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Let Us Greet our Young, Not Eat our Young: Nursing Preceptors

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Let Us Greet our Young, Not Eat our Young: Nursing Preceptors

by

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A THESIS

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Abstract

Background: During the final term of nursing education programs, students are placed in clinical learning environments (CLE) with assigned registered nurses (RN) commonly known as preceptors. The experiences within a preceptorship are related to students' satisfaction, job recruitment and, in the long term, retention in the profession. Despite having participated in preceptorships as students, new nursing graduates often report feeling unprepared to enter the profession. In 2010, Willemsen-McBride estimated 35-65% of new Canadian graduates leave their place of employment within their first year. Students who experience unsatisfactory preceptorships are thought likely to leave the profession altogether. Attributes of preceptors which foster positive CLEs contribute to students' satisfaction and success in preceptorship experiences. Such attributes include: kindness, patience, commitment, support, effective communication skills, clinical competence, providing clinical exposure, role modeling, and positive coaching.

Objective: To investigate nursing students' perceptions of preceptor attributes as these attributes relate to their satisfaction in the CLE, expectations from before and after their preceptorship, and their perceived preparedness for licensure and nursing practice.

Method: A pretest-posttest study was conducted during the 2017 fall term of the Faculty of Nursing at the University of Calgary in Calgary, Alberta. Students were recruited from the final term course (NURS 599). Participants (n=74) were tested prior to commencing their preceptorship experience and 55 participants were tested at the end of their preceptorship. Demographic data were gathered and participants were asked to complete the Preceptor Attributes survey, the Clinical Learning Environment Inventory (CLEI), and the My Preceptorship tool.

Results: Two attributes of preceptors were identified as contributing to students' satisfaction with their preceptor and with the CLE. The attribute of providing exposure significantly affected students' satisfaction when compared to the influence of the preceptor in the CLE ($t = 3.77$, $p = .000$, [CI 95%: 4.57, 14.91]). Providing exposure also significantly affected students' satisfaction when compared to the influence of the CLE ($t = 3.59$, $p = .001$, [CI 95%: 3.86, 13.64]). The attribute of clear communicator significantly affected students' satisfaction when compared to the influence of the preceptor in the CLE ($t = 3.56$, $p = .001$, [CI 95%: 3.21, 11.47]). Clear communicator also significantly affected students' satisfaction when compared to the influence of the CLE ($t = 3.04$, $p = .004$, [CI 95%: 2.05, 9.99]). Students' expectations pretest to posttest were not met for CLE aspects of innovation ($t = 3.36$, $p = .002$, [CI 95%: 0.85, 3.38]), student involvement ($t = 2.96$, $p = .010$, [CI 95%: 0.43, 2.98]), task orientation ($t = 2.82$, $p = .007$, [CI 95%: 0.56, 3.33]), or satisfaction ($t = 2.64$, $p = .011$, [CI 95%: 0.42, 3.07]) as measured by the CLEI. Approximately half of the students (41%, n=25) reported they did not feel prepared for their licensing exam. Many students reported feeling prepared to practice (92%, n=56) because of their preceptor. Most students were satisfied with their preceptor (95%, n=58) and 53 (87%) wanted to return to the CLE to work post-graduation. No significant difference was reported in students' perception of preceptor attributes ($t = -0.06$, $p = .956$, [CI 95%: -4.59, 4.53]) or of the six CLE aspects ($p>.05$) for students having two preceptors as opposed to those having only one.

Discussion: Students' satisfaction with their preceptorship in the CLE is highly dependent upon specific attributes of preceptors. Preceptors with effective communication skills who provide exposure to learning opportunities in the CLE are highly prized by students and contribute to their satisfaction throughout preceptorships.

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List of Abbreviations and Symbols

AHS – Alberta Health Services

CARNA – College and Association of Registered Nurses of Alberta

CAT – Computerized Adaptive Testing

CHREB – Conjoint Health Research Ethics Board

CINAHL – Cumulative Index Nursing and Allied Health Literature

CLE – Clinical Learning Environment

CLEI – Clinical Learning Environment Inventory

CNA – Canadian Nurses Association

ERIC – Education Resource Information Center

HESI – Health Education Systems Incorporated

NCLEX-RN – National Council Licensure Examination for Registered Nurses

NURS 599 – Integrating Nursing Roles and Practice VI: Transition to Nursing Practice

RN – Registered Nurse

SPSS - Statistical Package for the Social Sciences

USB – Universal Serial Bus

M – Mean

SD – Standard Deviation

List of Definitions

Attribute – A characteristic, feature, trait, quality, or inherent part of someone.

Attrition – Leaving the nursing profession.

Bullying – Unsupportive, negative, and critical behaviour toward others; taking pleasure in humiliating others.

Clinical Learning Environment – Where the preceptorship takes place; clinical placement where direct patient care occurs.

Faculty Advisor – Member of the university faculty responsible for supporting and evaluating students in final practicum, a student resource. Acts as a liaison between the clinical learning environment/preceptor, and university.

Final Practicum – Last clinical practicum of students' undergraduate education referred to as a preceptorship.

Imbalanced – Polarized relationships, variation between individuals' perceptions of built relationships.

Kindness – Being friendly, considerate, generous, gentle, warm, and caring; acknowledging individuality and treating others respectfully.

Preceptor – Assigned registered nurse, similar to mentor, clinical teacher, clinical staff, and ward staff nurse. Preceptors are variably described in the literature. Gray and Smith (2000) used the descriptors "good" and "poor"; Heffernan et al. (2009) used "effective" and "ineffective." These terms carry a judgement. I preferred desirable and undesirable because they are student-centered.

Preceptorship – One-on-one teaching experience with preceptor during students' final practicum

or new graduates' orientation. For this thesis, preceptorship refers to students' final

practicum.

Safe – Protected from harm and vulnerability.

Satisfaction – Meeting the expectations, needs, or desires of; extent of students' enjoyment.

Socialization – Provide support for growth and development allowing for students to become

familiarized to the profession and prepared to practice.

Transition – Assist novice nurses to adjust to performing in their new roles.

Epigraph

"Teaching is more than imparting knowledge, it is inspiring change. Learning is more than absorbing facts, it is acquiring understanding." - William Arthur Ward

Chapter One: Introduction

Registered nursing programs are accessible through a variety of educational institutions across Canada, offering baccalaureate degrees and the opportunity to practice the profession of nursing. The nursing degrees offered in these universities and colleges include mandatory clinical practicums within affiliated hospitals and community placements. The final year of baccalaureate nursing education sees students practice in final practicums, referred to in the literature as preceptorships (Billay & Myrick, 2008). Preceptorships take place in clinical learning environments (CLE), where employed registered nurses (RN) work as preceptors to provide one-on-one teaching experiences with students. The experiences provided by preceptors in CLEs impact students' satisfaction and learning.

During both my undergraduate education and early days as an RN, I encountered positive and negative experiences with preceptors. As a nursing student, I found my preceptor to be kind and attentive while explaining policies and procedures. She allowed me to continue to develop my own nursing identity. However post-graduation for the first six months, I was coupled with an RN who often reprimanded me at the bedside when I was trying to learn a new skill. I did not feel welcomed on the unit and had an unsatisfactory learning experience. This situation created feelings of uncertainty and anxiety related to my chosen profession. Having now worked in the emergency department for over nine years, I continue to witness varying degrees of positive and negative interactions between students and preceptors. As a preceptor myself, I was motivated to search for some way to help reduce negative interactions. This has been the impetus for attending graduate school and exploring the attributes of preceptors that affect students' satisfaction in the CLE.

In this chapter I will discuss the evolution of nursing education, the use of preceptorships for nursing education, and this study's relevance to nursing. I will also outline the study's primary and secondary objectives.

Evolution of Nursing Education

Over the past 50 years, nursing education has evolved from an apprenticeship model solely in hospitals to professional instruction in a university setting, with hospital and community placements (Canadian Nurses Association [CNA], 2004). The CNA (2018) believes complex nursing care is most effectively developed within a baccalaureate nursing education, and in 2010 this became the criterion for entry-to practice in Alberta. The change of educational requirement has placed an emphasis on theoretical education of students coupled with clinical learning. Due to this change a longstanding controversy, the theory-practice gap persists between students' theoretical knowledge and proficient clinical skills (Watson & Thompson, 2000). This theory-practice gap is impacting students preparation to practice when entering into the profession (Watson & Thompson, 2000).

Preceptorships

Preceptorships aid in providing hands-on experience, helping to reduce the theory-practice gap often affiliated with an academic education (Hickey, 2010). This educational method provides one-on-one clinical education between the preceptor and the student nurse in the community or hospital (CNA, 2004).

During their preceptorships, students are placed in CLEs to practice with and to learn from preceptors (Courtney-Pratt, FitzGerald, Ford, Marsden, & Marlow, 2012). The CLEs allow students to gain experiences concentrated in their assigned healthcare setting prior to graduation (Kim, 2007). In the CLE, students develop critical thinking, health assessment, and hands-on

clinical skills guided by preceptors (Myrick & Yonge, 2001). Preceptors familiarize students to unit culture, develop their knowledge and skills, and promote their independence; all necessary skills when they are new RNs (Heffernan, Heffernan, Brosnan, & Brown, 2009). Preceptors also assist students with transition and socialization into the nursing profession in the CLE (CNA, 2004) and collaborate with faculty advisors who liaise between the practicum setting and the university.

Preceptors use the personal and professional attributes which they possess, as role models and practitioners in the CLE, to search for and provide educational experiences for students to foster their learning (McClure & Black, 2013). Preceptors are responsible for making the CLE an inviting, safe, and supportive environment, which provide students with clinical educational experiences (Yonge, Hagler, Cox, & Drefs, 2011). It is within these preceptor-guided CLEs that students develop a professional identity and consider their future employment (Hickey, 2010).

Students' expectations of the CLE and of their preceptors can affect students' satisfaction with, and perceptions of the nursing profession. In choosing a preceptorship, students carry expectations regarding practicum location, number of preceptors assigned, and preceptor personality. When these expectations are not met, students' satisfaction in the CLE may be decreased (Hamshire, Willgoss, & Wibberley, 2013).

Preceptorships can enhance or hinder a student's undergraduate education, preparation for, and ultimate satisfaction with the nursing profession (Zilembo & Monterosso, 2008a). Retention in the nursing profession has been strongly associated with students' satisfaction during preceptorships (Lockwood-Rayermann, 2003). When preceptors provide students with positive socialization, retention rates increase as newly hired RNs (Zilembo & Monterosso, 2008a). Successful preceptorships can promote desirable impressions of the nursing profession,

assist with growing students' professional identity, and their willingness to engage in lifelong learning (Häggman-Laitila, Elina, Riitta, Kirsi, & Leena, 2007). The preceptor role is critical; students' satisfaction with their CLE can influence their field of nursing and desired workplace (Häggman-Laitila et al., 2007). The interrelationship with the CLE, student and preceptor has a lasting effect.

Relevance to Nursing: Retention of Graduates

Despite the socialization and preparation expected to occur throughout students' preceptorships, new graduates report being unprepared for their roles as RNs (Hickey, 2009). It is common for new graduates to feel vulnerable in their work environments due to their unfamiliarity with unit processes and specific procedures (Raines, 2009). In Hickey's (2009) mixed methods study, during qualitative interviews, greater than 50% of preceptors (n=62) verbalized that new graduates commonly experience challenges such as difficulties prioritizing tasks, managing patient loads, administering medications, and communicating effectively. These are competencies that are expected to have been developed throughout the students' preceptorship and baccalaureate education (Hickey, 2009).

New graduates are most vulnerable to rethinking their employment positions if they feel unwelcomed as well as unprepared (Raines, 2009). Willemsen-McBride (2010) estimated 35-65% of new Canadian graduates leave their place of employment within their first year of work. Currently, 50% of working RNs are eligible to retire in Canada in the next 10 years, careful consideration needs to be given to retaining new graduates (Kwok, Bates, & Ng, 2016).

Choosing preceptors may require more detailed consideration by hospitals and community management teams in response to requests from university placement coordinators then has previously occurred. Shinners and Franqueiro (2015) explained that, "just because an

RN is a good nurse does not mean that he or she will be a good preceptor" (p. 234). Examining preceptor attributes and their effect on students' satisfaction in the CLE is essential to assist in retaining Canadian nursing students post-graduation.

Research Objectives

The primary objective of this study was to see which preceptor attributes affected students' satisfaction in the CLE. Secondary objectives included to compare students' expectations of the preceptor and the CLE before and after their preceptorship. As well to ask students if they felt prepared for nursing practice after their preceptorship. There was one question addressing the primary objective and there were nine questions addressing the secondary objectives.

Chapter Two: Conceptual Framework

The purpose of this chapter is to explain the conceptual framework, the Proposed Synergy Model of Preceptorship for Learning and Care, developed by Zilembo and Monterosso (2008b). In this chapter, I will describe the framework, how it supports this study, and the literature review.

Historical Development of The Proposed Synergy Model of Preceptorship for Learning and Care Framework

The Proposed Synergy Model of Preceptorship for Learning and Care originated with Curley (1998) and was adapted over a decade. Curley's (1998) framework recognized synergy as patients and nurses working together towards a common health goal. The American Association of Critical Care Nurses adapted Curley's framework to highlight that ideal patient care is achieved when nurses' attributes are matched with patient needs (Curley, 1998). Kerfoot (2002) added leaders within an organization to the framework, and their responsibility for creating positive environments where nurses' abilities are matched to patients' needs. The clinical environment became part of the synergistic framework at this stage. Alspach (2006) brought nursing education and students into the synergy framework. Alspach (2006) used the framework for preceptorships and creating the optimal orientation of students to the clinical learning environment. Alspach (2006) focused on preceptors' competencies matching students' needs to achieve successful outcomes. Zilembo and Monterosso (2008b) then adapted the framework linking preceptors' qualities with students' desires, thus completing the development of the Proposed Synergy Model of Preceptorship for Learning and Care to date.

Proposed Synergy Model of Preceptorship for Learning and Care in Nursing Education

Zilembo and Monterosso's (2008b) framework focuses on the interrelations between patient care, leadership, and preceptors on the learners' clinical experiences (see Figure 1). The framework highlights that the individual personalities, circumstances, and experiences that can affect the learning environment (Zilembo & Monterosso, 2008b). These principles emphasize the unique nature of each preceptorship experience. Zilembo and Monterosso (2008b) asserted that all aspects of the preceptorship are interconnected including leadership qualities of preceptors, students' learning needs, and aspects of the CLE. The central concept of the framework expresses how positive clinical experiences will occur when students are placed with preceptors who demonstrate desirable preceptor attributes (Zilembo & Monterosso, 2008b). These preceptor attributes are leadership qualities that include, caring, compassion, clinical competence, and being a role model (Zilembo & Monterosso, 2008b). When the above preceptor attributes prevail, students' needs are most likely to be recognized and learning satisfactory.

Positive CLEs can be created by preceptors and students to provide learning opportunities, guidance, socialization, and orientation to the nursing profession (Zilembo & Monterosso, 2008b). A positive CLE creates positive personal and professional outcomes for students and preceptors, increasing job satisfaction for preceptors and developing students who are work ready (Zilembo & Monterosso, 2008b). This can lead to desirable outcomes for patients and for the system, helping to improve patient care and potentially decreasing attrition from the workforce (Zilembo & Monterosso, 2008b).
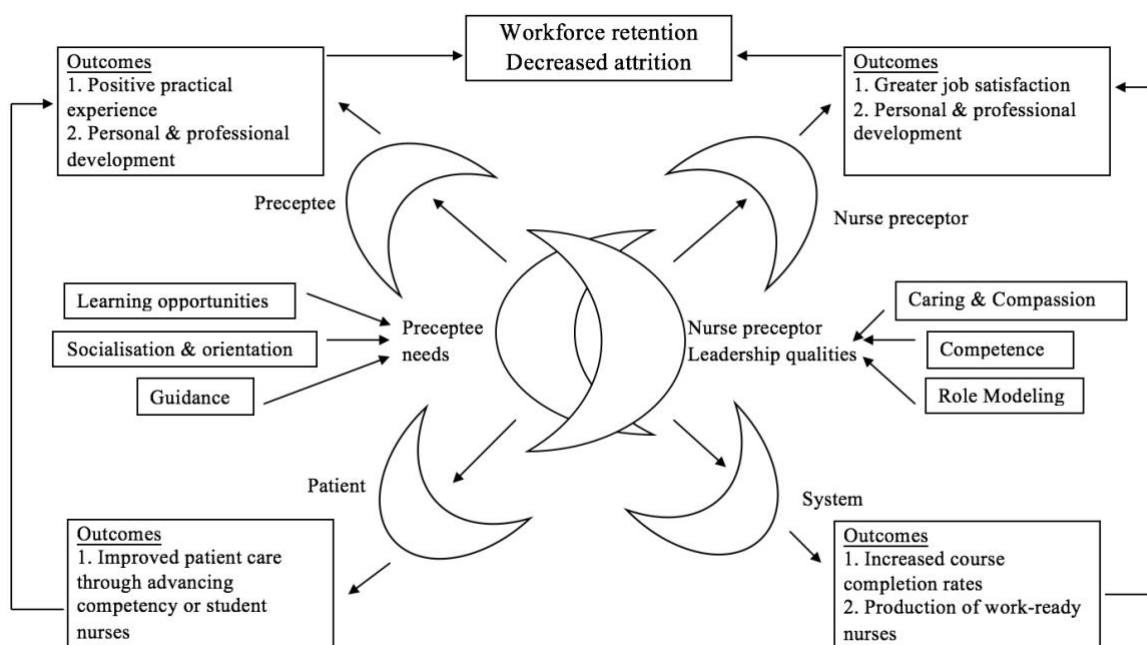
Figure 1. Proposed Synergy Model of Preceptorship for Learning and Care. From "Towards a Conceptual Framework for Preceptorship in the Clinical Education of Undergraduate Nursing Students," by M. Zilembo, and L. Monterosso, 2008, *Contemporary Nurse, 30*, p. 91. Copyright 2008 by Taylor & Francis Group. Reuses for a thesis or dissertation free of charge (Appendix A).

This conceptual framework encompasses many aspects of this study. The framework embodies preceptorship as a whole, and the CLE as the context for clinical learning. The preceptor is responsible for navigating the student through this environment to ensure positive and teachable learning experiences with patients (Myrick & Barrett, 1994; Yonge et al., 2011). Preceptors are key to ensuring that the transition is smooth and positive for all parties.

