factors* in this category was chosen because it best summarizes the five subcategories which discuss the reduction as well as the absence of pre-operative anxiety. Four of these subcategories present the various internal methods of coping with the anxiety; *Past experiences, Patient Choice, Acceptance* and *Ignoring others*. The last subcategory, *Nonexistence of anxiety due to incomprehension*, focuses on the absence of pre-operative anxiety due to the child being too young to understand.

Past experiences

While past surgical experiences of a child can induce anxiety, it can also assist them in coping with their situation. One parent discussed how her daughter appeared to be able to at least partly cope, due to her experiencing many previous surgeries and becoming accustomed to the hospital surroundings. The mother noted that her daughter's older sister, not needing as many operations, was more anxious when she required one.

I think a lot is different for her because she's gone her whole life. With her older sister... it was all new, it was all scary for her than it was for her younger sister. B6

Patient choice and Acceptance

Allowing a child to make their own decisions regarding their surgery also reduces anxiety. In one case, the parents explained to their fifteen-year-old daughter that it was her choice when her surgery was to be performed and that it will only be conducted when she was emotionally prepared. The parent discussed how she and her husband felt that they needed to allow their child to have greater control, especially due to her age. As a result, the child later accepted the idea of the previously unwanted surgery.

“Mom, I’m ready, I want to do it when my brother is still around”, and she had it all laid out, she picked the time. B1

Ignoring others

As presented earlier in the results, the act of ignoring others was categorized as a physical manifestation of anxiety. However, this could have been a method in which the same child coped with their situation.

As I told you about earlier when she wouldn’t talk to the doctor, she was downright rude but I think it was a coping mechanism. B7

Nonexistence of anxiety due to incomprehension

Anxiety may not be experienced at all in a child, due to their age. Multiple parents stated that their child was too young to understand their situation and one suggested that this was an advantage to their child. The ages of their children varied, with one being six months old and another thirteen months old. One parent even stated that her nine-year-old daughter didn’t completely understand the situation. As a result, the young age of and lack of comprehension in a child can be beneficial factors in reducing their anxiety.

He doesn't remember anything and I think that he was so young...he was thirteen months so I don't think he ever showed any...C1

The nurse’s task in reducing pre-operative anxiety in a child

Eleven subcategories exist under this main category; *The nurse’s general role in reducing a child’s pre-operative anxiety, Medical play, Explanation, Distraction, Providing other services, Humor, Encouragement, Providing physical comfort, Allowing the friends’ and family’s involvement, Being flexible and allowing patient choice and Becoming familiar to the child.* They investigate the nurse’s role, both in general, as well as specific actions that a nurse performs to reduce a child’s pre-operative anxiety.

The nurse's general role in reducing a child's pre-operative anxiety

The nurse's role general role when caring for a child preoperatively, was discussed by the parents. They reflected on both how it *was* carried out as well as how it *should* be conducted. One parent discussed briefly how the healthcare professionals prepared everything prior to commencing with the surgery. Another commented on the how the nurses were effective in reducing their child's anxiety. When questioned how they believe a nurse should communicate with a child, one parent offered her thoughts about how a nurse should act toward the child.

I guess if they're compassionate, soft-spoken, not like it's just their job, their routine, no big deal. Obviously, for a kid, it's not normal for them to be doing that so as long as they keep that compassion for each individual kid. I think they should stay fine. E4

Medical Play

Multiple methods that nurses use to reduce child anxiety were found. One of these was through medical play and numerous examples of this were given. When introducing medical equipment, such as induction masks, blood pressure cuffs and eye patches, a playful, fun method was used, sometimes incorporating stuffed animals in order to decrease the child's anxiety about the foreign objects and frightful situation. One parent explained how the healthcare professionals, when introducing the anesthesia induction mask for the first time, placed it on a stuffed animal. They also allowed the child to play with the mask and placed it on her own face. In addition, the nurses offered rhinestones and stickers with which the child could adorn the mask. As a result, the child's fear of the mask was decreased due to her being allowed to become accustomed to and play with the mask. In another case which a child required a hernia surgery, the nurses wrapped a bandage around the child's stuffed dog's belly as well as the leg. These bandages symbolized the post-operative hernia and IV bandage that the child was to receive. The actions of the nurses, as well as the presence of the familiar stuffed animal, assisted in reducing the child's nervousness.

Explanation

Under this subcategory, the citations about how the nurses and healthcare workers discussed and explained various aspects about the surgery with the child are placed. By explaining the

upcoming procedure, the child can be more informed, allowing them to understand the situation more clearly. One interviewee reported that the nurses explained to her child why the anesthesia induction mask is utilized. Sometimes, explanation does not come directly from a nurse but rather through an educational tool that he or she provides, such as a book. Another healthcare professional created a picture and explained to the child the surgery that the doctor was planning to perform. One parent gave an example about how the nurses explained to the child concerning upcoming procedures and interventions at a level that the child could comprehend. Although this was not a pre-operative case, the method that the nurses utilized can be used universally.

When our son fell, he didn't have surgery but...they just come in and they had a blood pressure cuff and they explained with shots, how it's going to feel, it's going to be a little sting and then it will be ok, if you need to have a shot. And this is an IV and this is why we put it in and explain to them in kid terms. Just try to get down on their level. A2

Distraction

Anxiety relief could also be assisted by the nurse, through distraction. Various examples of how this was done were given. For example, through providing toys, books, games, movies, coloring books, stuffed animals, food and so on, nurses could help the child take their mind off of their present situation. The creativity of one nurse also helped him to reduce a child's anxiety by creating a "Super star" award. One parent even explained how a therapy dog was used which the child was allowed to pet. Although this was a post-operative case, this highlights the multiple possibilities which exist to assist in reducing a child's negative emotions.

Providing other services

Sometimes, the care that a child receives is not directly from a nurse. However, through providing other services and individuals that specialize in these areas, a nurse can help the child to reduce their anxiety. Parents stated that the services of a child-life specialist or a life-skills professional were utilized. These individuals helped to distract the child by, for example, offering games, electronics and so on. One parent described how an artist created her

daughter's caricature. This seemed to help reduce her extremely high anxiety levels. By offering and organizing the correct services, the nurse can immensely support the child's emotional state.

Other nurses have probably gotten more life-skills people to bring games or an Ipad or put cartoons on something like that. B6

Humor and Encouragement

The nurse-child interaction is a vital facet in reducing child anxiety. A nurse's speech can affect the child's perception of the situation. Therefore, the nurse should use this to his or her advantage to calm the child down. One parent discussed how the healthcare professionals encouraged her child through words and that this was an effective method. Another parent commented on how a nurse provided anxiety relief for her child by joking and being humorous.

They would just encourage like "Oh, you're so brave, you'll be just fine"...just encourage them with words too was a big thing. A3

Her older sister had a male nurse preoperatively, and he was phenomenal...he joked around and had her laughing. He just had a really good quick sense of humor they just played it off each other. It seemed that it took the anxiety right away. B7

Providing physical comfort

Along with providing emotional comfort, physical comfort was also offered. When a child is made physically comfortable, he or she can then relax more easily and consequently, reduce anxiety levels. In the results, providing socks and blankets were shown to comfort the child, both physically and emotionally. One parent stated that a nurse had given her child a blanket that she herself had created. In the following citation, another parent commented on how comforting the heated blankets are for the child – relating to her own past experience.

When they're getting them ready they'll give them some nice, warm, grippy hospital socks and they'll take those heated blankets and put them on them. I know for myself when I've had surgeries it feels so good. It gets so cold especially if your nervous or the hospital room is cold, it feels so good. A4

Being flexible and allowing patient choice

Another way in which nurses assisted in lowering the child's anxiety is by allowing the patient to make their own choices concerning certain aspects surrounding the surgery. For example, one parent stated how the child was able to choose if they preferred entering the operating room with the nurse or the parents. Another choice that a child had was concerned with which chapstick flavor they preferred to be applied on the induction mask. Obviously, which choices the child is allowed to make is dependent on their age and comprehension level. However, if the nurse supports the child in making their own decisions, the chance of child's anxiety being reduced is increased.

