

From Their Eyes: Nursing Student Experiences Using Repeated Reflection from the  
Pediatric Patient's Perspective

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Submitted in partial fulfillment of the requirements for the degree of  
Master of Arts, Applied Health Sciences  
(Nursing)

Faculty of Applied Health Sciences  
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## Abstract

Simulation-based learning (SBL) has been a core course component in nursing curricula for decades. The growing use of SBL has led to increasingly lifelike simulations and continued development to maximize learning opportunities. Reflection and debriefing are key components of SBL to improve learning outcomes and clinical skills. Reflection is often described as a process; however, nursing students rarely have the opportunity to participate in the same simulation or clinical experience twice to completely engage in the reflective process.

Reflection from the patient's perspective is a new concept to simulation, first done by Taplay (2020) using the Reflective Practice from the Patient's Perspective (RPPP) tool. In this study, we applied the RPPP 3.0 tool to a pediatric nursing simulation, where the simulated child wore spyglasses to record visual and audio data of the simulation (Taplay, 2020). Participants watched their simulations from the patient's perspective and partook in an interview guided by the RPPP 3.0 tool (Taplay, 2020). Then, participants returned within 2-9 days to repeat the same simulation and reflection.

Participants found value and meaning in the repeated reflection. Themes of reactions, communication, appraisal of performance, and the difference were found. Reflecting from the pediatric patient's perspective allowed participants to gain insight into how their actions and communication were perceived. Repeating reflection encouraged participants to partake in self-directed preparation and allowed them to gain confidence, implement change, and improve their practice.

*Keywords:* Reflective practice, Simulation, Repeated Reflection, Patient's Perspective, Nursing, Education

## Acknowledgements

To all those who have helped me along this journey, thank you.

To my Paul, where on Earth would I be without you? You have been the most supportive partner through every step of this journey. You helped me get through *life* on top of my graduate studies, look at all we've done in these two years! Getting engaged, buying a house, getting a puppy, planning a wedding, house renos, getting a job in your field, my various 'side gigs' as a clinical instructor, lab instructor, teaching assistant, peds nurse, sim developer... and you know what, these have been the least two stressful years of my life so far! Life keeps getting better with you by my side because you always are here to take some weight off my shoulders and help me soldier on. I would not have accomplished half of what I have without you.

Karyn, you were an incredibly kind, patient, and supportive supervisor. You always knew when I needed a push, or when I needed time to work away independently. Your compassion and understanding for the extra things going on in people's lives is unmatched by anyone else I have met in academia. Your genuine interest in my future has driven me to success and made me want to put my all into this Masters degree. You taught me so much and I am so thankful you took me on as your student.

Jenn and Dawn, your input as my committee members was incredibly valuable and helpful. You helped to ensure that I had thought everything through and explained why I did everything that I did.

Vanessa, Tanis, and Ro, my grad school buddies, to say I could not have done it without you would be an incredible understatement. You have been such great friends

throughout this entire journey and have pushed me to keep going, keep smiling, and keep laughing. Thank you for being there for me.

To my parents, you have always been supportive of me in whatever new hobby or idea I have decided to take on. Grad school was no different. I know that I can always call you and you will be there for me. I wouldn't be the person I am today without you. I love you both.

Mary, I have leaned on you for years now. You are an absolutely amazing friend and have helped me get through everything I have signed up for in this crazy life. Even from across the country I know that you are just a phone call away, and you were always ready to house me if I decided to impulsively fly to BC and escape my worries for a week or two. Stay excellent.

To Lillian: the grammar police. Thank you for taking the time to read through this entire thesis with eagle eyes for Oxford commas and ways to make sentences "punchy". I have read this document too many times to be able to pick up on my own errors and your edits really helped to make this document what it is.

To whoever is reading this, I am glad you stumbled across my thesis and hope that you find as much value in the information presented here as I did while gathering it.

## Contents

Abstract .....	2
Acknowledgements .....	3
Contents .....	5
List of Tables.....	8
List of Figures .....	9
Chapter One: Introduction .....	1
Background .....	1
Framing the Question.....	5
Positionality Statement .....	6
Chapter Two: Literature Review .....	9
Search Strategy .....	9
Evaluation Tools and Techniques .....	10
New Simulation Development .....	12
Family-Centered Care.....	15
Debriefing and Reflection.....	18
Summary .....	21
Chapter Three: Methodology .....	24
Philosophical Grounding.....	24
Theoretical Framework: Interpretive Phenomenological Analysis .....	25
Study Design .....	25
Data Collection.....	29
Interviewing.....	30
Preparing for the Interview .....	31
Conducting the Interview.....	32
Contextualizing the Interview: Additional Data.....	33
Transcription.....	34
Inclusion and Exclusion Criteria .....	35
Sampling and Recruitment.....	35
Data Management.....	36
Data Analysis .....	37
Step One: Reading and Re-Reading .....	37

Step Two: Initial Noting.....	38
Step Three: Developing Emergent Themes .....	39
Step Four: Searching for Connections Across Emergent Themes .....	40
Step Five: Moving to the Next Case .....	41
Step Six: Looking for Patterns Across Cases .....	41
Enhancing Quality .....	42
Worthy Topic.....	42
Rich Rigour .....	43
Sincerity .....	43
Credibility.....	44
Resonance.....	45
Significant Contribution.....	45
Ethics.....	45
Meaningful Coherence .....	47
Chapter Four: Findings .....	48
Theme One: Reactions.....	49
Caring for a Simulated Child in Pain.....	49
Proximity and Intimidation .....	52
Seeing Through the Patient’s Eyes .....	54
Theme Two: Communication.....	55
Age-Appropriate Language .....	56
Non-Verbal Communication .....	57
Family-Centered Communication .....	58
Theme Three: Appraisal of Performance.....	60
Feeling Unsure.....	60
Appraisal of Care.....	61
I Could’ve, I Should’ve, I Would’ve, I Will .....	62
Theme Four: The Difference.....	64
Preparation.....	65
Perceived Improvements.....	66
Reflection Made the Difference .....	68
More Calm and More Confident .....	69

Moving Forward .....	70
Findings Summary.....	71
Chapter Five: Discussion .....	72
Reactions .....	72
Communication .....	77
Appraisal of Performance .....	81
The Difference.....	83
COVID-19.....	87
Limitations .....	88
Implications for Nursing.....	89
Education.....	89
Practice.....	91
Recommendations for Further Research.....	92
Conclusions .....	93
References.....	95
Appendix A – Interview Schedule .....	104
Reflective Practice from the Patient’s Perspective (RPPP) 3.0 tool (Taplay, 2020)...	104
Appendix B: Tabling of Literature Review Documents.....	106
Appendix C – Informed Letter of Consent .....	109
Appendix D – Demographic Data Questionnaire .....	112
Appendix D – Letter of Invitation .....	113
Appendix E – Recruitment Poster.....	114
Appendix F – Invitation Script.....	115
Appendix G – Diagram of Themes .....	116

## **List of Tables**

Table 1 – Literature Review Summary.....	106
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## List of Figures

Figure 1 – Themes and Sub-themes .....	116
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## **Chapter One: Introduction**

### **Background**

In Canadian nursing education, there is emphasis on providing hands-on learning experiences to help transition nursing students from university education to nursing practice (Canadian Association of Schools of Nursing [CASN], 2015). There is increasing evidence that having more clinical placements and simulation-based learning (SBL) can improve this transition (Dyess & Parker, 2012). SBL typically takes place in labs resembling healthcare settings, and can include the use of mannequins who have programmable vital signs, physiological symptoms and voice responses (CASN, 2015). This method of teaching provides a safe and supportive learning environment which is used to augment clinical nursing placements (CASN, 2015). With the ever increasing size of nursing baccalaureate programs in Ontario, the province has been facing a crisis of a lack of nursing clinical placements for several years, and this shortage continues to increase (Council of Ontario Universities, 2013). Specialized areas such as pediatrics and obstetrics are especially difficult to provide clinical placements for. Pediatric nursing is considered to be a specialized area of nursing and involves caring for patients from infancy to adolescence (Ambrose et al., 2008). In pediatric nursing, it is important to note that children are not considered small adults. From medication management to communication approaches, and disease presentation, their needs and issues are different than those of an adult patient (Lippincott Solutions, 2015). As the use of technology in education becomes increasingly popular, Canadian undergraduate nurse educators are using simulation-based learning (SBL) to augment clinical placements, including those for specialized nursing areas (CASN, 2015; Lewis & Ciak, 2011).

SBL can be broken down into three different components: pre-simulation preparation, simulated experience, and debriefing (Cole & Foito, 2019). Reflective practice is not listed as a component of SBL despite the mandate by the College of Nurses of Ontario (CNO) that Ontario nurses are to participate in reflective practice through the CNO Quality Assurance program as outlined in the CNO Practice Standard: Continuing Competence (2002). This practice standard also highlights that nurse educators demonstrate this standard by “supporting students and nurses in becoming reflective practitioners” (CNO, 2002, p. 5). As a professional expectation, reflection involves an intentional process of thinking, analyzing, and learning (CNO, 2002). It is useful for identifying learning needs and making a commitment to action (CNO, 2002). Registered nurses are required to participate in annual reflection as per the CNO. However, the CNO does not specify guidelines for reflective practice in nursing education.

The terms ‘debriefing’ and ‘reflection’ are often used interchangeably throughout simulation literature and there is a lack of a consistent definition for either. The International Nursing Association for Clinical Simulation and Learning (INACSL, 2016a) sheds some light on the use of reflection in debriefing in nursing simulations, implying that reflection and debriefing are not synonymous. Rather, reflection should be incorporated as a component of debriefing (INACSL, 2016a). As per INACSL, debriefing “promotes understanding and supports transfer of knowledge, skills and attitudes with a focus on best practices to promote safe, quality patient care, and development of the participant’s professional role” (p. 21) and must meet the following criteria:

1. The debrief is facilitated by a person(s) competent in the process of debriefing.
2. The debrief is conducted in an environment that is conducive to learning and supports confidentiality, trust, open communication, self-analysis, feedback, and reflection.
3. The debrief is facilitated by a person(s) who can devote enough concentrated attention during the simulation to effectively debrief the simulation-based experience.
4. The debrief is based on a theoretical framework for debriefing that is structured in a purposeful way.
5. The debrief is congruent with the objectives and outcomes of the simulation-based experience. (INACSL, 2016a, p. 21-22)

In this Standard of Best Practice: Simulation<sup>SM</sup> Debriefing, reflection is highlighted as a criterion of debriefing that “is the conscious consideration of the meaning and implication of an action, which includes the assimilation of knowledge, skills, and attitudes with pre-existing knowledge” (INACSL, 2016a, p. 21). However, this standard does not speak to *how* facilitators are to ensure reflection takes place and does not provide a theoretical framework for reflective practice (INACSL, 2016a). Reflective practice is not consistently defined in simulation literature, but is identified to contain characteristics of: involving cognitive processes, involving a strong critical element, reviewing and reconstructing ideas with the aim to improve practice, aiming for self-development, and having emotional involvement (Moon, 2013). The outcomes of reflective practice can include learning and action, empowerment and emancipation, and potentially a predisposition towards acting reflectively (Moon, 2013). For the purposes

of this study, reflective practice is described as a retrospective activity to purposefully and critically think about experiences and learn from them to develop knowledge or skill and planning to alter, improve or develop future practice (Bulman & Schutz, 2013; Moon, 2013). For the purposes of this study, debriefing is distinct from reflective practice because debriefing includes a component of feedback from the facilitator, whereas reflective practice is focused on the participant's interpretation of events (INACSL, 2016a).

Reflective practice is typically done as a one-time action in SBL, occurring during the debriefing period and is not typically revisited. Yet, repeated reflection has the potential to influence learning and practice further than the initial act of reflection. Repeated reflection for the purposes of this study involves taking reflective practice, using it to instigate change or improve practice, and then repeating the reflective practice. This allows the reflector to participate in further learning and emotional development in response to the actions of change they have initiated from the first reflection. By repeating the simulation and reflecting a second time, the participant will have the opportunity to evaluate the effects of their initial reflection on their practice in the repeated simulation.

Reflection is typically done from the perspective of the participant through their own internalizations of the process, but some cases of SBL provide time to watch a group video of the simulation room as a whole as part of the debriefing process (Small et al., 2018). Reflection from the patient's perspective is a novel practice to SBL that can offer a different view where the participant views themselves from the patient's perspective and reflects on that. This approach meets the CNO Practice Standard: Therapeutic Nurse-

Client Relationship (2006) which emphasizes practicing client-centered (referred to in this paper as patient-centered) care as it places emphasis on how the patient is experiencing their care rather than reflecting solely on the participant's experience.

To achieve this type of reflection in this study, the newly developed Reflective Practice from the Patient's Perspective (RPPP) 3.0 tool (Taplay, 2020) will be used in the interview schedule, see Appendix A. This tool was first developed by Dr. Taplay (2020) to incorporate reflective practice into SBL in a new and meaningful way. The RPPP 3.0 tool relies on the use of spyware glasses placed on the simulated patient to provide audio and visual recordings from the patient's perspective (Taplay, 2020). For this study, the RPPP 3.0 tool will be used to lead participants through a guided reflection from the patient's perspective, then repeat the simulation and reflective practice (Taplay, 2020).

### **Framing the Question**

To address the need for meaningful reflection, I created a nursing simulation for acute pain management in pediatrics with an emphasis on repeated reflective practice. During a simulation, students were knowingly filmed using spyware from the simulated pediatric patient's perspective. Afterwards, students watched these videos of themselves, used the structured reflective tool RPPP 3.0 by Taplay (2020) and then returned another day to repeat the simulation and the reflection. The research question is as follows: what are nursing students' experiences using repeated reflection from the patient's perspective of a pediatric acute pain simulation? The objectives are (1) to explore student self-reflections after viewing their practice from the pediatric patient's perspective, and (2) to understand the experiences of nursing students repeating a pediatric acute pain simulation scenario and repeating the reflection.

The format of this thesis is as follows: Chapter One is the introduction to the research topic and setting outlined above. Chapter Two consists of a review of the literature and includes research articles related to current practices in pediatric nursing simulation education. Chapter Three describes the methodology, including specifics of the simulation and the reflective tool being applied. This chapter also includes data collection and analysis through the application of Interpretive Phenomenological Analysis (IPA) as it is described by Smith, Flowers and Larkin in the book *Interpretive Phenomenological Analysis: Theory, Method and Research* (2009). Chapter Four consists of the findings of the study. Chapter Five highlights a discussion of those findings and offers recommendations.

### **Positionality Statement**

It is important to acknowledge my positionality within this research as I have a deep connection to this topic on many different levels (Daley, 2007). As a child, my eldest brother was diagnosed with cancer. The trauma of this extended event has impacted me deeply and continues to influence my emotional processing, my interpretations of meaning in life, and my drive to improve Canadian healthcare. Because of this experience I was able to attend Camp Trillium Childhood Family Support Centre. From here, my interest in working with children, nursing, health, and illness began in earnest. As I grew older, I started working with children in whatever capacity I could. I was a leader in training at Camp Trillium, I volunteered at a local Family Crisis Support Centre, I became a counsellor at camp, and I applied to nursing school and pursued every pediatric opportunity I could. I graduated as a registered nurse and now work both as a

camp nurse at Camp Trillium and in a pediatric hospital on a surgical floor. I am unquestionably tied to my passion for family-centered care and pediatric support.

I have extensive experience and preconceptions associated with pediatric acute pain management. In the hospital, I deal with acute pain management for pediatric patients every day. I see how nursing students are taught and prepared in a clinical setting and how new graduates (which I was, only five years ago) can face challenges in the transition from school to practice. I have also worked as a clinical instructor for the pediatric nursing simulation lab at Brock University and the pediatric ward for Niagara Health. I have worked closely with many of the nursing students in varying years of study at Brock and will continue to do so. My wish for them is to thrive and succeed in their futures as nurses and in the areas that I teach.

I decided to pursue graduate studies in nursing because of my wish to teach and influence change in nursing education. I feel strongly that simulation-based education is important, and that clinical experience in acute care settings is invaluable to nursing education. I personally think that if clinical placements continue to dwindle in availability, SBL will require innovation and adaptation to fill these gaps. I wonder what it would have been like if I had my clinical hours cut during my nursing degree and replaced with SBL. Would I still be the nurse I am today? Would I have faced a more difficult transition from theory to practice, or would the safe, okay-to-make-mistakes environment of the lab have given me confidence?

Would I still have learned the value of reflective practice...? It was in my final nursing placement that I found the value of reflective practice to be so striking. I had chosen to write a formal reflection on a series of extremely difficult shifts. My preceptor



and I were assigned the same set of emotionally, physically and socially exhausting patients for six shifts in a row. I was drained, in every sense of the word, and questioning my decision to become a nurse. It was during this reflection that I realized the validity of this feeling. As nurses, we cannot do it all, all the time, and we should not be expected to. I learned about my limits that week, and this process of formal reflection helped me to work through my stress and develop coping strategies.

My questions now are: what happens if we implement formal reflective practice in nursing simulation-based education? What if we use innovative approaches, such as reflecting from the patient's point of view? How will this impact student learning experiences? How will this impact nursing? What is the future of nursing education and what is my role in it?

These questions stem from my epistemology. Coming from a subjectivist epistemology, I believe that knowledge is subjective and interpretation is fundamental to knowing (Daley, 2007). The above is only a small glimpse into my positionality within this research, but begins to demonstrate the role of reflexivity with my personal experience as a starting point (van Manen, 2014). Expressly sharing my positionality adds to the credibility of this study. I will continue to acknowledge my positionality in the data and the influences that it has through journaling in an attempt to bracket aside this influence (Smith et al., 2009).