In this study, I examined highly rated preceptor attributes, identified in the literature by the following authors (Altmann, 2006; D'Souza, Karkada, Parahoo, & Venkatesaperumal, 2015; Gray & Smith, 2000; Heffernan et al., 2009; Hickey, 2009, 2010; Rebholz & Baumgartner, 2015; Smith, Swain, & Penprase, 2011; Walsh & Clements, 1995; Zilembo & Monterosso, 2008a). Highly rated attributes include role modeling and competence, which many authors defined as effective leadership qualities (Walsh & Clements, 1995; Zilembo & Monterosso, 2008a). My

research elicited the students' perceptions of preceptors' attributes, allowing for positive synergistic relationships.

Students learning needs can be addressed with exposure to clinical learning opportunities. This occurs in tandem with socialization to the nursing profession (Smedley, 2008). Positive preceptorships increase students' preparedness and can increase their willingness to return to a unit post-graduation (Häggman-Laitila et al., 2007). I assessed similar students' outcomes in this study. Students' professional development, preparation for practice, and desired work placements were all examined in my posttest; all of these are potential outcomes of positive preceptorships in the Zilembo and Monterosso (2008b) framework.

My research differs from the framework in three areas: the preceptor, the patient, and the system outcomes. This research focused on students' perceptions and their preparation outcomes. I did not obtain information on preceptors' perceptions, their employment satisfaction, or patient care. Retention of students in future employment was also not addressed in this study. During the posttest, I inquired if students wished to stay at the practicum for a nursing position. However, I did not collect data to examine if this actually occurred.

The Proposed Synergy Model of Preceptorship for Learning and Care provided a visualization of the importance of synergistic relationships within preceptorships and why they are pertinent to create positive CLEs. The conceptual framework helped me to organize the literature into related topics of preceptors, CLEs, and students, explicating the impact of preceptors on student experiences.

Chapter Three: Literature Review

The concept of a preceptor is not new to the nursing profession. For decades, preceptors have been used to help students become nurses. Preceptors and their personal and professional attributes are responsible for shaping the atmosphere of the CLE during preceptorships (Duteau, 2012; Myrick & Yonge, 2001). Preceptors with the right mix of attributes are fundamental to promote successful student learning. Several researchers have studied the preceptor role and the attributes needed to create positive preceptorships (Altmann, 2006; Gray & Smith, 2000; Heffernan et al., 2009; Hickey, 2009, 2010; Kim, 2007; Li & Su, 2014; Myrick & Barrett, 1992; Rebholz & Baumgartner, 2015; Smith et al., 2011; Walsh & Clements, 1995; Zilembo & Monterosso, 2008a). However, no literature exists relating to how these attributes are associated with students' perceptions of CLEs, coupled with students' satisfaction, and positive outcomes of preceptorships (Lalonde & McGillis Hall, 2017). In this chapter, an in-depth look at the past literature with a synthesis of relevant articles will provide a background for this research study.

Search Strategy

I conducted a literature search to establish the depth and breadth of knowledge around the use of preceptors in undergraduate nursing education. Databases searched included: Cumulative Index Nursing and Allied Health Literature (CINAHL), MEDLINE, PubMed, and Education Resource Information Center (ERIC), as well as Google Scholar. *Keywords* used were: nursing student*, attributes, qualities, characteristics, preceptor*, preceptorships, clinical learning environment, supportive learning environment, retention, and satisfaction. Multiple combinations of keywords and subject headings were utilized as well as hand selection from select article reference lists, and grey literature. Filters applied were for English articles and a timeline of 25 years (1992-2017). The terms mentor and mentorship are often used synonymously with the

terms preceptor and precepting. In this thesis, I chose to use the term preceptor. I also included

articles from preceptors and graduate nurses' perspectives, to gain an understanding of other

attributes that are considered positive to the development of supportive CLEs. I searched for

literature based on the main concepts of the conceptual framework: the student nurse, the

preceptor, the system, and the patient. Uncovering literature addressing these categories allowed

for a complete overview of preceptorships and the different components that impact students'

preceptorship experiences. Previous literature was grouped into the main categories of the

conceptual framework.

The System and the Patient: Navigating the CLE

The preceptor is the intermediary between the student, and the healthcare system and the

patient. Preceptors navigate students through the CLE, assisting them to develop the confidence

and competence in their knowledge and skills (Courtney-Pratt et al., 2012; D'Souza et al., 2015;

Duteau, 2012; Hickey, 2010; Myrick & Barrett, 1994; Shinners & Franqueiro, 2015). A variety

of facilitators and barriers occur in the CLE that affect students' learning.

Facilitators: Collaboration and Communication

Collaboration of key stakeholders (management personnel, staff nurses, university

faculty, and students) within the healthcare system can foster positive implications. Effective

collaboration ensures that relationships developed support the delivery of quality care (Hanson &

Carter, 2014). Open communication between faculty advisors with preceptors and personnel

within the hospital or community setting provides a collaborative approach to support students in

the CLE (McClure & Black, 2013; Myrick & Yonge, 2005). A positive working relationship

between a student and a preceptor helps to socialize student nurses as they transition into the

nursing profession (Raines, 2009). This has been shown to result in job retention, RN work satisfaction, and enhancement of quality patient care (Greene & Puetzer, 2002; Raines, 2009).

Barriers

Researchers have identified barriers that prevent positive CLEs from occurring, jeopardizing a student's socialization and transition to working as a RN (Burns, Beauchesne, Ryan-Krause, & Sawin, 2006; Luparell, 2011). Unclear expectations of the roles and responsibilities of staff nurses and faculty advisors towards the students cause adverse effects (Burns et al., 2006). Students can often feel lost, forgotten, or invisible during the clinical education process (Raines, 2009). The concept that "nurses eat their young" is not new to nursing education, and is often associated with preceptorships and new hire orientation (Raines, 2009, p. 33). Unsupportive behaviours such as impatience, lack of acknowledgement and discourtesy from healthcare professionals towards a student creates unsupportive CLEs, feelings of being judged, and a sense of powerlessness (Luparell, 2011).

Researchers have described bullying as harmful, hostile or aggressive behaviour towards others, and, with people taking pleasure in humiliating others (Smith, Gillespie, Brown & Grubb, 2016; Dellasega, 2011). There is documented nurse-to-nurse bullying also termed horizontal or lateral violence, which is intensified by demanding and stressful work environments (Dellasega, 2011). Nurses suppress their emotions toward the work environment, and project negative feelings towards colleagues, commonly to nurses with less experience (Dellasega, 2011).

It is a concern that "nurses have accepted the 'eating your young' phenomenon as if it's just another part of the licensing exam." (Dellasega, 2011, p. 10). Bullying, lateral violence is cyclical, those who were bullied tend to become the bullies in time (Weinand, 2010). Forming policies to address lateral violence, identifying poor behaviour and helping nurses with dispute

resolution can prevent this from continuing as a norm (Weinand, 2010). Nurses need to make the conscious effort to support and to act kindly toward one another (Smith et al., 2016). These personal behaviours could begin to diminish the negative behaviours associated with bullying (Dellasega, 2011).

Simons (2008) in a retrospective study, identified a strong correlation between bullying and intention of nurses to leave their position ($r = .51$, $p<.001$). Using the Negative Acts Questionnaire (revised) Johnson and Rea (2009) found, that nurses who were bullied were twice as likely to consider leaving their position compared to nurses who were not ($\chi^2=15.2$, $df = 2$, $p<.001$). Bullying persists if not apprehended and filters down from staff nurses to new nurses, and student nurses working on a unit (Weinand, 2010). Understanding the attributes of preceptors can inform a positive CLE, mitigate bullying by other nurses, and may have far reaching effects for the profession.

The Preceptor

Staff nurses either volunteer to be preceptors or are chosen by the setting unit manager. Nurses' willingness and their commitment to the role of preceptor can affect the quality of clinical preceptorship education provided to students. Hickey (2009) stressed the importance that preceptors volunteer for the role and not be delegated.

Positive Implications for Preceptors

Teaching undergraduate students and watching them develop skills and a passion for a particular specialty can be rewarding for preceptors (Kalischuk, Vandenberg, & Awoscoga, 2013). Rogan (2009) found that positive interactions with students can instill personal and professional satisfaction in preceptors. These positive interactions can also provide mutual opportunities for students and preceptors to learn (Raines, 2009). A satisfying preceptor-student

relationship can increase critical thinking, enhance knowledge for the student, and encourage

mutual growth in the nursing profession (Duteau, 2012; Kalischuk et al., 2013; Rogan, 2009).

Barriers to Becoming Preceptors

Multiple barriers to becoming a preceptor have been identified for staff nurses (Kalischuk

et al., 2013). Kalischuk et al. (2013) reported preceptors leave the role when faced with high

workload demands and unmotivated students lacking competency in basic nursing skills. A

phenomenological study by Smedley (2008) uncovered that staff nurses found the preceptor role

time consuming and emotionally demanding. Preceptors had difficulties with allocating time

during their work day in order to finish needed tasks as well as instructing students (Kalischuk et

al., 2013; Smedley, 2008).

A lack of communication, recognition, and support from colleagues and management

were also barriers to becoming a preceptor. Preceptors voiced frustration when there was a lack

of direction from the college or university about students' learning objectives (Kalischuk et al.,

2013). Preceptors also found nursing faculty advisors did not provide sufficient support when

students were challenged with clinical skills, or unreceptive to learning techniques, and if they

lacked the motivation to take control of their own learning (Kalischuk et al., 2013; McClure &

Black, 2013).

Sometimes the preceptor role is not recognized or supported by colleagues, complicating

the completion of student tasks and challenging the preceptor to find another way (Kalischuk et

al., 2013; Smedley, 2008). Also, decreased recognition from management personnel can

contribute to burnout in nurses who are preceptors (Kalischuk et al., 2013). RNs stressed the

importance of managers supporting the preceptor role and providing educational preceptor

workshops to help to develop their teaching abilities (Kalischuk et al., 2013). Kalischuk et al.

(2013) surveyed 331 preceptors, who identified that professional development during work hours (55%), reduced patient load while precepting (37%), and a certificate of recognition (31%) assists in increasing preceptors' willingness to continue in the role.

Preceptor Selection

Preceptor selection is not standardized across clinical placements. Management often selects preceptors based on availability, not because they are willing or capable (Lalonde & McGillis Hall, 2017; Myrick & Barrett, 1994; Zilembo & Monterosso, 2008a). Delegating staff RNs into the role of preceptors when they are unwilling can negatively affect the preceptor-student relationship within CLEs (Kalischuk et al., 2013).

Myrick and Barrett (1992) highlighted the procedures in how preceptors are selected at 20 Canadian universities. Only 15% of Canadian universities identified the use of criteria such as having a baccalaureate degree, showing commitment to the role, and two attributes, clinical competence and effective communication skills (Myrick & Barrett, 1992). Myrick and Barrett (1992) made no reference to personal attributes required for the preceptor role. The only explanation for why a degree, clinical competence, and communication were used was that preceptors needed to have expert knowledge and nursing skills to instruct. Altmann (2006) repeated the study in the United States, with a larger sample of universities (n=226). The use of preceptors increased in Altmann's (2006) study to 62%, but the criteria among universities were inconsistent and again the highest ranked items were clinical competence and commitment to the preceptor role. A gap remains in identifying those personal and professional attributes optimal for selecting RNs for the preceptor role.

The Nursing Student

Most nursing students currently are part of the millennial generation born between 1979-1994 (Myers & Sadaghiani, 2010). They have been characterized as "self-centered, unmotivated, disrespectful, and disloyal… [however,] they work well in teams, are motivated to have an impact on their organizations, favor [*sic*] open and frequent communication with their supervisors, and are at ease with communication technologies" (Myers & Sadaghiani, 2010, p. 225). Researchers have shown that the needs of this generation of nursing students are not always met nor even considered (Lalonde & McGillis Hall, 2017; Myers et al., 2010). Myers et al. (2010) gave an example that sometimes preceptors are able to recognize differences in students' learning styles but choose not to adapt their teaching techniques to meet these needs.

Nursing Students' Satisfaction with Preceptorships

Nursing students' satisfaction with their clinical education plays a critical role in their continued motivation to become RNs (Bos, Alinaghizadeh, Saarikoski, & Kaila, 2015). Satisfaction is defined as "the state of being satisfied", where satisfy is defined as "meet[ing] the expectations, needs, or desires of" (Barber, Fitzgerald, Howell, & Pontisso, 2005, p. 741). Being satisfied with learning processes, gaining confidence, and seeing improved patient outcomes help to motivate students to persevere and to attain professional RN designations (Bos et al., 2015).

Students expect CLEs to be challenging, friendly, and supportive, with the majority of students (97%) expecting preceptor support throughout (Heslop, McIntyre, & Ives, 2001). The attributes of preceptors are significant in maintaining a challenging but positive CLE as well as offering sensitive and effective support. If preceptors are unsupportive or indifferent, students' learning and motivation can be impeded, thereby decreasing their satisfaction with their preceptorship (Bos et al., 2015).

Concerns with Nursing Students' Transition to Nurses and Retention in Nursing

Depending upon the socialization students receive during preceptorships, they can experience more or fewer challenges when transitioning to the RN role (Duteau, 2012). Lack of socialization or satisfaction may contribute to decreased job satisfaction, lower work productivity, burnout, and disillusionment with the nursing profession (Duteau, 2012; Mamchur & Myrick, 2003). A well-structured, satisfying preceptorship, a positive transition to clinical practice, can decrease nurse attrition (Marcum & West, 2004). Students enter their undergraduate education with preconceived notions of the nursing profession, of upcoming educational experiences, and of clinical rotations (Hamshire et al., 2013). Students' unmet expectations can influence their satisfaction with the preceptorship (Shih & Chuang, 2008). Students with failed expectations are dissatisfied and can harbour negative emotions toward the profession (Hamshire et al., 2013).

A mixed methods study by Brodie et al. (2004) found that when students' expectations are frequently unmet, they are at risk for leaving the nursing profession. During Brodie et al.'s (2004) interviews, students expressed that poor treatment by unit staff during preceptorships adversely affected their willingness to continue in the profession. Lee, Tzeng, Lin, and Yeh (2009) examined the use of preceptorship programs in decreasing future turnover of new graduates and found that the turnover rate decreased by 46.9% following the implementation of a preceptorship program compared to the previous year with no preceptorship program. Both of the above examples, exemplify the impact preceptorships can have on students and new graduates vision of, and continuance in the profession.

Concerns of Multiple Preceptors During Preceptorships

Sometimes a student will have more than one preceptor. The number of preceptors assigned during a preceptorship can affect students' satisfaction with their practicum. Being assigned multiple preceptors during a preceptorship can be disappointing for students and can affect their overall learning experiences (Yonge et al., 2011). Students reported that multiple preceptors put them at a disadvantage, and was disruptive to their learning experience due to varying approaches in the same clinical environment (Yonge et al., 2011). Zilembo and Monterosso (2008a) also found that multiple preceptors can provide inconsistent teaching in practice style and clinical skills. For students this leads to frustration and confusion (Zilembo & Monterosso, 2008a).

Effects of the Preceptor and Student Relationship

The quality of learning that occurs during a preceptorship is dependent on the preceptor-student relationship. Unresolved conflicts arising during preceptorships can have long-term consequences for students (Kalischuk et al., 2013). Kalischuk et al. (2013) noted that negative preceptorships "create student dissatisfaction with nursing that, in turn, may negatively influence learning or cause the student to leave the profession" (p.31). By contrast, when preceptorships are positive, they allow for satisfying learning experiences where students acclimate to the profession throughout their education, thereby decreasing early attrition post-graduation (Blevins, 2016; Duteau, 2012; Kim, 2007; Zilembo & Monterosso, 2008a).

Positive and negative experiences are co-created by preceptors and students and can directly affect the CLE during students' preceptorships (see Figure 2). If the developed preceptor-student relationship is imbalanced, it can polarize the learning experience (Dunn & Hansford, 1997). Constant collaboration and open communication between students, preceptors,

and faculty advisors are crucial to ensure student success and socialization to the profession (Duteau, 2012; Myrick & Yonge, 2005). This collaboration allows for joint commitment, continuous support, and fair evaluation of students during their preceptorships (Duteau, 2012; Myrick & Yonge, 2005). A satisfying student experience is achieved when all parties work together within the CLE (Billay & Myrick, 2008; Dunn & Hansford, 1997).
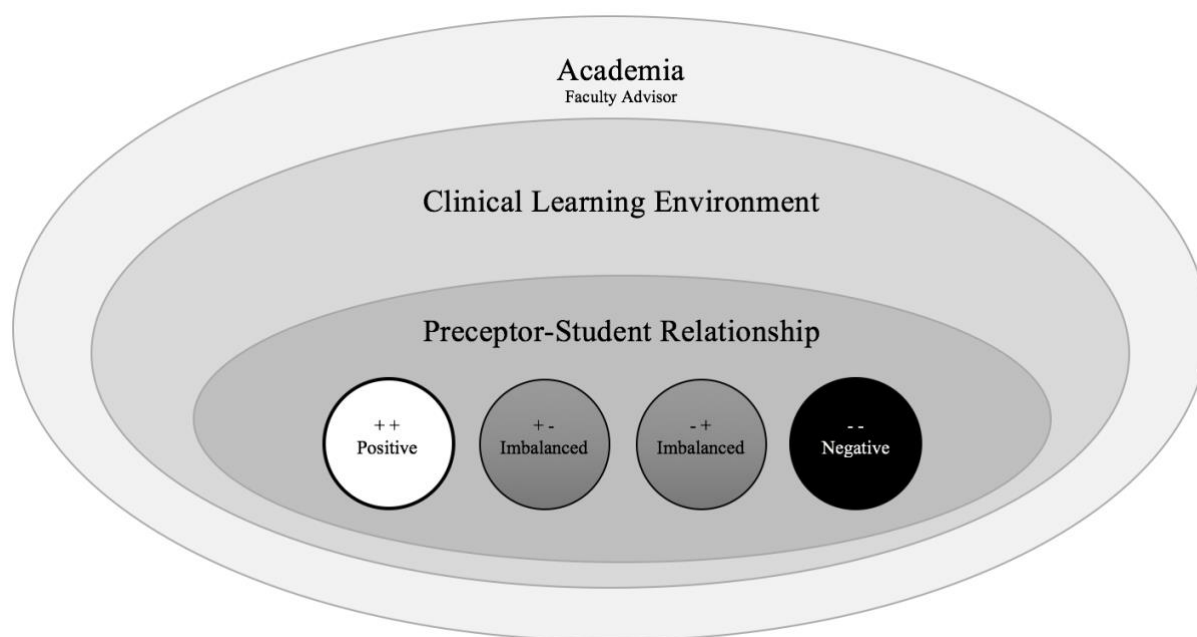
Figure 2. Description of a Preceptorship Scenario with Various Preceptor-Student Relationships.