I think protocol is good, you need to have that but there's always exceptions to the rules too, I think.

B7

Becoming familiar to the child

Merely the presence of the nurse can affect the child's emotional state positively, if the nurse becomes sufficiently familiar to the patient. The child may not become comfortable with the nurse instantly. Therefore, the nurse may need to make themselves known over a longer period of time, to the child. One parent explained this in detail, which is shown below.

When they come into the room, you have to make yourself a familiar face. So, you can't come in for two minutes and then leave and then go "Ok, now we are going to go in for surgery". The child doesn't know you from anybody else. So, I think if you could hang out with them for a little while and become like a safe person. Maybe explain who you are, what you are going to do, you are going to help take care of them, that's your job, you are a nurse. Even a 3-4-year-old, they understand even more than we probably think they do. I think it would be important to sit with them and play with them a little bit, talk to them so they know you are not a stranger. D5

Allowing the friends' and family's involvement

Not only is the nurse's presence and involvement important to the child, but also family and friends. By allowing familiar loved ones to be present and involved in the child's care, the nurse can help in decreasing the child's anxiety. One parent explained that the child's older sister and her friends accompanied her while in the hospital. They provided fun such as games and discussion and this helped to lower her anxiety. Also, parents are usually more familiar with the child than anyone else, so allowing them to take part in the care may reduce the child's negative emotions.

There was times that her older sister and friends from college...they would come and that was way better than having mom and dad there... it was really helpful to have the distraction of just chitty-chat, they played games and were just so fun for her. B2

The nurse's inability to relieve pre-operative anxiety in a child

This main category is built up of three subcategories; *Anxiety relief hindered by age*, *Time constraints* and *Inexperience*. The main focus of this section is to present the reasons why a nurse is unable to relieve the anxiety that a child endures. The patient's age as well as negative factors affecting the nurse's ability, more specifically, time restrictions and an insufficient level of experience, all decrease the ability to deliver anxiety-reducing care.

Anxiety relief hindered by age

Although a child's age can benefit them emotionally prior to a surgery due to their incomprehension of the situation, a young age of a child has also shown to be a complicating factor when nurses attempted to comfort them. One parent discussed that nothing could be done to reduce the child's anxiety due to his age. Another parent of a toddler, echoed this by stating how her daughter's young age was the reason for her limited comprehension of the situation. However, for this child, the nurses still provided support in ways that were possible.

With D, they really couldn't because he was so little, I mean there's nothing really that they could do. A2

Time constraints

Another factor in which hindered a nurse in reducing a child's anxiety, is time constraints. When time is limited due to a busy environment, less opportunities exist to support the child's emotional and even physical states. One parent discussed how the busy environment of the ward restricted the nurse's time to care for her child and that she and her husband were forced to tend to a substantial amount of his needs themselves. In another case, the long wait time for food was the cause for anxiety in the child. The parent even stated that she would have retrieved it herself if she would have known the service would take an unacceptably long time. Although the surgery itself was not the reason for these negative emotions and it may not have been a nurse who was supposed to provide the food, this highlights the importance of providing efficient care as soon as possible.

There's time constraints, especially when, say, the next patient shows up and maybe our daughter's surgery has gotten pushed off... you're supposed to be out of that room already but they have to go on and take care of all the other patients coming in. B5

Inexperience

Inexperience of the nurse also plays a part in why a nurse can fail to reduce a child's anxiety. One parent described how nurses, who were unknowledgeable and inexperienced in caring for children, spoke in such a way that was incomprehensible to her child. Therefore, nurses, through gaining experience and being aware of the cognition level of the child, can provide better care for the pediatric patient.

There were a couple nurses that weren't bad nurses but maybe they didn't know how to deal with a child, they would maybe use language that was way too big for her. They would tell her stuff and I'd be like she doesn't even know what you are saying. D4

7.3 Parental experience of a child undergoing surgery

The third theme is concerned with the parent's position of having their child undergo surgery. During the analysis phase of this study, four main categories were found. The first two

categories, *Negative emotions of the parents* and *Parental coping and support mechanisms*, present the negative feelings that parents encounter as well as the how they cope with them. The following category, *Parental presence in the operating room*, is concerned with the results pertaining to the various aspects of parental presence in the operating room with their child. Finally, in the last category, *The nurse's role in reducing parental anxiety*, the results attained from the study which focus on what a nurse does and can do to reduce parental anxiety will also be presented.

Negative emotions of the parents

In this section, the negative feelings that a parent endures due to their child going for surgery will be discussed. Five different subcategories were found which describe these emotions; *Parental anxiety in general*, *Uncertainty/worries about the unknown*, *Limited trustworthiness*, *Helplessness* and *Parental responsibility anxiety*.

Parental anxiety in general

Some parents offered descriptions of how anxiety and uneasiness felt prior to and during their child's operation. These feelings were encountered on different levels. One parent stated that she was a "ball of nerves" (A1) while another said that she experienced a small amount of nervousness and possibly anxiety. Yet another parent described how the situation as a whole felt "Like a black cloud hanging over your head" and that "You knew you were facing this major thing. It hung there till you got through it all." (B3). The same interviewee also stated that during the intraoperative period, parental anxiety is extremely high and that "You're on pins and needles the entire time." (B4).

Uncertainty/Worries about the unknown and Limited trustworthiness

Many parents experienced anxiety and worriedness and explained the reason for these phenomena. Past surgical experiences of both the parent themselves and their child was found to be one factor which caused anxiety in parents. One parent felt anxiety due to her son's previous operation's negative outcome and not knowing how upcoming surgery would unfold.

A second parent was worried due to the high-risk surgery that her daughter was to undergo. Another parent stated that she was nervous about the unknown future because of her never having a child undergo this type of situation previously. Also, in one case, the inexperience of a surgeon with a certain type of operation caused a little concern within a parent.

The doctor that did the hernia surgery didn't usually do hernia surgeries so there was a little bit more concern there. E2

Helplessness

Many parents exhibited helplessness by discussing their inability to affect the situation. Some described it in a more general sense surrounding the surgery while others commented on how they felt helpless prior to the operation. In the following examples, one parent discussed her emotions and fear due to the surgery while another parent, in the latter citation, described her feelings when her child was to enter the operating room.

I think it was the night before when...it kind of hit, oh my goodness, this is real, this is happening tomorrow. I was freaked out a little bit and I told my husband "What if she dies? What are we going to do?" And he's like "God has her life in His hands, we're not in charge of it". Even though you know that it's true, still think I can do one thing, and I can make a difference. D3

It's probably harder on the parents. That's the moment where you feel a little bit like aaahhh!!!...You get that feeling in your gut that you kind of want to puke or whatever. It's your kid, your baby. E3

Parental responsibility anxiety

Anxiety that some parents experienced was not only caused by the surgery itself, or even the child's anxiety, but responsibilities that the parents carried. One parent discussed how she and her husband felt stress due to leaving their other children at home while they accompanied their daughter when she went for an operation. A parent also stated that she experienced worriedness due to fiscal responsibilities. These examples underscore the various elements which can cause anxiety in parents and it is a beneficial practice for the nurse to discover the root of the parental anxiety in order to address the issue, if possible.

Yes, it's always very stressful and probably and a few huge stress factors for us, of course, are the other children. To make sure that everybody and everything at home is all set and that somebody is here to watch them so that we don't have to think about it when we're gone. B3

Parental coping and support mechanisms

The support mechanisms as well as the means in which parents utilized to cope with the situation are described in the following four subcategories; *Anxiety relief through experience*, *Comfort through prayer and belief in God*, *Support from and communication with loved ones* and *Trusting in others*. These results show the manner by which parental anxiety and nervousness is decreased. Both internal and external factors are found to assist in doing this.