## **Chapter Two: Literature Review**

Phenomenological researchers advocate for the use of a literature review prior to beginning the research process in order to orient the researcher to the phenomenological topic (van Manen, 2014) and to gain an overall understanding of the topic (Moustakas, 2011). For this research project, a review of literature was conducted with the intent of providing insight into existing research about pediatric nursing simulation education and reflective practice.

### **Search Strategy**

Databases searched included the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Education Source, Medline via Web of Science and Proquest. The following search terms were used: "(simulat\* OR standard\* patient\* OR mannequin\*) AND (nurs\* AND student\*) AND (reflect\* OR debrief\*) AND (pediatric OR child\* OR youth OR adolescent\* OR teen\* OR infant OR newborn OR toddler OR neonatal)". This resulted in a combined total of 219 results. These results were further limited to peer-reviewed journal articles only, with duplicates removed and limited to the past 10 years, resulting in a total of 121 results. Next, the results were narrowed by reading relevant abstracts and selecting those specific to nursing, undergraduate education, or debriefing/reflection on simulation and to exclude those specific to community or mental health settings. Then the search was narrowed to only include the past 5 years (2015-2020). This was done for feasibility of the study and because of the large volume of simulation literature that has been a result of the extensive integration of simulation in nursing education in the past ten to fifteen years. This resulted in 13 journal articles, two of which were unavailable as full text in English. Ultimately, 11 peer-reviewed journal

articles were selected as relevant literature based on the inclusion and exclusion criteria outlined above.

Of the 11 results, five were quantitative, three were qualitative, and three were descriptive or used undefined or unclear methods. While reading this literature pertaining to pediatric nursing simulation-based learning (SBL), data was entered into a table format for ease of review and to assist in revealing patterns among the articles (see Appendix B). The following four themes were identified: evaluation tools and techniques, new simulation development, family-centered care, and debriefing and reflection.

### **Evaluation Tools and Techniques**

SBL is often used in nursing education to evaluate students. The focus of what is being evaluated can include psychomotor and technical skills, relational skills, and recognition and response based on understanding of course content (CASN, 2015). Formative feedback and summative evaluation are used through informal and formal evaluation methods as means for grading and/or meeting course objectives. Throughout this literature, simulation for the purpose of evaluation was a common theme, it was presented in many different forms and included different evaluation tools and techniques.

Diaz, et al. (2020) used an exploratory quantitative approach to evaluate students' recognition of factors contributing to early sepsis detection in pediatric patients using SBL. These authors found a checklist style evaluation tool to be valuable in assessing the knowledge of students and suggested using it in other simulations as a means of assessing clinical readiness of new graduates.

Multiple authors sought to assess the learning process of their students and their progress in development of clinical reasoning skills, clinical thinking, and clinical

judgement. Forsberg et al. (2015) used a qualitative approach to explore the use of Kolb's learning cycle model (Kolb, 1984) to understand the learning process and how it can affect development of clinical reasoning skills through the use of SBL. They specifically emphasized the need for formative feedback in SBL, and providing students with opportunities for reflection to encourage learning and development of clinical reasoning abilities (Forsberg et al., 2015). Cazzell and Anderson (2016) used a quantitative cross-sectional descriptive correlational design to discover the relationship between critical thinking and clinical judgement during a pediatric Objective Structured Clinical Evaluation (OSCE). In this quantitative study, the authors evaluated clinical judgement using the Lasater Clinical Judgement Rubric (LCJR) through the evaluation of how students chose which medications to give to the simulated patient (Lasater, 2007).

Kim et al. (2015) also evaluated students' clinical thinking and judgement using the LCJR (Lasater, 2007). These authors used statistical analysis to evaluate the usefulness of this tool in terms of its reliability and validity as a means of evaluating SBL outcomes (Kim et al., 2015). Their findings suggest that using the LCJR in conjunction with the specific pediatric dehydration simulation they developed provides a means to evaluate clinical judgement in pediatric nursing students (Kim et al., 2015).

Moreira and Tibbetts (2015) used evaluations of learning outcomes to implement system-wide changes in pediatric resuscitation programs of their health system. By evaluating the outcomes of their pediatric resuscitation simulation, they identified inconsistencies across units and hospitals regarding resuscitation approaches and equipment, which was then standardized across the health system. A quantitative study by Crow et al. (2018) implemented a Pediatric Fundamental Critical Care Support

simulation and evaluated the course effectiveness by implementing a pre- and post-simulation test. These authors did not include a further description of the test but did include the comparison of these results (pre-test:  $38.7 \pm 7$  vs. post-test  $62.7 \pm 6$ ,  $p < 0.05$ ), which suggested learning by the participants. While outlining a novel approach to pediatric end-of-life simulations, Gotwals and Scholtz (2016) directed their student participants to create care plans which were formally marked according to a rubric and evaluated to assess learning.

Some authors did not use formal evaluation tools but described how informal evaluation through debriefing and/or reflection allowed identification of student growth and meeting of learning outcome goals. Zimmermann and Alfes (2019), Cole and Foito (2019), and Small et al. (2018) suggest there was progress in learning, which was identified through the debriefing and/or reflection periods despite not formally evaluating participant performance.

This literature reflects that there is currently no single method to evaluate student learning, skill and knowledge acquisition, and growth using SBL in pediatric nursing education. Quantitative surveys/tests, debriefing and reflections all offer insight into students' progress and the effectiveness of simulation-based education.

### **New Simulation Development**

SBL is becoming increasingly useful in undergraduate nursing education as a teaching method used to augment clinical nursing placements (CASN, 2015). Throughout this literature review, several articles emphasize the need to develop new simulations to address learning needs in pediatric nursing education. These novel simulations were created for a variety of different settings within pediatric nursing, including pediatric end-

of-life care, emergency departments, inpatient wards, clinics, and community care settings.

Each article included a pediatric nursing simulation, with the topics covering a wide array of situations. The following topics specific to pediatric nursing were included: sepsis (Diaz et al., 2020), bupropion overdose (Hartford et al., 2019), cardiopulmonary arrest (Small et al., 2018), end of life care/palliation (Cole & Foito, 2019; Gotwals & Scholtz, 2016), mock codes (Moreira & Tibbetts, 2015), dehydration (Kim et al., 2015), and medication administration (Cazzell & Anderson, 2016). Two articles used multiple simulation topics in their works and did not specify their exact topics other than they were pediatric nursing scenarios (Forsberg et al., 2015; Zimmermann & Alfes, 2019). Through this vast range of simulation topics, only one was specific to pediatric medication administration. However, this was minimally addressed in the article that focused on the impact of critical thinking on clinical judgement (Cazzell & Anderson, 2016).

Gotwals and Scholtz (2016), as well as Cole and Foito (2019), addressed the need for new simulations focusing on pediatric end-of-life. Pediatric end-of-life is a specialized area of care requiring unique needs and education. Gotwals and Scholtz (2016) used a documentary style film to set a background and enhance the lived experience and emotional aspects of caring for children at end-of-life. This unique simulation involved watching a video to learn about the patient, the family, and the process of their disease journey (Gotwals & Scholtz, 2016). This was followed by discussing and creating care plans for the patient and family (Gotwals & Scholtz, 2016). The use of video to provide a deeper connection and background helped students to

connect emotionally to the simulated patient and family (Gotwals & Scholtz, 2016). Cole and Foito (2019) also created a simulated experience focused on pediatric end-of-life, placing emphasis on symptom management, communication, and family-centered care. Cole and Foito (2019) discovered heavy concerns from students regarding use of nursing communication during end-of-life scenarios, especially when practicing family-centered caring. Students identified that they were uncomfortable communicating with the child and their family in this type of situation. Development of this simulation provided opportunity to practice effective and sensitive family-centered communication for this population (Cole & Foito, 2019).

Two studies focused on addressing the need for pediatric simulations focused on identifying/recognizing when quick intervention is necessary. The scenarios highlighted the recognition of pediatric dehydration (Kim et al., 2015) and the recognition of pediatric sepsis (Diaz et al., 2020). Each of these articles stress the importance of being able to recognize early warning signs that are specific to pediatric patients in order to intervene before they escalate to emergent situations (Diaz et al., 2020; Kim et al., 2015). These newly created simulations add to the variety of ways that simulation can be used to create a safe learning environment to foster skills in clinical judgement and decision-making.

Two studies identified the need for SBL focused on high-fidelity situations, specifically on pediatric emergencies. Hartford et al. (2019) created a simulation focused on pediatric overdose of bupropion in an emergency department, whereas Moreira and Tibbetts (2015) created a simulation about pediatric mock codes. Although both articles were centered on emergency situations, their actual research approaches and simulation

implementation were different. Hartford et al. (2019) focused on evaluation of their tool for use in training emergency department interdisciplinary health care providers to be prepared for pediatric overdoses. Moreira and Tibbett (2015) instead wanted to implement their mock code program in emergency departments as well as inpatient units to prepare staff in the event of an emergency. During this study, they found that the learners had the practical knowledge about what to do during a pediatric code, but could not necessarily convey the theory behind it (Moreira & Tibbetts, 2015).

Each of these studies showed the value of developing new and innovative simulations to drive education in pediatric nursing and to meet specific learning needs that students may not be exposed to in a clinical setting. It is evident that simulation-based education can be applied at a variety of levels and in different settings, from university teaching laboratories to emergency departments and inpatient wards. SBL can be an incredibly useful teaching tool. These studies also serve as a reminder that every situation is different, and there is still much to be explored, imagined, and created in the form of pediatric nursing simulations that can continue to inform our teaching and learning methods and meet the needs of these learners.

### **Family-Centered Care**

A recurring theme throughout this literature review was the emphasis on family-centered nursing care, particularly for those simulations geared towards undergraduate nursing students only. Zimmermann and Alfes (2019) were most direct in their emphasis on family-centered care. These authors identified the importance of developing comfort in building relationships with the entire family through the use of role playing as the family member during pediatric nursing simulations (Zimmermann & Alfes, 2019). This



strategy is often used in nursing education due to the need for many different nursing roles to give each student experience (Thidemann & Söderhamn, 2013).

Gotwals and Scholtz (2016) also emphasized family-centered nursing practice by including a documentary style video that showed the connections between a child at end-of-life and their family. Throughout this simulation, there was continued emphasis on family-centered care by evaluating students' ability to create holistic interventions addressing the needs of both the patient and their family (Gotwals & Scholtz, 2016). The use of the documentary style video allowed nursing students to see more of the existing relationship between the patient and their family, and emphasized the long term effects of the diagnosis on both child and family (Gotwals & Scholtz, 2016). The authors also included either a faculty member or a student in the role of the parent during the actual simulation, again providing an opportunity for students to practice these interactions and the communication they would need in this scenario (Gotwals & Scholtz, 2016).

Cole and Foito (2019) used their pediatric end-of-life simulation to highlight family-centered care, symptom management, and communication. Using guided reflection, students who participated in this simulation experienced learning related to providing emotional and family support, and involving the family in decision-making related to comfort measures. Cole and Foito (2019) also had students or faculty play the role of a parent, demonstrating again that this is a widely used concept.

Others did not clearly state that they included a family member in the form of role playing, a videoclip, or an actor. However, through searching the context, this could be discerned. For example, although it was never explicitly mentioned in their design or set up, Kim et al., (2015) included family-centered care as part of their evaluation of the

nursing student during a pediatric dehydration simulation. These authors evaluated students on the criteria of assessing past history, assessing recent changes to familial environment, offering emotional support to parent(s), providing information to parents about the child's condition, and ensuring they understood the child's condition (Kim et al., 2015). Although the authors did not explicitly state that there was someone acting as a family member, it is clear from the assessment criteria that there was a family-centered focus. Throughout the literature reviewed, higher-fidelity simulations placed little to no emphasis on family-centered care. Hartford et al. (2019) described using a facilitator who acted as a parent to provide the emergency department with a brief history of how the pediatric patient was discovered at home, in turn providing clues as to the emergency simulation they are dealing with. This would encourage family-centered care but was not included as a focus of the article.

None of the other high-fidelity simulations discussed in the literature (pediatric mock codes (Moreira & Tibbetts, 2015), high-fidelity undergraduate cardiopulmonary arrest (Small et al., 2018), early recognition of pediatric sepsis (Diaz et al., 2020), and fundamentals pediatric critical care training simulation (Crow et al., 2018), mentioned the words parent, family, guardian, mother, or father. Similarly, two articles that focused on critical thinking and clinical reasoning in pediatric nursing simulations did not include any emphasis on family-centered care (Cazzell & Anderson, 2016; Forsberg et al., 2015).

While some articles mentioned and incorporated family-centered care, many of the articles did not. "Family-centered" is a term that is seen throughout local pediatric hospitals' philosophy, value and mission statements in Ontario. For example, McMaster Children's Hospital in Hamilton, Ontario has included it in their "About Us" section:

“Here, patients ranging in age from infancy to 17 receive care through a family-centered approach that accounts for the child’s emotional, mental and physical well-being.”

(Hamilton Health Sciences, 2019, McMaster Children's Hospital - About us section, para.

1). It is also emphasized by the Canadian Patient Safety Institute and the Registered Nurses Association of Ontario (Canadian Patient Safety Institute, 2017; Registered Nurses Association of Ontario [RNAO], 2015). With such a massive focus on family-centeredness in Canadian healthcare, it is appropriate to incorporate opportunities for family-centered interventions when developing pediatric nursing simulations.

### **Debriefing and Reflection**

Best practices for nursing simulation typically include three phases: pre-briefing, simulation, and debriefing (INACSL, 2016b). While these standards emphasize the importance of having pre-planned debriefing after simulation, these guidelines do not emphasize reflection, nor recommend specific forms of reflective practice to guide SBL. Debriefing is a standard procedure associated with simulation and is a well-explored concept in nursing education. However, the use of guided reflection in SBL is a new and developing concept of research interest. Reflective practice is a legislated professional expectation in Ontario, Canada, according to the College of Nurses of Ontario (2015) and can be incorporated in SBL to facilitate improvement and development of practice.

Of the articles reviewed, several used only debriefing and did not touch on guided reflection. Hartford et al. (2019) used guided debriefing after simulation and found it to be an effective guide for evaluating teamwork and communication. Crow et al. (2018) found that their simulation participants were grateful for the use of debriefing as a safe opportunity to ask questions and receive constructive feedback. This, in turn, impressed

upon the authors “the importance of continuing to pursue debriefing opportunities within our own US health-care environment as an effective method for supporting team members and enhancing team dynamics” (Crow et al., 2018, p. 5). Although debriefing was not the focus of this article, it was one of the takeaways to be incorporated in future education. Articles by Diaz et al. (2019) and Moreira and Tibbetts (2015) each only briefly mentioned that debriefing was done post-simulation and did not expand on this further.

Reflection, as a new concept in debriefing in pediatric simulation, was mentioned by seven articles to different degrees. Some studies used reflection as part of a greater evaluation method. Both Kim et al. (2015) and Cazzell and Anderson (2016) applied the Lasater Clinical Judgement Rubric, which includes noticing, interpreting, responding, and reflecting as a means for measuring clinical judgement at different levels of expertise (Lasater, 2007). By asking students three questions focused on their simulation experience, personal learning, and translation of the experience to future practice, both studies evaluated reflecting as part of their participants’ clinical judgement (Cazzell & Anderson, 2016; Kim et al., 2015). Forsberg et al. (2015) also emphasize reflection in conjunction with formative evaluation to develop clinical reasoning. They also found that reflective tools are useful in formative assessments to help visualize the expected clinical competence of their participants (Forsberg et al., 2015).

Gotwals & Scholtz (2016) emphasize reflective learning with their use of a pediatric end-of-life documentary video simulation. They used reflection to help participants understand changes in attitudes and values and gain understanding of ethical responsibility (Gotwals & Scholtz, 2016). Cole and Foito (2019) wrote that they used

debriefing as a means to reflect and reexamine topics discussed during the pre-simulation component. This was done by allowing time for quiet, unguided reflection post simulation, and then through a guided group discussion to reflection on emotions, word choices, nursing process, and addressing spiritual needs (Cole & Foito, 2019).

Some researchers employed more specific reflective tools. For example, Zimmermann and Alfes (2019) applied the Promoting Excellence and Reflective Learning in Simulation method (Cheng et al., 2016). Part of this process involves encouraging each student to conclude their simulation with a reflection that includes a take-home message from their learning experience (Zimmermann & Alfes, 2019). Small et al. (2018) encouraged reflection using video recordings of their high-fidelity emergency simulation. In this case, the videos were recorded encompassing the entire room in which the simulation took place, giving an overall view of what happened (Small et al., 2018). Afterwards, undergraduate nursing students were specifically encouraged to apply Gibb's Cycle of Reflection (Gibbs, 1998).

The articles that implemented reflective practice focused on reflection from the participant's perspective. However, reflective practice is used to improve the experience of the patient, so it is pertinent to reflect from the patient's perspective as well (Taplay, 2020). One of the main characteristics of reflective practice is planning to improve, alter, or develop future practice, however, none of these articles implemented repeated reflection to follow up on this component. For this study, we will address these gaps in using repeated reflection from the patient's perspective through the application of the RPPP 3.0 (Taplay, 2020). This tool facilitates a guided reflection on the participant's experience of viewing themselves caring for a patient as seen from the patient's

perspective. This tool includes specific questions to guide reflection such as questions on how the experience felt, what happened and what could be changed or developed, what was learned, and takeaways from the experience (Taplay, 2020).

### **Summary**

The reviewed literature demonstrates that pediatric nursing simulations are applied in a wide variety of health care settings and cover many different simulation topics. However, only one reviewed article used the simulation topic of medication administration and it was minimally addressed (Cazzell & Anderson, 2016). Medication errors are more prevalent in pediatrics compared to adults because of the increased need for individual, weight-based calculations for each medication, as well as the increased susceptibility of pediatric patients to smaller dosing errors (Chen, 2013). With Canadian nursing programs often providing only one nursing course throughout a four-year program that is specific to pediatric and family nursing care, these specific differences require emphasis and practice to ensure competent nursing care is taught. As such, pediatric medication administration is a topic that deserves significant focus and practice in pediatric nursing simulations and so will be incorporated in the simulation in this study.