Effects of the Clinical Learning Environment

The CLE is an unpredictable and unfamiliar environment that can be overwhelming and anxiety-provoking for students (D'Souza et al., 2015; Newton, Jolly, Ockerby, & Cross, 2010). It is the preceptor's responsibility to navigate the CLE to create environments that are safe and supportive (Duteau, 2012; Myrick & Yonge, 2001). Preceptors provide opportunities in CLEs for students to decrease the theory-practice gap, and to further develop cognitive and psychomotor

skills (Henderson, Cooke, Creedy, & Walker, 2012; McClure & Black, 2013). When the CLE is a supportive and safe environment, students can recognize the culture of an organization and how to become part of a team, and can understand the process of delivering high-quality patient care (D'Souza et al., 2015; Lúanaigh, 2015). These positive CLEs promote students' satisfaction with their learning and encourage them to return for employment post-graduation (Newton et al., 2010).

Students found that their satisfaction with the CLE was highly dependent on the atmosphere the preceptor created (Lúanaigh, 2015). D'Souza et al. (2015) noted that the leadership style of the preceptor accounted for 35% of students' satisfaction. Preceptors act as mediators or safety nets for students in the CLE when they are learning new skills and interacting with patients (Myrick & Yonge, 2001). An open, safe, and rich learning space allows students to thrive (Myrick & Yonge, 2001). Students "feel safe enough to question, to challenge and be challenged and to problem-solve creatively" (Myrick & Yonge, 2001, p. 467).

Safe and supportive CLEs also contribute to students' satisfaction (Hickey, 2010). Common factors identified for supportive CLEs included: committed preceptors, positive relationships between students and preceptors, and students' sense of belonging (Courtney-Pratt et al., 2012; D'Souza et al., 2015; Lúanaigh, 2015). A positive preceptor-student relationship impacts the CLE and strengthens the learning experience of the student (Courtney-Pratt et al., 2012; D'Souza et al., 2015; Hickey, 2010; Lúanaigh, 2015). Courtney-Pratt et al. (2012) found that most students (87%) agreed that being introduced by preceptors, welcomed to the unit, and accepted by other staff and patients helped them to feel as if they were members of the team.

Effects of the Preceptor

Students' successes or failures during a preceptorship can also depend on the preceptors' teaching abilities (Zilembo & Monterosso, 2008a). Shinners and Franqueiro (2015) explained that being proficient at nursing does not always translate to being an effective preceptor. Burns et al. (2006) wrote that a preceptor is required to have expert clinical competence as well as positive personal attributes to teach successfully.

The role of preceptors is complex; their personal and professional attributes contribute to the mediation between CLEs and students (Shinners & Franqueiro, 2015; Zilembo & Monterosso, 2008a). In Gray and Smith's (2000) grounded theory study, students identified good preceptors as those who encourage students to feel comfortable asking questions, assist in applying theories to patient care, and positively promote students' evolving nursing identity. Poor preceptors delegate unwanted tasks to students, indicate that students are a burden, and do not actively facilitate students' learning (Gray & Smith, 2000; Hickey, 2010). Understanding the attributes of preceptors and how they affect students' learning in the CLE is important to potentially ensure students are satisfied with their preceptorships and subsequent careers as RNs.

Attributes of Preceptors

Preceptors' professional expertise and their personal attributes influence the quality of students' learning experiences (Li & Su, 2014). Desirable preceptors are RNs who can integrate both personal and professional attributes into their teaching methods, and can socialize students to the CLE and to the nursing profession (Heffernan et al., 2009; Li & Su, 2014). Undesirable preceptors may openly belittle or publicly criticize students (Gray & Smith, 2000; Hickey, 2010; Smith et al., 2011).

Differences in Nursing Education

Preceptor attributes varied in the literature depending upon the geographical location in which the studies were conducted (Gray & Smith, 2000; Heffernan et al., 2009; Smith et al., 2011; Walsh & Clements, 1995; Zilembo & Monterosso, 2008a). This could reflect differences in nursing education, hospital hierarchies, or measurement tools. In Australia, Zilembo and Monterosso (2008a) established that clinical competence (100%) and purposefulness (100%) were highly desirable attributes. In Scotland, Gray and Smith (2000) identified different attributes—approachability, patience, understanding, friendliness, and enthusiasm—whereas Heffernan et al. (2009) in Ireland found that being supportive and approachable were important attributes for preceptors to possess. In the United States, two different tools were used to measure attributes across varying populations; among these attributes, those of supporter, role model, and friend were highly ranked (Smith et al., 2011; Walsh & Clements, 1995).

Differences noted in each country limit linking specific attributes to Canadian RNs. Completion of a study in Canada is useful for understanding which preceptor attributes affect Canadian nursing students' satisfaction with their CLE.

Preceptor and Student Perspectives

Preceptors and students have different opinions about what makes a desirable preceptor. Preceptors identified attributes for teaching and preparing students as being clinically competent, being self-assured, and having effective communication skills (Altmann, 2006; Heffernan et al., 2009; Li & Su, 2014; Smith et al., 2011). Altmann (2006) explained that deans and directors of nursing programs ranked clinical competence as of higher importance than teaching abilities when selecting preceptors. This perspective differs from the opinions of students, who ranked stimulating student learning and motivation as important attributes of desirable preceptors (Smith

et al., 2011). Walsh and Clements (1995) also found that greater than 75% of students' perceived intellectual stimulus and exposure to different clinical opportunities as important educational attributes. Common between both students' and preceptors' views is the identification of supportive and approachable preceptors (Gray & Smith, 2000; Heffernan et al., 2009; Kim, 2007; Walsh & Clements, 1995; Zilembo & Monterosso, 2008a). Kim (2007) reinforced the attribute of support, with all students identifying the building of trusting relationships with preceptors, setting objectives with preceptors, and understanding roles and responsibilities as necessary in the promotion of students' learning.

I believe that kindness is a vital preceptor attribute in both the personal and clinical realm. Kindness can be defined as being friendly, considerate, generous, gentle, warm, and caring (Hall, 2017). In my experience, kindness allows for students' feelings to be considered, and can mitigate bullying. Kindness is demonstrated by acknowledging individuality and respectful, courteous treatment. Rebholz and Baumgartner (2015) completed interviews of nurse preceptors in the United States to understand essential attributes preceptors should demonstrate during preceptorships. All participants agreed that it was essential that preceptors have positive attitudes with kind behaviours (Rebholz & Baumgartner, 2015), while Hickey's (2009) research regarding new graduates' readiness for nursing practice summarized that preceptors need to demonstrate kindness, patience, and support. A preceptor's kind demeanor is not limited to one definition. It can also encompass many other positive attributes such as support, approachability, patience, and friendliness. Validating this attribute is worthy of further research.

Gaps in the Literature

Few researchers have conducted quantitative studies in Canada, regarding preceptors, students, and CLEs (Lalonde & McGillis Hall, 2017; Mamchur & Myrick, 2003; Myrick &

Barrett, 1992; Yonge et al., 2011). Lalonde and McGillis Hall (2017) supported the need for further investigation regarding specific preceptor attributes related to students' satisfaction and positive outcomes of preceptorships. Identifying desirable preceptor attributes could assist in the development of criteria for management personnel when selecting preceptors. These criteria can help ensure suitable staff RNs are selected for the preceptor role. Completing research in Canada involving preceptor attributes and students' satisfaction in the CLE is important to understand the preceptor-student relationship.

Chapter Four: Method

I explored the attributes associated with preceptors which fostered positive CLEs in a large western Canadian university undergraduate nursing curriculum. In this chapter I will provide a detailed description of the research process, decisions made, and data analysis plan.

The primary research question of this study: What are the attributes of preceptors associated with students' satisfaction in the CLE? Secondary objectives specifically address the following questions:

1. Was there a difference in students' perceptions from pretest to posttest?

2. Which preceptor attributes did students desire preceptors to have?

3. Which aspects did students desire the CLE to be focused on?

4. Which preceptor attributes did students' preceptors demonstrate?

5. What aspects did the students report that they found in the CLE?

6. What perceived effect do preceptors have on nursing students' preparation for practice?

7. Were nursing students satisfied with their preceptors?

8. Did the practicum choice affect their satisfaction with the preceptorship?

9. Was there a difference from having one preceptor versus two preceptors?

Research Design

A pretest-posttest study was conducted. The pretest was completed in September 2017 and the posttest in November 2017 following the students' preceptorships. A pretest-posttest is often used when examining a change in behaviour or perception, allowing for the assessment of differences and changes that occur within the groups over time (Polit & Beck, 2012).

Research Setting

This study was conducted in the Faculty of Nursing at the University of Calgary, Calgary, Alberta. The baccalaureate nursing program at the University of Calgary is an integrated curriculum, divided into terms with nursing courses beginning in term three (Faculty of Nursing, 2018). There are three entry-points for students: direct admission from high school, transfer from another discipline, or admission based on previous degrees (Faculty of Nursing, 2018). The length of study ranges from one and a half to four years. Terms three to eight encompass one and a half to three years, where the final term is comprised of a clinical preceptorship. Students take one course, weighted at two and a half credits, called NURS 599, Integrating Nursing Roles and Practice VI: Transition to Nursing Practice, (Faculty of Nursing, 2018). NURS 599 is the final practicum or preceptorship and requires students to complete 378 hours. The hours may be completed in Calgary, in rural centres around Calgary, in other areas of Canada, or with the University of Calgary's partner university in Qatar (Faculty of Nursing, 2017). Final course hours are broken down into two components: clinical hours and on-campus seminar hours. Clinical hours (348) are completed with a preceptor in a hospital or community setting providing direct patient care (Faculty of Nursing, 2017). A university faculty advisor liaises with the preceptor and student throughout the term at the beginning, at midterm, and at final evaluation. Faculty advisors meet students for 30 hours during the term for mandatory seminar hours, including: simulations within University of Calgary simulation lab, Health Education Systems Incorporated (HESI) and Computerized Adaptive Testing (CAT) exams, behavioural descriptive interviews, and a growth and development competency portfolio (Faculty of Nursing, 2017). Faculty advisors are responsible for grading nursing students with either a satisfactory or a fail in the course.

Research Participants

In September 2017, 99 students were enrolled in the NURS 599 course. Recruitment occurred from one term eight class using convenience sampling. Convenience sampling is the most commonly used sample type as it allows for the use of easily available participants (Polit & Beck, 2012). Ten of the students had already begun their out of province practicums with a preceptor. Eighty-nine students were available for recruitment (M.K, personal communication, September 1, 2017).

Inclusion Criteria

Participants were included in this study if they were enrolled in NURS 599, were completing their final practicum prior to writing their licensing exam, and were assigned to a preceptor(s) in a hospital or community setting.

Exclusion Criteria

Participants were excluded from this study if they had already left Calgary for their practicum or had already begun their clinical hours with their assigned preceptor(s).

Research Procedure

Research commenced following approval from the Faculty of Nursing at the University of Calgary and the Conjoint Health Research Ethics Board (CHREB) on August 4, 2017. With approval from the associate dean of undergraduate programs, I contacted the course coordinator to recruit students for my research study during NURS 599 orientation.

Recruitment and Data Collection

Recruitment took place in the second week of September 2017, during two orientation classes for NURS 599. A package containing the consent form (Appendix B), the pretest Demographic questionnaire, the Preceptor Attributes survey, and the preferred Clinical Learning

Environment Inventory (CLEI) were placed in a blank envelope and placed on each student's desk prior to class. Research details and student participation information were presented in a five-minute PowerPoint presentation. Students were ensured that participation in the research was voluntary and had no impact on their grades or completion of the course. Non-participants were asked to return the envelope with blank documents. Students completed the consent form, provided names and email addresses for the online posttests and completed the three-page pretest, then returned the envelopes to me. Students were informed that they would be contacted in November 2017 via email to complete the online posttest. Consent forms, pretests, and envelopes were anonymized with a code to protect the students' privacy and ensure confidentiality.

On November 14, 2017, participating students received an email requesting that they continue their participation in this research study. Two participants' email addresses failed. The failed email addresses were checked twice with their original consent forms and a second attempt was made to contact these participants. These two students were considered lost participants on the basis of continued failed email contact. A reminder email was sent to participants a week following the first email to encourage completion of the posttest.

The individual emails sent to the students had identifying codes and links to two online posttests. Students were asked to enter the identifying code into the online posttests for anonymized data analysis. The online posttests were customized according to whether the student had one or two preceptors, allowing for comparison of the preceptors. LimeSurvey was used to permit the participants to complete the online posttests. Each of the online tests identified the number of sections, anticipated amount of time to complete the test, and provided a test completion bar at the top to assist the participants. Using an online vessel for the posttest allowed

for control of how participants could answer questions. Making each question mandatory ensured that all questions would be answered prior to continuing (Van Selm & Jankowski, 2006).

Measurement Tools

Data were collected using four measuring tools. Pretests included: Demographic questionnaire (Appendix C), Preceptor Attributes survey (Appendix D) and the preferred CLEI (Appendix E). Posttests consisted of: Preceptor Attributes survey (Appendix F), the actual CLEI (Appendix G), and My Preceptorship tool (Appendix H). Students were given the option to complete either the One- or Two-Preceptor posttest package depending on their clinical assignment. The Two-Preceptor posttest package asked that students complete the Preceptor Attributes survey, the actual CLEI, and My Preceptorship tool for both preceptors.

Demographic Questionnaire

The Demographic questionnaire included age, gender, civil status, first language, and past educational degrees. Some items were specific to the University of Calgary nursing curriculum: past and current practicums, placement choice, and the number of preceptors assigned. Face validity was achieved through three nurse experts in the Faculty of Nursing and two RNs working in clinical environments. Modifications were made to change mother tongue to first language.

Preceptor Attributes Survey

The Preceptor Attributes survey, part of the pretest and posttest packages, utilized 14 attributes ranked highly in the literature by students, preceptors, management personnel, and from personal education experiences (see Figure 3).

Preceptor Attributes	
Attribute	*Reference*
Approachable	(Gray & Smith, 2000; Heffernan et al., 2009; Walsh & Clement, 1995),
Supportive	(Gray & Smith, 2000; Heffernan et al., 2009)
Clinical Competence	(Altmann, 2006; Zilembo & Monterosso, 2008)
Clear Communication	(Hickey, 2010)
Role Model	(Walsh & Clement, 1995)
Patient	(Gray & Smith, 2000; Heffernan et al., 2009)
Provides Exposure/Assist Students to be Better Prepared	(Hickey, 2010)
Enthusiastic	(Gray & Smith, 2000)
Stimulates	(Smith et al., 2011; Walsh & Clement, 1995)
Clinical Nurse Commitment	(D'Souza et al., 2015)
Kindness	(Hickey, 2009; Rebholz & Baumgartner, 2015)
Accessible/Visible	(Walsh & Clement, 1995; Zilembo & Monterosso, 2008)
Coach	(Walsh & Clement, 1995)
Inspiring	(Gray & Smith, 2000; Heffernan et al., 2009; Walsh & Clement, 1995)

Figure 3. Highly Ranked Attributes noted with Corresponding Literature Reference.

My supervisor and I created the Preceptor Attributes survey, scored upon a 4-point Likert scale (4=strongly agree, 3=agree, 2=disagree, 1=strongly disagree). Likert scales are often used in nursing research so that participants' opinions and perceptions are measured with fixed choices and removes the option for a neutral response (Rattray & Jones, 2007). The Preceptor Attributes survey was utilized to obtain information regarding students' perceptions of, and attitudes toward, the personal and professional attributes of preceptors. In the posttest, students were asked to rate the attributes they witnessed in their preceptors. Face validity was achieved through three nurse experts in the Faculty of Nursing and two RNs working in clinical environments. Modifications were made to change the preceptor attribute from patient to patience.

Clinical Learning Environment Inventory

The CLEI employed in this research study was purchased from its author, Dr. Dominic Chan of The Chinese University of Hong Kong, on June 19, 2017 and was used with his permission (Appendix I). It consists of 42 statements about the CLE, ranked on a 4-point Likert scale. A student preferred CLEI was used for the pretest, and the actual CLEI experienced by the student was used for the posttest, to facilitate comparison (Chan, 2001). The 42 statements of the Inventory provided descriptive information for each of six subscales: personalization, satisfaction, innovation, student involvement, individualization, and task orientation (Chan, 2001, 2002). Each subscale contained seven questions that examined the CLE, preceptors' teaching practices, students' activities, and the atmosphere created within the CLE (see Figure 4).

Descriptive Information for each Scale of the CLEI:

Scale Name	Scale Description	Sample Item
Individualisation	Extent to which students are allowed to make decisions and are treated differentially according to ability or interest.	12. I am generally allowed to work at my own pace (+)
Innovation	Extent to which clinical teacher/clinician plans new, interesting and productive ward experiences, teaching techniques, learning activities, and patient allocations.	5. New ideas are seldom tried out (-)
Involvement	Extent to which students participate actively and attentively in hospital ward activities.	32. I have opportunities to express opinion (+)
Personalisation	Emphasis on opportunities for individual students to interact with clinical teacher/clinician and on concern for student's personal welfare.	1. The mentor usually considers my feelings (+)
Task Orientation	Extent to which ward activities are clear and well organized.	28. Clinical tasks assigned to me are always clear (+)
Satisfaction	Extent of enjoyment of clinical field placement.	3. I look forward to attending clinical placement (+)

Items designated (+) are scored 5, 4, 2, 1 respectively, for the responses Strongly Agree, Agree, Disagree and Strongly Disagree. Items (-) are scored in the reverse manner. Omitted or invalid responses are scored 3.

Figure 4. Descriptive Information of the CLEI Subscales. From the information provided with the purchase of the CLEI. Copyright Dr. Dominic Chan and used with his permission.