Anxiety relief through experience

Although experience is able to play a role in causing parental anxiety, it also has shown, according to the interviewed parents, to decrease it. Having an idea of what is going to take place helped comfort the parents. One parent discussed how she believes that if one of her children were to undergo an operation in the future, she would endure less anxiety due to her child's past experiences. Another interviewee supported this by stating that the preoperative fear she experienced was due to not knowing what events were to transpire. She also reported that later surgeries did not cause the high anxiety levels that the former one did because she was knowledgeable about what was to happen.

Experience does help the parents. A4

Comfort through prayer and belief in God

Another factor which comforted the majority of the parents is through praying and having a belief in God. Although the situation was difficult, knowing that there exists a higher power who had the situation in His hands, relieved the parent's anxiety. One parent stated that she spent time praying with her family the night prior to the operation. She also discussed that although she experienced a great deal of anxiety, "*God has provided*" (B3) and she knew that

others were praying; this supported her. Another interviewee discussed how “*Having a faith in God*” (D1) and knowing that her child’s life was in His control strengthened her.

You know, we said a prayer, and just kind of visited. That was actually really comforting because it kind of took your mind off, a little bit, off of this just, endless waiting. D2

And my husband is like “God has her life in His hands, we’re not in charge of it”. D3

Support from and communication with loved ones

Receiving support from and communicating with other people also were positive methods in which to relieve the anxiety. This was done through normal conversation and by way of the internet. Through communication, parents were able to “open up” and discuss their emotions as well as allowing others to be a support system. One parent discussed how their pastor visited and prayed with them while their child was undergoing surgery and this proved to distract her as well as reduce her anxiety. Additionally, the loving actions of others, such as a spouse offering to carry the child into the operating room, proved to be beneficial in reducing negative emotions. In the following latter citation, one mother explains how her husband, although affected emotionally when accompanying their child into the operating room, still supported her emotionally when he returned from the room.

I think that...when we’ve done the Caring Bridge page, that’s kind of like therapeutic in many ways for me to get my thoughts out...It’s overwhelming when the phone is always ringing, people wanting to know what’s going on then, that way you get the message out and everyone who wants to read it, can read it...When people respond, the messages people send back, like sometimes my husband and I have just sat there and sobbed. He’s done it a few times himself and as he types it out he just cries and cries. I think as parents it’s so good for us. B3

Going into the operating room, we can only have one parent go back with her... I’ve gone once. My husband usually goes, he’s a lot stronger than I am. I have a very hard time with it...When my husband comes back, I can tell he’s been emotional but he’s always strong for me. B3-4

Trusting in others

An additional factor which was found to reduce anxiety was the trust found in other people. In an earlier subcategory, the inexperience of a surgeon weakened the trust of the parents.

However, in an opposite fashion, trust in a medical professional can increase the coping ability in the parent, thereby decreasing anxiety. One parent discussed how she soothed her emotions by reminding herself of the experience that the professionals have and that problems usually do not occur.

You just remind yourself that they probably done this many times now and its always went well. E2

Parental presence in the operating room

This category is constructed of two subcategories, namely *Parental willingness to be in the operating room* and *Effects of parental presence in the operating room on the child and the parent*. The citations from the interviewees that are presented, highlight the level of interest the parents had in being present in the operating room prior to the commencement of the operation. The effect of parental presence on the child as well as the parent was also commented on.

Parental willingness to be in the operating room

The willingness of the parents to enter the operating room prior to the surgery varied. While some showed an interest in in being present, others were not as eager. One parent stated that she would have been willing to observe her child's operation but this was not allowed.

However, another interviewee mentioned that she was uninterested. A third parent declared that she doesn't believe she will accompany her daughter into the operating room again in the future after observing her daughter being put under general anesthesia during a previous surgery.

No, they didn't let me... We had to wait in the waiting room...That kind of stuff, like watching procedures, doesn't bother me. I'm interested in it. But yeah, I would have if I could have. A2

Effects of parental presence in the operating room on the child and the parent

Various results were found considering the effects and opinions of the parents being present in the operating room on both the child as well as the parents. One interviewee stated that it is a beneficial practice which relieved the nervousness in their child due to them being present. She believes that it is vital that parents are present for their children and that it assists the child emotionally. A second parent declared that the effect that parental presence caused on the parent was dependent on the type of surgery. The interviewee further explained by stating that if the operation was considered a major surgery, it may not be so beneficial to the parent because “*Your emotions are so into it*” (A2). A third interviewee discussed shortly how her husband and child was affected by being present in the operating room, as can be read below.

My husband said it was almost harder doing it that way to leave her in there and watch her get put out but he knew it helped her so he was happy he did it. E2

The nurse's role in reducing parental anxiety

The results presented here are concerned with the tasks that a nurse can, or did, perform to relieve parental anxiety. Six subcategories fall under this category, all considering the care a nurse can provide, whether through words or actions. These subcategories are *Anxiety relief through distraction*, *Keeping the parents informed*, *Being present for and supporting the parents*, *Becoming familiar to the parents*, *Respecting the parents' wishes* and *Providing other services for the parents*.

Anxiety relief through distraction

Distraction was found to be not only an aid to reduce pre-operative anxiety in children, but also their parents. If a nurse provides toys, games, coloring books and other distractions for the child, the parent can also become involved and play with their child. One parent stated that she believes it is beneficial to the parent because it is obvious to them that their child is being entertained and it also helps to reduce their own anxiety by diverting their own attention. Still, the overwhelming thoughts can make it difficult to do anything other than dwell on the surgery. One parent found that this was the case while waiting during the intra-operative period.

You bring your phone and your reading material and you bring your knitting and things to pass the time away but you almost can't concentrate. It's a little bit tough to focus on what you are trying to do.
D2

Keeping the parents informed

Another aspect that was discussed to a great extent and decreased parental anxiety, was the practice of a nurse keeping the parents informed. This was done in various ways, such as marking the operation site, through pre-operative information telephone calls and during visits prior to the surgery. Knowing what the operation consisted of and obtaining preparation information, appears to comfort and decrease the anxiety that a parent may have. One parent discussed how the nurses explained the upcoming procedure in non-professional terms so that the parents could more easily understand. Another parent explained how the nurses, during the pre-operative preparation telephone call, notified them that the child could bring along an item which would comfort them, such as a stuffed animal, blanket or specific clothing. The interviewee also stated that if she had an inquiry, she could ask at that time. In the case that they could not accurately reply to her question, they would respond once the information was obtained.

The effectiveness of informing parents is also supported by the *unfulfilled* wishes of the parents. Although it is unfortunate that some parents were not offered a sufficient amount of information, this reinforces the fact that keeping the parents informed is vital in lowering their anxiety. For example, one parent discussed that, upon arrival to an unfamiliar hospital, they did not receive an adequate amount of information on where they were supposed to go. Another suggested that the nurses could either write down important information or suggest to the parents that they record instructions in order to avoid forgetting essential advice. In the following statement, although the parent commented on how the physician should have given more information, these suggestions are just as true for the nurse.

Well at a doctor's visit before we scheduled the surgery they gave us information, what they were going to do more. I think our son's doctor could have been a little bit more informative. I just think the more information you can have, the better. A3

Being present for and supporting the parents

Results from this study show that it is clear that the nurse's presence is critical in supporting the parents' psychological and emotional status. Having a nurse present and receiving this support throughout the whole perioperative period is important for the parents. One parent stated that the nurses cared for her and her child in an exceptional manner. She also noted that nurses accompanied her when returning from the operating room, and frequently verified her emotional status to assess if any needs were present, despite the busy environment of the ward. In the following statement, it is obvious that a professional, caring approach of a nurse towards a child also improves the relationship between the nurse and the family.