Family-centered care is also coming to the spotlight in pediatric nursing SBL and continues to be emphasized by hospitals and nursing organizations. Family dynamics can be incredibly complicated. Practicing family-centered care and learning or practicing communication strategies in a safe laboratory setting can help students to gain confidence prior to interacting with real patients and their families (Cole & Foito, 2019; Gotwals & Scholtz, 2016; Zimmermann & Alfes, 2019). This study will address the need to further

incorporate family-centered care in pediatric nursing SBL and may offer new insight into how students experience interactions with the simulated family-member.

New simulations are being developed in pediatric nursing to expose learners to the many different ailments this population can see. Each and every situation can be completely different based solely on the age and weight of the child, as well as their family dynamics. Ideally, nursing students would gain practice and exposure to a variety of different pediatric nursing situations through clinical nursing placements. However, due to the continued expansion of Canadian nursing programs and ongoing shortage of nursing clinical placements, specifically in specialty areas of nursing, this is not always possible (CASN, 2015; Lewis & Ciak, 2011). Actively engaging in reflective practice through SBL can help to augment this potential learning gap with a variety of different pediatric nursing simulations.

Each of the articles reviewed referred to one or more pediatric nursing simulations whose topics were vastly different from each other. The topics covered everything from drug overdose to end-of-life care and were approached in completely different ways. Two areas had overlap: pediatric end-of-life care (Cole & Foito, 2019; Gotwals & Scholtz, 2016) and pediatric mock codes (Moreira & Tibbetts, 2015; Small et al., 2018), and when directly compared to the other, the simulations were quite different. Clearly, pediatric nursing simulation is an area of education that is not saturated with educational materials and curriculum, but one that remains in development and requires continued additions of new simulation materials to fill the gaps and improve existing material. This study will provide a new simulation focused on medication administration, family-centered care,

and reflection from the patient's perspective that will add to this growing collection of topics in pediatric nursing simulation.

Of the 11 articles reviewed, only one article was published in Canada (Small et al., 2018). This article used video technology to film the whole room during a high-fidelity simulation and then facilitated reflection using Gibb's reflective cycle (Gibbs, 1988). The other articles were published in different countries around the world, where there are vast differences in nursing practice, health care, and education systems. This research study will contribute to the pool of nursing research in Canada and make it easily applicable to the specificities of Canadian nursing practice and education.

Reflection as part of debriefing is a newly developing research area in pediatric nursing SBL. Repeated reflection from the patient's perspective offers even more depth to reflective practice. This research study attempts to explore experiences of pediatric nursing students when using repeated reflection from the pediatric patient's perspective using the RPPP 3.0 (Taplay, 2020). This will be applied to a pediatric acute pain management nursing scenario and will include a family member role in the simulation to emphasize family-centered care.



### Chapter Three: Methodology

This study explored nursing students' experiences using repeated reflection from the pediatric patient's point of view, while undergoing an acute pain management simulation. This chapter will describe the details of the methodology for this study, guided by interpretive phenomenological analysis as it is described in the book *Interpretive Phenomenological Analysis: Theory, Method and Research* by Smith, et al. (2009).

#### Philosophical Grounding

Phenomenology is traditionally grounded in two distinct branches: Husserl's transcendental phenomenology and Heidegger's hermeneutic phenomenology (Dowling, 2007). The philosophies of these forefathers in research are distinctly different, with Husserl emphasizing intentionality, description, and objectivity through bracketing aside researcher bias, and Heidegger focusing on a less structured, subjective, and interpretive analysis (Dowling, 2007). The subjective and interpretive nature of Heidegger's phenomenology lends well to the nature of the research question in this study. While Heidegger provided detailed philosophical basis on the hermeneutical art and science of interpretation and phenomenological exploration of the lived experience, he did not provide a clear method for phenomenological research methods (Horrigan-Kelly et al., 2016). This has led to a variety of researchers creating interpretive research methods derived from Heidegger's views on phenomenology, with the goal of interpreting, revealing, and expressing the human experience (Benner, 1994; Caelli, 2001; Smith et al., 2009; van Manen, 2014). Smith et al., (2009) use Heidegger's philosophy to create detailed research methods for interpretive phenomenology, called *Interpretive*

*Phenomenological Analysis*, making this research accessible and applicable for novice researchers such as myself.

### **Theoretical Framework: Interpretive Phenomenological Analysis**

Interpretive Phenomenological Analysis (IPA) is a recent approach in qualitative inquiry and is “committed to the examination of how people make sense of their major life experiences” (Smith et al., 2009, p 1). IPA is distinguished from other phenomenological approaches in that it is focused not just on the description or structure of an experience, but on “personal meaning and sense-making in a particular context, for people who share a particular experience” (Smith et al., 2009, p. 45). IPA was ideally suited to answer the research question because the participants were experiencing reflecting from the patient’s perspective for the first time.

### **Study Design**

This study addresses the research question “What are nursing students’ experiences using repeated reflection from the patient’s perspective of a pediatric acute pain simulation?”. Prior to data collection and analysis, participants were led through pre-briefing. Next, they partook in simulation-based learning (SBL) while knowingly being filmed using spyware. They then watched the video of themselves and were guided through a reflection from the patient’s perspective using the RPPP 3.0 tool (Taplay, 2020) during an interview with the researcher. The setting for this study was the Brock University simulation lab. The simulation included three phases: the pre-briefing phase, simulation phase, and reflection phase (in place of the typical debriefing phase).

Prior to arriving to the lab, participants partook in pre-briefing (INACSL, 2016b). The pre-briefing followed a written script to standardize the process and content between

cases as per INACSL guidelines (2016b). Due to COVID-19 protocols, this part of the simulation was done virtually through the provision of a video vignette recording, as well as an online video conference meeting between the researcher and participant within a week of the participants' first simulation. One participant was contacted via phone instead of video due to internet issues. In this case both the researcher and participant had copies of all documents for review, but video capability was not functional.

In the pre-briefing phase, participants were re-introduced to the details of the study and given the opportunity to ask questions. Participants were prepared for the type of simulation they would encounter and the expectations of the simulation. A simulation overview was provided via video vignette, including an orientation to the building and room, the supplies and equipment, the roles (researcher, actor, participant), the time allotment, the patient situation, and limitations (INACSL, 2016b). This video also included the expectations of the researcher, participant, and actor, as well as COVID-19 protocols that would be followed. Next, consent was reviewed in detail with the participant, to be signed in person on the first simulation day.

On the first simulation day, participants were admitted to the building following COVID-19 protocols, as set out by the university. Contact information was obtained for contact tracing purposes as required by the Public Health unit. Upon entering, participants were shown the interview room where they could also keep personal belongings. Participants were then brought to the lab to once again see the patient set up and equipment that had been reviewed in the video vignette. They were also introduced to the family member actor. Additionally, participants were provided with the patient chart including a Kardex, interdisciplinary notes, and scheduled and unscheduled

medication administration records to review prior to starting the simulation. They were then given the opportunity to ask questions and reminded that they could leave the study at any time or choose not to answer any questions with no loss of the incentive which would be given to them. If they had no further questions or concerns, participants were asked to fill out a demographic questionnaire and sign the consent form (Appendices C and D).

Following the pre-briefing, students participated in a short pediatric acute pain management simulation developed according to INACSL (2016b) best practice guidelines. This simulation used the simulated pediatric mannequin technology Sim Junior in the simulation laboratory at Brock University. Participants were made aware that the simulated patient was wearing spyglasses to record visual and audio records of the simulation as though from the patient's perspective. Participants went through a simulation with emphasis on acute pain management, choosing and administering pain medication, and family-centered care. A standardized patient who was trained by the researcher about how to act in the simulation acted as the family member at the bedside using a predetermined script with prompts and guided responses. This actor remained consistent throughout the project.

The simulation details were as follows: a seven-year-old patient named Freddy was admitted post-operatively with appendicitis. Freddy had morphine 2.5 hours ago (as indicated on his medication administration record), but otherwise has not had any pain medication. The simulation began with the family member actor at the bedside pressing the call bell with concerns about their child's level of pain. The participant entered the room to answer the bell, which began the simulation.

In the simulation phase, the participants were expected to perform a focused assessment of the simulated pediatric patient, including a pain assessment. Based on the pain assessment results, the participant had the option to choose which pain medication was appropriate to give to the patient and practice administering it. The participant chose from the existing medication administration records as ordered for this patient. The standardized patient actor played the role of the parent and remained at the bedside for the duration of the simulation. They followed a predetermined script/role for how to interact with the participant. The simulation was observed by the researcher who was sitting across at a table approximately 10 feet away from the foot of the patient's bed. The researcher recorded outstanding observations and provided patient responses using a soundboard app. The soundboard app contained pre-recorded patient voice and sound responses such as moaning/groaning, rating pain, and basic yes/no/I don't know answers. These sound responses were projected from a speaker tucked at the top of the simulated patient's pillow. The researcher utilized the appropriate sound response based on interactions with the participant as per a pre-determined response guide. After administering the pain medication and any other interventions, the simulation was considered completed when the participant decided to leave the patient room. At this point, participants moved to the reflection phase.

During the reflection phase, the researcher guided the participant through reflection using the RPPP 3.0 tool as a form of semi-structured interview (Taplay, 2020). The participant first shared their initial thoughts and feelings coming out of the simulation. They watched the video of the care they provided from the patient's perspective and then participated in an interview with the researcher which included the

questions from the RPPP 3.0 tool (Taplay, 2020). The completion of the interview signaled the end of the first part of the study for this participant.

Each participant returned within two weeks to repeat the entire process, including the pre-brief, simulation, and reflection phases. The shortest duration between sessions was two days and the longest was nine days. The duration between sessions was determined by the scheduling availability of the lab, participant, and researcher. Repeated reflection is a novel concept to nursing simulation research and is not yet well explored. As such, there is no proven ideal timeline for when the reflective process should be repeated. For this study, a timeframe of one to two weeks was selected. This allowed participants time to process the event and the interview, without allowing so much time to pass that it was no longer memorable.

### **Data Collection**

From grounded theory to narrative inquiry to discourse analysis, researchers in qualitative fields recommend a variety of preferred methods to encourage the collection of rich data (Smith et al., 2009). IPA provides its own guidelines for data collection, emphasizing the usefulness of in-depth interviews and/or personal diaries to provide detailed first-person accounts of experiences (Smith et al., 2009). IPA also places an emphasis on collecting rich data, meaning “that participants should have been granted an opportunity to tell their stories, to speak freely and reflectively and to develop their ideas and express their concerns at some length” (Smith et al., 2009, p 56). The use of semi-structured interviews, while not the only way to collect data in phenomenological research, is one of the preferred methods in IPA to facilitate rich data collection (Smith et al., 2009).

### *Interviewing*

This study was conducted using semi-structured, in-depth interviews in accordance with the guidelines set out by Smith et al. (2009). Using a semi-structured interview format allows for creativity to help facilitate the elicitation of detailed stories, thoughts, and feelings from the interviewee. This type of interviewing allows the questions to be modified in response to the participants' responses, creating a dialogue that pursues interesting areas in depth, and allows the participant to use their own words to describe their story (Smith et al., 2009). This study used an interview schedule to “facilitate the discussion of relevant topics and allow the research question to be answered subsequently, via analysis” (Smith et al., 2009, p 58).

For a novice researcher, an interview schedule is useful to facilitate comfortable conversation and interaction with the interviewee as it encourages thoughtful discussion and sharing (Smith et al., 2009). Appendix A includes the interview schedule constructed for this study, the questions used allowed for exploration of ideas, and conversation as they happened. Smith et al. (2009) recommend using open-ended questions, providing minimal input from the interviewer, and moving between descriptive and evaluating questions to help encourage sharing from the participant. This interview schedule was developed in collaboration with the research supervisor, using an initial descriptive question to encourage sharing from the participant and then moving to the more evaluative questions of the RPPP 3.0 tool (Taplay, 2020). It should be noted that preparing an interview schedule is an iterative process and this schedule may be changed before, during, or after the pilot interview (Smith et al., 2009). Data analysis and collection occurred simultaneously, with data collected from the initial interview with a

participant influencing their second interview as part of this iterative process. In response to the data from participant 003, who indicated that they had done independent preparation for their second simulation, and in consultation with the research supervisor, the researcher chose to add a question about preparation between simulations to subsequent second interviews.

A pilot interview was conducted with the graduate student's supervisor prior to the first simulation to gain feedback on the interview schedule and the manner it was conducted in. This allowed the researcher to practice interviewing techniques, such as the appropriate use of silence and pauses to allow for expansion on information and decrease distraction throughout the interview (Smith et al., 2009). The research supervisor was present for the first two interviews, providing feedback and setting an example by assisting with prompts during these interviews.

### ***Preparing for the Interview***

Smith et al. (2009) recommend providing the participant with guidance on what to expect by informing them of the style of interview, the estimated length, and choosing a location that is comfortable and free from interruptions. This interview preparation was provided to the participant virtually prior to attending the experience and again in more detail in the in-person pre-briefing phase. For the purposes of this study, interviews and simulations were conducted in the Brock University nursing simulation laboratories at a time when no other classes or labs were scheduled to take place and that was conducive to the participant. This setting was chosen as it is a familiar, safe, and quiet space where students have practiced debriefing throughout their education for previous simulation and laboratory classes. Interviews were conducted one-on-one, with the exception of the first



two interviews where the supervisor was present. The interviewer had practiced and become familiar with the interview schedule beforehand to decrease distraction throughout the interview.

### ***Conducting the Interview***

Smith et al. (2009) highlight the importance of setting the stage at the beginning of the interview to ensure the participant knows that you are interested in hearing their stories, there are no right or wrong answers, and the schedule is flexible to allow them to expand on and provide as much detail as they can about their experiences. This process began during the pre-briefing phase and was reiterated prior to starting the interview. During the interview, the researcher leaves the research world and enters the participants' world. By allowing the participant to be the expert and the sole focus of attention, the researcher can bracket aside their pre-existing hunches and concerns and ask questions generated based on the participants' words (Smith et al., 2009).

In accordance with IPA, the researcher wrote down preconceptions on the research topic in a journal to bracket, and memo about them, before meeting with each participant. The researcher participated in what is known in IPA as the hermeneutic circle (Smith et al., 2009). According to Smith et al. (2009), the researcher starts at their point in the circle, where they are of focus, and then writes down their preconceptions to allow themselves to move to a point where the participant is the main focus and deserving of the researcher's full attention. During the interactions with the participant, the researcher is fully engaged and focused solely on what the participant has to say and how the participant understands their experiences (Smith et al., 2009). After concluding the conversation, the researcher can continue around the circle back to where they started,

now changed from their interactions with the participant. The focus in IPA is more so on the positive process of actively and attentively engaging with the participant and their words, rather than only bracketing aside the researcher's preconceptions (Smith et al., 2009).

Smith et al. (2009) recommend establishing a rapport at the start of the interview and then beginning with a descriptive question to allow the participant to get comfortable talking before moving on to more evaluative and analytical questioning. In this study, establishing rapport began during the pre-brief and extended into the interview, since the interview process involved the questions from the RPPP 3.0 (Taplay, 2020). Since these questions are part of a tool, and have less flexibility than the interview schedule, they were asked later in the interview once the participant was more comfortable. These questions are highly reflective and evaluative and encourage deep introspection and sharing by the participant. Participants may not be ready to do early in the interview so opening descriptive questions were used to start (Appendix A). Smith et al. (2009) highlight that the interview structure does not need to be followed in the order it was prepared. Nor does every question need to be asked or asked in the same way of each participant (Smith et al., 2009). Prompts can be useful to facilitate sharing of further details. However, the use of silence can also encourage elaboration, but can be a difficult balance for the novice researcher (Smith et al., 2009). The researcher practiced these techniques in a pilot interview with the research supervisor and implemented them in the study interviews.

### ***Contextualizing the Interview: Additional Data***

An interview can provide a wealth of data to analyze and work with (Smith et al., 2009). Collecting additional data, such as taking notes immediately after the interview, can help to provide context for interview material (Smith et al., 2009). For this study, the researcher set aside time after each interview to take such notes to later use as resources for contextualization and development of analysis. This was a useful way to reflect upon initial impressions of interactions with the participant, and also informed the interview schedule for the next interaction with this particular participant (Smith et al., 2009). This also helped to bracket reactions and preconceptions that were specific to this case prior to moving to the next interview experience. Data was also collected during the simulations and while watching the participant watch the video of themselves. The researcher recorded these observations as field notes and assigned them the same numerical value as the participant's transcript to use for context and further evaluation as needed.

### ***Transcription***

When using IPA methods, it is necessary to keep a verbatim record of the data collected in the interview (Smith et al., 2009). For this study, each interview was recorded using two audio devices. While a complete semantic transcription is necessary and was completed, IPA focuses on interpreting the content of the data collected, and so does not require detailed transcription of exact length of pauses or non-verbal noises such as would be necessary for conversation analysis (Smith et al., 2009). Any additional information that may be relevant, such as laughter or sounds of discomfort were included in the transcript but were done so at the discretion of the researcher (Smith et al., 2009). Transcription of the interviews was done verbatim and checked by the researcher against the audio recording to help familiarize themselves with the data and contribute to the

iterative process of data collection and analysis (Smith et al., 2009). The transcripts do not contain any identifying information, only a numeric code to ensure confidentiality.

### ***Inclusion and Exclusion Criteria***

The participants were limited to third- and fourth- year nursing students at Brock University. This cohort of students was chosen because they had completed the course: Nursing Care of the Young Family (NUSC 2P10/2P12). This helped to ensure that the students had participated in the education needed to be able to reasonably work through the pediatric nursing simulation that they were presented with.