The 42 statements comprised 23 positively- and 19 negatively-worded statements, the latter being reverse-scored (Chan, 2002). My supervisor and I concur with Newton et al. (2010), that item 29 (the same ward staff member works with the students for most of this placement)

should not be reverse-scored, and we kept the raw score. According to Chan (2002), the 4-point Likert scale is scored 5=strongly agree, 4=agree, 2=disagree, 1=strongly disagree, unless indicated to reverse score. Missing or omitted answers were given a three (3).

Validity and Reliability of the CLEI

Chan (2001) calculated Cronbach's alpha coefficients ranging from 0.68 to 0.80 for the student preferred CLEI (pretest) and 0.74 to 0.84 for the actual CLEI student's experienced (posttest). Cronbach's alpha scores range from .00 to +1.00 with a score above .80 showing internal consistency (Polit & Beck, 2012). Discriminant validity was also evaluated by Chan (2001) using correlations; correlation coefficients of 0.23 to 0.40 were determined for the preferred CLEI (pretest) and of 0.39 to 0.47 for the actual CLEI (posttest). The correlation coefficient is close to zero, indicating discriminant validity for the scales (DeVon et al., 2007). This statistical data indicates that the CLEI has reliability and validity. Chan (2001) stated that students' satisfaction levels were strongly associated with all subscales of the CLEI; and these are often used to provide an overall indication of students' satisfaction in the CLE (Chan, 2001). Chan did not supply tests of association.

My Preceptorship Tool

My Preceptorship tool is a 12-item questionnaire developed to represent specifics of the University of Calgary Faculty of Nursing method for practicum assignment. It was used for the posttest only. My Preceptorship tool was created to gather data on students' overall experiences during their preceptorships and to determine to what extent preceptors influenced students' satisfaction with their learning and preparation. There were three sections to the tool. The first five questions were rated on a 4-point Likert scale (4=strongly agree, 3=agree, 2=disagree, 1=strongly disagree), regarding preparedness and experiences. This section gathered information

pertaining to preceptors' effect on nursing students' readiness to write the National Council

Licensure Examination for Registered Nurses (NCLEX-RN), and on their post-graduation

workplace choice. The next section was an ordinal scale which allowed students to rank how

preceptors influenced their learning; providing a clear order in the responses (Brown, 2011). The

last section was based on the Faculty of Nursing curriculum, examining if students' practicum

assignments (not necessarily their choices) had any impact on their satisfaction with the CLE and

if their expectations for the CLE were met. This section used nominal scales to categorize data

into yes-or-no responses (Brown, 2011). Students were given the option, at the end of the tool, to

leave comments if they wished to provide details regarding their preceptorship; however, this

was not made mandatory in LimeSurvey. Face validity was achieved through three nurse experts

in the Faculty of Nursing and two RNs working in clinical environments. Modifications were

made to change the title from Post Preceptorship Perceptions on Preparedness to My

Preceptorship.

Ethical Implications

Permission was granted by the Faculty of Nursing at the University of Calgary and by the

CHREB, prior to commencing the research, for access to final practicum students. Though I have

worked for the University of Calgary Faculty of Nursing as a graduate teaching assistant, that

work was limited to term four nursing students. I have had no contact with nursing students in

term six, seven, or eight. I was far enough removed from students in term eight that their

participation in this research study was not influenced in any way. A clear statement was

provided to students during the recruitment stage that I was not associated with NURS 599 and

that declining to participate in this research study would jeopardize neither the completion or

grading of that course nor the granting of their degree.

A consent form was provided to all participants at the recruitment presentation. All consent forms and paper surveys are kept in my supervisor's office at the University of Calgary in a locked filling cabinet. Posttest email communications were stored on my personal computer under password protection, and students' emails and email addresses were deleted both from my sent folder and from my contact list at the end of December 2017. The data collected included the identifying features of age, gender, current placement, and placement choice. Data was anonymized by codes for pretesting and posttesting. Analysis of the anonymized data was completed and data was shared in aggregate form with committee members and with the Faculty of Nursing statistician. All computerized material is stored by my supervisor for five years on a secure, protected universal serial bus (USB).

Data Analysis Plan

The IBM Statistical Package for the Social Science (SPSS) Version 24.0 (2016 Armonk, New York) was used to analyze the data. In consultation with a statistician and prior to analysis, data were assessed for assumptions of parametric statistical tests using the Shapiro-Wilks test of normal distribution. Nonparametric tests were used for non-normally distributed data. A p-value was set at $<.05$ for significance for all testing. Aggregate data from each measurement tool were used for analysis. Descriptive statistics, means, standard deviations, and frequencies were conducted on the Demographic questionnaire, the Preceptor Attributes survey, the CLEI, and the My Preceptorship tool. Data from pretests and posttests were then divided by their identifying codes for further analysis.

Data collected were separated into preceptor groups A and B for students with two preceptors, and I used independent t-tests to test for differences between these preceptors. If there was no statistical difference between preceptors A and B, I used average scores for the final

analysis. If there were statistical differences between preceptors A and B, I removed the data to avoid misclassification of students' experiences. I later matched data to the code at two-time points (pre and post) and used paired t-tests to look at mean differences in students' perceptions. I also utilized the CLEI and Preceptor Attributes posttests to examine students' perceptions of preceptors' attributes that affected satisfaction in the CLE. Independent t-tests were used to test the mean differences. Attributes were dichotomized to agree and disagree as numbers were less than five in some categories. I used the CLEI subscales of personalization and satisfaction as continuous dependent variables to see which preceptor attributes affected students' satisfaction with the CLE and then with the preceptor. Finally, I analyzed thematically the comments left by participants at the end of the posttest.

Chapter Five: Results

In this chapter, I will report data from the pretests and posttests and from the covariate analysis. Initially I cleaned all data, and all scoring was completed following Dr. Chan's method for the CLEI. I then exported data from Excel to SPSS for analysis.

Data Cleaning

Participants returned the completed consent forms and pretests over two days of recruitment. I entered all participants' responses into Excel. I then double-checked and reviewed the data. Following Dr. Chan's (2002) scoring method, missing or omitted answers for the CLEI were given a neutral score of three on a 4-point Likert scale (strongly agree, agree, disagree, strongly disagree), and reverse-scoring was applied for those designated questions. The cleaned pretest data were then imported into SPSS for analysis. The pretest had an 83% response rate (74/89).

Three months later, the posttest was sent to 72 participant email addresses. Two email addresses were non-viable. From the first email, 35 completed responses were received. Twenty-eight students completed the One-Preceptor posttest and seven completed the Two-Preceptor posttest. A reminder email was sent within one week to non-respondents of the first email and an additional 20 students participated; 12 students completed the One-Preceptor posttest and eight completed the Two-Preceptor posttest. A response rate of 74% (55/74) completed the research study (see Figure 5).
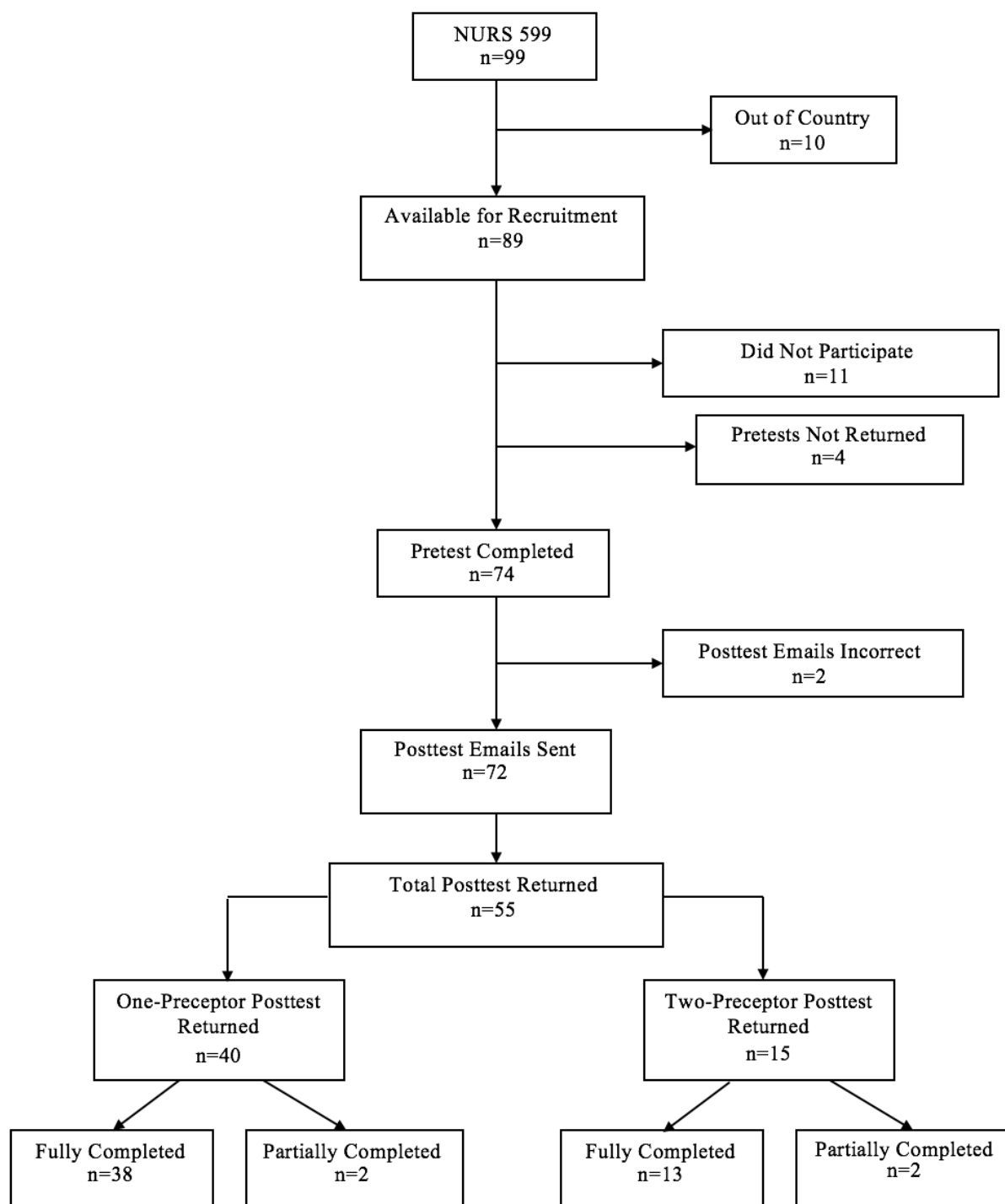
Figure 5. Flow Diagram of Responses Pretests and Posttests.

Posttest Analysis

Four posttests were partially completed, and four posttests were coded incorrectly (see Figure 6). As per Chan's scoring procedure, missing or omitted data from the CLEI were given a three and reverse-scoring was applied for those designated questions. I imported these data into SPSS. A total of 12 participants left comments in the comments section. I imported these comments into a Word file for thematic analysis.
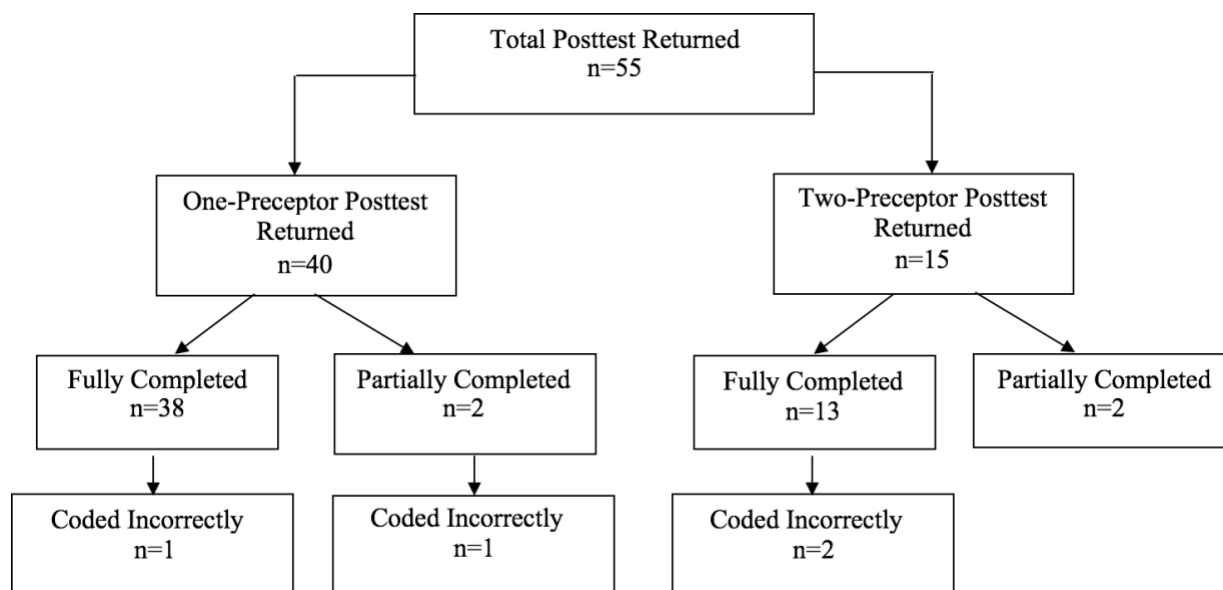
Figure 6. Flow Diagram of Participants Posttest Completion.

Missing Data

There were minimal missing data. Missing data is not considered extensive if less than 10% is missing (Fox-Wasylyshyn & El-Masri, 2005). In the pretest, there was a total of 1% (39/4884) missing data for all data points. For the posttest, all data points had a total of 8% (296/3740) missing data. CLEI was the only questionnaire wherein data were imputed. To remain true to students' experiences, I did not impute data for the remaining measuring tools. Most of the missing data were confined to the My Preceptorship tool, which was not involved in

any statistical comparisons. I aggregated pretest and posttest responses to each of the measuring

tools. Frequencies of each question were computed.

Demographics

I conducted descriptive statistics on 74 participants' demographic information (see Table

1). Most participants were under the age of 29 years old (87%, n=64). The sample included 60

(82%) females and 13 (18%) males. Most of the participants were single (66%, n=48) while the

remainder were married (16%, n=12) or in a common-law relationship (18%, n=13). Sixty out of

the 74 (81%) were from Canada and their primary language was English (88%, n=65). Three-

quarters of participants (74%, n=54) had completed a degree prior to nursing and 57% (n=27) of

those degrees were in the science field.

Table 1	
Description of Sample (n=74)	
	n (%)
Age (y)	
20-24	31 (41.9)
25-29	33 (44.6)
30-34	7 (9.5)
35-39	1 (1.4)
40+	2 (2.7)
Gender*	
Male	13 (17.8)
Female	60 (82.2)
Civil Status*	
Single	48 (65.8)
Married	12 (16.4)
Common-Law	13 (17.8)
Country of Origin	
Canada	60 (81.1)
Other	14 (18.9)
Other Countries	
North America Other than Canada	3 (21.4)
South America	2 (14.3)
Africa	6 (42.9)

Asia	3 (21.4)
Primary Language	
English	65 (87.8)
French	1 (1.4)
Other	8 (10.8)
Other Languages*	
Spanish	2 (28.6)
Arabic	1 (14.3)
Cantonese	1 (14.3)
Tagalog (Filipino)	1 (14.3)
Persian	1 (14.3)
Vietnamese	1 (14.3)
Completed Other Degrees*	
Yes	54 (74)
No	19 (26)
Type of Degrees*	
Science Baccalaureate Degree	27 (57.4)
Arts Baccalaureate Degree	10 (21.3)
Both Science and Arts Baccalaureate Degree	8 (17)
Science Master's Degree	1 (2.7)
Human Ecology Baccalaureate Degree	1 (2.7)

Note. n = number of participants; % = percentages; y = years; *M* = mean; *SD* = standard deviation; *Missing data: Gender n=1 (1.4%); Civil Status n=1 (1.4%); Other Languages n=1 (1.4%); Completed Other Degrees n=1 (1.4%); Type of Degree n=7 (9.5%).

Student Practicums

I conducted descriptive statistical analysis on students' practicum information (see Table 2). Students in term seven had practicums in maternity/perinatal (27%, n=20), pediatrics (22%, n=16), and mental health (16%, n=12). Practicums shifted in term eight to emergency/urgent care (17%, n=12), maternity/perinatal/postpartum (17%, n=12), and medicine (15%, n=11). Many students (92%, n=67) received their first or second choice of practicum. Forty-eight (66%) students surveyed were assigned one preceptor and 25 (34%) were assigned two preceptors. Monitoring the shift from term seven to term eight practicums was important to ascertain

students' familiarity with their current CLE. The placement coordinator tries to place students in

different practicums from term seven to term eight.

Table 2	
Student Practicums (n=74)	
	n (%)
Practicum Term 7	
Medicine	5 (6.8)
Maternity/Perinatal	20 (27)
Cardiology	5 (6.8)
Pediatrics	16 (21.6)
Mental Health	12 (16.2)
Oncology/Hematology	11 (14.9)
Surgery	2 (2.7)
Respiratory	3 (4.1)
Practicum Term 8*	
Medicine	11 (15.3)
Maternity/Perinatal/Post-Partum	12 (16.7)
Cardiology	3 (4.2)
Pediatrics	4 (5.6)
Mental Health	7 (9.7)
Oncology/Hematology	1 (1.4)
Surgery	5 (6.9)
Emergency/Urgent Care	12 (16.7)
Critical Care	10 (13.9)
Community	6 (8.3)
Orthopedics	1 (1.4)
Choice of Practicum*	
1	55 (75.3)
2	12 (16.4)
3	1 (1.4)
4	3 (4.1)
5	1 (1.4)
6	1 (1.4)
Number of Preceptors*	
1	48 (65.8)
2	25 (34.2)
Note. Terms used to describe practicums are those used in the curriculum; n = number of participants; % = percentages; *Missing data: Practicum Term 8 n=2 (2.7%); Choice of Practicum n=1 (1.4%); Number of Preceptors n=1 (1.4%).	

Students with Two Preceptors A and B

I conducted comparisons for the 15 participants who had two preceptors, using two-tailed

independent *t*-tests (*p*<.05). Attributes and subscales of the CLE were compared between

preceptors A and B. There were no significant differences between students' perceptions of their

preceptors or the CLE when assigned two preceptors for their preceptorship (see Table 3).