I actually felt like I connected more to the ones that I felt cared more. Even when they came back in the room I felt warmer towards them, feeling like they cared a little more about my kid. So that bedside manner is probably kind of important even when it's your child. D3

Becoming familiar to the parents

Just as it is important to become familiar to a child when caring for them, the nurse also should become acquainted with the parents. The more comfortable the parents become with the nurse due to them knowing each other, the more their anxiety can be decreased. One parent reported that a number of the nurses who were present during their child's operation were familiar to her from previous events. Knowing that an individual, who was of familiar acquaintance, was to care and support them, positively affected the parent's emotional status.

Many years later, there were still nurses there at the hospital who knew us from when our son was there and that just helps relieve anxiety in itself, just to have a familiar face there, knowing that if you need anything we will do whatever for you. That probably makes a big difference. C4

Respecting the parents' wishes

Within nursing, respect for the patient is discussed to a great extent. Even through respecting the patient's family, in this case, the parents, helps to reduce parental anxiety. This can be done in various ways. One parent discussed how her and her spouse realized that they could also become involved in their child's care and have a greater effect on the decisions made

within the healthcare setting. As a result, her anxiety decreased in later operations. Another interviewee explained how she wishes that the healthcare professionals would be aware of the fact that her child and family have a great amount of experience due to her child's numerous previous surgeries. She suggested that this information could be noted within the child's care charts so that the nurses would not be naïve to their situation and experience. This way, improved, more understanding care could be delivered. These two examples show that the parents opinions are important. Therefore, a nurse should notify parents that they are free to express their wishes in order for issues to be addressed and so that excellent care can be delivered to all members of the family.

One thing I can say because we are there so often, that they would respect that too. Sometimes it gets annoying like the way they treat you like this is your first time. Could that be noted in a chart, frequent flyer, something like that? B7

Providing other services for the parents

The final method discovered in which a nurse could relieve pre-operative parental anxiety is through offering services. One example of assistance which can be offered, is through spiritual and emotional aid. This could come from, for example, a pastor, as stated by one interviewee. If the needs of a parent are not able to be attended to by a nurse directly, the nurse is still obligated to address the issue by organizing, or at least informing the patient of "outside" services that are available.

At the hospital, they do offer services if you need them, a pastor to come pray with you or a chaplain, they'll come pray with you or sit with you. D3

8 Discussion

This chapter is divided into two sections; *Result discussion* and *Method discussion*. In the former section, the results of the study and how they are connected to the background and theoretical framework is considered and reviewed. The latter section focuses on the methods chosen for the study as well as the trait of trustworthiness in this study.

8.1 Result discussion

In this section, *Result discussion*, the result implications from the study conducted, along with how they are connected to the background and theoretical framework, will be discussed. Approximately the first half of this discussion will be focused on the child's preoperative anxiety as well as the reasons for both its total nonexistence and the coping mechanisms utilized to reduce it. The parents' experiences of the nurses' role in relieving their child's anxiety, along with what actions a nurse can take, will also be discussed. Additionally, the reasons that the nurses were unable to provide care for the child's anxiety is also examined. In the second half of this section, the anxiety that parents have experienced, both prior to and during their child's operation, as well as various aspects of them being present in the operating room are considered. Furthermore, the care and support that a nurse can provide for the parents is another area which is discussed.

Pre-operative anxiety manifestations in the child

The first aim of this thesis was to investigate how a child exhibits pre-operative anxiety and the question was asked, "*How does the child exhibit, from the parent's perspective, preoperative anxiety?*" The *need* of the patient is, in this case, is to reduce pre-operative anxiety in a child. This is well supported by Orlando's theory (1990, 6), when she states that a need is "*situationally defined as a requirement of the patient which, if supplied, relieves or diminishes his immediate distress or improves his immediate sense of adequacy or well-being.*". The results that the parents offered clearly show that the manner in which anxiety is manifested, differs from child to child. Two types of manifested anxiety were presented; *Verbal signs* and *Physical actions*. Many of the signs that some children manifested are well supported by those offered by Kain (according to Romino et. Al, 2005, 781); becoming agitated, ceasing activities in which they are doing, expressing fear, crying, trembling and even trying to avoid the unknown healthcare professionals. The means by which each child exhibited their anxiety differed from child to child, depending on their age. For instance, an uncooperative five and a half-year-old child physically attempted to escape the nurses while trying to place an intravenous cannula (IV) and had to be physically held still so the

intervention could be completed (St. Onge, 2012, 15). This is considered a *Physical limitation* by Orlando (1990, 12-13) due to the child being too young to comprehend the situation. The child also showed an *Adverse reaction to the setting* by misunderstanding the importance of the IV placement. Another example is when a young teenager was very angry concerning the inevitable change and appearance of her body due to a future operation which was offered by a doctor. This latter phenomenon is also discussed by Romino et. al (2005, 780), stating that these children, who undergoing physical changes in their body, may have anxiety due to fear of an altered body image.

Nonexistence of and coping mechanisms for pre-operative anxiety in the child

As shown in the results, pre-operative anxiety in the subject children was either nonexistent already or reduced by two different means. First of all, within the first mechanism, *Intrinsic factors*, the age of the child is an important determinant if the child experienced anxiety at all. A number of parents reported that their children did not encounter any anxiety, due to the child being too young to understand. This is an obvious advantage. However, other children who did experience anxiety found various methods which helped them to cope. For example, allowing the child to make certain decisions surrounding the surgery, appeared to lower their anxiety. However, as Martin et. Al (2011) state, anxiety can also be increased if a child is granted excessive amounts of control. Another interesting factor which affected the child's psychological state was the experience of undergoing surgeries in the past. Although earlier operations showed to induce anxiety, it also assisted a child psychologically and relieved their negative emotions for the upcoming one. Furthermore, allowing a child, especially when they are in their older years, to make decisions surrounding the surgery, such as the surgery date, increases the willingness of the child to undergo the operation.

The nurse's role in reducing pre-operative anxiety in the child

The other factor in reducing a child's anxiety is from assistance of other people, and more specifically, in this study, the nurse. Multiple examples of how nurses assisted the child in reducing their anxiety were offered by the parents. These examples tie in well with the

information existing in the background section of this thesis and produce various solutions to the aim question; *What actions can a nurse take to reduce anxiety and meet the needs of the child?* The general role of the nurse, as well as how effective the staff was during their experiences were discussed. One of the most important aspects, if not first and foremost, is the familiarity of the nurse to the child. One of the parents elaborated on this topic, highlighting the importance of the nurse making themselves known to the patient. Orlando (1990, 24-25) supports this by stating that a nurse must first create an assistive relationship with the patient in order to provide sufficient care. Also, suggestions and advice were offered regarding the nurse's role when caring for a child pre-operatively. In one case, the parent stated;

“I guess if they're compassionate, soft-spoken, not like it's just their job, their routine, no big deal. Obviously, for a kid, it's not normal for them to be doing that so as long as they keep that compassion for each individual kid. I think they should stay fine.”

This showcases the role of the nurse very well, especially when caring for a child pre-operatively. A nurse can become “numb” to their daily work and may not realize the magnitude of the situation in the child's perspective. This situation clearly highlights the importance of why the nurse is required to carry out the *nursing* role professionally. In Orlando's theory (1990), the major concepts discuss this aspect in detail. The nurse should be aware of the child's behavior through her basic senses. Once the nurse notices an abnormal behavior, the nurse should pause and assess what is the originating factor for this expression; it may be manifested due to anxiety. These factors should be explored with the child so that the initial cause for the anxiety can be addressed.