### ***Sampling and Recruitment***

In IPA, samples are selected purposefully to include participants who have experienced the phenomena of interest (Smith et al., 2009). For this study, participants meeting inclusion and exclusion criteria were recruited using e-mails, posts to the online learning management system Sakai, and virtual lectures following a recruitment poster and invitation script (Appendices D, E and F). Recruitment activities were completed by the primary researcher. The recruitment pool included third- and fourth-year students to ensure the pool would be large enough to meet sample size requirements. In IPA, small sample sizes are encouraged due to the detailed analysis required for each data collection event, as well as organizational and time constraints (Smith et al., 2009). There is a focus on quality of analysis rather than quantity. As such, Smith et al. (2009) suggest using between three and six participants for the novice researcher, though this is a rough guide only. Working with smaller numbers allows the graduate level researcher to conduct quality, detailed analyses of each case and to also analyze comparisons between each case. For this study, each participant was interviewed twice, resulting in additional data

for analysis. In discussion with the research committee, the goal for this study was to aim for a larger sample of at least six participants to help facilitate data saturation and keep the research feasible at the graduate studies level. Ultimately, a total of eight participants were interviewed. See Appendices E, F, and G for the letter of invitation, recruitment poster, and script for in class recruitment. To encourage interest in participation for both parts of the study, incentives were provided to the students in the form of a total of \$20 in gift cards to Tim Hortons. The participants received the first \$5 gift card on basis of arriving for the first simulation experience, and the \$15 gift card on arriving at the second simulation experience. The students were informed they could withdraw from the experience at any time without fear of losing the incentive or any impact on their standing in the nursing program.

### **Data Management**

Computational software can be used to assist in organizing and coding qualitative data (Smith et al., 2009). All audio recordings of the interviews were stored on the primary researcher's computer, which has a secure network, antiviral software, and fingerprint and password protection. The transcripts and any notes taken post-interview were organized and analyzed using NVivo 11 qualitative analysis software (QSR International Pty Ltd, 2015). In addition to audio and transcript files being stored on the researcher's computer, the information was backed up and stored on a password protected external hard drive kept in a locked drawer, only to be accessed by the research team. Data will be stored for 5 years and then will be permanently deleted. Any hard copies will be shredded in a secure shredder.

## **Data Analysis**

IPA does not prescribe one single method for analyzing data, though it does illustrate the analytic process and how it may be approached to allow for flexibility and creativity of the researcher (Smith et al., 2009). IPA analysis is described as “an iterative and inductive cycle” which “directs our analytic attention towards our participants’ attempts to make sense of their experiences” (Smith et al., 2009, p 79).

IPA recognizes that there are many different ways to approach analysis that can be useful in different qualitative research situations, allowing for flexibility in the researcher’s approach to analysis (Smith et al., 2009). As such, the experienced researcher may choose to be innovative while applying the processes, principles, and strategies typically used for IPA research, but clearer guidelines are offered for the novice researcher (Smith et al., 2009). For this chapter, the guidelines outlined by Smith et al. (2009) were used to guide quality research analysis. These guidelines include six steps that help outline the coding process in detail to come to the data. Through these steps, which are explained clearly below, the researcher undertook the process of orienting to the data as a whole, taking initial notes, developing emerging themes, finding connections across themes, moving to the next case, and then looking for connections among cases (Smith et al., 2009). The researcher and thesis supervisor were involved in the analysis of the data and collaborated to seek consensus on the themes.

### ***Step One: Reading and Re-Reading***

The first step of IPA analysis takes place when the researcher first approaches the written data (Smith et al., 2009). While approaching the written transcript for the first time, the researcher listened to the audio recording of the interview while reading the

transcript. This helps to facilitate focus on the participant by matching the participants' voices to their words during future readings of the transcript (Smith et al., 2009).

During the initial reading and re-reading, Smith et al. (2009) encourage taking time to slow down and record your initial and most powerful recollections from the interview experience in a journal to bracket those strong feelings aside for a while. This was done in the same journal as the initial thoughts after each session was recorded. This can be helpful for the novice researcher as the beginning stages of analysis are often accompanied by feelings of being overwhelmed by possible connections and ideas, and recording this elsewhere can help to reduce that noise (Smith et al., 2009). Repeated reading allows for active engagement with the written data and helps the analyst enter the participants' worlds (Smith et al., 2009). This initial stage of analysis can be useful to discover the overall model of the interview and highlight the location of richer sections, contradictions, or paradoxes.

### ***Step Two: Initial Noting***

This phase of analysis is described as the most time consuming and detail-oriented portion. Semantics and language are examined on an exploratory level and anything that could be of interest is noted by the researcher (Smith et al., 2009). Through this process, the researcher begins to gain familiarity with the data and how the participant approaches, understands, and expresses themselves on a topic (Smith et al., 2009). The lack of rules about what is commented upon allows for the researcher to produce comprehensive notes for the data and spend more time on areas that are richer and warrant more detailed notes (Smith et al., 2009). These initial notes should stick close to the participant's explicit meaning and will likely describe the things that are

important to them and how they experience them (Smith et al., 2009). Using NVivo software, the researcher coded and made memos about these initial notes (QSR International Pty Ltd, 2015).

The analyst can typically use three exploratory commenting tools: descriptive, linguistic, and conceptual (Smith et al., 2009). Descriptive comments focus on “describing the content of what the participant has said, the subject of the talk within the transcript” (Smith et al., 2009, p 84). Linguistic comments focus on “exploring the specific use of language by the participant” (Smith et al., 2009, p 84). And finally, conceptual comments are more interpretive and focus on “engaging at a more interrogative and conceptual level” (Smith et al., 2009, p 84). These different types of comments were analyzed using NVivo software and grouped based on similar ideas and constructs to ensure manageability and organization of the data (QSR International Pty Ltd, 2015).

Smith et al. (2009) also speak to using deconstruction during the initial noting phase of analysis. Deconstruction or de-contextualization strategies can help to find what the participant is actually saying rather than what the researcher initially thinks the participant is saying (Smith et al., 2009). There are several strategies for this, such as reading a paragraph backwards and only one sentence at a time. These strategies were used throughout this analysis to emphasize the importance of context within the interview and the relationships among experiences.

### ***Step Three: Developing Emergent Themes***

At this point, the researcher had developed a familiarity with the data and expanded the volume of that data significantly through exploratory commenting. This



larger data set was used to develop emergent themes and involved more work with the exploratory notes rather than the transcript itself, since the notes (done comprehensively) remain close to the original transcript in description and meaning (Smith et al., 2009). Turning notes into themes was done in collaboration with the research supervisor by attempting to create concise statements of what was important from the exploratory comments of the transcript (Smith et al., 2009). Themes may also emerge from the whole text rather than just one point in the text and can be a reflection of both the participant's words and the researcher's interpretation (Smith et al., 2009).

#### ***Step Four: Searching for Connections Across Emergent Themes***

Once a set of themes was established and organized chronologically, mapping was done to link how the themes fit together (Smith et al., 2009). This portion of the analysis was not prescriptive as patterns and connections can emerge in many different forms. Smith et al. (2009) highlight abstraction, subsumption, polarization, contextualization, numeration, and function as some strategies to use to organize thematic relationships. Choosing which strategy to use depends upon the type of material gathered and the intuition and comfort of the researcher. For example, in this study, abstraction was used to pair like with like and find appropriate titles for groupings as it came naturally to the researcher (Smith et al., 2009). When creating nodes in NVivo, they can be organized using colours (QSR International Pty Ltd, 2015). For this analysis, nodes were grouped according to things that seemed similar in context, or opposites, with no written note as to why different colours were together but more a sense the researcher had regarding similarities and contrasts. These colour groupings served as the first strategy when organizing themes and sub-themes of the data for a particular interview, and it was

at this point different colours were initially labelled and mapped where and how they fit with the data as a whole. This is an example of how abstraction was used as a strategy to organize thematic relationships (Smith et al., 2009).

#### ***Step Five: Moving to the Next Case***

For the purposes of analysis in this study, each interview was considered a separate case. After completing the analysis of the first interview transcript, the researcher moved onto the second interview for that participant, and repeated the process outlined above (Smith et al., 2009). The two interviews of each participant were not considered entirely separate. They were compared to each other specifically but were initially analyzed separately. The process was repeated for each participant. In keeping with IPA, the researcher treated the next account as separate, and as much as is possible, bracketed aside the ideas emerging from the first transcript during this analysis (Smith et al., 2009). There was likely some influence from the previous analysis, however, attempting to bracket this aside through journaling allowed new themes to emerge with each account. This was then repeated for each interview transcript.

#### ***Step Six: Looking for Patterns Across Cases***

Once each case was subjected to coding for themes, they were compared to one another. Having the colour-sorted breakdown of themes identified in each analysis helped when searching for patterns across accounts. This portion of analysis has the potential to unveil themes that are consistent and potent as well as themes that are contrasting. This leads to relabeling and reconfiguring of themes as needed, depending if they are specific to individual cases or super-ordinate themes (Smith et al., 2009). Cases were compared for both interviews of each participant, and then between participants to look for patterns.

The themes were then put together in a figure to demonstrate the existing relationships between the themes across accounts and as a whole. This figure was altered many times through discussions between the researcher and the supervisor to find the most accurate representation of the participants' experiences.

### **Enhancing Quality**

There are a number of approaches outlining how to maintain quality in qualitative research that range from strict checklists to general guidelines (Creswell & Miller, 2000; Smith et al., 2009). Tracy (2010) outlines eight criteria for excellence in qualitative research that are expansive and flexible and pertain not only to the research means and methods, but also its end product. The eight markers include: worthy topic, rich rigour, sincerity, credibility, resonance, significant contribution, ethics, and meaningful coherence (Tracy, 2010). These markers may be achieved using different skills highlighted by Tracy (2010) that are flexible based on the researcher's preferences and skills, and the goals of the research.

### ***Worthy Topic***

This criteria for quality asks: Is the topic of interest relevant, timely, significant, and/or interesting (Tracy, 2010)? The research question: "What are nursing students' experiences using repeated reflection from the patient's perspective of a pediatric acute pain simulation?" is in response to a number of issues that meet this criterion. The use of simulation in nursing education is increasing as access to clinical placements for nursing students continues to decrease, making this a relevant and timely issue (CASN, 2015). As highlighted in Chapter Two, there is minimal literature pertaining to the topic of simulation-based learning for pediatric nursing simulations, and no literature pertaining

to the use of repeated reflection from the patient's perspective. This demonstrates the potential significance and interest of this study.

### ***Rich Rigour***

This quality criteria ensures that the study uses sufficient, abundant, and appropriate theoretical constructs, data, and time in the field, sample(s), context(s) and data collection, and analysis processes (Tracy, 2010). As highlighted throughout this methods chapter, this study is grounded in Interpretive Phenomenological Analysis (Smith et al., 2009). This theoretical background has been used to guide the methods of the study to ensure that rigour is met to collect rich data, spend sufficient time in the field, reach an appropriate sample size, provide context, and maintain rigour throughout the data collection and analytic process. These processes have been described in great detail throughout this methods chapter, and were enacted with great care and constant re-evaluation to ensure the study is rigorous (Tracy, 2010).

### ***Sincerity***

Tracy (2010) highlights sincerity as a goal for honesty and transparency in the researcher's biases, goals, and faults that can be achieved through self-reflexivity, vulnerability, honesty, transparency, and data auditing. Self-reflexivity is an ongoing process that began in the early stages of this project through journaling and open discussions about my biases and motivations in choosing this topic. The inclusion of a positionality statement in Chapter One helps to demonstrate the researcher's relationship to this topic and practiced ongoing journaling throughout this study to continue this practice. The researcher strove to maintain sincerity through transparency and maintaining an audit trail to provide documentation of decisions and activities throughout

the research process (Tracy, 2010). This process began through inputting literature review data into a table to ensure ease of review (Appendix B) and journaling and a commitment to sincerity was maintained throughout this study.

### *Credibility*

Credibility refers to the “trustworthiness, verisimilitude and plausibility of the research findings” and can be addressed through practices such as thick description, triangulation or crystallization, and member reflection (Tracy, 2010, p 842). Thick description can be achieved through showing the reader what is happening and allowing them to make their own conclusions about the scene rather than telling the reader exactly what to think (Tracy, 2010). To enhance credibility, thick description was used, providing concrete details to situate the data, and giving context to the analysis and interpretations made. Triangulation was done using data in the form of interview transcripts as well as observations and field notes from during the simulation, the video play back, and immediately after the interview. Triangulation was also demonstrated through collaborating with multiple researchers to enhance credibility. This was done by having both the researcher and supervisor participate in analysis of the interview transcripts to ensure deep exploration of the data from different angles and convergence of themes (Tracy, 2010). Member reflection is an opportunity for collaboration reflective elaboration on behalf of the participants (Tracy, 2010). This was done by using information from the initial interview when conducting the second interview for each participant. Any questions requiring clarification that arose during the initial interview could be clarified in collaboration with participants in this way.

### ***Resonance***

Tracy (2010) highlights the importance of resonance when creating quality research in order to “promote empathy, identification and reverberation of the research by readers who have no direct experience with the topic discussed” (p. 844). Resonance can be achieved through aesthetic merit and generalizability/transferability (Tracy, 2010). To achieve resonance, the text was presented in an evocative way that offers clarity, avoids jargon, and is comprehensible to the reader in an attempt to achieve aesthetic merit through the writing process (Tracy, 2010). Transferability is described by Tracy (2010) as the potential for the research to offer value across various contexts and situations. This study has the potential to inform the development of simulations and decisions regarding implementation of reflective practice across a variety of educational programs both in and beyond nursing education.

### ***Significant Contribution***

Tracy (2010) suggests that in order to evaluate a study’s significance, researchers should “gauge the current climate of knowledge, practice, and politics and ask questions such as ‘Does the study extend knowledge?’, ‘Improve practice?’, ‘Generate ongoing research?’, ‘Liberate or empower?’” (p 845). This topic has the potential to be used to extend knowledge, improve practice, or generate further research, making it meaningful and significant (Tracy, 2010). This is further addressed throughout Chapter Four.

### ***Ethics***

When considering ethics, Tracy (2010) states that the researcher needs to consider procedural ethics, situational ethics, relational ethics, and exiting ethics. Procedural ethics are encompassed by institutional review boards, and typically address mandates such as

do no harm, avoid deception, negotiate informed consent, and ensure privacy and confidentiality (Tracy, 2010). This study underwent a complete ethics application approved through the Brock University Research Ethics Board.

Situational ethics emerge from considering the context-specific circumstances and go above the responsibilities of review boards, pertaining specifically to the ethical actions of the researcher in response to the unveiling of unprecedented ethically important events (Tracy, 2010). Throughout this study, the researcher practiced reflection, critique, and questioning of ethical decision-making in response to ethically important moments as they arose.

Relational ethics pertain to the character, action, and conduct of the researcher and the consequences this has on others (Tracy, 2010). In response to this, the researcher committed to uphold personal values of ethics and morals as a nurse educator and researcher in the manner of interactions with others throughout this study.

Exiting ethics address how researchers leave the scene and share the research (Tracy, 2010). Once the research is published, it is beyond the researcher's control as to how the research may be read, understood, and used. However, it is the responsibility of the researcher to attempt to present the research in such a way that avoids unjust consequences (Tracy, 2010). Participants were informed that they will be notified when and where the study results are published and shared by the researcher.

For this study, there were no identified risks or emotional or psychological distress. Participants were reminded that should they feel the need during the pre-brief, simulation, or reflective practice, they may stop participation at any time. Participants

were also reminded they may seek assistance through Brock Student Wellness and Accessibility Services, which provides 24/7 assistance to students.

### *Meaningful Coherence*

The final criterion of quality in qualitative research outlined by Tracy (2010) is meaningful coherence. This refers to how the study attempted to achieve what it intended to research, that it used methods and procedures that were suited to its stated goals, and how it meaningfully connected related literature, research questions, findings and interpretations, and their relationships (Tracy, 2010). Each of these aspects were constantly kept in mind through the researching and writing phases of this study to ensure meaningful coherence was achieved. This is achieved beginning with the literature review and grounding the findings in the literature throughout this thesis.



## Chapter Four: Findings

The findings of this study stem from analysis of the data using Interpretive Phenomenological Analysis (IPA) guidelines developed by Smith et al. (2009) with the aim to answer the research question: what are nursing students' experiences using repeated reflection from the patient's perspective of a pediatric acute pain simulation? Prior to examining these findings, a summary of the demographic information will be presented.

Eight senior-level Bachelor of Science in Nursing (BScN) students attending Brock University participated in this study. Seven of the eight participants were enrolled in their third year of the BScN program at the time, and the eighth was enrolled in fourth year. All the participants identified as female in gender. Participant ages ranged from 20-22 years old, with a mean age of 20.75 years. All participants had previously practiced reflection in the form of self-reflection and written reflection in the nursing program. Seven of the eight participants had practiced peer reflection before. Seven of the eight participants have never reflected from the patient's perspective before.

Through my extensive analysis, I identified four themes and their sub-themes from the data. These will be outlined sequentially by theme and sub-themes to provide logical flow and clearly link how the themes stem from the participants' experiences. The *Interpretive* component of the IPA approach will come into play during the discussion chapter where the researchers' interpretations will be included in the form of analytic comments and comparisons to existing research (Smith et al., 2009). The four themes are: reactions, communication, appraisal of performance, and the difference between the first simulation and reflective experience (which will further be referred to as "the

difference”). Each theme is further broken down into sub-themes. For a visual representation of themes and sub-themes, see Appendix G. Please note that this is a simple visual representation of the themes and sub-themes and does not represent the intricate overlapping and entangling of these themes and sub-themes which are touched on throughout this chapter (Appendix G).