Table 3

Independent t-test for differences between Preceptor A and Preceptor B

Variable	M ± SD		t (28)	p	95% CI
	Preceptor A (n=15)	Preceptor B (n=15)			
Preceptor Attributes	48.67 ± 8.11	47.60 ± 8.34	0.36	.725	[-5.09, 7.22]
CLEI Subscales					
Personalization	29.07 ± 4.88	27.00 ± 5.76	1.06	.298	[-1.92, 6.06]
Student Involvement	26.47 ± 5.00	26.20 ± 3.99	0.16	.873	[-3.11, 3.65]
Satisfaction	29.20 ± 3.82	28.20 ± 5.40	0.56	.563	[-2.50. 4.50]
Task Orientation	27.53 ± 5.04	26.87 ± 4.85	0.37	.715	[-3.03, 4.37]
Innovation	22.93 ± 5.22	24.87 ± 4.10	-1.13	.269	[-5.44, 1.58]
Individualization	24.13 ± 5.08	23.93 ± 5.12	0.11	.915	[-3.62, 4.02]
Note. *M* = mean; *SD* = standard deviation; *t* = *t*-statistic; (28) = degree of freedom; *p* = *p*-value; CI = confidence interval; n = number of participants; *statistical significance, *p*<.05.					

Since there was no significant difference between preceptors, I used averages of these

responses for the remainder of the analysis. I linked pretest and posttest results for preceptor

attributes and the CLE via participant code for paired *t*-test comparisons. A total of 51 participant

responses were coded from pretests to posttests and were used to compare students' perceptions.

Final comparisons were made regarding preceptor attributes and the CLEI using the posttests

from the 55 participants. I examined which attributes affected students' satisfaction. Where

numbers were less than five in some preceptor attributes categories, the data were dichotomized

to agree and disagree. I used the subscale of personalization as the continuous measurement as this subscale involved questions including the preceptor. I also used the satisfaction subscale for students' satisfaction with the CLE, as most of the questions therein focused on the environment itself (Appendix J).

I conducted normality tests on all variables prior to analysis to ensure parametric tests could be used. If data fails to meet normality assumptions with over 30-40 participants, parametric tests could still be used according to the central limit theorem (Ghasemi & Zahediasl, 2012). With a sample size larger than 40 participants, the sample distribution tends to be normalized regardless of the shape of the data, allowing the mean of the sample to have normal distribution (Ghasemi & Zahediasl, 2012).

The data were examined closely with the assistance of a statistician. Given that the sample size was greater than 40 participants with minimal differences between means and medians, the data met the assumptions of normality and parametric tests were used. Differences between preceptors A and B was the only test where sample size was not met for central limit theorem. Parametric and non-parametric tests yielded the same results, and with consultation with the statistician I reported the parametric test results for consistency in analysis.

Primary Objective: Preceptor Attributes and Students' Satisfaction

The primary research question for this thesis was: What are the attributes of preceptors that are associated with students' satisfaction in the CLE? I used two-tailed independent t-tests ($p<.05$) to compare preceptors' attributes with students' satisfaction with their preceptors.

After correcting for multiple hypothesis testing, seven preceptor attributes were identified which, according to students, affected their satisfaction with the preceptor in the CLE (see Table 4). Students agreed ($M = 30.42$, $SD = 4.21$) that the preceptor attribute of accessibility affected

their perception of the preceptor in the CLE compared to those who disagreed ($M = 20.33$, $SD = 6.03$); $t (53) = 3.95$, $p = .000$; [CI 95%: 4.97, 15.21]. Students' mean perceived agreement ($M = 30.58$, $SD = 4.13$) was higher than their mean perceived disagreement ($M = 22.80$, $SD = 6.30$) for a preceptor being a positive coach; $t (53) = 3.83$, $p = .000$; [CI 95%: 3.71, 11.85]. Students' agreement ($M = 30.40$, $SD = 4.26$) versus disagreement ($M = 20.67$, $SD = 6.11$) indicated that providing exposure was an attribute that affected their satisfaction with their preceptor; $t (53) = 3.77$, $p = .000$; [CI 95%: 4.57, 14.91]. Students' mean perceived agreement ($M = 30.54$, $SD = 4.28$) was higher than their mean perceived disagreement ($M = 23.20$, $SD = 5.39$) for clear communicator as a desired preceptor attribute; $t (53) = 3.56$, $p = .001$; [CI 95%: 3.21, 11.47]. More students agreed ($M = 30.65$, $SD = 4.20$) than disagreed ($M = 24.57$, $SD = 5.97$) that patience was an attribute that affected their satisfaction with the preceptor; $t (53) = 3.39$, $p = .001$; [CI 95%: 2.48, 9.67]. Students' agreement ($M = 30.33$, $SD = 4.26$) was significantly greater than disagreement ($M = 22.00$, $SD = 8.54$) that supportiveness affected their desired perception of the preceptor in the CLE; $t (53) = 3.12$, $p = .003$; [CI 95%: 3.21, 13.68]. A significant number of students agreed ($M = 30.46$, $SD = 4.29$) that the attribute of stimulation affected their satisfaction with the preceptor compared to those who disagreed ($M = 24.00$, $SD = 6.67$); $t (53) = 3.05$, $p = .004$; [CI 95%: 2.22, 10.70].

Table 4							
Independent t-test for Personalization and Each of the Preceptor Attributes							
Variable	Group	n	$M \pm SD$	t (53)	p	95% CI	Holm-Bonferroni
Enthusiasm	Agree	51	30.2 ± 4.72	1.80	.077	[-0.50, 9.39]	
	Disagree	4	25.75 ± 3.94				
Approachable	Agree	52	30.27 ± 4.65	2.67	.010*	[1.74, 12.80]	
	Disagree	3	23.00 ± 2.65				
	Agree	53	30.08 ± 4.77	1.62	.111	[-1.32, 12.47]	

Respected Role Model	Disagree	2	24.50 ± 4.95				
Clear Communicator	Agree	50	30.54 ± 4.28	3.56	.001*	[3.21, 11.47]	.001ᵃ
	Disagree	5	23.20 ± 5.39				
Supportive	Agree	52	30.33 ± 4.26	3.12	.003*	[2.97, 13.68]	.003ᵃ
	Disagree	3	22.00 ± 8.54				
Committed	Agree	53	30.19 ± 4.64	2.62	.011*	[2.04, 15.34]	
	Disagree	2	21.50 ± 0.71				
Kindness	Agree	52	30.03 ± 4.82	1.06	.295	[-2.73, 8.80]	
	Disagree	3	27.00 ± 5.29				
Patience	Agree	48	30.65 ± 4.20	3.39	.001*	[2.48, 9.67]	.001ᵃ
	Disagree	7	24.57 ± 5.97				
Provides Exposure	Agree	52	30.40 ± 4.26	3.77	.000*	[4.57, 14.91]	.000ᵃ
	Disagree	3	20.67 ± 6.11				
Inspiring	Agree	48	30.48 ± 4.35	2.55	.014*	[1.02, 8.51]	
	Disagree	7	25.71 ± 6.32				
Clinically Competent	Agree	53	30.08 ± 4.77	1.62	.111	[-1.32, 12.47]	
	Disagree	2	24.50 ± 4.95				
Accessible	Agree	52	30.42 ± 4.21	3.95	.000*	[4.97, 15.21]	.000ᵃ
	Disagree	3	20.33 ± 6.03				
Positive Coach	Agree	50	30.58 ± 4.13	3.83	.000*	[3.71, 11.85]	.000ᵃ
	Disagree	5	22.80 ± 6.30				
Stimulating	Agree	50	30.46 ± 4.29	3.05	.004*	[2.22, 10.70]	.004ᵃ
	Disagree	5	24.00 ± 6.67				

Note. *M* = mean; *SD* = standard deviation; *t* = *t*-statistic; (53) = degree of freedom; *p* = *p*-value; CI = confidence interval; n = number of participants; *statistical significance, *p*<.05; ᵃ statistical significant after correcting with Holm-Bonferroni correction.

I used two-tailed independent *t*-tests, (*p*<.05) to compare preceptors' attributes to students' satisfaction with the CLE. Two attributes remained significant after correcting for multiple hypothesis testing (see Table 5). Students' agreement (*M* = 30.75, *SD* = 4.12) was significantly greater than their disagreement (*M* = 22.00, *SD* = 3.46) regarding the contribution of the preceptor attribute of provides exposure to their satisfaction in the CLE; *t* (53) = 3.59, *p* = .001; [CI 95%: 3.86, 13.64]. Students' mean perceived agreement (*M* = 30.82, *SD* = 4.17) was higher than their mean perceived disagreement (*M* = 24.80, *SD* = 4.76) for satisfaction in the CLE when a preceptor was a clear communicator; *t* (53) = 3.04, *p* = .004; [CI 95%: 2.05, 9.99].

Table 5

Independent t-test for Satisfaction and Each of the Preceptor Attributes

Variable	Group	n	$M \pm SD$	t (53)	p	95% CI	Holm-Bonferroni
Enthusiasm	Agree	51	30.31 ± 4.69	0.24	.813	[-4.20, 5.32]	
	Disagree	4	29.75 ± 1.071				
Approachable	Agree	52	30.38 ± 4.59	0.76	.451	[-3.37, 7.47]	
	Disagree	3	28.33 ± 3.21				
Respected Role Model	Agree	53	30.23 ± 4.61	-0.39	.700	[-7.87, 5.33]	
	Disagree	2	31.50 ± 0.71				
Clear Communicator	Agree	50	30.82 ± 4.17	3.04	.004*	[2.05, 9.99]	.004[a]
	Disagree	5	24.80 ± 4.76				
Supportive	Agree	52	30.42 ± 4.43	1.03	.310	[-2.64, 8.15]	
	Disagree	3	27.67 ± 6.66				
Committed	Agree	53	30.32 ± 4.57	0.40	.690	[-5.28, 7.92]	
	Disagree	2	29.00 ± 4.24				
Kindness	Agree	52	30.27 ± 4.64	-0.02	.981	[2.72, -5.51]	
	Disagree	3	30.33 ± 2.08				
Patience	Agree	48	30.73 ± 4.45	2.01	.049*	[0.01, 7.16]	
	Disagree	7	27.14 ± 4.06				
Provides Exposure	Agree	52	30.75 ± 4.12	3.59	.001*	[3.86, 13.64]	.001[a]
	Disagree	3	22.00 ± 3.46				
Inspiring	Agree	48	30.67 ± 4.31	1.72	.092	[-5.17, 6.71]	
	Disagree	7	27.57 ± 5.44				
Clinically Competent	Agree	53	30.22 ± 4.61	-0.39	.700	[3.29, -7.87]	
	Disagree	2	31.50 ± 0.71				
Accessible	Agree	52	30.50 ± 4.40	1.57	.123	[-1.16, 9.49]	
	Disagree	3	26.33 ± 6.03				
Positive Coach	Agree	50	30.58 ± 4.44	1.61	.113	[-0.82, 7.58]	
	Disagree	5	27.20 ± 4.76				
Stimulating	Agree	50	30.62 ± 4.26	1.84	.072	[-0.35, 7.99]	
	Disagree	5	26.80 ± 6.22				

Note. M = mean; SD = standard deviation; t = t-statistic; (53) = degree of freedom; p = p-value; CI = confidence interval; n = number of participants; *statistical significance, *p*<.05; [a] statistical significant after correcting with Holm-Bonferroni correction.

Secondary Objective: Students' Expectations of Preceptor Attributes and the CLE from

Pretest to Posttest

I used two-tailed paired *t*-tests (*p*<.05) to analyze the following question: Was there a difference in students' perceptions from pretest to posttest? After correcting for multiple hypothesis testing, four subscales of the CLEI showed significant differences between pretests and posttests (see Table 6).

Students' mean perceived use of innovation in the CLE decreased from pretest (*M* = 27.73, *SD* = 2.34) to posttest (*M* = 25.61, *SD* = 4.22); *t* (50) = 3.36, *p* = .002; [CI 95%: 0.85, 3.38]. There was also a decrease in students' mean perceptions of task orientation in the CLE during their preceptorships from pretest (*M* = 30.68, *SD* = 2.26) to posttest (*M* = 28.73, *SD* = 4.30); *t* (50) = 2.82, *p* = .007; [CI 95%: 0.56, 3.33]. Students' mean perceived satisfaction in the CLE decreased from pretest (*M* = 32.16, *SD* = 2.26) to posttest (*M* = 30.41, *SD* = 4.50); *t* (50) = 2.64, *p* = .011; [CI 95%: 0.42, 3.07]. There was a decrease in students' mean perceptions of student involvement in the CLE from pretest (*M* = 30.06, *SD* = 2.49) to posttest (*M* = 28.35, *SD* = 3.92); *t* (50) = 2.69, *p* = .010; [CI 95%: 0.43, 2.98].

Table 6

Students' Expectations from Pretest to Posttest for Preceptor Attributes and the CLEI (n=51)

	M ± *SD*		*t* (50)	*p*	95% CI	Holm-Bonferroni
Variable	Pretest	Posttest				
Preceptor Attributes	50.86 ± 3.83	48.92 ± 7.50	1.83	.074	[-0.20, 4.08]	
CLEI Subscales						
Personalization	30.80 ± 2.38	30.09 ± 4.72	0.99	.328	[-0.73, 2.14]	
Student Involvement	30.06 ± 2.49	28.35 ± 3.92	2.69	.010*	[0.43, 2.98]	.010[a]
Satisfaction	32.16 ± 2.26	30.41 ± 4.50	2.64	.011*	[0.42, 3.07]	.011[a]
Task Orientation	30.68 ± 2.26	28.73 ± 4.30	2.82	.007*	[0.56, 3.33]	.007[a]

Innovation	27.73 ± 2.34	25.61 ± 4.22	3.36	.002*	[0.85, 3.38]	.002[a]
Individualization	26.29 ± 3.02	25.96 ± 4.59	0.51	0.51	[-0.99, 1.66]	

Note. M = mean; SD = standard deviation; t = t-statistic; (50) = degree of freedom; p = p-value; CI = confidence interval; n = number of participants; *statistical significance, $p<.05$; [a] statistical significant after correcting with Holm-Bonferroni correction.

Secondary Objective: Students' Pretest Perceptions of Preceptor Attributes and the CLE

During the pretest students were asked questions regarding what attributes they would prefer in a preceptor and in a CLE. I used descriptive statistics to analyze these perceptions. The three preceptor attributes most strongly desired by students were (see Table 7): approachability (96%, n=71), clinical competence (92%, n=68), and clear communication (89%, n=66). These were followed closely by the attributes of supportiveness (85%, n=63) and patience (84%, n=62).

Table 7

Preceptor Attributes: Pretest (n=74)

	n (%)
Enthusiasm	
Strongly Agree	39 (52.7)
Agree	35 (47.3)
Approachable	
Strongly Agree	71 (95.9)
Agree	3 (4.1)
Respected Role Model	
Strongly Agree	46 (62.2)
Agree	28 (37.8)
Clear Communicator	
Strongly Agree	66 (89.2)
Agree	8 (10.8)
Supportive	
Strongly Agree	63 (85.1)
Agree	11 (14.9)
Committed	
Strongly Agree	42 (56.8)
Agree	32 (43.2)
Kindness*	
Strongly Agree	41 (55.4)

Agree	29 (39.2)
Disagree	3 (4.1)
Patience	
Strongly Agree	62 (83.8)
Agree	11 (14.9)
Disagree	1 (1.4)
Provides Exposure	
Strongly Agree	48 (64.9)
Agree	26 (35.1)
Inspiring	
Strongly Agree	24 (32.4)
Agree	47 (63.5)
Disagree	3 (4.1)
Clinically Competent	
Strongly Agree	68 (91.9)
Agree	6 (8.1)
Accessible	
Strongly Agree	55 (74.3)
Agree	18 (24.3)
Disagree	1 (1.4)
Positive Coach	
Strongly Agree	55 (74.3)
Agree	18 (24.3)
Disagree	1 (1.4)
Stimulating	
Strongly Agree	36 (48.6)
Agree	37 (50)
Disagree	1 (1.4)
Note. n = number of participants; % = percentages; *Missing data: Kindness n=1 (1.4%).	

The top three aspects on which students desired the CLE to be focused were (see Table 8): satisfaction ($M = 32.24$, $SD = 2.23$), personalization ($M = 30.84$, $SD = 2.35$), and task orientation ($M = 30.72$, $SD = 2.18$).

Table 8	
Clinical Learning Environment Inventory: Pretest (n=74)	
Subscales	$M \pm SD$
Personalization	30.84 ± 2.35

Student Involvement	30.16 ± 2.33
Satisfaction	32.24 ± 2.23
Task Orientation	30.72 ± 2.18
Innovation	27.72 ± 2.19
Individualization	26.16 ± 2.94
Note. n = number of participants; *M* = mean; *SD* = standard deviation; omitted or missing data given a 3.	

Secondary Objective: Students' Posttest Perceptions of Preceptor Attributes and the CLE

I used descriptive statistics to describe students' perceptions of their preceptors' attributes and of their CLE.

Which preceptor attributes did students' preceptor demonstrate? Students agreed that the top three attributes preceptors strongly demonstrated were (see Table 9): clinical competence (76%, n=50), commitment (67%, n=44), and supportiveness (64%, n=42). These attributes were closely followed by approachability (62%, n=41), kindness (62%, n=41), accessibility (62%, n=41), and positive coaching (62%, n=41).