Medical play and medical reinterpretation was used quite often prior to many of the children's surgeries. One example is when the nurses offered the induction mask to a child and said that she can use it on her dolls. Another parent reported that a nurse explained to the child what a blood pressure cuff is and let them play with it. In one situation, a nurse applied a bandage around a child's stuffed dog's leg and another around it's stomach, symbolizing the bandage that the child would receive after her hernia surgery. The parent then stated;

I think that helped her ease her anxiety the day of surgery too, that they were able to see a little bit that her dog is right with her.

These examples clearly show that these methods are indeed effective. St. Onge (2012, 17) states that these actions by the nurse allows the child to understand, connect and prepare them for the surgery.

As St. Onge (2012, 16) discusses, a child-focused approach is also very important. Smith and Callery (according to St. Onge, 2012,16) explain that the child should also be involved when providing information about the surgery. When explaining a forthcoming procedure, it should be done in a way that is fitting for that child's comprehension level. This was performed in multiple cases and as can be read under the *Explanation* subcategory, various methods such as verbal speech, drawing pictures and children's fun information packets were utilized. Therefore, if the focus is on patient-centered care as well as the age and comprehension level of the child, it should be possible for nurse to, as one parent stated, "*Get down on their level*".

Another tactic that St. Onge (2012,17) offers to reduce child pre-operative anxiety is through distraction. Two parents reported that this method was used during their children's surgeries. Nurses provided various ways to occupy the mind of the patient, for example, games, toys, food, movies and so on. However, not only "conventional" tactics were utilized. One nurse created a card for the child and distracted her by being humorous. Martin et. al (2011), state that if distraction through conversation and humor is provided, the child will then have a decreased amount of time to brood on the present condition, and therefore, his or her anxiety will be reduced. Oppositely, the authors report that if reassuring comments are directed toward the child, increased levels of anxiety may result. However, this idea is contrary to one parent's viewpoint. When discussing this topic, the parent stated that encouragement from the healthcare professionals proved to be an effective tactic.

The nurse's inability to relieve pre-operative anxiety in a child

Although not an aim of the study, the inability of the nurse to properly care for the child and reduce their anxiety is an important aspect to consider. During the study, parents reported that there were times that the nurses were unable to properly care for their child due to three reasons; the child's age, time constraints and inexperience. In regard to the child's age, Smith and Callery (according to St. Onge, 2012, 16) discuss how the nurse should communicate

personally with the child, in age appropriate terms and that by doing this, the child is able to more completely comprehend the situation. While this may be true, there is a point at which the child is *too* young, as shown in the results. The second reason the nurses were unable to care for the child more completely, was due to time constraints. As Fortier et. al (2015) state, the surgical ward is a very active and bustling environment, therefore, only a limited amount of time can be reserved for these types of emotional needs. This was the case for one parent in the study. As Li, Lopez and Lee (according to Boles, 2016, 147) report, not only do parents experience higher levels of anxiety prior to the operation commencement and anesthesia induction, but also if the child has an increased need of care by the parents both pre- and post-operatively. Another aspect to consider is that, on a busy ward where nurses, doctors and other healthcare professionals are busily tending to their jobs, this in itself may cause the child to be overcome with anxiety. As Orlando (1990, 17) states, "*The important point for consideration is that a patient may react with distress to any aspect of an environment which was designed for therapeutic and helpful purposes.*". Inexperience of the nurses was also a key factor in why a child's negative emotions could not be reduced. One of the parents described how some nurses, when communicating with her child, utilized language that was incomprehensible to the child, due to her age. Therefore, because the child did not understand what was being said, any anxiety that she encountered, could not be decreased.

Parental anxiety and coping mechanisms

Preoperative anxiety is not restricted to only the child requiring the surgery. The second aim question in this study was "*What emotions does a parent experience prior to their child's surgery?*" and the results demonstrate that parents also experienced adverse emotions. While a number of the parents described *what* the emotions felt like, such as when they stated they were a "*Ball of nerves*" and "*It was like a black cloud hanging over your head*", others explained *why* they felt anxiety. For example, one parent discussed how she was anxious due to the *Uncertainty of the unknown*, more clearly, the upcoming operation. However, not all anxiety was directly due to the surgery, but to another factor, *Parental responsibility*. As seen in the results, responsibilities at home, such as other children and so on, as well as monetary factors increased the stress of the parents.

The coping factors which assisted in reducing preoperative parental anxiety varied. One example which lowered the anxiety in a child also accomplished this in the parent; past experiences. Similar to the child's case, although the parent can have anxiety due to memories of a past negative surgical outcome, experience can also provide relief. The knowledge that he or she gained from an earlier event allows them to be prepared for their child's upcoming operation. Two other factors which helped to decrease the anxiety was having a belief in God and through praying. Knowing that the situation was in a Higher Power's control, comforted the parents. Also, receiving support and communicating with others provided relief. When the parents were able to discuss and "open up", whether this was via telephone, through the internet, or in person, the resulting effect was positive and as one parent stated, "*overwhelming*".

Effects of parental presence on the parent and the child

The effect that the presence of the parents in the operating room had on themselves as well as their child was overall, a beneficial practice, according to the results. Romino et. al (2005, 780) state that a child's fears can be relieved if a parent or other close individual is present with them. One parent stated that she believes her being present during the anesthesia induction lowered her child's anxiety because the child knew she wasn't "alone". However, while some parents believed that their accompaniment affected their child positively, it is possible that it could cause negative consequences. McGraw (according to Zuwala and Barber, 2001, 21) states that the child's own anxiety levels reflect those of his or her parents. Therefore, if parent is experiencing increased levels of anxiety, so will the child.

At least two parents commented on the effect that parental presence had on the parents. One stated that her husband accompanied their child up until and throughout the anesthesia induction period. According to the interviewee, his wife, he reported that it was difficult to observe the anesthesia induction process on his child. However, he stated that it was beneficial for their child, therefore he remained in the operating room with her. Another parent declared that the benefits of parental presence *during the operation* is dependent on the extent of the surgery and type of operation performed. She stated that it may not be a wise decision to be with the child, if it is a major surgery, because "*...your emotions are so into it*". Also, Wright

et. al (according to St. Onge, 2012, 17) suggests that by allowing parents into the operating room, there is the possibility of creating problems within the operating room procedures as well as increasing legal risks. However, as Romino et. al (2005, 782) report, parental presence can be a beneficial practice both for the child and the parent, if provided with adequate instructions and properly prepared.

Although the third aim question in this study was “*How does parental presence in the operating room affect the child and the parent?*”, the aspect of *Parental willingness to be in the operating room* was also discussed by the parents and the author believed this was an interesting and important area to consider. A number of healthcare institutions allow the parents to enter the operating room with their child and accompany them during the anesthesia induction. Some parents are willing to do this and as Wright et. al (according to St. Onge, 2012, 17) state, this can increase their satisfaction and their self-recognized duty as a parent. However, some parents may not be willing to enter the operating room, as shown in the results of this study. They may feel as though they are a “bad parent” if they do not accompany their child, yet may still feel that there is a “pressure” from others. This obviously is an inaccurate and false opinion and the parent should not feel emotionally forced to enter the operating room if they are uncomfortable. Therefore, the nurse must assess the parent’s willingness through their exhibited speech and actions. The parent may manifest behavior or make a statement that is “out of the ordinary” and is either intentionally or unintentionally due to their reluctance of entering the operating room. The nurse should then inquire of the parent their reason for exhibiting these actions or verbal statements. In this way, the nurse, collaborating with the parent, can assist them in making a decision based on their true preferences. As Marriner (1986, 207) suggests, this situation can be considered major concepts in Orlando’s theory (1990) when she discusses this as a *nursing situation*. Although she describes this as a relationship between a nurse and a *patient*, the parents also have the right to receive the care and emotional support they require. This would be in accordance to and providing *family-centered care* which is a vital aspect, especially in this situation.