### **Theme One: Reactions**

Throughout the interviews, the participants had many varied reactions to the simulation experience and watching the videos of themselves performing the simulations. These reactions included their thoughts and feelings about how they experienced the simulations, what it was like to watch and listen to themselves, and what was significant to each participant. The theme of reactions is broken down into the following sub-themes: caring for a simulated child in pain, proximity and intimidation, and seeing through the patient’s eyes.

#### ***Caring for a Simulated Child in Pain***

This sub-theme highlights the reactions participants had to the simulation and how they experienced it. It is notable to comment that the participants specifically reacted to the patient’s expression of pain, the patient’s age, and viewing themselves wearing a mask. None of these reactions were specifically asked about in the interview but were brought up independently and repeatedly by the participants.

In reaction to patient pain, the participants spoke about how they felt dealing with a patient in pain while also completing their assessment. Participant 004 emphasized this:

I was feeling a little helpless because I wanted to like help him and help his pain go away but I felt like I couldn’t right away and I had to get like the rest of my

assessment done before I could administer his pain medication . . . I wanted to make sure there wasn't anything else that was, that stood out that would require like immediate intervention like if his vital signs were really abnormal or if there was bleeding in his like abdominal wound then I would wanna address that before giving him acetaminophen for his pain.

The participants were sensitive to the fact that the patient was in pain and often expressed feeling challenged because they knew that it was important to complete their nursing assessment first to make decisions for patient care. Participant 001 stated, "I was causing him a lot of pain with doing the assessment, but it was something . . . I had to do". Participant 003 said: "the fact that he kept moaning and groaning was, made me want to hurry up and uh finish the assessments so that I could make him as comfortable as possible".

Mask-wearing was another common topic of reaction while caring for the simulated child in pain. During this study, the world was under threat of a pandemic in the form of COVID-19. The effects of COVID-19 impacted not only the protocols behind this research but also the participants' ways of experiencing the simulations and interviews. All participants wore masks and were mandated to stand in such a position that they were at least six feet apart from the standardized family member actor. Unprompted, participants commented on wearing a mask during the simulation. Multiple participants remarked that they may need to speak louder because of the mask, and that non-verbal communication (e.g., smiling) was made difficult with mask wearing. Participant 003 expressed that the type of mask made the interaction challenging, "I hate wearing masks, I would love to be able to have the plastic like see-through ones so that

they can see my face and see who I am”. While Participant 006 commented on the fact that masks could scare children, stating:

Even like with masks . . . I feel like that would scare kids, so I know some hospitals are having pictures, so I feel like that would’ve maybe made things be like different for Freddy, made him feel less scared of who this person is.

The participants identified that they wanted to make the patient more comfortable and that non-verbal cues were impeded by mask-wearing.

Participants also reacted to the patient’s age and the experience of caring for a pediatric patient. Despite completing a maternal child clinical placement in the second year of the nursing program, participants expressed feeling out of practice in pediatric nursing as most of their clinical and lab experiences have been with adults. Multiple participants spoke about how they had missed out on some pediatric experiences due to COVID-19 and were not comfortable with providing care for a child. Participant 002 explained:

I feel like I need more experience in . . . caring for children and like interacting with their family ’cause I feel like I haven’t really got that. I didn’t get that experience . . . I never got to do the peds lab.

The patient’s age also impacted the participants in their communication style and in how they approached their care. In both the first and second simulation experiences, participants reacted to their communication with a pediatric patient and how it needed to be age appropriate. This is emphasized by one participant who stated:

I think I need to choose like slightly different communication for him specifically and then his mom . . . For Freddy, I think I should've used words that were a little more specific to a pediatric patient. (Participant 004)

Participant 002 highlights how they had to change their care approach because of the patient's age, stating:

I need to learn to remember that like he is a kid and getting to know him and make him feel comfortable first is more important um so that I can better approach the situation of being able to provide care to help deal with that pain while making him feel comfortable at the same time.

The simulation scenario of caring for a child post-appendectomy led to many reactions from the participants. In summary, common reactions were centered on the concepts of the patient's expression of pain, wearing a mask during the simulation, and the patient's age. Again, it should be noted that these areas were consistently and independently commented on by participants despite there being no interview questions specific to these topics.

### ***Proximity and Intimidation***

The reactions to proximity to the patient were at times in response to the interview questions specific to this, and at other times, brought up independently by participants. When describing the significance of proximity, multiple participants repeatedly used words such as intimidating, too close, hovering over, and personal space. This was highlighted by one participant who stated:

In the moment, like I don't think I'm that close to him but like when you watch it back you can see me hovering over him. So, like it's weird to watch from the

patient's perspective because you never really imagine that that's what it's, the proximity is actually like in real life. (Participant 008)

Participant 002 spoke about proximity and intimidation after watching from the patient's point of view:

It was interesting to see from that perspective like seeing . . . how it looks when this person's just like standing over them, especially a kid too, and like touching them and moving things around and then just like squeezing his arm and things and putting things in his ear. Like it just from that angle like made me seem really intimidating so I have never really thought about it like that . . . I think when doing it, I didn't think about 'oh, I was too close'. I was just so used to like how I would normally do an assessment, and um but the video kind of opened my eyes more to see how like I would come in and pop in and be really close and like doing an assessment and that kind of made me take a step back and realize that uh, uh, it's intimidating especially as a little kid being in pain.

This idea of intimidation was echoed by multiple participants and was directly linked to proximity to the patient. Participant 005 said, "Would it have been better if I sat down? 'Cause it felt like I was towering over him and that could've seemed intimidating to him".

Participants' reactions to their proximity to the patient and realizations that it could be perceived as intimidating for a child were powerful and consistent reactions that were found from the data. These findings highlight the specialized knowledge and skills required for pediatric nursing.

### *Seeing Through the Patient's Eyes*

In addition to reactions to patient proximity, the participants had several other reactions in response to watching themselves through the patient's eyes. Initial reactions to watching from this perspective included words such as "different, interesting, uncomfortable, and a good learning experience", but "weird" was the word most consistently mentioned. Participant 001 described their experience:

It is a little bit weird seeing myself, but I think it's a good way to learn about where you went wrong or like how you did . . . I like it actually because um like seeing this I get to see from their side of view. I never get to see that and see like where um I'm kind of, like I kind of went wrong or how I can improve just with, like not with the assessment per say but also communication techniques, how close I was, 'cause most of the time you don't take those factors into account when you are caring for a patient, like usually most of the time it's just how you did your assessment . . . so like knowledge-based and not just emotional and I think that's also important. So, that's why these type of reflections help with that aspect of it as well.

Participant 005 spoke about their reactions to seeing through the patient's eyes:

It was different, I've never done this . . . there's more depth in a point of view: 'Oh yeah this is how I actually come off to a patient' and doing there's some things I feel like: 'Oh I could've done this better'. Sometimes it was 'Okay I may just be overthinking it', sometimes it actually wasn't and I could've improved it. Yeah, it was different, super helpful, it gave me- it allowed me to have a more detailed reflection, all of those tiny things which I think is beneficial.

Additionally, the participants were observed by the researcher to have reactions while watching the videos of themselves, which were recorded in the form of field notes during data collection. Participants watched the video intently, reacting with audible sighs, awkward laughter, and visible cringes or subtle posturing changes that were perceived as discomfort. Participants appeared more relaxed the second time they watched the video, watching closely and looking away less, fidgeting less, and providing more commentary on their actions while watching the video.

Overall, the reactions to viewing the simulation experience from the patient's perspective were multiple and varied but were meaningful to each participant and impacted their reflective practice.

### **Theme Two: Communication**

This theme came up consistently and repeatedly throughout the participants' interviews and overlaps with the other themes of reactions, appraisal of performance, and the difference between first and second simulations. A focus on communication was pronounced among all participants. Although the interview guide contained specific questions about communication, participants often came to this topic before those questions were asked and/or revisited the topic later while answering other questions. This theme is broken into sub-themes of age-appropriate language, non-verbal communication, and family-centered communication. These sub-themes are overlapping but were separated when analyzing sentence to sentence and the semantics of interview comments as per IPA, and so were teased apart into distinct sub-themes.



### *Age-Appropriate Language*

Completing a simulation for a pediatric patient with a family member present was a new experience for many of the participants. In response to this situation and questions about their communication style, participants spoke about the need to change the specific words and semantics that they used in their conversations with the parent and the patient.

Participant 004 noted their communication techniques:

I definitely noticed my communication, I think that um, like I said, explaining to . . . a young child patient is something I'm not as used to . . . I think for Freddy, I think I need to choose like slightly different communication for him specifically and then his mom. Like for his mom I can explain things like really easily and use like bigger words and stuff like that . . . using different language for Freddy and his mom, so and not talking too fast and not using like um medical terms.

Participant 006 also spoke about age-appropriate language when they said:

I tried to use language that was appropriate for his age, um, there was some things I could've worded better for his age for him to understand . . . I guess just like choosing the right words, like I did a good job for the most part but then there were just sometimes where I tripped up and said words that he probably wouldn't have understood.

Participant 005 focused on using appropriate words for a seven-year-old and stated that the presence of a family member was big:

I found myself stuck on which words to use with a seven-year-old. . . the kinds of questions the seven-year-old understanding, having the most appropriate response, having the right words to say to him as well, and not making terms very

complicated. His mom being there was a big thing for me . . . I struggled explaining how, 'cause I used the term blood pressure, I don't think a seven-year-old would understand the term blood pressure.

The linguistics and vocabulary level needed while working with a seven-year-old and their family member were frequently mentioned throughout the interviews, but participants also spoke about non-verbal communication.

### ***Non-Verbal Communication***

Beyond the actual language choices, participants expressed how their non-verbal communication such as their actions and facial expressions impacted the care they provided to the patient and family-member. Participants frequently brought up non-verbal communication in the form of eye contact and smiling (despite mask-wearing).

Participant 001 mentioned their appearance and eye contact with both the patient and the family member, stating: "I think like I could have been more like happy, or . . . made more eye contact with the patient, and like look at him as well as the mom 'cause she's also concerned". Multiple participants spoke about needing to work on their eye contact, describing how they could have comforted the patient with eye contact rather than words while auscultating with their stethoscope, or maintained equal eye contact with both the child and the family member.

Participants also commented on areas in which they did well with non-verbal communication. Participant 003 explains this:

I think my non-verbal communication . . . sitting down, with a little bit of hand gestures, um would've been perceived well by the child, um, and I think that they were appropriate to the situation. Yeah, I didn't appear nervous like I felt, um,

yeah, again the eye contact, I maintained eye contact with the client, with both the mother and with, with Fred.

Participant 006 touched on the challenges of non-verbal communication with a simulated patient when they said:

I think just a couple times I tripped up over my words, but I feel like if it was a real patient, it like wouldn't have happened like that and it would've been easier to like correct myself . . . I would be able to like read his face if he understood what I was saying more, um like asking about the pain like if he looked confused, then that would've been a good prompt for me.

In many ways, the non-verbal communication was just as significant to the participants as the language and wording that they used. These sub-themes overlapped when referring to family-centered communication.

### ***Family-Centered Communication***

This sub-theme of communication demonstrates how the participants focused on their experiences of communicating with the patient and the family-member using concepts of family-centered care. Participants identified what went well and what they wanted to improve on, or what they changed between simulations, emphasizing family-centered communication throughout their responses. When asked the question, "How was the care that you provided patient-centered?" participants repeatedly brought up family-centered communication. For example, Participant 005 stated:

I tried to remind Fred of a few things, like I talked about his sister and then just the problem with him. I asked for consent with the pillow, 'I'm pulling this up, I'm pulling it down'. I explained to him before I gave him the med, 'Oh yeah this

is this', 'It's going to work in this long'. Um I told both mom and child what was, what I was doing, what I got from what I was doing, what I was going to do.

Participant 004 emphasized their interactions with the family member and how they provided family-centered care by enabling the mother to help care for her child, saying:

I really tried to involve his mom in all of the teaching that I did and made sure that she was empowered to take care of him and with the resources that she had available um even if the nurse wasn't in the room so, like, teaching her, or, showing her the pillow and like that she could like put the blankets on him and um even that she can ring like the call bell if he needs more um like pain management.

Conversely, when asked about family-centered care, Participant 002 indicated this was something they needed to work on, "I don't think it was very family-centered, that's what I wanted to improve upon. . . I didn't include the mom as much as I should have and like asked more questions about her".

Participant 007 spoke about improving communication with the family member by asking about their needs when they said:

Maybe just asking like a couple more questions to the mom and be like 'How do you feel like that your like kids in like has surgery and then is having pain?'. Like 'Are you okay?', because they're also technically our patients, you know what I mean? They're part of our patient and in holistic care, so they're part of it as well.

Family-centered care was consistently emphasized by patients as an area they were thinking about and focusing on through their communication styles and techniques.

### **Theme Three: Appraisal of Performance**

This theme focuses on the ways that the participants appraised their actions during the simulations. After the initial reactions, the participants appraised their performance using reflective practice. Multiple participants spoke to how reflecting from the patient's perspective allowed them to appraise themselves differently. Participant 006 provides an example when they said: "You get all up in your head but in real life it's a lot better than what I was thinking . . . it helped me recognize that like I just need to like feel as confident as I appeared to be". Participant 003 explained how this reflective experience allowed them to appraise their performance differently compared to previous reflective experiences, saying:

Confidence in my own abilities and in how I'm perceived is something that I've struggled with throughout all my years as a nursing student . . . so in that way, this experience was good for me to see that I at least look like I knew what I was doing . . . I've been told by my clinical instructors that I need to work on my confidence . . . Like I tried to, but it's different when you're actually able to view your own care that you gave and see, 'Wow, I actually wasn't shaking when I thought I was shaking', or 'I didn't seem so awkward when I really felt in the moment that I was making a fool of myself'.

Appraising performance is divided into the following sub-themes: feeling unsure, appraisal of care, and I could've, I should've, I would've, I will.

#### ***Feeling Unsure***

One of the ways the participants appraised themselves was identifying when they felt unsure in making decisions. Participants primarily expressed uncertainty when

interacting with the patient who was in pain, but also addressed uncertainty in choosing appropriate pain medication and choosing between a hot or a cold pack.

This was highlighted by Participant 006 who talked about uncertainty because of their obligations of care in context with the patient's pain, saying, "I also wasn't sure with the assessment part, if I should do full GI or not, it's like too painful to, I couldn't palpate or anything because of the pain".

Participants spoke about uncertainty choosing analgesics, saying "Choosing the medication, I never do that really, get to choose for myself what I wanna give him. Usually, I have like the nurse or my [clinical instructor] helping me do that, so that was pretty like big" (Participant 001). Meanwhile, Participant 007 focused on the medication form, saying "I didn't know if I should give like the chewable tablets or if I should give the liquid".

Several participants expressed uncertainty with non-pharmacological pain interventions, such as when Participant 006 said: "I wasn't sure about the ice, if I'm supposed to use ice or heat on this kind of, 'cause one of them would probably help with the pain but I wasn't sure which one would be right".

Besides identifying that they felt unsure with making decisions, participants also appraised their performance in terms of what went well and what didn't, which is the next sub-theme: appraisal of care.

### *Appraisal of Care*

This sub-theme is quite broad and includes ways the participants appraised their care. While watching videos of themselves, participants focused on what they were doing: what they perceived went well, and what they perceived went wrong. Each

participant experienced the simulation and reviewing the videos differently, which led them to appraise their care, identifying both positive and negative actions. Participant 001 gives an example of appraising their care in the following statement:

I think I did the pain assessment pretty good . . . I think my communication with like the mom was good and like giving other options if they didn't want to do the medical approach um I think that was okay. I think I did my vitals pretty good.

Participant 003 critiqued themselves as they said:

I'm not happy with my assessment, 'cause I did not look at his stomach even, um, until after I had given him medication and if there was an issue, I wouldn't've found out until after . . . there are still things that I missed in my assessment like the severity of pain, um, becoming more familiar with interacting with the family and, and the child as a whole.

Participant 004 appraised both positives and negatives in their actions, saying:

I think I hit most of like what I wanted to with the assessment and was able to um get his vital signs pretty easily and I think I picked a good medication to give to Freddy so, yeah . . . I noticed like things that I missed I think in my assessment, like I didn't ask him if he was nauseous.

Medication administration, assessments and interventions, communication, and pace were commonly included in the appraisals of care and highlighted when describing what went well and what needed improvement.

### ***I Could've, I Should've, I Would've, I Will***

This sub-theme of appraisal of performance is represented by the countless times that the participants used variations of the phrases I could've, I should've, I would've, or

I will. As part of appraising their performances, the participants spoke to multiple and varied things to change, commenting on what they believe they should have done differently and/or would do different in the future. Some of the common areas noted were communication, order/speed of actions, and non-pharmacological pain interventions. Participant 001 shows this when they identified several areas to change in their first simulation:

I feel like there's something that I could have done when I was in there first to try and help him, like me relax him. Like I just told the mom what she could do. Maybe I could have done something um 'cause you know when I was trying to pick the med he was saying like ow, he was just, he seemed very uncomfortable. So, I feel like I could have done something um first before I left . . . I could've done umm some deep breathing, like try to teach it to him, or I could've lifted the bed . . . got him an icepack or like a heated blanket – try and make him more comfortable . . . I asked the mom like some questions, and asked, I guess I could ask her like when her son is feeling sick, what does she do at home to uh like relax him or help with that with the pain, I could've done that to make it more family-centered and then see what approaches work best with uh Freddy.

Participant 002 indicated a wish to change their communication with both the patient and the family member, saying:

I feel like I could've been more um like more of like therapeutic talking and I feel like I just was kinda more straight to like doing my assessment and I don't know if I would, took the time to really get to know him as I should've to try and make him feel more comfortable because he was in so much pain . . . I feel like I



should've maybe spoke to [the family member] . . . more, asked more of her like 'oh has Freddy ever felt this pain before?' like uh 'have you seen him like this before at home?' to kind of get a better idea of like is this normal for Freddy?