Table 9	
Preceptor Attributes: Posttest (n=66)	
	n (%)
Enthusiasm	
Strongly Agree	34 (51.5)
Agree	28 (42.4)
Disagree	3 (4.5)
Strongly Disagree	1 (1.5)
Approachable	
Strongly Agree	41 (62.1)
Agree	19 (28.8)
Disagree	6 (9.1)
Respected Role Model	
Strongly Agree	39 (59.1)
Agree	25 (37.9)
Disagree	2 (3)
Clear Communicator	

Strongly Agree	33 (50)
Agree	26 (39.4)
Disagree	5 (7.6)
Strongly Disagree	2 (3)
Supportive	
Strongly Agree	42 (63.6)
Agree	19 (28.8)
Disagree	3 (4.5)
Strongly Disagree	2 (3)
Committed	
Strongly Agree	44 (66.7)
Agree	18 (27.3)
Disagree	4 (6.1)
Kindness	
Strongly Agree	41 (62.1)
Agree	20 (30.3)
Disagree	4 (6.1)
Strongly Disagree	1 (1.5)
Patience	
Strongly Agree	39 (57.6)
Agree	20 (30.3)
Disagree	5 (7.6)
Strongly Disagree	3 (4.5)
Provides Exposure	
Strongly Agree	36 (54.5)
Agree	25 (37.9)
Disagree	4 (6.1)
Strongly Disagree	1 (1.5)
Inspiring	
Strongly Agree	34 (51.5)
Agree	24 (36.4)
Disagree	5 (7.6)
Strongly Disagree	3 (4.5)
Clinically Competent	
Strongly Agree	50 (75.8)
Agree	13 (9.7)
Disagree	3 (4.5)
Accessible	
Strongly Agree	41 (62.1)
Agree	20 (30.3)
Disagree	4 (6.1)
Strongly Disagree	1 (1.5)
Positive Coach	
Strongly Agree	41 (62.1)
Agree	18 (27.3)

53

Disagree	4 (6.1)
Strongly Disagree	3 (4.5)
Stimulating	
Strongly Agree	39 (59.1)
Agree	21 (31.8)
Disagree	5 (7.6)
Strongly Disagree	1 (1.5)
Note. n = number of participants; % = percentages.	

What aspects did the students report that they found in the CLE? The top three aspects

reported were (see Table 10): satisfaction (*M* = 29.83, *SD* = 4.70), personalization (*M* = 29.56,

SD = 5.02), and task orientation (*M* = 28.18, *SD* = 4.50).

Table 10

Clinical Learning Environment Inventory: Posttest (n=66)

Subscales	$M \pm SD$
Personalization	29.56 ± 5.02
Student Involvement	27.77 ± 4.27
Satisfaction	29.83 ± 4.70
Task Orientation	28.18 ± 4.50
Innovation	25.03 ± 4.47
Individualization	25.44 ± 4.77
Note. n = number of participants; *M* = mean; *SD* = standard deviation; omitted or missing data given a 3.	

Secondary Objective: Students' Preparation for Practice

I used the My Preceptorship tool to address the next three secondary questions regarding

students' preparation and readiness for their nursing careers (see Table 11).

What perceived effect do preceptors have on nursing students' preparation for practice?

Most students (87%, n=53) believed they were prepared for the nursing profession. However,

approximately half of the students (41%, n=25) did not feel prepared to take the NCLEX-RN

exam. Ninety-three percent of students (n=57) had an overall positive practicum experience.

Most of the students (87%, n=53) wanted to return as employees to their practicum location post-graduation.

Were nursing students satisfied with their preceptors? Most students (95%, n=58) were strongly satisfied with their preceptor during their preceptorship. Ninety-three percent (n=57) of students believed the preceptor had a strong, positive influence on their learning and 92% (n=56) felt well-prepared to practice because of their preceptor.

Did the practicum choice affect their satisfaction with the preceptorship? Seventy-two percent (n=44) of students received their first choice of practicum. Three-quarters (75%, n=46) believed that their choice of practicum affected their satisfaction. However, 82% (n=50) of students reported their expectations of the CLE were met and 85% (n=52) were satisfied with their CLE.

Table 11	
My Preceptorship: Posttest (n=61)	
	n (%)
I feel prepared to enter the nursing profession	
Strongly Agree	13 (21.3)
Agree	40 (65.6)
Disagree	7 (11.5)
Strongly Disagree	1 (1.6)
I feel prepared to take the NCLEX-RN	
Strongly Agree	5 (8.2)
Agree	31 (50.8)
Disagree	21 (34.4)
Strongly Disagree	4 (6.6)
I would like to work at the same location as my practicum post-graduation	
Strongly Agree	36 (59)
Agree	17 (27.9)
Disagree	4 (6.6)
Strongly Disagree	4 (6.6)
Overall, I had a positive experience during my practicum	
Strongly Agree	34 (55.7)
Agree	23 (37.7)

Disagree	2 (3.3)
Strongly Disagree	2 (3.3)
Overall, I had a negative experience during my practicum	
Strongly Agree	1 (1.6)
Agree	4 (6.6)
Disagree	15 (24.6)
Strongly Disagree	41 (67.2)
My preceptor had a strong positive influence on my learning	
10 = Strongly Agree	57 (93.4)
5 = Neutral	2 (3.3)
1= Strongly Disagree	2 (3.3)
My preceptor strongly influenced my satisfaction with my practicum	
10 = Strongly Agree	58 (95.1)
5 = Neutral	2 (3.3)
1= Strongly Disagree	1 (1.6)
I feel well prepared for practice because of my preceptor	
10 = Strongly Agree	56 (91.8)
5 = Neutral	0 (0)
1= Strongly Disagree	5 (8.2)
Were your expectations of the clinical learning environment met?	
Yes	50 (82)
No	11 (18)
Was the student nurse satisfied with their clinical learning environment?	
Yes	52 (85.2)
No	9 (14.8)
Did you receive your first choice of practicum?	
Yes	44 (72.1)
No	17 (27.9)
Do you think your choice of practicum affected your satisfaction?	
Yes	46 (75.4)
No	5 (24.6)
Note. n = number of participants; % = percentages.	

Secondary Objective: One Preceptor versus Two Preceptors

I used two-tailed independent *t*-tests ($p<.05$) to compare differences between having one preceptor versus having two preceptors. There were no significant statistical differences between students who had one preceptor versus two preceptors (see Table 12).

Table 12					
Testing Differences between One Preceptor and Two Preceptors					
	$M \pm SD$		t (53)	p	95% CI
Variable	One Preceptor (n=40)	Two Preceptors (n=15)			
Preceptor Attributes	49.08 ± 7.81	49.20 ± 5.95	-0.06	.956	[-4.59, 4.35]
CLEI Subscales					
Personalization	30.18 ± 5.05	29.13 ± 4.41	0.70	.484	[-1.93, 4.01]
Student Involvement	28.58 ± 3.99	27.13 ± 4.41	1.16	.251	[-1.05, 3.94]
Satisfaction	30.70 ± 4.47	29.13 ± 4.63	1.15	.257	[-1.18, 4.31]
Task Orientation	28.83 ± 4.34	27.80 ± 4.77	0.75	.454	[-1.70, 3.75]
Innovation	25.90 ± 4.08	24.40 ± 4.39	1.19	.239	[-1.03, 4.03]
Individualization	26.20 ± 4.76	24.47 ± 4.93	1.19	.239	[-1.19, 4.65]
Note. *Note. M* = mean; *SD* = standard deviation; *t* = *t*-statistic; (53) = degree of freedom; *p* = *p*-value; CI = confidence interval; n = number of participants; *statistical significance, *p*<.05.					

Post-Hoc Power Analysis

With the assistance of a statistician, I completed a post-hoc power analysis to assess the power of the study as a convenience sample was used. Calculating the power of the study reduces the risk of type II errors or false negative results (Pilot & Beck, 2012). After correcting for multiple hypothesis testing using the Holm-Bonferroni correction, for a medium effect, with alpha set at .01, and a sample size of 51 for matched pairs, power was 81%. Post-hoc power analysis was not completed for independent *t*-test samples as there was no way of ensuring that students' experiences could be equally distributed between agrees and disagrees on the Likert scale.

Students' Comments

Twelve students (22%) provided comments at the end of the posttest. Three independent reviewers used thematic analysis to examine these comments. Comments were coded to similar experiences identifying emerging themes. With thematic analysis similar data are clustered into

ideas and labeled as themes of the participants' recurrent lived experiences (Clarke & Braun, 2017)

The three independent reviewers identified common experiences expressed by the majority of students and labeled these as themes. Once each reviewer had completed coding and identifying themes and sub-themes, my supervisor and I then compared all three reviews, examining the reviews for common themes shared by students. The commonalities of preceptor attributes and expectations during preceptorships were noted across all three reviews, with each affecting the students in positive or negative ways. These commonalities were clustered together and labeled as the themes of the students' preceptorship experiences.

Attributes of Preceptors

Among the 12 comments, an apparent theme concerned the positive and negative attributes of preceptors and their effect on students' preceptorships. Positive attributes in the comments included: enthusiastic, realistic, understanding, encouraging, challenging, knowledgeable, friendly, and pleasant. These behaviours positively impacted students' clinical experience. One comment stated "I was incredibly fortunate to have an amazing preceptor. She was enthusiastic, realistic and understanding." Another student credited the preceptor with success.

> I had an incredible preceptor! I could not have made it through the hospice environment without my preceptor. She is always encouraging me and challenging me with question[s]. She always finds interesting tasks that I can perform or view throughout our shifts. She has really made the last 3 months so amazing! She has definitely opened my eyes to a different type of nursing and her passion for this population is one that I hope I can demonstrate once I begin working as an RN.

Not all behaviours demonstrated by the preceptor were positive. Students found that the negative behaviours jeopardized their experience in the preceptorship. These negative behaviours were characterized as patronizing, unsupportive, moody, impatient, and critical. One student explained:

> I found her a little patronizing and impatient. I often did not feel supported by her during tasks/situations I was less confident in. Therefore, I was often stressed out and I feel that it negatively impacted my performance in such scenarios.

Another student confirmed the importance of the preceptor to the preceptorship as it related to the student's success.

> From talking with peers in the program the preceptor's approach, openness, attitude, and level of respect toward the [student] either made or broke your final semester. I found my preceptor moody frequently making it an uncomfortable environment and could not imagine a full semester working with her.

These comments emphasize the impact preceptors and their personal and professional attributes can have on students.

Expectations

Expectation was another theme that emerged as having an effect on students' preceptorships. This theme can be broken down into expectations of the clinical environment, of the preceptor, and of the student.

Sometimes staff felt strongly that students should not be in a particular clinical environment. One student commented:

> I was fortunate to obtain a specialized clinical focus, however, the nurses on the unit had a generalized belief that students didn't belong on the unit. I worked hard to try to meet

expectations, but I constantly felt like I didn't belong on the unit and I was just in the way.

Students feeling unwelcomed often make it difficult for them to progress smoothly through their preceptorships.

Students often felt a disconnect between what the preceptor expected, and what the faculty advisor expected of them. One student commented, "I sometimes felt that my faculty advisor and my preceptor had different goals for where my skill level had to be before the end of the term." Another student commented that "…preceptors need to be explained the expectations for students." When preceptors do not understand student expectations, their uncertainty can influence the students' experience, thereby challenging their progression through the preceptorship.

Students' meeting expectations and receiving constructive feedback often enhanced their growth and development in the CLE. One student commented, "I was pushed by my preceptor, she believed I could be a team lead. Turns out she was right." Recognition of students' abilities and encouragement for them aids students' development and also their satisfaction with the preceptorship. The student stated, "I enjoyed my time on the unit. It was a great learning opportunity for me and a great way to finish nursing school."

To summarize, preceptors have a significant impact on students' satisfaction during preceptorships. Preceptors' personal and professional attributes exercised in the CLE can be positive or negative for students. That students have realistic expectations is also critical for a satisfying preceptorship.

Chapter Six: Discussion

My research examined nursing students' perceptions before and after their final preceptorships, gaining insight into those personal and professional attributes of preceptors affecting students' satisfaction. In this chapter, I will describe the study results and limitations; present implications and recommendations for practice; and suggest future research.

Students' Satisfaction and Preceptor Attributes

The purpose of this study was to address attributes of preceptors and aspects of the CLE that contributed to students' satisfaction with their preceptorships. Some attributes of preceptors were associated with both students' satisfaction in the preceptor and in the CLE. Preceptor attributes identified as key to satisfaction were providing exposure, and clear communication in the CLE.

There is ample evidence to show that effective communication skills are necessary to ensure continual support of students during their preceptorships (Altmann, 2006; Duteau, 2012; Heffernan et al., 2009; Li & Su, 2014; Myrick & Barrett, 1992; Myrick & Yonge, 2005; Smith et al., 2011). When preceptors communicate effectively, they can provide specific, constructive feedback, and effective listening, for students progressing well and with satisfaction throughout their preceptorships (Duteau, 2012; Myrick & Yonge, 2005). Preceptors who possess effective communication skills can also communicate to their colleagues, to management, and to university faculties regarding concerns students may develop during clinical practicums. Preceptors can also suggest to the faculty advisor for improvement of preceptor programs to ensure positive CLEs are promoted and sustained in the future. Researchers confirm this attribute and explain that clear and open communication is often an attribute considered by management

teams when selecting preceptors (Altmann, 2006; Heffernan et al., 2009; Li & Su, 2014; Myrick & Barrett, 1992).

When preceptors communicate effectively, an open dialogue occurs which facilitates discussion of students' strengths and weaknesses. Through this dialogue, preceptors can provide students with targeted learning opportunities to enable identified weaknesses. Such a process affords students' specific experiences to meet exposed learning needs. This parallels the findings of Walsh and Clements's (1995) study showing the importance of preceptors providing exposure and visibility to a variety of experiences, and intellectual stimulation to augment students' growth and development. This also promotes a positive interaction in the preceptor-student relationship illustrated earlier in Figure 2 Preceptorship Scenario with Various Preceptor-Student Relationships.

Positive interaction with the preceptor in the CLE increases students' satisfaction (Lockwood-Rayermann, 2003), and may influence their retention to preceptorship locations post-graduation (Newton et al., 2010; Raines, 2009). Ensuring preceptors have the abilities to communicate clearly and that they will provide students with exposure to different clinical situations contributes to students' satisfaction with CLEs. This will, in turn, aid in students' willingness to return to their preceptorship placement post-graduation.

It is interesting that some preceptor attributes specifically accessibility, positive coaching, support, patience, and stimulation, separate from the CLE, were significant to students' satisfaction. These attributes are more relational and speak to the dialogue between a preceptor and a student apart from clinical exposure and performance. This may address students' vulnerabilities by providing a safe space to address students' concerns. Duteau (2012) noted that when preceptors created a safe and supportive space in the CLE, students' satisfaction with their

preceptorship increases. The preceptor is better informed by frank student dialogue to then navigate the student through the CLE addressing vulnerabilities while developing clinical skills (Courtney-Pratt et al., 2012; D'Souza et al., 2015; Duteau, 2012; Hickey, 2010; Myrick & Barrett, 1994; Shinners & Franqueiro, 2015).

Proposed Synergy Model of Preceptorship for Learning and Care Framework

My research results fit well within the Proposed Synergy Model of Preceptorship for Learning and Care Framework (Zilembo & Monterosso, 2008b). As identified in my study, students' satisfaction with the CLE was dependent upon the preceptor attributes of effective communication, and the provision of clinical exposure. Students' satisfaction was perceived as dependent upon their preceptors' abilities to navigate through the CLE to meet these expectations. This translates into positive socialization, and potentially that graduate nurses feel work ready (Zilembo & Monterosso, 2008b). Retention of post-graduate nurses in chosen work placements may follow, decreasing the attrition prophesized by Zilembo and Monterosso (2008b). Common to the framework, in this study, I found students felt prepared to practice nursing and wanted to return to their unit post-graduation because of their preceptors.

Students' Perceptions of Preceptor Attributes

Student participants reported that the preceptor attributes of clear communication and exposure in the CLE promoted satisfaction. The only attribute which met students' expectations from pretest to posttest was that preceptors were clinically competent, but this did not influence their satisfaction. Clinical competence is often highly rated by management teams for selection of preceptors (Altmann, 2006; Heffernan et al., 2009; Li & Su, 2014; Smith et al., 2011), matching students' expectations. However, clinically competent nurses may not make good preceptors, notwithstanding that competence is a criterion for preceptor selection (Shinners and

Franquerio, 2015). Lacking the ability to communicate may lead to disparate expectations causing frustration for both parties and resulting in an imbalance between students and preceptors as earlier illustrated in Figure 2 Preceptorship Scenario with Various Preceptor-Student Relationships. If students convey the attitude that the preceptor is an ineffective teacher, the preceptor may regard this as a lack of respect or motivation to learn (Kalischuk et al. 2013).

Preceptorships and Post-Graduation Choices of Work

Students often enter nursing programs with an idea of the specialty in which they hope to work (Happell, 1999). The interaction of the preceptor and student in the CLE can change students' decisions on where to work post-graduation or indeed hopes to continue in the profession (Edwards, Smith, Courtney, Finlayson, & Chapman, 2004; Newton et al., 2010).

At the University of Calgary, students choose among 10 placements for their preceptorships and are assigned units based upon availability (Faculty of Nursing, 2017). Not all students receive their first choice of practicum, which can be a potential source of dissatisfaction. When students are placed in an area or unit where they have been previously or desire to be, they have increased motivation and prior knowledge in their skills, allowing them to further develop (Edwards et al., 2004). In this study, 72% of students received their first choice of practicum, and the majority were satisfied with their placement. Many wanted to return to those areas for employment post-graduation. This has implications for increased retention of new graduates in the workplace.

Multiple Preceptors

In this study, 34% (n=25) of student participants were assigned more than one preceptor. It is documented that multiple preceptors can be detrimental to students' learning due to inconsistent teaching or practice style leading to frustration and confusion (Yonge et al., 2011;

Zilembo & Monterosso, 2008a). However, in this study there were no differences in students'

satisfaction when assigned more than one preceptor. It could be that two preceptors provide more

exposure to clinical experiences, which students identified as contributing to satisfaction. With

two preceptors, students may also experience different teaching techniques, knowledge bases and

skill sets, allowing them exposure to a variety of techniques that allow choices for students to

use. This may allow students to develop confidence in a unique approach to clinical situations,

and the development of their professional identity.

Students' Concerns

Comments in the posttest revealed that, students noted some preceptors did not meet their

expectations of the role. Contrary to the survey results, some students with two preceptors wrote

that there were disconnects between two preceptors and that their attributes greatly differed.

These differences affected their confidence when attempting new skills. Students wrote that there

was a lack of communication between preceptors regarding students' growth and development.

This disconnect greatly affected the preceptorship experience. Communication among multiple

preceptors is important for student success in the CLE (Yonge et al., 2011; Zilembo &

Monterosso, 2008a). This underscores the importance of consistency among preceptors who

share involvement with one student.