The nurse’s role in reducing parental anxiety

The nurse caring for a child pre-operatively must also include and conduct *family-centered care*, or in this text, care for the parents. Multiple methods were discovered in the results that

were utilized by the nurses to decrease parental anxiety. An interesting tool which was found to not only be beneficial for the child but also for the parents was *distraction*. Allowing and encouraging parents to play or perform some activity with the child also diverts the attention of the parent, seemingly allowing them to relax more. One parent noted that, while waiting during the intra-operative period, she had taken personal possessions along with her such as her phone, reading material and knitting accessories to pass the time. However, it was still difficult for her to focus on these things. Still, the nurse should attempt to provide distractions both pre- as well as intra-operatively.

Another area which is possibly one of the most important to adults and key in reducing their anxiety, is the ability to be informed about the situation. For example, if a parent is planning to be present in the operating room, they should be informed and educated about their role as well as how they can assist their child in reducing their anxiety. Also, a sufficient amount of time should be set aside to teach, guide and prepare the parent. In this way, the nurse can assist the parent in decreasing the negative emotions that they or their child may experience (St. Onge, 2012, 17-18).

The practice of informing the parents is not reserved strictly for procedures in the operating room but throughout the whole perioperative period. Although no preoperative preparation programs focusing specifically on anxiety were offered to the children or their parents in this study, such as those discussed by Justus et.al (2006, 35), at least one parent described how a telephone interview/information session was conducted beforehand. Various aspects such as the child's clothing, diet restrictions and distractions that could be brought along, were discussed. Informing parents about the upcoming event in simple terms is very important. One parent explained how the nurses explained the procedure process and times in a manner that the parents, who are non-professionals, could understand. One interviewee suggested notes or recordings could be made by either the nurse or the parents so that vital information is not forgotten and returned to, if needed.

Supporting and being available for the parents was another aspect which was mentioned. It is very clear in the results that the parents very much appreciated when the nurses cared for them and their child. One parent stated that she felt emotionally closer to the healthcare individuals who genuinely cared for her child. Therefore, not only does a child benefit from the support

and help that a nurse honestly provides, but also the parent. Sometimes, the needs that a parent has cannot be addressed by a nurse, and another specialist or professional in a specific area is required. For example, as one interviewee noted, if a parent is in need of spiritual or emotional support, the services of a pastor or chaplain can be called upon. If the parent or child has a requirement that is outside of the nurse's scope of work, the nurse should make available or at least assist the individual in contacting a specialist within that field. This would be considered as fulfilling the nurse's mediating role as a patient *advocate* or one who "*Directly intervenes on the client's behalf.*" (Berman & Snyder, 2012, 93).

8.2 Method discussion and critical review

This section of the discussion considers various sections as well as methods used within the study. The background, qualitative method, data analysis, theoretical framework as well as the advantages and disadvantages of different elements within the study are discussed.

Background discussion

The author found a strong connection between the existing data in the background with the information discovered in this study. Some of the information offered by the interviewees mirrored the data which was gathered previously from articles, while new information was also obtained from the parents. This was found to be a strong, positive aspect of this study due to two reasons; (1) the data already existing in the background supports a portion of the information gathered from the interviewees while (2) the remaining data is fresh, new information which is not mentioned in the background.

Qualitative method

In this study, one reason for which a qualitative method was chosen, is due to the author's desire to more deeply investigate the anxiety and negative emotions in children who are to

undergo surgery and consequently, the anxiety that parents experience due to their child's situation. Another reason was to shed light on the advantages and disadvantages of allowing parents in the operating room and how it affects not only the child but also themselves. Due to the nature of the study and its objectives, the author decided that a qualitative study was the ideal research method. Ultimately, this method worked well with this type of study and the information gathered was beneficial. However, there are a few possible negative aspects that will be discussed below.

Interview method and amount of obtained information

It is possible that, during the interviewing phase of this thesis, the author may have had an influence, in one way or another on the participant and their responses given. Also, the author attempted to interpret the data as clearly as possible and to the best of his ability, however, there is a chance that the information was unintentionally misconstrued. Smith and Firth (2011, 54) state that due to drawing out and using certain pieces of information from the results, data can be misunderstood by the researcher. One reason for this may be due to the author's preconceived notions and biases about a specific topic which, consequently, may have had an effect on the interpretation (O'Leary, 2010, 208-209). Also, the author would have preferred to obtain a greater amount of information about the experiences of a parent accompanying a child within the operating room. This would have allowed him to investigate the effect that parental presence has on the parent and the child more thoroughly. However, since at least some information was gained and the fact that this was not the only focus of the study, it was decided that the data obtained was sufficient.

Ecologic psychology vs phenomenology

Another topic in which the author would like to comment on is the choice of design approach used in this study. Although the ecologic psychology approach was able to be utilized, it focuses on the "...*influence of the environment on human behavior...*" (Polit & Beck, 2017, 466) instead of describing the emotions and feelings that an individual has experienced, which is the focus of the phenomenological approach (O'Leary, 2010, 119). Therefore, it may be that

a phenomenological approach may have been a better choice in studying the parent's emotions. However, in regard to studying the child's emotions, which is an important aspect of the first aim, the phenomenological approach would have not been feasible anyway. The author was unable to interview the patients (children) in person, thus information could not be gathered as to how the experience "felt" to the child.

Trustworthiness

In order for a study to be trusted and well-founded in its concepts and procedures, there must be a standard to which the study is held. If a study meets all of the pre-set criteria, it then can be considered "high-quality". In this section of this study, a description of the standard which the study was tested by, trustworthiness, will be provided.

The Merriam-Webster Dictionary (2017) defines trustworthiness as *worthy of confidence and dependable*. Lincoln and Guba (according to Polit & Beck, 2017, 161, 559-560) state that trustworthiness is a term used within qualitative research and have suggested that it consists of five different aspects in which support it; credibility, dependability, confirmability, transferability, and authenticity. Fulfilling each one of these aspects is what the author strived for in order to build trustworthiness within this study.

In the first aspect, credibility, Polit and Beck (2017, 724-725) state that it is a "*criterion for evaluating trustworthiness in qualitative studies*" and "*referring to confidence in the truth of the data*". In this study, the author presented the data clearly along with performing the collection and analyzation methods in a logical manner.

The second feature of trustworthiness is dependability. Lincoln and Guba (according to Polit & Beck, 2017, 559) suggest that dependability is concerned with how stabile, over time, the presented data is. The degree of dependability is raised when the findings of a study can also be found in another study with the same, or at least similar participants in the same, or approximately the same, context.

The degree of agreement between two separate individuals about the meaning, relevance and accuracy of a study's data is the third element, confirmability (Polit & Beck, 2017, 559-560). The author has striven to create a high level of confirmability; to the point that the reader or another researcher would arrive to the same conclusions and interpretations, or at least deem the presented data logical.

Polit and Beck (2017, 560) describe transferability, the fourth aspect, as “...*the extent to which findings can be transferred to or have applicability in other settings or groups*”. To further clarify, if the results of one study fits well with and can be used easily in another separate study, the original research would have a high level of transferability.

Authenticity, the last but certainly not least feature, is the degree in which a phenomenon or event described by a participant is accurately described (Polit & Beck, 2017, 560). The author has attempted to achieve a high level of authenticity in order to allow the reader to not only understand the true feelings/emotions of the participant, but grant them the possibility to create a clear accurate “picture” of the described situation while building the study's trustworthiness (O'Leary, 2010, 43).

Creating a high level of trustworthiness was one of the main goals in this study. The multiple aspects described above were used, along with other concepts, to guide and “test” the study's trustworthiness. By gathering and interpreting the correct data in an unbiased manner while following these five traits of trustworthiness, the author has increased the chance of creating a high-quality study.