Participant 004 indicated how they will use this experience to change their future practice saying, "Next time I would take a little bit more time to explain things to Freddy".

These quotes are only a small sample of the many times participants used this language to indicate what they could've, should've, would've, and will do in a similar situation. Some participants did change their actions between the first and second simulation based on these reflections, and others did not. The changes between the first and second simulation are discussed in the following theme: the difference.

#### **Theme Four: The Difference**

Participants found the entire experience to be helpful, including the practical experience of participating in the simulation, the reflective practice, and the opportunity to repeat the simulation and reflect again. This repetition allowed room for the participants to change their practice, resulting in differences between the first and second simulation. Although participants completed the two scenarios within different time frames (at minimum two days apart and at maximum nine days apart), each participant identified many changes in their actions and perceptions between experiences. This broad theme focuses on "the difference" and is broken down into the following sub-themes: preparation, perceived improvements, reflection made the difference, more calm and more confident, and moving forward.

### *Preparation*

Between the two simulations, the participants were not directed to do anything with their time off but repeatedly, participants spoke about what they had done to prepare for the second simulation. The participants independently prepared for their second simulation with no direction from the researcher. Preparations included reviewing information, watching videos, or writing out a plan. Throughout their second interview, Participant 003 revealed ways that they had prepared, saying:

I had gone home, I had looked up indications for ibuprofen vs Tylenol, I had looked up, um or I had practiced an assessment a couple times . . . I took vitals on my husband.

Preparation was highlighted by Participant 007, who said:

I like went through the steps in my mind and I like kinda was like ‘I’m gonna do this and then this and then this’ . . . and then I like wrote the steps out . . . I kind of knew more about the medications before I like went into it so I knew what like the peak time was and I had like certain side effects like memorized.

Participants 008 and 005 were both observed taking notes during their first reflections stating that they were going to use these to prepare for the second simulation. This was evidenced when Participant 008 said:

I looked over like properly structuring the assessment, so like not going in, listening to his bowels asking him questions then doing vitals, instead I remembered, like I looked at my notes, vitals, pain assessment, and then doing your focused assessment, which I think helps me be more structured about the assessment.

The participants' preparation between simulations contributed to making the difference between how they experienced each of the two simulations. Although they had not been asked nor expected to prepare, participants had used notes, discussed the scenario with family and friends, or practiced at home. These preparations helped them to improve their performance in the second simulation.

### ***Perceived Improvements***

When comparing the difference between the first and second simulation, the participants consistently identified the areas they felt were improved. Participant 002 highlighted how repeating the experience and having the opportunity to reflect twice led to these perceived improvements, saying: "I did have improvements that I don't think I would have if I just reflected that one day . . . I was able to better remember the areas that I wanted to improve upon". Among the participants, perceived improvements were highlighted in the areas of proximity, pace, communication, family-centered care, interventions/assessments, and perception of self from the patient's perspective.

As a testament to improved pace, Participant 007 said, "I was calmer, I didn't talk as fast, I was slower with the questions" and Participant 003 said, "I felt like I slowed it down . . . my pace was better".

Participants also identified perceived improvements in communication, this was highlighted by Participant 008, who said:

I think that my communication style in terms of like talking to mom and asking more questions was better today, because last time I didn't really ask a lot of questions. Like I didn't ask when he last had a BM or gas or anything. So, I think asking those questions and including mom made my communication better.

Participants also highlighted improvements to family-centered care. For example, Participant 007 spoke to how their family-centered care improved with changes in communication: “This time I made sure that I involved family-centered care. So, I like straight up asked the mom [questions] but I made sure I told Freddy: ‘Hey, can I ask mom now?’”.

Overall, the greatest improvements noted by the participants were related to their interventions and/or assessments. Participants spoke to an overall improved assessment that was more thorough and interventions that included more non-pharmacological pain interventions in the second simulation. Participant 003 said, “My assessment was stronger, it was more thorough, definitely”, while Participant 005 said, “I think I did a lot more this time than with non-pharmacological interventions, just helping get him a bit more comfortable instead of just the medication”. Participant 003 also explained how they used their reflection to improve the care provided, saying:

I reflected last time on how I, I could’ve made him comfortable right away instead of going out and getting him medication. I mean there, there are benefits to both sides to both get the medication in him as soon as possible so that it can take effect, but it doesn’t take long to put a pillow under his knees or ask him if there’s anything else that I can grab for him while I am out of the room, instead of going back and forth out of the room a couple times. Um so I reflected on that before so this time I, yeah I made him comfortable with the pillow, I asked him about a warm blanket, I asked him if he wanted ice, um, part of that came from knowing that there was ice available but um, yeah and then I also asked if there was any distractions that he wanted.

These quotes highlight how participants perceived their improvements between the first and second simulation.

### ***Reflection Made the Difference***

Participants spoke about how using reflection led to the differences between their performances in the first and second simulation. One of the questions from the interview schedule was: *What did it mean to you to reflect from the patient's perspective?* In answering this question, and when talking about the experiences in general, participants found the reflective experience impactful between the first and second simulation.

Participant 002 highlighted the impact on repeating reflection, saying:

I wanted to improve upon and think of how like certain way[s] I acted last time impeded my ability to get to know the patient or care for them. So, [reflecting] a second time I feel like I did have improvements 'cause I was able to um, try and focus more on my communication.

When reflecting from the patient's perspective, Participant 003 said:

I've never experienced it. It was very eye-opening um, I thought I would feel more uncomfortable watching myself um, because of the uncomfortable feelings that I felt during the assessment giving the assessment, um like and the fact that I wasn't comfortable or convinced of the care that I was giving. But then when I watched it back, it increased my confidence in myself.

Participant 002 highlighted how this reflection was different than previous reflections they had done, saying:

I don't know if I would've um understood it to that angle when I reflected just like writing something down like an experience. I don't think I would've um

thought that, no, 'cause it maybe like writing it down I would've been like 'oh yeah I was talking to the mom and then talking to Freddy' and I don't know if I would've maybe seen it from that angle just writing it and not being able to see it.

In general, participants found reflection from the patient's perspective and repeated reflection to be meaningful and make a difference in their care. They also found it to have increased their confidence and comfort levels between simulations.

### ***More Calm and More Confident***

Every participant spoke to their increased confidence and/or comfort levels in the second experience, despite a lack of questions or prompts about this from the researcher. Participants used the words calm, comfortable, confident, and better to highlight the difference between their first and second experience. Participant 004 summarized this when they said: "I felt a lot more calm going in, like a lot more confident just like going in and I think, 'cause I had done it before I, and I had time to think about it and . . . I felt a lot better". Participant 008 spoke about how the difference was seen while reflecting from the patient's perspective, saying:

You could tell that I had more confidence today . . . compared to like last time, just from the patient's perspective like I seemed more like calm and confident in the assessment that I was doing . . . It definitely made me way more confident and . . . in between the first one and the second one it allowed me to reflect on like what I could do better in the moment to ensure that the patient is getting the better experience in the end.

Despite the increases in their calmness and confidence, none of the participants indicated that they had completed the second simulation flawlessly, leading to the next sub-theme: moving forward.

### ***Moving Forward***

Despite all the perceived improvements they had, the participants continued to identify areas for improvement moving forward beyond the second simulation. Often these areas were not entirely new concepts but were things they wanted to continue to work on or continue to implement moving forward. The areas highlighted most included communication, the assessment in general, and proximity to the patient.

Participant 002 spoke to how they had intended to improve communication but did not fully reach that goal in the second simulation, saying:

I think I had wanted to include the mom more and talk to her, I think I said that in my reflection last time and I don't think I did that as well, I feel like I focused more on Freddy, which was good, but I didn't pay enough attention to the mom, I feel like I could get her to ask more questions if she needed to.

Participant 003 spoke to their assessment in general when they said: "There are still things that I missed in my assessment like the severity of pain, um, becoming more familiar with interacting with the family and, and the child as a whole". Participant 008 highlights the need to continue working on proximity:

Still with like proximity and everything like that, if I was the patient, I could feel like the nurse was kind of in my personal space. So, like reflecting from that aspect, like I saw that I needed to change the way I was standing or the just making it more comfortable for the patient just so he didn't feel as if like a

stranger was in his personal space while they were providing care because that can make children really uncomfortable. So, like just from that aspect I think that I would improve on that next time.

During the reflective practice, the participants focused on both their strengths and what they wanted to continue to improve on in future practice.

### **Findings Summary**

In summation, the analysis of this data led to four overarching themes: reactions, communication, appraisal of performance, and the difference and 14 sub-themes. These themes capture how the participants experienced repeating reflective practice on a pediatric nursing simulation using the RPPP 3.0 tool (Taplay, 2020). The overlap and interconnectivity across themes and sub-themes was frequent and demonstrates the complex nature of the phenomena explored. The following chapter will explore the researcher's interpretations of these results, how the participants' experiences compare with existing research, and the insights and future work that might be gained from these findings.



## Chapter Five: Discussion

Through narrative quotes, the experiences of eight participants using repeated reflection from the simulated pediatric patient's perspective have been shared. These experiences help to address the research question: what are nursing students' experiences using repeated reflection from the patient's perspective of a pediatric acute pain simulation? The shared experiences help meet the objectives: (1) to explore student self-reflections after viewing their practice from the pediatric patient's perspective, and (2) to understand the experiences of nursing students using RPPP 3.0 then repeating a pediatric acute pain simulation scenario and repeating the reflection (Taplay, 2020).

This chapter will present a discussion of the experiences of these participants. Existing research in similar areas will be compared with the findings and limitations of the study will be discussed. Recommendations for nursing education, practice, and future research will be shared.

### Reactions

Notable in the findings were the participants' consistent expressions of discomfort while reflecting on caring for a pediatric patient in pain. This was surprising because all the participants had multiple clinical experiences where they have assessed for and cared for patients in pain. In an article by Bernhofer and Sorrell (2015), researchers explain how nurses providing pain management experience moral distress, especially when they feel they are unable to provide successful pain relief (Bernhofer & Sorrell, 2015). The findings from this study advance this literature by showing that moral distress can be experienced even when assessing a pediatric patient in pain and planning pain relief. The participants were uncomfortable and often hesitant in caring for a patient in pain, and

although they had the ability to intervene, they expressed concern over the timeliness of the interventions and the duration it would take before successful pain relief was achieved. Participants expressed having the knowledge in how to intervene, but also expressed discomfort, hesitancy, and uncertainty about how to best intervene with pharmacological and non-pharmacological methods. This finding differs from the literature by Amponsah et al. (2020), which found final year nursing students have insufficient knowledge and attitudes towards pediatric pain management.

The trepidation around caring for a patient in pain was manifested by the participants' expressions of feeling rushed. Despite there being no time limit on the simulation, participants described feeling pressured to complete their assessment quickly prior to administering pain medication. The Hawthorne Effect says that people perform differently when they are being observed, which may explain why participants felt this pressure (Baxter et al., 2015). Baxter et al. (2015) explain that the Hawthorne Effect diminishes as rapport is built between the participant and observer, and the longer the person is observed. In this study, participants described the feeling of pressure to have improved from the first to the second simulation, but this reaction remained prominent throughout both. This supports work by Liljedahl et al. (2016), which found nursing students expressed frustration in feeling slow as part of a theme of being overwhelmed by the responsibility of care in clinical nursing placements. To try and address this feeling of frustration or feeling overwhelmed, future simulations could include an aspect of highlighting these feelings in the debriefing for this simulation.

A fascinating finding was that participants in the first simulation did little in terms of non-pharmacological pain management prior to leaving to get medication. This

contrasts to the second simulation, where all participants offered non-pharmacological pain management options while simultaneously completing their assessment. These non-pharmacological pain management interventions included distraction, family engagement and support, repositioning, and reassurance. This finding does not support literature from Amponsah et al. (2020), which indicated that senior-level nursing students have poor knowledge related to non-pharmacological pain management in children. The participants had the knowledge, it just took practice and a second attempt to result in translation of the knowledge to their simulation practice. It would be interesting to apply the research by Amponsah et al. (2020) to a repeated reflection and see if repeating the scenarios would change their results.

As part of their reactions, participants described the simulation experience, with many of them highlighting it as “weird”. This was also reflected in their observed reactions while watching the videos of themselves through the patient’s eyes. The participants were observed watching the video with intensity and reacting with sighs, awkward laughs and at times cringes, or expressing subtle facial cues, that were interpreted as discomfort. This discomfort improved between the first and second experience, where participants were observed to watch closer, look away less, fidget less, and to comment out loud more on their actions while watching the second video. This adds to research by Taplay et al. (2021) by highlighting how the participants experience repeated video-based reflection, specifically from the pediatric patient’s perspective.

Participant reactions also included reactions about proximity to the patient. This finding was not surprising, as it was part of the interview schedule guided by the research tool, the RPPP 3.0 (Taplay, 2020), so it is only fitting to compare the results of this study

with other work done with this tool. There is one published work which used this tool, where participants provided care for a simulated intubated patient wearing a GoPro® camera on its forehead (Taplay et al., 2021). In the study by Taplay et al. (2021), the concept of personal space was identified as significant for their participants. This is similar to the finding on proximity noted in this study, thereby supporting the concept that physical proximity is significant.

Although both study results show common experiences surrounding proximity or personal space, this study advances the concept by including the idea of intimidation being linked to proximity. Perhaps it was because the perspective was from that of a child rather than an adult, but intimidation came up repeatedly in conjunction with proximity when watching from the child's perspective. Proximity, or intrusion of personal space, is considered an intimidating behaviour (Fall & Howard, 2018). Intimidation can be used as a means to control relationships (Fall & Howard, 2018). The participants in this study struggled with the concept of looking or feeling intimidating toward the child when they were in the patient's personal space. This highlights the need for reflection from the patient's perspective since participants expressed how they may not have noticed this through other means of reflection, such as writing, peer reflection, or verbal debriefing.

Although relevant literature surrounding 'proximity' and 'intimidation' in pediatric nursing was not found, it has long been recognized that hospitalization can be psychologically traumatizing for children (Cartland et al., 2018). Sheehan and Fealy (2020) found that trust is central to the therapeutic relationship between a nurse and child. Children generally trust nurses, but this trust lessens with repeated hospitalizations resulting in one fifth of children, in their study, who reported fear of the nurse (Sheehan

& Fealy, 2020). This aligns with the idea of intimidation in relation to proximity brought forward by the participants in this study. Proximity may be a factor that contributes to pediatric patients' fears as closeness could suggest a hands-on intervention is imminent, such as a painful procedure or venipuncture. This topic requires further research to determine the relationship between fear, intimidation, and proximity in pediatric patients. This notion of proximity and intimidation should also be further explored in adult populations.

Seeing through the patient's eyes is a new topic to nursing simulations using video technology. Taplay et al. (2021) pioneered this technique with the development of the RPPP 3.0 tool. The reactions participants had to seeing through the patient's eyes between this study and the original had differences. The differences were related to the essence of the patient scenario. In the original study, the patient was an intubated adult, whereas in this study, the patient was an alert child in pain. In the original scenario, participants reacted to personal space, communication imbalance, and the concept of "doing for" the patient. Whereas reactions in this study focused on patient pain, mask-wearing, and proximity.

Although reflecting from the patient's perspective was highlighted as a reaction, it was also part of the findings of appraising self in the original study, and therefore will be discussed in this context. The participants in this study commented on being able to appraise their performance by seeing what they did well or what they need to work on. They indicated that independently reflecting using writing or discussion without video may not have led them to appraise their performance in this way. This helps to demonstrate *why* seeing through the patient's eyes offers value, how every patient

scenario is different, and offers a different perspective of the nurse caring for them. A nurse cannot act the same way for each patient and scenario and expect it to be perceived the same. These findings align with work by Wilbanks et al. (2020), who found that video-based reflection allows students to appraise their performance objectively compared to faculty-led debriefing without video. Wilbanks et al. (2020) explain how, in debriefing without video, there can be controversies of what activities were performed, which can impede the reflective process. This bias is reduced with video-based reflection. Video-based reflection using different nursing scenarios has the potential to offer different perspectives and insights. This supports the idea that students have different needs and perceptions when it comes to debriefing. Combining video-based reflection with a reflective practice tool and pre-briefing materials, as was done in this study, can lead to effective debriefing and appraisal of performance, which may lead to changes in future practice.

The participants' reactions demonstrated their empathy towards the pediatric patient in pain and opened their eyes to the potential impact of their proximity to the patient and how their care might be perceived through the child's eyes. These reactions were reflected on with the use of the RPPP 3.0 tool and led to changes in their practice when conducting the repeated simulation and planning for future practice in pediatric nursing (Taplay, 2020).

### **Communication**

Communication as a theme was not surprising to have been identified from the data as participants were specifically asked about their communication in the debriefing interview. Participants expressed feeling unsure about how to change their language to be

age appropriate when addressing the pediatric patient and the family-member. This is supported by Cole and Foito (2019), who found that students in their study expressed discomfort when communicating with the family and child in a pediatric end-of-life scenario. Cole and Foito found students were worried about saying the right thing to both the patient and the family member (2019). This was reiterated by the participants in this study.

Participants had completed a course on maternal/child nursing and had been introduced to the concept of family-centered care. Due to this, family-centered care was included in the debriefing questions. In the interview schedule, there was one question using the term ‘patient-centered care’ and a separate question about ‘family-centered care’. This differs from the original study using the RPPP 3.0 tool, which only uses the term ‘patient-centered care’ (Taplay, 2020). Regardless of the terms used, the participants in this study consistently responded using family-centered care concepts, including the family member as part of the ‘patient’ they were communicating with. Participants were not informed that this simulation would have any focus on family-centered care. Pre-briefing did not include any emphasis on this other than to say a family member would be present. Without guidance, the participants demonstrated a strong grasp of person- and family-centered care through their focus on communication with both the child and the family member, exhibiting a clear link between theory and practice. This simulation scenario provided the right set of circumstances for this knowledge translation to be demonstrated.