Students' Preparation for Practice Post-Graduation

Preceptors have control over the information and experiences provided in the CLE

during the preceptorship. From the My Preceptorship posttest, I found that most students were

satisfied with their preceptor and felt prepared to practice. Raines (2009) explained that when

students were satisfied with their preceptorships and were provided with positive socialization,

their transition to the profession was easier, job retention and work satisfaction increased post-graduation, and better-quality patient care was delivered.

Despite feeling ready to work, approximately half of the students in this study did not feel prepared to take the NCLEX-RN exam. This high-stake exam is a test of facts, critical thinking, and an examination of the competencies required for nurses to practice safely (College & Association of Registered Nurses of Alberta [CARNA], 2018). Feelings of unpreparedness emanate from students' anxieties regarding the exam or from weaknesses uncovered as a student practicing in the CLE. Feedback provided by preceptors in the CLE can alert students to weaknesses in competencies prior to their licensing exam (Lúanaigh, 2015).

The University of Calgary Faculty of Nursing assists in preparing students for the licensure exam by providing them with two practice exams, the HESI and CAT, during the final term (Faculty of Nursing, 2017). This helps students to familiarize themselves with the exam and with the types of questions posed. It allows students to determine which areas require more focused studying prior to writing the NCLEX-RN. The posttest was collected prior to the CAT and could reflect their feelings of being unprepared or anxiety about the upcoming NCLEX-RN exam.

Students' Expectations and Satisfaction

In this study, I examined students' perceptions before and after their preceptor-led practicum to understand if students' realities met their expectations. These expectations were met in some of the categories examined, but not all. Students' expectations were met with regard to the preceptor. Examining CLEI subscales, students' expectations for satisfaction, personalization, and task orientation were evident in the posttest. However, with further comparison there were differences in satisfaction and task orientation, indicating that students'

expectations for clinical learning were not met, nor were CLE aspects of innovation and involvement. CLEs cannot be expected to supply every experience for every student. Communication of those particular events that students wish to have exposure can occur in a positive relationship with a preceptor but are less likely to be realized in a negative or compromised preceptor-student relationship (Dunn & Hansford, 1997).

In this study, students' expectations of desirable innovative teaching techniques were not met during preceptorships. Some explanation of this may be found within the social context of generational differences. Most student participants are millennials and preceptors are predominately Generation X; with 43 being the average age of nurses working in Alberta (CNA, 2016). Myers and Sadaghiani (2010) defined Generation X as being skeptical, preferring to work autonomously, and dislikes group work and attending team meetings. The education of millennials has not been extensively studied but some researchers have expressed concern that millennial educational needs are not being considered (Lalonde & McGillis Hall, 2017; Myers et al., 2010).

Approaches to nursing education are changing. There is the addition of gamification, simulation, blended classrooms, and online courses alongside of traditional teaching methods (Pardue & Morgan, 2008). Preceptors may not be equipped to recognize these differences in academia. However, the CLE has adopted computers and bedside laptops to view electronic patient health records and to provide timely electronic documentation (Carlson et al., 2010). Millennials are technologically savvy and highly interactive, owning personal devices designed to provide immediate response to specific queries for individual needs, and for social contact (Pardue & Morgan, 2008). Some preceptors may be challenged by the digital healthcare system encompassing documentation, orders, and progress notes. There may be a technological gap

between Generation X preceptors and millennial students where technological advances are common place for those socialized early on in the millennial world but present learning for experienced but technologically naive nurses (Myers & Sadaghiani, 2010). This may also affect student involvement and task orientation in the daily workings of the CLE.

Students' indicated pretest that they wanted an "interesting" CLE (CLEI, n.d, question 39). Posttest students reported that their "clinical placement was boring …[or] a waste of time" (CLEI, n.d, question 21, 27). This may be linked to the lack of exposure to clinical opportunities to develop cognitive and psychomotor skill that could have been provided by the preceptor (Henderson et al., 2012; McClure & Black, 2013).

The CLEI and My Preceptorship tool did not provide the same results for students' satisfactions and expectations of the CLE. I believe this was a limitation of questionnaire construction. The CLEI offered richer descriptors for respondent consideration, whereas the My Preceptorship tool forced yes or no responses.

Implications for Nursing Practice

It is evident that the attributes of preceptors affect students' satisfaction during preceptorships. Satisfaction of student nurses is associated with nurse retention concerns (Lockwood-Rayermann, 2003). In this study, I found that most nursing students (87%, n=53) wanted to return to their preceptorship units post-graduation. Preceptor attributes impact students' satisfaction (Heffernan et al., 2009; Shinners & Franqueiro, 2015; Zilembo & Monterosso, 2008a); therefore, it is incumbent upon placement coordinators and management teams to ensure that preceptors are equipped with personal and professional attributes to assist with student development. Preceptors with effective communication skills, who ensure learning opportunities for students, play a role in nursing retention insofar as they impact students'

experiences and their preparation for practice (Duteau, 2012; Hickey, 2009; Shinners & Franqueiro, 2015).

From the results of this study, I can reaffirm that preceptors are essential for the clinical education of students preparing to enter the nursing profession. Surprisingly, I found there was no difference in students' experiences in having one versus two preceptors. This confirms the decision made by personnel in the academic and clinical settings to use two preceptors when necessary for preceptorships. As this is a new finding and contrasts with reports in the literature, further studies with a larger sample size would help to confirm these results.

Researchers support the importance of RNs volunteering for the position of preceptors (Burns et al., 2006; Hickey, 2009). When RNs are selected due to availability, and not because they are willing, they may not exercise those attributes that encourage student learning and satisfaction (Kalischuk et al., 2013). This may have less than promising implications for the CLE, and for the relationship that occurs between the student and the preceptor (Kalischuk et al., 2013). Individuals in management and placement coordinator positions should take into consideration the identified preceptor attributes which help to develop students' preceptorship satisfaction. These attributes include: effective communication skills and providing clinical exposure.

Preceptor attributes separate from the CLE that significantly affected students' satisfaction were accessibility, positive coaching, patience, supportiveness, and stimulation. Considering these attributes when selecting RNs and educating preceptors may assist in mitigating undesirable preceptorship experiences. Positive or negative preceptorships can affect not only the student, but also the preceptor (Kalischuk et al., 2013; Raines, 2009). All members

involved in the preceptorship should understand the importance of the identified personal and professional attributes suggested for preceptors.

If an undesirable preceptorship experience develops, it is important that the university faculty advisor act as a buffer between student and preceptor. Faculty advisors can assist in resolving conflicts within the practicum by helping to transform it into a positive experience, or they can relocate the student if the CLE is not the right fit. Collaboration between students, preceptors, and faculty advisors is imperative and could reduce the harms associated with suboptimal experiences (Courtney-Pratt et al., 2012). Open communication between all parties assists with conveying teaching and learning opportunities and assures appropriate feedback is maintained (Courtney-Pratt et al., 2012).

Recommendations for Practice

My research supports that preceptors provide invaluable clinical experience for students and preceptorships and should be continued by nursing educational institutions. I would like to suggest some recommendations to improve this valuable educational resource.

Course Coordinators to Faculty Advisors

Recommendation: The NURS 599 course coordinator should provide faculty advisors with education on the importance of clear communication and consistent collaboration among preceptors during students' preceptorships.

Rationale: Constant communication with students, preceptors, and practicum location staff can help to ensure students are progressing through the preceptorship appropriately and could mitigate conflicts. Having the course coordinator stress the importance of consistent collaboration among faculty advisors and preceptors involved in the undergraduate nursing students' preceptorships can assist in promoting a positive socialization for students. As noted

from the students' comments section at the end of the posttest, conflicts arise. Collaboration between students, preceptors, and faculty advisors is necessary and could recognize and reduce potential issues that could create suboptimal learning experiences (Courtney-Pratt et al., 2012).

Associated Deans of Undergraduate Programs to Faculty Advisors

Recommendation: The associate dean of undergraduate programs at the Faculty of Nursing should encourage faculty advisors to provide preceptors and students with an orientation day.

Rationale: In this study, I found that students' expectations are not always met with regard to the preceptorship. Having an orientation day for preceptors can help to ensure that preceptors and students understand their expectations. The content for the day could include: students' scope of practice, agreed-upon points of contact during preceptorships, if different than the suggested midterm, and final evaluations, the importance of consistency among preceptors who share a student. This could allow students to meet their preceptor prior to their first preceptorship day and help to establish accountability to both the preceptor and student for their actions during the preceptorship.

Clinical Placement Coordinator to Management Teams

Recommendation: The clinical placement coordinator or faculty member who is requesting preceptorships for students should provide the student placement team or management team at the institution with criteria of RNs' personal and professional attributes of which to be conscious when selecting unit preceptors.

Rationale: From this study, I found preceptors possessing effective communication skills and providing exposure to varied clinical experiences affected students' preceptorship satisfaction. As well, being a positive coach who is accessible, patient, supportive, and

stimulating, affected students' preceptor satisfaction. Emphasizing the importance of these attributes to students' preceptorship satisfaction could assist management in selecting desirable RNs for the preceptor role. Preceptors' personal and professional attributes can affect the CLEs that are developed during students' preceptorships. It is reasonable to suggest that not all RNs make good preceptors (Shinners & Franqueiro, 2015), but those exhibiting identified attributes ensure students' satisfaction. Considering preceptors attributes is essential, as these attributes can affect the creation of safe and supportive CLEs and the students' socialization to the nursing profession (CNA, 2004; Gary & Smith, 2000; Heffernan et al., 2009).

Clinical Educators to Preceptors

Recommendation: The clinical educator or management team at the preceptorship placement should provide educational resources for RNs in the preceptor role.

Rationale: Providing RNs with orientation to the roles and responsibilities of preceptors can assist in increasing preceptors' and students' satisfaction with preceptorships (Kalischuk et al., 2013). Education modules could provide RNs with varied teaching techniques and could educate RNs on what students expect from a preceptorship. Education modules could also potentially lay out a step-by-step preceptorship guide, having students reach certain goals by certain weeks, providing structure to the preceptorship. One way to ensure that RNs complete learning modules would be to make them mandatory. However, making modules mandatory requires RNs to be paid for their time in completing them. Involving the university, the professional body CARNA, or Alberta Health Services (AHS) may be necessary to implement monetary incentives and professional acknowledgements to RNs to partake in the preceptor role and education.

Currently, AHS offers Preceptor Education online learning e-modules with additional resources for RNs to prepare for the preceptor role (Bennett, 2018). These are highly recommended by the unit clinical educators but not mandatory. The results of my study are congruent with AHS e-modules, especially where the learning emphasizes the importance of making students feel welcome, communicating expectations, and providing different learning experiences.

Recommendations for Future Research

Further investigations may include: (a) the impact of the preceptor attribute of kindness, (b) the use of two preceptors, (c) preceptor attributes of clear communication and provision of clinical exposure and their effect on students' learning satisfaction, and (d) students' outcomes post-preceptorship.

Kindness

I have been a student, practicing nurse, preceptor, and nurse educator. I believe kindness is a crucial attribute in these roles and especially to the preceptor role, to facilitate learning but also to confront the origin of lateral violence, bullying. Kindness has not been extensively examined except as an afterthought that preceptors should exhibit kind behaviour (Hickey, 2009; Rebholz & Baumgartner, 2015). Students should be able to recognize kindness in a preceptor who has high expectations for student learning. From my experience, kindness is important when a preceptor demonstrates new skills and delivers feedback to a student.

The public image of nursing is associated with care, comfort, and kindness. It is paradoxical, then, that the assumption that nurses eat their young is still active. If nurses consciously make efforts to be kind and supportive, bullying behaviours could be extinguished from the beginning (Dellasega, 2011; Smith et al., 2016). Studying kindness in preceptorships

would contribute to an understanding of its importance and impact on students' satisfaction and nurse-to-nurse collegiality.

Preceptorships with Multiple Preceptors

In this research study, I concluded that there were no differences in students' perceptions of the preceptor or the CLE when they were assigned one or two preceptors. As this can validate the use of more than one preceptor during preceptorships, further investigation needs to be completed as the students' comments did not align with the survey results. Mixed methods studies, with a larger sample size, across multiple sites, will better assess the realities that students face with multiple preceptors.

Preceptor Attributes and Satisfaction

In this study, I found that the preceptor attributes, providing exposure and clear communication, increased students' satisfaction in the CLE. A larger sample size in another study would confirm these results and increase generalizability. Confirming these results may also assist hospital and academic personnel to develop criteria for those chosen for the preceptor role.

Student Outcomes Post-Preceptorship

Answering my secondary objective, I found that approximately half of the students reported they were not ready for their NCLEX-RN exam. Further exploration of students' preparation for NCLEX-RN exams could provide an understanding of whether their preparation is associated with the preceptor and CLE, or a result of stress and emotions towards professional exams. Some research suggestions include: reviewing NCLEX-RN results of baccalaureate nursing programs nationally, students' job applications, successful obtainment of RN positions,

new graduate retention levels once the students enter the nursing profession, and how long they stay in their positions.

Study Limitations

The study design could affect students' perceptions for the posttest due to a learning effect held over from the pretest (Polit & Beck, 2012). Convenience sampling and self-selection to participate contributes to sampling bias and may affect the generalizability of the results to other nursing programs (Polit & Beck, 2012).

The timing of the research study affected the sample size. Posttests were collected near the end of the semester when students were finishing their preceptorships and preparing for the NCLEX-RN exam, reducing the number of student responses. The posttest was also offered as an online option with distribution via an email, potentially limiting students' willingness to participate. I was also necessarily dependent upon students providing correct email addresses and checking their emails at the end of November.

The impact of faculty advisors on students' satisfaction was not measured. The faculty advisor provides guidance throughout the preceptorship and grades the student. Their collaboration with the preceptor and the student can help to mitigate problems in the preceptorship (Courtney-Pratt et al., 2012). However, the faculty advisor concentrates on identified student problems and may not interact as frequently with unidentified problems. Therefore, the student-faculty advisor relationship could impact students' preparation and potential satisfaction with how their final term concludes, and should be studied further.

Measuring tools were created for this study due to the lack of available published tools. Two of the questionnaires, the Demographic and My Preceptorship tool were developed with considerations specific to the University of Calgary's Faculty of Nursing curriculum, limiting

generalizability. The Preceptor Attributes survey was developed based on specific preceptor attributes that were commonly rated highly in the literature. Face validity, the weakest of validity measures requires additional testing to ensure that the tools will produce reliable and valid results (Polit & Beck, 2012). This was the only validation for the Demographic, the My Preceptorship tool, and the Preceptors Attributes survey, limiting the internal and external validity of these tools.

Conclusion

Through this study, I gained insight into those preceptor attributes identified by students, which affected students' satisfaction in the CLE during preceptorships. Overall, students' satisfaction with their preceptors and the CLE appeared to be dependent upon some preceptors' personal and professional attributes. Having preceptors with effective communication skills, who were willingly able to provide exposure to learning opportunities were vital for students' satisfaction. Using preceptors with selected attributes to navigate CLEs is key to students' satisfaction and positive socialization. In conclusion, let us not eat our young, but rather kindly greet them, provide meaningful clinical exposure, and welcome them to the nursing profession.

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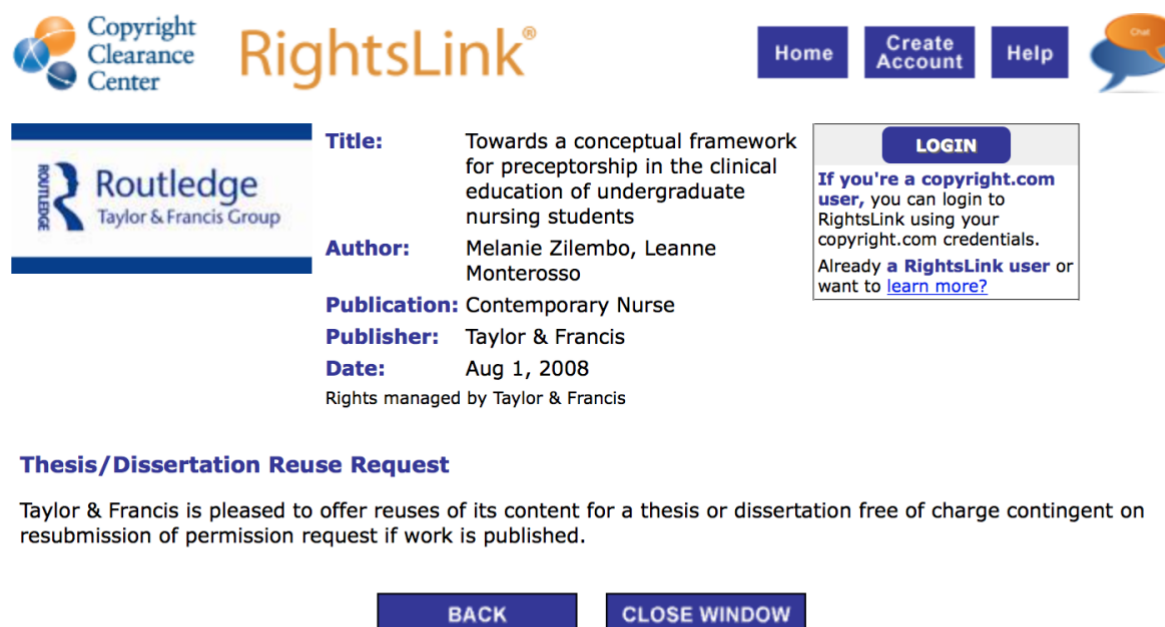Smith, C., Swain, A., & Penprase, B. (2011). Congruence of perceived effective clinical teaching characteristics between students and preceptors of nurse anesthesia programs. *AANA Journal, 79*(4), S63-S68.

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APPENDIX A: FIGURE COPYRIGHT

Title: Towards a conceptual framework for preceptorship in the clinical education of undergraduate nursing students

Author: Melanie Zilembo, Leanne Monterosso

Publication: Contemporary Nurse

Publisher: Taylor & Francis

Date: Aug 1, 2008

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APPENDIX B: CONSENT

Name of Student Researcher, Faculty, Department, Telephone & Email:

Kendra Carrington RN BScN MN Student, Faculty of Nursing, ███████████
███████████████████████

Supervisor/Primary Investigator (PI):

Dr. Cynthia Mannion, Faculty of Nursing, ██████████████████████████

Title of Project:

Let us Greet our Young, Not Eat our Young: The Nursing Preceptor Study

_____

This consent form is only part of the process of informed consent.