Theoretical framework discussion

Connections were discovered between the results in this study and the theoretical framework. Orlando's (1990) theory about the Nurse-Patient relationship is essentially what nursing consists of and the importance of this theory is clearly shown in the actions of the nurses in this study's cases. This is not to say that all the cases' outcomes were positive. There most certainly is the need for further and continual education for nurses. For example, the child's familiarity of the nurse is especially important in the pre-operative stage. Therefore, the nurse

must be educated on how to create a natural caring relationship with the child. Also, the nurse must be aware of the whole family in difficult times like this and provide emotional support to all members involved. Orlando's theory provides a means by which the caring relationship and actions of the nurse in the interviewed cases can be better understood.

9 Conclusion

The thought of requiring surgery can be a fearful one, especially for a child. The first aim of this study was to investigate the preoperative anxiety and negative emotions as well as the resulting manifestations in a child. Various methods of expressing preoperative anxiety in children were discovered such as through verbal signs and statements and the physical actions that they manifested.

The study also focused on the parents' experience and how the situation affected them, both prior to the surgery and while accompanying their child into the operating room. It was discovered that parents can feel a variety of emotions such as uncertainty, helplessness and worriedness due to other simultaneous parental responsibilities. An interesting discovery made during this study is the effect of past experiences. These seem to have been disadvantageous in that they caused anxiety due to negative memories in both the parent and the child. However, previous surgical events also proved to be an advantage. This is because knowledge gained from earlier experiences assisted the individuals to cope with the situation. Prior to the child's operation, the days before, and on the actual surgery date, many participants and their children were in need of emotional care and support from the nurse. This highlights the significance of the nurse's role in assisting the reduction of preoperative anxiety that an individual may experience. One of the most important aspects discovered in this study is this; it is essential that the nurse assesses the patient and family's needs thoroughly in order to care for them holistically. As Orlando (1990, 9) states, "*The purpose of nursing is to supply the help a patient requires in order for his needs to be met*". Although there is limited time surrounding a patient's surgical experience, if the nurse is successful in decreasing the anxiety in those involved, the resulting outcome will be remembered as a positive experience.

Future research

This study was by no means comprehensive and future research is recommended on this topic. A few questions which surround this subject and which could be inquired in future studies are; *What kind of education programs or workshops could be implemented to teach nurses how to care and support children and their families pre- and intraoperatively?* This type of a study could possibly focus on educative methods which teach nurses how to properly care for a child's emotional state within a limited time frame. Another future research question could be; *How could more hospitals be influenced to utilize preoperative preparation programs?* A study investigating the implementation of these programs within hospitals would be of great importance and may assist in creating methods to achieve this. By not only conducting more research and gaining new information, but also implementing beneficial protocols and care standards, nurses can more effectively support the child and the parents. However, even if new systems are put into effect within a healthcare institution, it must be remembered that the main aspect within nursing is the nurse-patient relationship.

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Appendix 1 – Topic guide

1. Information offered and discussed prior to the commencement of the interview

- Introduction
- The research topic (Prior to surgery)
- An explanation of the topic being studied.
- The purpose of the interview
- Semi-structured interview
- The data collection process
- The estimated time required for the interview
- The manner in which the provided data will be stored
- The intended subsequent use of information gained from the interview (transcription, qualitative data analysis)
- The author/researcher's contact information
- The clarification of the participant's voluntary participation
- And the right to cease the interview at any time
- The privacy of the respondent
- Consent for clarification/spell-check (if needed)

2. Interview questions

Can you tell me about your experience (in general)?

How did your child exhibit/show anxiety, if any? What kind of negative emotions did they experience? Describe in detail!

- What did they do (behavior, reactions)?
- What kind of actions or movements did they show?
- Did your child exhibit any behavior that would “point to” a “hidden” need? In other words, was there a need (emotional need) that your child had but he or she wouldn’t show (express) directly/clearly?

What kind of emotions did you experience when your child was to undergo surgery? Could you describe this?

- Was it stressful?
- Did you feel helpless?
- Did you experience anxiety? If so, was there a specific time that you became more anxious?
- Any other negative emotions?

How did the experience affect you?

- How did you react?

Did you go into the OR? If so, how did your presence affect your child?

- How did the experience of being in the OR with your child affect you? Could you give a description?
- Do you believe being present in the OR was a negative or positive thing as related to your and your child’s emotions? Why?
- Did you experience any anxiety while being present in the OR? If so, do you believe your child was affected by it?

Did the nurse (nurses) do anything to alleviate the child’s anxiety or needs, throughout the whole pre-operative (days, minutes, in the operating room) period? What?

- Were there any “physical limitations” that hindered the nurse, at least partly if not completely, from assisting your child?

- Was there any preparation education for the child such as medical play or medical reinterpretation, pre-visits to the hospital, etc., to familiarize the child with the hospital/situation? Did this help?
- Did the nurse explain the procedures to your child in a way so your child would understand or do anything similar to this?
- Relating to the question I asked earlier about your child's "hidden" or obscure need, did the nurse notice this need and how did he/she react to it?
- In what way did the nurse react to the child's behavior (within a more specific situation)? Was it a quick, automatic reaction or was it a more disciplined response? Did the nurse evaluate the situation after carrying out her action?

Did the nurse's actions benefit your child? Is there something more that he or she could have done?

Did the nurse (nurses) do anything to educate you prior to the surgery in order to ease your possible negative emotions (anxiety, stress)?

- What did they do?

Did the nurse's actions help to relieve any anxiety or other possible needs? Is there something more that he or she could have done?

Is there anything else you would like to add?

Appendix 2 – Data analysis table

(This is a condensed copy - Not all citations are included)

Theme	Main Category	Subcategory	Citations
Pre-operative anxiety in a child	Verbal signs of anxiety/nervousness	Questioning	<i>He was worried...He just had a lot of question and stuff... “How long am I going to be there, Do I get a treat afterwards?” ... He wasn’t really that anxious from what I remember. A1</i>
		Fear	<i>She says...that she’s going to have to be awake for the needle. She has a lot of anxiety about that. B4</i>
		Anger	<i>So, the best option they told us, several years ago, would be to have it amputated, and she was livid with us. She was like “I don’t know why you would change the way God made me”. B1</i>
		Joking	<i>She keeps saying she needs to lose, I think, ten pounds in order to have the mask. It’s kind of halfway joking thing but in the back of her mind, she worries about it with the upcoming one. B4</i>
	Physical signs of anxiety in children	Crying/whining	<i>Our boy cried some before his last one because his previous one coming out, it hurts his ears really bad. E1</i> <i>She would be more weepy. (B2)</i>
		Ignoring others	<i>One of the big things she has done, it’s been embarrassing to me, is completely won’t acknowledge the doctor, to the point she’s rude and I think it’s because she’s nervous and doesn’t want to deal with that. Like, pretend they’re not there, like if there’s a cartoon playing, she’ll just focus on that. B2</i>
		Desiring to snuggle	<i>It’s not like he typically snuggles with mom anymore but he kind of did before. He was a little bit more apprehensive. E2</i>

			<i>I guess he gets snuggly, gets his blanket, you know kind of more wants to be with mom. Which would obviously been his age, he would have been 6 or 7. E2</i>
		Vomiting	<i>She has vomited a few times, with nervousness. B2</i>
		Unrestrained actions	<i>When she came out they had done a heart cath. She was an absolute bear. I mean hitting and kicking and clawing and scratching. I mean, just out of control, like she was going to hurt herself, thrashing around. D1</i>
		Uncooperative behavior	<i>They had her on a table to try to put an IV in and she tried to get away from them, roll away. They had to have a couple people hold her down because she had to have it done. C1</i>
Pre-operative anxiety reduction in a child	Intrinsic factors	Acceptance	<i>"Mom, I'm ready, I want to do it when my brother is still around", and she had it all laid out, she picked the time. B1</i>
		Patient choice	<i>We kept telling her, you don't have to do it until you know it's right... So, I felt like we needed to leave that in her control more, especially at her age. So, I felt like we needed to leave that in her control more, especially at her age... She'll be almost sixteen B1</i>
		Past experiences	<i>I think a lot is different for her because she's gone her whole life. With her older sister... it was all new, it was all scary for her than it was for her younger sister. B6</i>
		Ignoring others	<i>As I told you about earlier when she wouldn't talk to the doctor, she was downright rude but I think it was a coping mechanism. B7</i>
		Nonexistence of anxiety due to incomprehension	<i>He doesn't remember anything and I think that he was so young, he was thirteen months so I don't think he ever showed any...C1</i>
	Nurse's role in reducing pre-op anxiety in children	Nurse's general role in reducing a child's pre-operative anxiety	<i>I think everything was good... They make sure everything is perfectly ready before they do anything. D4</i>