In this study, participants spoke about communication with both the child and the family-member as significant. Family-centered care is considered to be the standard of

pediatric health care by many hospitals, clinics, and other health care settings (Kuo et al., 2012). However, there is much ambiguity in the literature surrounding the terms used to describe it, including person-, patient-, and family-centered care. Regardless of which question was asked, the participants answered using concepts of ‘person- and family-centered’ care as defined by the RNAO (2015). Person- and family-centred care emphasizes treating the whole person as a unique individual, with needs beyond just their illness or disease (RNAO, 2015). The ‘patient’ in this study included both the family member and the child, which was clearly demonstrated by the participants. By approaching care through a person- and -family centred approach, nurses can begin to understand the patient’s experience of health, illness and wellness, the role of family members in their life, and the role they may play in supporting the achievement of health goals (RNAO, 2015). It is positive that the students applied a person- and family-centered approach without direction. It would be interesting to see if they used this approach for an adult patient like they did with the pediatric patient.

Participants frequently identified answering family-member questions as something they wanted to improve on and identified it being “big” that the family-member was there. None of the participants described having the family member there as stressful, despite indicating it was a new experience for them. This contrasts with research by Boztepe and Kerimoğlu Yıldız (2017), which described barriers to family-centered care experienced by nurses working in pediatric units in Turkey. The experiences of those nurses indicated that having parents present can be a stressor and that their questions can lead to the nurse feeling under pressure (Boztepe & Kerimoğlu Yıldız, 2017). It would be interesting to explore if nursing students experience this



differently than nursing professionals, and if that feeling of pressure is experienced differently across varying cultures. It would also be interesting to explore how including a family member actor in simulations of adult patients impacts students' experiences.

The participants in this study reflected on communication as something they wanted to improve on in future clinical practice. This is similar to findings from the original study applying the RPPP 3.0 tool in a scenario with an intubated patient, where communication was also a central theme from their data (Taplay et al., 2021). However, there was no 'family' at the bedside (Taplay et al., 2021). Instead, their findings showed an imbalance of communication, with verbal communication being one-sided and needing improvement (Taplay et al., 2021). Taplay et al. (2021) did not specifically comment on non-verbal communication in their research study.

Non-verbal communication was an interesting sub-theme from this study and may be directly connected to the use of video-based reflection. Not only did the participants identify the importance of non-verbal communication, such as eye contact or facial expressions, they were also observed to have improved in these areas between the first and second simulation. MacLean et al. (2019) found similar results when studying perceptions of nursing students using video-based reflection on discharge communication skills training. These authors illustrated how video-based reflection allowed greater self-awareness in the students when it came to non-verbal communication.

Another study by Heinerichs et al. (2013) studied non-verbal communication skills using video recording and debriefing of simulation exams for athletic training students. The participants in their study used a self-directed reflection questionnaire to guide their reflections on multiple different simulations over the duration of a course.

They found that using video-based reflection in combination with the feedback questionnaire allowed the participants to improve their non-verbal communication skills and increased their confidence and awareness (Heinerichs et al., 2013). This work supports the idea that video-based reflection and guided debriefing is useful in guiding change and improvement in interpersonal communication.

Communication is a skill in nursing and other disciplines that requires repeated practice and reflection. Participants in this study found their language, non-verbal communication, and family-centered communication to be of significance and improved their practice between simulations. Because of the noted changes between simulations and the noted improvements, it would be interesting to see if participants will carry this new learning forward into clinical practice.

### **Appraisal of Performance**

The theme of ‘appraisal of performance’ was expected because participants were asked about their strengths and weaknesses and are in the habit of evaluating their simulation performances as part of their curriculum. These findings align with the findings by Taplay et al. in their 2021 study using the RPPP 3.0 tool, which describes similar results in the theme ‘critiquing self’. This theme highlighted where participants evaluated the areas they did well on and what they would like to improve on. This concept of students evaluating their own performance is not new to nursing education and is a mandated part of nursing practice in the form of reflective practice (College of Nurses of Ontario, 2002).

One of the areas in which the participants appraised themselves was in feeling unsure. A lot of this uncertainty was focused on medication administration. Participants

spoke about how they were unsure which medication to give and which would be most helpful. The participants had time to review the patient chart, Kardex, and medication administration records prior to starting the simulation and to ask questions about these if they had any. Despite this time to orient themselves to the scenario and create a possible plan of action, participants were observed to take a considerable amount of time when selecting a medication, especially during the first simulation. This leads to questions about why this occurred, was it a lack of pediatric-specific training in pain medication administration? A lack of hands-on clinical practice in this area? A feeling of pressure in being observed by the observer or recorded on camera? This requires further research and exploration.

When debriefing, participants identified areas for improvement in medication administration, such as explaining the mechanism of drug action, choosing the appropriate route, and performing proper safety checks. These uncertainties are supported by Fusco et al. (2021), who studied medication safety competence of undergraduate nursing students. The study found that senior nursing students did not demonstrate greater medication safety when compared to junior nursing students (Fusco et al., 2021). This stresses the importance of providing continued opportunities for students to practice medication administration for both pediatric and adult nursing throughout their undergraduate curriculum to improve safe practices.

The sub-theme I could've/I should've/I would've/I will was an incredibly interesting finding from this research. Using this language, participants indicated a dedication and willingness to change and improve. Their words were reflective and indicated a deeper appraisal of their performance beyond a simple evaluation, to

considerations of how their actions could be changed to improve future practice. This aligns with work by Yoo et al. (2009), which shows that video-based self-assessment can improve student nurses' clinical skills through self-awareness and self-evaluation of both positive and negative behaviours. It also results in a high level of student satisfaction with learning (Yoo et al., 2009). Reflection from the patient's perspective has potential to add even more self-awareness by giving the learner insight into how the patient could experience their actions. This desire to improve practice could translate into the clinical setting thereby showing the benefit of repeating simulated experiences and reflections.

### **The Difference**

The theme the difference is perhaps the most interesting as there was no equivalent research surrounding this data to compare with. One main difference between this study's design and that by Taplay et al. (2021), where the participants only participated in the simulation and reflection once, was repeating the simulation and the reflection. Repeated reflection is a new concept to simulated nursing education and resulted in the major theme of the difference. Repeating the experience and the reflection provided unique experiences for the participants. Noteworthy are the ways in which participants prepared for the second experience. They identified successful improvements, expressed how they increased in confidence and comfort level, and committed to continued improvement moving forward. Additionally, use of guided reflection, specifically through the use of the RPPP 3.0 tool, was found to be an asset (Taplay, 2020).

The participants found the reflections to be a positive and meaningful experience, and this was in part because of the use of the RPPP 3.0 tool that was used to guide the

reflection. Participants in this study identified how they were able to make changes and improve on their practice because of the guided reflections they partook in. Although not specific to the RPPP 3.0 tool by Taplay (2020), the idea that guiding reflection helps nursing learners reflect in a meaningful way is also supported by multiple other researchers in nurse education. Smith and Jack (2013) found nurses to find reflective writing helpful, but also addressed how nurses might need guidance to reflect in a meaningful way. This aligns with what Taplay et al. (2021) emphasize: that the use of a reflective practice tool to guide simulation debriefing and reflection is helpful and impactful for nursing education. This supports the use of the RPPP 3.0 tool in combination with watching the videos from the patient's perspective. The RPPP 3.0 tool guides the participants in their reflection, helping to make it meaningful and influence change (Taplay, 2020). Repeating the process also allowed students to become familiar with the tool. When they watched the video a second time, they could look closer for the things they would be reflecting on. Moving forward, repeating simulations and reflections while using the RPPP 3.0 tool (Taplay, 2020) as a guide is recommended to assist students with deep meaningful reflections to enhance or change their practice.

The use of repeated reflection in video-based simulation was found to be a benefit with the participants of this study, but it is not well-researched. Bussard (2016) created a study where participants reflected multiple times using video-based reflection over the course of a term. However, their study used different, progressing simulations each time. Their work found similar themes to this study including confidence, improved communication and decision-making, and a change in clinical practice (Bussard, 2016). Bussard (2016) highlighted decision-making as a central theme to their participants'

experience. They found that over the course of the term, students identified feeling more confident in their communication and decision-making. This would ultimately lead to a change in clinical practice. Although Bussard did not subject participants to repeated reflection on the same scenario, nor were the videos taken from the patient's perspective, the study supports the findings from this study that video-based reflection impacts nursing students' confidence, communication, and changes to practice moving forward (2016).

The preparation that students did between simulations is noteworthy. This self-directed work was fascinating and completely unanticipated. Participants were not directed to complete any preparation between simulations. Yet, they repeatedly spoke to how they had used their spare time, during their full-time studies, to reflect and prepare to do better in the second simulation. This was an ungraded simulation. Even though there was an incentive for participants to participate, there was no incentive or expectation from the research study for participants to improve or change their practice. The participants took this initiative on their own accord, with many of them expressing their gratitude in having the opportunity to practice pediatric nursing in this setting. There was a change in the participants' engagement as self-directed learners, as was evidenced through their self-directed preparations between simulations. This aligns with work by Zhang et al. (2019), which explored nursing students' perspectives on video-assisted debriefing and found that students identified a need to be motivated learners to be successful in video-assisted debriefing. Zhang et al. (2019) described motivated learners as actively participating, willing to step out of their comfort zones, and showing resilience to stress and criticism. The research by Zhang et al. (2019) uses the term

‘motivated learner’, which aligns well with the findings of ‘self-directed’ learners as they both focus on how students contributed to their own learning to ensure success. This is also supported by Yoo et al. (2009), who studied how video-based self-assessment affects the abilities of nursing students’ skills and perceptions, with results showing improvement on a post-test and satisfaction with this form of self-assessment. This supports the claim by the students in the study by Zhang et al. (2019), who stated that nursing students should act in the role of a motivated learner and take responsibility for their own learning.

The sub-theme ‘moving forward’ speaks to participants’ commitment to continued improvement. All the participants indicated changes they will make in their future practice after participating in the simulations and reflections. The participants expressed a commitment to provide family-centered care with good communication, timely interventions, an awareness of proximity, and additional comfort measures such as non-pharmacological pain management. The unprompted preparation participants did between simulations and their continued comments on what they would like to improve upon speaks to their desire to do better. This desire and level of self-directedness that the students demonstrated through preparation could help participants to transfer this knowledge into clinical practice.

The differences between first and second simulations was unprecedented and provided novel insights into reflective practice in simulation-based learning. Repeated reflection and preparation by the participants made the difference in their improvements, confidence and comfort, and knowledge moving forward. The use of a reflective tool, the RPPP 3.0, made a difference in the participants’ reflective practice (Taplay, 2020).

## **COVID-19**

This research study was conducted during the height of a global pandemic. As highlighted in the previous chapters, this impacted the way the research was conducted and the way the participants experienced the study. COVID-19 also led to some challenges in this study. For example, participants wore masks for the simulations and interviews. This limited the amount of observable data that could be collected as participants' mouths and noses were not visible. Only their eyes were visible, making facial expressions more difficult to observe and interpret. Additionally, participants reacted to mask-wearing while watching their care from the patient's perspective. The fact that the participants had to wear masks was mentioned by the participants multiple times. They remarked on how it could be perceived as scary or intimidating for a child. Rushton and Edvardsson (2020) support this in their research about mask-wearing during the COVID-19 pandemic, suggesting that there may be difficulty portraying a caring attitude and risk of depersonalization due to wearing a mask. They go on to say that nurses wear masks in an act of caring for their patients and peers, but may now need to adjust the way that they embody our caring expressions by using their eyes more and in other ways beyond just facial expressions (Rushton & Edvardsson, 2020). For the student nurses participating in this study, mask-wearing may be an ongoing expectation in their future employment as a nurse. Using video-based reflection to see facial expressions and actions has helped these participants to understand how mask-wearing can be perceived through the pediatric patient's eyes.

Due to COVID-19, the pre-briefing sessions were held virtually prior to the simulation experiences. During the pre-brief, participants expressed feelings of



anticipation related to being able to attend the lab. Participants expressed feeling nervousness and excitement, stating that they had not been allowed in the university's nursing simulation lab in over eight months. This could have led to participants feeling out of practice or lacking in confidence, but they were also grateful for the opportunity to practice in a hands-on, in-person context during a time when nearly all their learning was online. This desire for in-person experiences may have aided in the recruitment of participants.

### **Limitations**

There are several limitations to this study that could be improved upon with further research. One limitation is that this study was performed at a single nursing school in Ontario, Canada using a simulation scenario specific to pediatric nursing. Despite all being senior students, only one student was in fourth year. Moving forward, a greater representation of each level of student may provide new information. Studying the experiences of students at different levels in nursing education, along with graduated nurses, would provide further insight into understanding this phenomenon. Additionally, none of the participants who volunteered for this study identified as male in gender, despite the increasing number of males graduating in the nursing profession (Canadian Nurses Association, 2019).

Next, in the context of this study, only the perspective from the child's point of view was explored. Including the perspective of the family member could offer more valuable data, adding to the emphasis on person- and family-centered caring.

Since the pre-brief was mandated to be done over the phone/online because of COVID-19, not doing the pre-brief in person may have impacted the experience for the

participants. Additionally, enhanced protocols surrounding screening and access to the simulation facility may have impacted the participants' comfort levels. As mentioned earlier, mandatory mask-wearing impeded visibility of facial expressions such as smiling. COVID-19 protocols mandated that the participants stay at least six feet apart to maintain a safe physical distance between the participants and the actor, thus restricting the participants' ability to utilize the full space of the patient room.

### **Implications for Nursing**

This research study leads to numerous implications for nursing education, practice, and further research.

#### ***Education***

Nursing education is constantly evolving, changing, and adapting as the nursing profession does. Considering COVID-19, it is important to realize, now more than ever, how meaningful simulation-based learning can be for students. The use of repeated reflection in simulation does not offer the same experience as clinical placement, but it may offer something different: the chance to repeat a reflection on a nearly identical experience.

The findings also demonstrate that repeated reflection in conjunction with video-based recordings can be used to increase participant confidence and comfort levels because it results in real-time, unbiased visual feedback for students so they can see how they improved. In a time where nursing placements are being cut and enrollment is increasing, student confidence and comfort levels could be impacted by a decrease in clinical hours; this teaching strategy can help address that.

The findings show the participants were driven by their desire to improve, and that repeated reflection in conjunction with video-based recordings coincided with self-directed preparation. This reinforces the need to support students as motivated learners and promote self-directedness through the use of repeated reflection in future nursing education to enhance reflective practice.

The need for continued education and practice opportunities surrounding medication administration are evidenced by this study and supported by existing literature. Incorporating more opportunities to practice medication administration in a simulated environment may help to address the uncertainty nursing students feel when making decisions around medication administration and help improve safety and preparation for transition to practice.

Debriefing is a necessary component of simulation-based learning to achieve learning goals and increase competency. Guided debriefing or reflection is shown to provide increased satisfaction and improved clinical skills for students (Yoo et al., 2009). The RPPP 3.0 tool developed by Taplay (2020) is useful in guiding student reflection from the patient's perspective. As mentioned earlier, the original research tool, the RPPP 3.0, uses the terminology 'patient-centered care' in one of the questions to guide reflection (Taplay, 2020). Future users of this tool should consider changing this terminology to 'person- and family-centered care' instead for future use in debriefing.

Reflection using spyglasses from the pediatric patient's perspective provides a distinct point of view that offers unique insight and value, which differs from experiences gained in clinical placements. It may be helpful in nursing education to use spyglasses

from the viewpoint of the patient, family member, and other interdisciplinary team members to provide various perspectives for deeper reflection.

### *Practice*

Reflective practice is not only an expectation for nursing education, but also for nursing practice (College of Nurses of Ontario, 2002). Nurses who are currently practicing could use this technology to help change and improve their practice. Person- and family-centered care remains inconsistently defined across various institutions but participating in reflection from the pediatric patient's perspective could help nurses gain a deeper understanding of how using person- and family-centered care impacts their patient population.

Person- and family-centered care remains an important and valuable concept that requires focus in nursing practice. Person- and family-centered care is useful in nursing beyond pediatric nursing and should be emphasized for patients of all ages to establish therapeutic relationships, treating the whole person as a unique individual with needs beyond just their illness or disease (RNAO, 2015).

During the COVID-19 pandemic, hospital staff must wear masks and other personal protective equipment at all times. Some medical settings require the addition of eye protection, gowns, gloves, and hair coverings. The possible ramifications of wearing personal protective equipment on depersonalization and intimidation for patients are briefly touched on in this study. We do not yet know the full implications of how wearing personal protective equipment impacts patient perceptions of care. It is important moving forward that nurses find ways to demonstrate caring and connection to create therapeutic nurse-client relationships, despite the physical barriers of personal protective equipment.

### ***Recommendations for Further Research***

Because this research is the first of its kind studying repeated reflection, it opens up many different avenues that require further research. Repeating reflection was incredibly impactful for the participants in this study and requires further study in both qualitative and quantitative research. This study did not confirm or test hypotheses but situated the experience of this phenomenon of using repeated reflection from the simulated pediatric patient's perspective. Questions that could be addressed for further exploration include:

- What is the ideal time frame to repeat reflective practice?
- How is repeated reflection from the patient's perspective experienced in different scenarios, and for different disciplines?
- What is the feasibility of repeating reflective practice in nursing curriculums?
- Does repeated reflective practice require the use of faculty to guide reflection or would it be similarly meaningful if students used the RPPP 3.0 tool (Taplay, 2020) independently?
- What is the relationship between proximity and intimidation for pediatric patients? For adults?
- How would applying repeated reflection to some of the existing research in nursing education impact outcomes and findings for different studies?