		Medical play	<i>Sometimes they've actually given the mask to them so they can take it home so then they can pretend with their babies and stuff. They told them "you can play with your dolls or whatever." C3</i>
		Explanation	<i>Yeah. And explaining. We're going to put this on you and whatever and just show them different things. A</i> <i>They drew out a picture and said, "This is what we are going to do, what the doctor is going to do". C4</i>
		Distraction	<i>Usually bring them a toy and (they let them) keep it. They think that's great. Or a coloring book or something. Especially if you are sitting there waiting for a while it's nice to have something like that to keep them distracted. Especially if they can't eat or drink it's nice to have toys or coloring books or something to keep their mind off of it. A2</i>
		Providing other services	<i>Other nurses have probably gotten more life-skills people to bring games or an Ipad or put cartoons on something like that. B6</i>
		Humor	<i>Her older sister had a male nurse preoperatively, and he was phenomenal...he joked around and had her laughing. He just had a really good quick sense of humor they just played it off each other. It seemed that it took the anxiety right away. B7</i>
		Encouragement	<i>They would just encourage like "Oh, you're so brave, you'll be just fine" ...just encourage them with words too was a big thing. A3</i>
		Provide physical comfort	<i>Warm blankets are huge, just to wrap around them. B2</i> <i>When my daughter got there one of the nurses there had made a blanket that she gave her and told her, you can have this and she actually still clings to it to this day. So, I think that was a big thing for her which I didn't realize it'd be. E3</i>

		Allowing the friends' and family's involvement	<i>There was times that her older sister and friends from college...they would come and that was way better than having mom and dad there... it was really helpful to have the distraction of just chitty-chat, they played games and were just so fun for her. B2</i>
		Being flexible and allowing patient choice	<i>I think protocol is good, you need to have that but there's always exceptions to the rules too, I think. B7</i>
		Becoming familiar to the child	<i>When they come into the room, you have to make yourself a familiar face. So, you can't come in for two minutes and then leave and then go "Ok, now we are going to go in for surgery". The child doesn't know you from anybody else. So, I think if you could hang out with them for a little while and become like a safe person. Maybe explain who you are, what you are going to do, you are going to help take care of them, that's your job, you are a nurse. Even a 3-4-year-old, they understand even more than we probably think they do. I think it would be important to sit with them and play with them a little bit, talk to them so they know you are not a stranger. D5</i>
	The nurse's inability to relieve pre-operative anxiety in a child	Anxiety relief hindered by age	<i>With D, they really couldn't because he was so little, I mean there's nothing really that they could do. A2</i>
		Time constraints	<i>There's time constraints, especially when, say, the next patient shows up and maybe our daughter's surgery has gotten pushed off... you're supposed to be out of that room already but they have to go on and take care of all the other patients coming in. B5</i>
		Inexperience	<i>There were a couple nurses that weren't bad nurses but maybe they didn't know how to deal with a child, they would maybe use language that was way too big for her. They would tell her stuff and I'd be like she doesn't even know what you are saying. D4</i>

Parental experience of a child undergoing surgery	Negative emotions of the parents	Anxiety in general	<i>I was the one that was the ball of nerves. A1</i> <i>You get a little bit nervous and little bit maybe anxiety. E2</i>
		Feelings of Uneasiness	<i>Now I think anxiety during surgery for a parent is really high...you're on pins and needles the entire time. B4</i>
		Feelings of being separated from the child	<i>They were all willing to take off with the nurse other than one of our daughters. It's probably harder on the parents. That's the moment where you feel a little bit like aaahhh!!! E3</i>
		Uncertainty/worries about the unknown	<i>I know I was more anxious about our son's second surgery because of how the first one went. His stitches had popped and I was afraid that that was going to happen again. Like "What in the world are we going to deal with?" A4</i>
		Limited trustworthiness	<i>The doctor that did the hernia surgery didn't usually do hernia surgeries so there was a little bit more concern there. E2</i>
		Helplessness	<i>That was hard too, with my baby, just to let them take him. A2</i>
		Nervousness due to previous experiences	<i>I just had one done myself, and you know how awful it was so it made me worry more about how she was going to do after. E1</i>
		Parental responsibility anxiety	<i>Yes, it's always very stressful and probably and a few huge stress factors for us, of course, are the other children. To make sure that everybody and everything at home is all set and that somebody is here to watch them so that we don't have to think about it when we're gone. B3</i>
		Post-operative anxiety	<i>I felt helpless afterwards because I couldn't calm him down. A1</i>
	Parental coping mechanisms	Anxiety relief through experience	<i>Experience does help the parents. I think sometimes it makes you more nervous because you know more too. I think it can go either way. A4</i>
		Comfort through prayer and belief in God	<i>The night before, there are a lot of tears, you know, usually a lot of time spent in prayer as a family and stuff like that. B3</i>

			<i>But it's amazing cause I can honestly say there's been a lot of anxiety, there's a lot of unknowns but God has provided and you know that everyone's praying for you and that definitely carries you. B3</i>
		Communication with others	<i>When people respond, the messages people send back, like sometimes my husband and I have just sat there and sobbed. He's done it a few times himself and as he types it out he just cries and cries. I think as parents it's so good for us. B3</i>
		Support from loved ones	<i>Going into the operating room, we can only have one parent go back with her... I've gone once. My husband usually goes, he's a lot stronger than I am. I have a very hard time with it. B3</i>
		Trusting in others	<i>You just remind yourself that they probably done this many times now and its always went well. E2</i>
	Parental presence in the operating room	Parental willingness to be in the operating room	<i>No, they didn't let me... We had to wait in the waiting room... That kind of stuff, like watching procedures, doesn't bother me. I'm interested in it. But yeah, I would have if I could have. A2</i>
		Effects of parental presence in the OR	<i>I don't really think so. I think at that point she's too worried about herself. I think she's too self-absorbed at that point, which, understandably so... I don't think so, but maybe she does. B4</i>
	The nurse's role in reducing parental anxiety	Anxiety relief through distraction	<i>Especially if they can't eat or drink it's nice to have toys or coloring books or something to keep their mind off of it. It helps the parent too. If you can do it with them... A2</i>
		Keeping the parents informed	<i>Sometimes it was a communication failure, you wish they would have told you more. I wish they would have been more open. I think they were holding back because they were afraid. D4</i>
		Being present for and supporting the parents	<i>They don't leave your side, they make sure they're with you and check with you, make sure you're ok and that type of thing. B4</i>
		Becoming familiar to the parents	<i>Many years later, there were still nurses there at the hospital who knew us from when our son was there and that just helps relieve anxiety in itself, just to have a familiar face</i>

			<i>there, knowing that if you need anything we will do whatever for you. That probably makes a big difference. C4</i>
		Respecting the parents' wishes	<i>One thing I can say because we are there so often, that they would respect that too. Sometimes it gets annoying like the way they treat you like this is your first time. Could that be noted in a chart, frequent flyer, something like that? B7</i>
		Providing other services for the parents	<i>At the hospital, they do offer services if you need them, a pastor to come pray with you or a chaplain, they'll come pray with you or sit with you. D3</i>