It would also be interesting to conduct research using resources from across different disciplines. As mentioned earlier, Heinerichs et al. (2013) applied a self-reflective questionnaire for assessing non-verbal communication using video-based assessment in athletics. This questionnaire could be applied to nursing simulations and be

used to expand the knowledge surrounding video-based reflection in nursing education. This questionnaire could also be compared with the RPPP 3.0 tool and be utilized to influence changes to the tool to encompass non-verbal aspects of reflection from the patient's perspective.

Research needs to be replicated, repeated, and modified to increase transferability and discover feasibility, impact, and ramifications of using these educational tools and strategies to change nursing education and practice (Smith et al., 2009). Extending this research with more participants, including male students, and across different educational levels while exploring different perspectives (such as from the family member) has potential to add to our understanding of this phenomena.

It would also be interesting to explore what knowledge students have transferred to their clinical practice from simulation-based learning. This could be done by following up with the participants from this study after the participants have graduated and started their nursing career. This would help shed light on knowledge transfer to practice, and the implementation of self-directed learning and commitment to improvement moving forward.

## **Conclusions**

The purpose of this study was to explore nursing student self-reflections after viewing their practice from the pediatric patient's perspective and to understand their experiences using Taplay's (2020) RPPP 3.0 tool, then repeating a pediatric acute pain simulation scenario and repeating the reflection. Through the use of IPA, four themes were identified from the data, including reactions, communication, appraisal of performance, and the difference. While reactions, communication, and appraisal of

performance add on to previous research in experiencing simulation-based learning, the findings surrounding the theme of the difference are unique to this study.

This research is groundbreaking, having minimal existing research to compare and contrast it with. Reflection from the patient's perspective is an innovative concept, found in the literature only in the work by Taplay et al. (2021), with the use of the RPPP 3.0 tool. Furthermore, repeated reflection in simulation using the same scenario is a novel area of research which this study has shown to have incredible impact and outcomes for learners.

This study is the first of its kind to offer repeated reflection on simulation in nursing education. The experiences of the participants highlight the value and knowledge transfer from theory to practice that occurs through repeating simulation and reflection. Reflection from the patient's perspective led to outcomes beyond that of typical self-reflection, allowing students to see not just their successes and challenges, but also how their actions and words could be interpreted by a child. The findings illustrate the value of repeated reflection as a means to offer a unique experience to reflect from the patient's perspective. As more research is done to grow and expand on these findings, the implications could guide changes in education, practice, and simulation-based learning across disciplines to improve learning outcomes and knowledge transfer.

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## Appendix A – Interview Schedule

**Initial introduction:** Thank you for taking the time to participate in this simulation and now this interview. The goal of this interview is to gain insight into how you experienced reflecting on the video of yourself caring for the pediatric patient. I will ask you questions but know that you may ask to stop the interview at any time or choose not to answer questions. The interview will be recorded on two audio devices so that I can transcribe it later.

Questions/Prompts:

- You participated in a simulation where you interacted both with the simulated patient and a family member, please describe what happened during the simulation.
  - Can you describe in detail your interactions with the patient?
  - Can you describe your interactions with the family member?

I will now lead you through a series of questions from the Reflective Practice from the Patient's Perspective Tool 3.0.

**Reflective Practice from the Patient's Perspective (RPPP) 3.0 tool** (Taplay, 2020).

1. Describe what was significant to you while caring for this patient within this simulated scenario.
2. Based on what you described above, what were your strengths and what were your areas for improvement?
3. What did you learn about the care you provided after viewing it from the patient's perspective? (video that was captured by the GoPro ® camera or spy glasses that the patient wore)

4. Was there anything about the environment and or the equipment that impacted the care you provided?
5. Was there anything about your proximity to the patient that was significant to you while providing care or while watching the care you provided?
6. What is it like for you to watch and listen to yourself provide care?
7. Is there anything that stood out to you about your communication style?
8. Is there anything you would like to change about your communication style?
9. How was the care that you provided patient-centered?
10. What do you need to learn to change or improve your future practice?
11. What did it mean to you to reflect from the patient's perspective?

**Concluding statement:** Thank you for taking the time to participate in this simulation and reflection with me today, I appreciate you sharing your experiences, thoughts and ideas with me. Let's review the plan for when you can participate in the repeated simulation and reflection. The process will be similar to today, with participation in the same simulation and a similar reflection interview afterwards.

- Additional question added for participants after interview 2 for participant 003:  
Was there anything that you did to prepare between the previous simulation day and today?

## Appendix B: Tabling of Literature Review Documents

**Table 1**

*Literature Review Summary*

<b>Title</b>	<b>Reference</b>	<b>Methods</b>	<b>Simulation Topic</b>	<b>Themes</b>
Early recognition of pediatric sepsis simulation checklist – An exploratory study	(Diaz et al., 2020)	Quantitative – categorical principle component analysis of checklist	Pediatric sepsis	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> </ul>
Simulating the role of the parent: Promoting family-centered care	(Zimmerman & Alfes, 2019)	Quantitative – Likert scales	Multiple pediatric simulations – specific topics not defined	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> </ul>
Pediatric end-of-life simulation: Preparing the future nurse to care for the needs of the child and family	(Cole & Foito, 2019)	Undefined/Mixed methods – open ended questions in debriefing, but themes presented as percentages	Pediatric end-of-life	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> <li>- Stress for the participant</li> </ul>
Pediatric toxidrome simulation curriculum: Bupropion overdose	(Hartford et al., 2019)	Quantitative – Likert scales	Pediatric bupropion overdose	<ul style="list-style-type: none"> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> </ul>

<b>Title</b>	<b>Reference</b>	<b>Methods</b>	<b>Simulation Topic</b>	<b>Themes</b>
High-fidelity simulation of pediatric emergency care: An eye-opening experience for baccalaureate nursing students	(Small et al., 2018)	Qualitative – van Manen’s phenomenology	Pediatric cardiopulmonary arrest	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> <li>- Stress for the participant</li> </ul>
A “fundamentals” train-the-trainer approach to building pediatric critical care expertise in the developing ward	(Crow et al., 2018)	Quantitative – Likert scales	Implementation of Pediatric Fundamental Critical Care Support (PFCCS) program	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> <li>- Stress for the participant</li> </ul>
The impact of critical thinking on clinical judgement during simulation with senior nursing students	(Cazzell & Anderson, 2016)	Quantitative – Priori power analysis for multiple regression	Undefined pediatric simulation to encourage critical thinking – did include an aspect of pediatric medication administration	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> </ul>
Video-enhanced simulation in pediatric end-of-life care	(Gotwals & Scholtz, 2016)	Undefined - Description of implementation of a simulation in conjunction with a documentary video	Pediatric oncology end-of-life	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> <li>- Stress for the participant</li> </ul>

<b>Title</b>	<b>Reference</b>	<b>Methods</b>	<b>Simulation Topic</b>	<b>Themes</b>
Assessing progression of clinical reasoning through virtual patients: An exploratory study	(Forsberg et al., 2015)	Qualitative	Multiple undefined pediatric simulations	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> </ul>
Pediatric mock codes: An evidence-informed focused pediatric resuscitation program	(Moreira & Tibbetts, 2015)	Undefined – descriptive results only	6 different versions of pediatric mock codes	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> </ul>
Development of a simulation evaluation tool for assessing nursing students' clinical judgement in caring for children with dehydration	(Kim et al., 2015)	Quantitative – Cronbach's alpha and kappa coefficients	Pediatric dehydration	<ul style="list-style-type: none"> <li>- Evaluation tools and techniques</li> <li>- New simulation development</li> <li>- Family-centered care</li> <li>- Debriefing or reflection</li> <li>- Stress for the participant</li> </ul>

## **Appendix C – Informed Letter of Consent**

Informed Letter of Consent (Participants)

Study Title:

From Their Eyes: Nursing Student Experiences Using Repeated Reflection from the Pediatric Patient’s Perspective

Principle Investigator: Melissa Van der Wal, RN, BSc, BScN, Masters Candidate, Applied Health Sciences in Nursing, Brock University. mv19sm@brocku.ca

Supervisor: Karyn Taplay, RN, MSN, PhD, Faculty of Applied Health Sciences: Department of Nursing, Brock University. ktaplay@brocku.ca

Invitation to participate:

You have been invited to participate in this research study because you are a Brock University nursing student interested in reflecting from the pediatric patient’s perspective of an acute pain simulation. Your participation in this research is voluntary, and if you consent to participate, you can choose to withdraw at any time and any of your data collected will be destroyed. There are no consequences for students who withdraw from this research study.

Why is this study being done?

This study is being done to gain understanding into how nursing students experience using repeated reflection from the simulated patient’s point of view. This research has the potential to expand existing knowledge and practice of reflection to pediatric nursing simulations and the patient’s perspective in acute pain management. The research question is: “What are nursing students experiences using repeated reflection from the patient’s perspective of a pediatric acute pain simulation?”

What will happen to participants in this study?

Should you choose to participate in this study, you will be asked to participate in a simulation where you will provide care to a simulated pediatric patient with a standardized patient family member at the bedside who is calling because the child is experiencing acute pain. The simulation mannequin for the pediatric patient will be equipped with spyglasses to record visual and audio data of the care that you provide. One researcher will observe the simulation and use the data collected to guide you through a reflective practice after the simulation. Using the Reflective Practice from the Patient’s Perspective (RPPP) tool 3.0 developed by Dr. Karyn Taplay (2020), the researcher will ask you questions about your experience after you view the video of yourself providing care. After the experience is completed, you will be asked to return 1-2 weeks later where you will have the opportunity to repeat the same simulation, again recorded with spyglasses, and the subsequent reflective practice. In total, you are asked to attend two separate days, approximately 1 hour each in length.

Are there any risks?

There are no identified risks, or emotional or psychological distress associated with this research.

Are there any benefits?

Participants will be able to provide insight about the use of reflecting from the patient's perspective in simulation-based learning and have the opportunity to reflect on your own practice from the patient's perspective. Participating may help transfer knowledge gained from this study into hospital settings.

Will I be paid to participate in this study?

For each of the two days required for this study, you will receive a \$10.00 Tim Horton's gift card, for a total of \$20.00 in gift cards to acknowledge your participation in this study. On arrival to the study (conducted at Brock University simulation lab), participant parking will be paid for.

What will happen to my personal information?

All information you provide is considered confidential. Your name will not be included with any data collected in this study. Security codes will be used in place of identifying information. All security codes and collected data will be stored on the primary researcher's computer which has a secure network, antiviral software and is fingerprint and password protected. This information will be backed up and stored on a password protected external hard drive which, along with any hard copies of the collected data, will be kept in a locked drawer, only to be accessed by the research team. Data will be stored for 5 years and then will be permanently deleted and any hard copies will be shredded in a secured shredder. The only people to have access to this information are the primary investigator and the supervisor identified above. All reports of results and or publications will be in summary so individual's identities are not revealed.

Can participation end early?

Yes, participation can end early. This is a voluntary study, and if students wish to withdraw or exclude their data from the study they just have to verbalize this to the researcher or supervisor. You have the right to refuse to answer any questions posed during the interview.

If I have questions about this study, who should I call?

If you have any questions about this research study, please contact:

Melissa Van der Wal, RN, BSc, BScN, Masters Candidate, Applied Health Sciences in Nursing, Brock University.

**Email:** mv19sm@brocku.ca

Karyn Taplay, RN, MSN, PhD, Faculty of Applied Health Sciences: Department of Nursing, Brock University.

**Phone:** (905)-688-5550 Ext. 3786

**Email:** ktaplay@brocku.ca

Participant:

I agree to participate in this study described above. I have made this decision based on the information I have read in the Informed Letter of Consent. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at anytime.

I agree to be video and audio recorded

Thank you for your assistance in this project. Please keep a copy of this form for your records.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_





### Appendix D – Demographic Data Questionnaire

Directions: for each of the following questions, please mark the answer that best describes you.

1. What is your present age? \_\_\_\_ Years

2. What is your gender? 1) Male  2) Female  3) Other

3. What is your highest level of education in the nursing program?

01  1st year complete

02  2nd year complete

03  3rd year complete

04  4th year complete

4. What methods of reflective practice have you used in the nursing program? Select all that apply.

01 Self reflection

02 Written reflection

03 Peer reflection

04 Reflection from the patient's perspective

05 Other



## Appendix D – Letter of Invitation

Study Title: From Their Eyes: Nursing Student Experiences Using Repeated Reflection from the Pediatric Patient’s Perspective

Principle Investigator: Melissa Van der Wal, RN, BSc, BScN, Masters Candidate, Applied Health Sciences in Nursing, Brock University. mv19sm@brocku.ca

Supervisor: Karyn Taplay, RN, MSN, PhD, Faculty of Applied Health Sciences: Department of Nursing, Brock University. ktaplay@brocku.ca

The purpose of this study is to increase understanding in how nursing students experience using repeated reflection from the simulated pediatric patient’s point of view. This research has the potential to expand existing knowledge and practice of reflection to pediatric nursing simulations and the patient’s perspective in the area of acute pain management. The research question is: “What are nursing students experiences using repeated reflection from the patient’s perspective of a pediatric acute pain simulation?”.

Should you choose to participate in this study, you will be asked to provide care to a simulated pediatric patient with a standardized patient family member at the bedside who is calling because the child is experiencing acute pain. The simulation mannequin for the pediatric patient will be equipped with spyglasses to record visual and audio data of the care that you provide. One researcher will observe the simulation and use the data collected to guide you through a reflective practice after the simulation. Using the Reflective Practice from the Patient’s Perspective (RPPP) tool 3.0 developed by Dr. Karyn Taplay (2020), the researcher will ask you questions about your experience after you view the video of yourself providing care. After the experience is completed, you will be asked to return 1-2 weeks later where you will have the opportunity to repeat the same simulation, again recorded with spyglasses, and the subsequent reflective practice. In total, you are asked to attend two separate days, approximately 1 hour each in length. The simulation and interview experience will be held in the Brock University simulation lab. Your parking will be paid for you and you will receive a \$10.00 Tim Horton’s card for each of the two days that you participate in this study, for a total of \$20.00 value.

Thank you for your consideration, if you would like to participate please contact either of the researchers listed at the top of this invitation. Should you have any questions about your rights as a research participant, you may contact the Brock University Research Ethics Officer (905-688-5550 ext. 3035, reb@brocku.ca).

Sincerely,

Melissa Van der Wal, RN, BSc, BScN, Masters Student, Brock University



## Appendix E – Recruitment Poster

### **Student Nurses are needed for a research study on pediatric nursing simulations and reflective practice conducted at Brock University.**

The purpose of this study is to increase understanding in how nursing students experience using repeated reflection from the simulated pediatric patient's point of view.

To be eligible to participate you must meet the following requirements:

1. Be currently enrolled in your 3<sup>rd</sup> or 4<sup>th</sup> year in the BScN program at Brock University and have taken or are currently taking the course NUSC 2P10/2P12 Nursing Care of the Young Family.
2. Agree to be observed and have your simulation video and audio-recorded and your guided reflection audio-recorded.

You will be asked to provide care to a simulated pediatric patient who is experiencing acute pain and who has a standardized patient family member at the bedside. The family member requests pain medication for the patient, and you will have to complete a focused assessment and pain assessment, then choose and administer medication from the patient's medication administration record if needed. The simulated patient will be wearing spyglasses. You will then participate in a debrief, view the video of your care from the patient's perspective and participate in a guided reflection on your experience. After 1-2 weeks, you will return to participate in the same simulation and reflective practice on repeating the experience.

Your participation would involve two sessions which would be approximately one hour each.

In appreciation of your time, you will receive a \$10.00 Tim Horton's gift card for each session, for a total of \$20 and your parking will be paid for upon arrival.

**For more information about this study or to volunteer to participate please contact:**

Melissa Van der Wal (Master of Arts in Nursing Student), [mv19sm@brocku.ca](mailto:mv19sm@brocku.ca)

Karyn Taplay (Associate Professor, Department of Nursing), [ktaplay@brocku.ca](mailto:ktaplay@brocku.ca)



## Appendix F – Invitation Script

Thank you for taking the time to listen to my invitation to join a research study. I am recruiting student nurses for a research study on pediatric nursing simulations and reflective practice at Brock University.

The purpose of this study is to increase understanding in how nursing students experience using repeated reflection from the simulated pediatric patient's point of view.

To be eligible to participate you must meet the following requirements:

1. Be currently enrolled in your 3<sup>rd</sup>, or 4<sup>th</sup> year in the BScN program at Brock University and have taken or are currently taking the course NUSC 2P10/2P12 Nursing Care of the Young Family.
2. Agree to be observed and have your simulation video and audio-recorded and your guided reflection audio-recorded.

You will be asked to provide care to a simulated pediatric patient who is experiencing acute pain and who has a standardized patient family member at the bedside. The family member requests pain medication for the patient, and you will have to complete a focused assessment and pain assessment, then choose and administer medication from the patient's medication administration record if needed. The simulated patient will be wearing spyglasses. You will then participate in a debrief, view the video of your care from the patient's perspective and participate in a guided reflection on your experience. After 1-2 weeks, you will return to participate in the same simulation and reflective practice on repeating the experience.

Your participation would involve two sessions which would be approximately one hour each.

In appreciation of your time, you will receive a \$10.00 Tim Horton's gift card for each session, for a total of \$20 and your parking will be paid for upon arrival.

**For more information about this study or to volunteer to participate please contact:**

Myself, Melissa Van der Wal (Master of Arts in Nursing Student), mv19sm@brocku.ca

Or Karyn Taplay (Associate Professor, Department of Nursing), ktaplay@brocku.ca

This information will be shared in both in-person or virtual lectures in 3<sup>rd</sup>, and 4<sup>th</sup> year classes where the Professors agree to allow time for the researcher to speak this script at the beginning of their lecture.

### Appendix G – Diagram of Themes

Figure 1 – Themes and Sub-themes