Please take the time to carefully read and understand the accompanying information.

The University of Calgary Conjoint Health Research Ethics Board has approved this research study.

Purpose of the Study:
This research is being conducted as partial fulfillment of a Masters in Nursing. The focus of this research is to understand nursing students' perceptions of preceptors' attributes that influence student satisfaction in the learning environment and their preparedness for the nursing profession.

What Will I Be Asked to Do?
You will be asked to participate in one pre-practicum and one post-practicum survey. Each survey will take approximately 20 minutes to complete. The survey questions will ask you about your experiences during your final practicum, rate your satisfaction and if you feel prepared to practice nursing.

Voluntary Participation and Withdrawal:
Your participation in the research is completely voluntary. You may terminate your participation at any time, and for any reason without any consequences or questions asked. Every attempt to remove your data will be made if you wish.

What Type of Personal Information Will Be Collected?
Non-nursing information: age, gender, civil status, first language, past educational degrees other than nursing*, and y*our perceptions of your experience during preceptorship.

What Happens When/If I Agree to Participate?
1. By signing and completing this consent form, you are agreeing to participate in this research study. Following the completion of this consent, pre-surveys will be handed out for your completion.
2. At the beginning of December 2017, using the email provided a link to the online post-survey will be distributed. A reminder to complete the survey will be email*ed* one-week later.

No further contact will occur with the willing participants.

What Happens to the Information I Provide?
Surveys will be anonymized and only aggregate data will be used in the analysis. Access to the master list will be restricted to the PI and Kendra Carrington.   The results will be disseminated through a thesis, presentations, and publication in a journal.

Consent forms and paper surveys will be kept in a locked filling cabinet in Dr. Mannion's office for five years.

LimeSurvey will be used to obtain online surveys. LimeSurvey is an online survey platform used for survey administration and will be used for the post-surveys. Responses to the survey questions will be stored and accessed in Canada. Data is only accessed by the research team, and data is not transferred to third parties for any other purposes. The security and privacy policy for this web-survey company can be found at the following link: https://www.limesurvey.org/policies/privacy-policy

All data collected will be secured on a protected universal serial bus (USB) by Dr. Mannion for five years. Emails will be secured on a password protected computer until the end of data collection December 2017, then deleted.

Are there Risks or Benefits if I Participate?
There are no foreseeable risks or direct benefits to you because of your participation in this research. Since the data is being collected at one university, there is a potential that information could be linked via students' specific placement, age, and gender.

By signing this consent and providing your email address, you agree to participate in this research project.
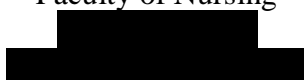

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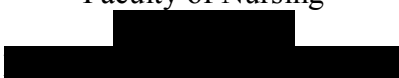

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Questions/Concerns

If you have any further questions or require clarification regarding this research and/or your participation, please contact:

<div align="center">

Dr. Cynthia Mannion
Faculty of Nursing

████████████

Kendra Carrington, RN BScN MN Student
Faculty of Nursing

████████████

</div>

If you have any questions concerning your rights as a possible participant in this research, please contact The Director, The Office of Medical Bioethics, The University of Calgary, at ████████.

APPENDIX C: DEMOGRAPHIC QUESTIONNARE

Please Circle the Following:

Gender:	Male	Female	Other		

Age Range:	20-24	25-29	30-34	35-39	40+

Civil Status: Single   Married   Common-Law   Separated

Divorced   Other

Country of Origin: Canada   Other

If other, please indicate (e.g. USA):

What is your first language: English   French   Other:

If other, please indicate (e.g. Spanish):

Have you completed other degrees: Yes   No

If yes, please indicate with year granted (e.g. BSN 1999):

Practicum Completed in Term 7 (e.g. Medicine):

Area of Current Term 8 practicum (e.g. Maternity):

Which term 8 practicum choice did you receive? 1 2 3 4 5 6 7 8 9 10

Number of Preceptors assigned? 1   2   Other

If other please indicate:

APPENDIX D: PRECEPTOR ATTRIBUTES – PRETEST

Please rate the attributes you think are important for a preceptor to have. Please score for each attribute.

Descriptor Attribute	Strongly Agree	Agree	Disagree	Strongly Disagree
Enthusiastic	○	○	○	○
Approachable	○	○	○	○
Respected Role Model	○	○	○	○
Clear Communicator	○	○	○	○
Supportive	○	○	○	○
Committed	○	○	○	○
Kindness	○	○	○	○
Patience	○	○	○	○
Provides Exposure	○	○	○	○
Inspiring	○	○	○	○
Clinically Competent	○	○	○	○
Accessible	○	○	○	○
Positive Coach	○	○	○	○
Stimulating	○	○	○	○

APPENDIX E: PREFERRED CLINICAL LEARNING ENVIRONMENT INVENTORY – PRETEST

Clinical Learning Environment Inventory (CLEI)				
Please rate all of the Clinical Learning Environment factors below:	Strongly Agree	Agree	Disagree	Strongly Disagree
1. The preceptor would consider the students feelings	SA	A	D	DA
2. The preceptor would talk rather than listen to the students	SA	A	D	DA
3. Students would look forward to coming to clinical placement	SA	A	D	DA
4. Students would know exactly what has to be done in the ward	SA	A	D	DA
5. New ideas would be seldom tired out in this ward	SA	A	D	DA
6. All staff in the ward would be expected to do the same work in the same way	SA	A	D	DA
7. The preceptor would talk individually with students	SA	A	D	DA
8. Students would put effort into what they do in the ward	SA	A	D	DA
9. Students would be dissatisfied with what is done in the ward	SA	A	D	DA
10. Getting a certain amount of work done would be important in this ward	SA	A	D	DA
11. New and different ways of teaching to the students would be seldom used in the ward	SA	A	D	DA
12. Students would be generally allowed to work at their own pace	SA	A	D	DA
13. The preceptor would go out of his/her way to help students	SA	A	D	DA
14. Students would "clock watch" in this ward	SA	A	D	DA
15. After the shift, the students would have a sense of satisfaction	SA	A	D	DA
16. The preceptor would often get sidetracked instead of sticking to the point	SA	A	D	DA
17. The preceptor would think up innovated activities for students	SA	A	D	DA
18. Students would have a say in how the shift is spent	SA	A	D	DA
19. The preceptor would help the student who is having trouble with the work	SA	A	D	DA
20. Students in this ward would pay attention to what others are saying	SA	A	D	DA
21. This clinical placement would be a waste of time	SA	A	D	DA
22. This would be a disorganized clinical placement	SA	A	D	DA
23. Teaching approaches in this ward would be characterized by innovation and variety	SA	A	D	DA
24. Students would be allowed to negotiate their work load in the ward	SA	A	D	DA
25. The preceptor would seldom go around to the ward to talk to students	SA	A	D	DA
26. Students would seldom involve with the process of handing over to staff in the ward for the next shift	SA	A	D	DA
27. This clinical placement would be boring	SA	A	D	DA
28. Ward assignments would be clear so that students know what to do	SA	A	D	DA

29.	The same preceptor would work with the students for most of this placement	SA	A	D	DA
30.	Teaching approaches would allow students to proceed at their own pace	SA	A	D	DA
31.	The preceptor would not be interest in students' problem	SA	A	D	DA
32.	There would be opportunities for students to express opinions in this ward	SA	A	D	DA
33.	Students would enjoy coming to this ward	SA	A	D	DA
34.	Staff would be punctual	SA	A	D	DA
35.	The preceptor would often think of interesting activities	SA	A	D	DA
36.	There should be little opportunity for a student to pursue his/her particular interest in this ward	SA	A	D	DA
37.	The preceptor would be unfriendly and inconsiderate towards students	SA	A	D	DA
38.	The preceptor would dominate debriefing sessions	SA	A	D	DA
39.	This clinical placement would be interesting	SA	A	D	DA
40.	Workload allocation in this ward would be carefully planned	SA	A	D	DA
41.	Students would do the same type of tasks in every shift	SA	A	D	DA
42.	It should be the preceptor who decides the students' activities in the ward	SA	A	D	DA

Used with permission from Dr. Chan, *the term preceptor was substituted for clinical teacher/ward staff keeping with current parlance in Alberta, Canada

APPENDIX F: PRECEPTOR ATTRIBUTES – POSTTEST

Please rate the attributes your preceptor had. Please score for each attribute.

Attribute	Strongly Agree	Agree	Disagree	Strongly Disagree
Enthusiastic	○	○	○	○
Approachable	○	○	○	○
Respected Role Model	○	○	○	○
Clear Communicator	○	○	○	○
Supportive	○	○	○	○
Committed	○	○	○	○
Kindness	○	○	○	○
Patience	○	○	○	○
Provides Exposure	○	○	○	○
Inspiring	○	○	○	○
Clinically Competent	○	○	○	○
Accessible	○	○	○	○
Positive Coach	○	○	○	○
Stimulating	○	○	○	○

APPENDIX G: ACTUAL CLINICAL LEARNING ENVIRONMENT INVENTORY – POSTTEST

Clinical Learning Environment Inventory				
Please rate the items below that you found in the Clinical Learning Environment. Please provide a score for each item.	Strongly Agree	Agree	Disagree	Strongly Disagree
1. The preceptor considers the students feelings	SA	A	D	DA
2. The preceptor talks rather than listen to the students	SA	A	D	DA
3. Students look forward to coming to clinical placement	SA	A	D	DA
4. Students know exactly what has to be done in the ward	SA	A	D	DA
5. New ideas are seldom tired out in this ward	SA	A	D	DA
6. All staff in the ward are expected to do the same work in the same way	SA	A	D	DA
7. The preceptor talks individually with students	SA	A	D	DA
8. Students put effort into what they do in the ward	SA	A	D	DA
9. Students are dissatisfied with what is done in the ward	SA	A	D	DA
10. Getting a certain amount of work done is important in this ward	SA	A	D	DA
11. New and different ways of teaching to the students are seldom used in the ward	SA	A	D	DA
12. Students are generally allowed to work at their own pace	SA	A	D	DA
13. The preceptor goes out of his/her way to help students	SA	A	D	DA
14. Students "clock watch" in this ward	SA	A	D	DA
15. After the shift, the students have a sense of satisfaction	SA	A	D	DA
16. The preceptor often gets sidetracked instead of sticking to the point	SA	A	D	DA
17. The preceptor thinks up innovated activities for students	SA	A	D	DA
18. Students have a say in how the shift is spent	SA	A	D	DA
19. The preceptor helps the student who is having trouble with the work	SA	A	D	DA
20. Students in this ward pay attention to what others are saying	SA	A	D	DA
21. This clinical placement is a waste of time	SA	A	D	DA
22. This is a disorganized clinical placement	SA	A	D	DA
23. Teaching approaches in this ward are characterized by innovation and variety	SA	A	D	DA
24. Students are allowed to negotiate their work load in the ward	SA	A	D	DA
25. The preceptor seldom goes around to the ward to talk to students	SA	A	D	DA
26. Students seldom are involved with the process of handing over to staff in the ward for the next shift	SA	A	D	DA
27. This clinical placement is boring	SA	A	D	DA
28. Ward assignments are clear so that students know what to do	SA	A	D	DA

29.	The same preceptor works with the students for most of this placement	SA	A	D	DA
30.	Teaching approaches allow students to proceed at their own pace	SA	A	D	DA
31.	The preceptor is not interested in students' problems	SA	A	D	DA
32.	There are opportunities for students to express opinions in this ward	SA	A	D	DA
33.	Students enjoy coming to this ward	SA	A	D	DA
34.	Staff are often punctual	SA	A	D	DA
35.	The preceptor often think of interesting activities	SA	A	D	DA
36.	There is little opportunity for a student to pursue his/her particular interest in this ward	SA	A	D	DA
37.	The preceptor is unfriendly and inconsiderate towards students	SA	A	D	DA
38.	The preceptor dominates debriefing sessions	SA	A	D	DA
39.	This clinical placement is interesting	SA	A	D	DA
40.	Workload allocation in this ward are carefully planned	SA	A	D	DA
41.	Students seem to do the same type of tasks in every shift	SA	A	D	DA
42.	It is the preceptor who decides the students' activities in the ward	SA	A	D	DA

Used with permission from Dr. Chan, *the term preceptor was substituted for clinical teacher/ward staff keeping with current parlance in Alberta, Canada

Please rate your final practicum

Item	Strongly Disagree	Disagree	Agree	Strongly Agree
I feel prepared to enter the nursing profession	○	○	○	○
I feel prepared to take the NCLEX-RN	○	○	○	○
I would like to work at the same location as my practicum post-graduation	○	○	○	○
Overall, I had a positive experience during my practicum	○	○	○	○
Overall, I had a negative experience during my practicum	○	○	○	○

Please rate with an X the following statements on a scale from 1-10

My preceptor had a strong positive influence on my learning
_____
1   10
Strongly Disagree   Strongly Agree
My preceptor strongly influenced my satisfaction with my practicum
_____
1   10
Strongly Disagree   Strongly Agree
I feel well prepared for practice because of my preceptor
_____
1   10
Strongly Disagree   Strongly Agree

Please answer the following questions:

Were your expectations of the clinical learning environment met?	Yes	No
Were you satisfied with your clinical learning environment?	Yes	No
Did you receive your first choice of practicum?	Yes	No
Do you think your choice of practicum affected your satisfaction?	Yes	No
Other Comments:		

APPENDIX I: PERMISSION EMAILS FROM DR. CHAN

On Jun 19, 2017, at 5:40 PM, Dominic S.K. Chan ▮▮▮▮▮▮▮▮▮▮▮▮▮▮ wrote:

Hello Kendra
Thank you for the note; you have my permission to use the CLEI for your study. Please note that the rights of use of the CLEI is solely granted for you and/or your team to carry out your stated study and is not transferable to anyone else without my prior permission. I have attached herewith the 2 versions of the CLEI (Actual & Preferred) along with details of subscale items and scoring methods (3 attached files altogether). Naturally I would appreciate the usual respect for copyright with acknowledgement of my authorship of the CLEI in all related publications and presentations. I wish you a smooth and productive study.
Kind regards
Dominic Chan

On Tuesday, June 20, 2017 4:31 AM, Kendra Carrington ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ wrote:

Hello Dr. Chan
I have just completed the electronic transfer via Western Union from Canada.
300 USD is 411.78 Canadian dollars with the current exchange rate at 0.73. This is the equivalent to 398.07 ▮▮▮▮▮▮ dollars at the conversion of 1 Canadian dollar equals 0.97 ▮▮▮▮▮ dollars.
As per Wester Union the below information is required to receive this money transfer.
Name: Kendra Carrington
MTCN: ▮▮▮▮▮▮
Thank you, I look forward to receiving the email attachment with the tool, details of the sub scales and scoring methods.
Sincerely,
Kendra Carrington

On Jun 16, 2017, at 5:12 PM, Dominic S.K. Chan ▮▮▮▮▮▮▮▮▮▮▮▮▮▮ wrote:

Hello Kendra
The USD300 can be paid through electronic transfer from any branch of **Western Union** in your country (alternatively you may wish to do this online via Western Union website). This electronic transfer can be sent to me as the recipient (**Dominic S. CHAN**) to any branch of Western Union in ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮. Please note that this is the only mode of transfer I accept. Once you have completed the money transfer, you'll need to send me by email the following information before I could receive the transfer:
1. Name and address of the sender (you),
2. The **Western Union Money Transfer Control Number (10 digits) for identification**

As mentioned, the USD300 is for the rights of use of the CLEI solely for you. Upon receiving the amount, the 2 versions of the CLEI (actual & preferred) along with details of subscale items and scoring methods will be sent to you via e-mail attachment. Naturally I would appreciate the usual respect for copyright with acknowledgement of my authorship of the CLEI in all related publications and presentations. Thank you
Kind regards
Dominic
PS: lately, Western Union may request recipient's address, if required, here is the detail: █
██

On Friday, June 16, 2017 2:44 PM, Kendra Carrington ██████████████████████████████ wrote:

Dear Dr. Chan
Thank you for the information on June 14, 2017. I have discussed this with my thesis supervisor and I would like to purchase the rights to use the CLEI.
How do we proceed with this transaction?
Do you accept e-transfer? Will the scoring tool be included?
I would like to expedite this transaction, as this is pending for my ethics application.
Thank you in advance.
Sincerely,
Kendra Carrington

On Jun 14, 2017, at 6:48 PM, Dominic S.K. Chan ████████████████████████ wrote:

Hello Kendra
Thank you for your message. I am sorry to inform you that the rights of use of the tool is not free which was detailed in my earlier message. Once again, thank you for your expression of interest.
Kind regards
Dominic Chan

On Tuesday, June 13, 2017 3:32 AM, Kendra Carrington ████████████████████████ wrote:

Dear Dr. Chan,
I am just following up on my previous email from May 26, 2017. I have attached the email below incase you did not receive the original.
Thank you for taking the time to consider allowing me to use the CLEI without charge.
I look forward to hearing from you.
Sincerely,
Kendra Carrington, RN BScN MN student

On May 26, 2017, at 2:12 PM, Kendra Carrington ███████████████████████ wrote:
Dear Dr. Chan,
Thank you for your response to my query on May 22, 2017.

This is the first time that I will be conducting a research study as part of the fulfillment of my Master's degree. I am funding my Master's degree from personal savings and working as an RN part time. Your tool is the best one I have found for my research question: What are nursing students' perceptions of preceptors' attributes as they relate to satisfaction with the clinical learning environment during the students' final practicum? Would you consider allowing me to use your tools without charge? I will acknowledge you as author of the tool throughout my research. I intend to publish a paper which will provide your tool with a current citation and a measure of internal validity (Cronbach's alpha). Using your tool will allow me to conduct a pretest and posttest which significantly strengthens my study.
Thank you for your consideration.
Sincerely,
Kendra Carrington, RN BScN MN student

On May 23, 2017, at 5:09 PM, Dominic S.K. Chan ████████████████ wrote:

Hello Kendra
Thank you for your expression of interest with the CLEI. The rights of use of the tool is not free and in fact it costs USD300, i.e. Three Hundred US Dollars. Let me know if you wish to pursue the tool, thank you.
Kind regards
Dominic

On Tuesday, May 23, 2017 5:36 AM, Kendra Carrington ████████████████████ wrote:

Good Afternoon Dr. Dominic Chan,
My name is Kendra Carrington. I am a first-year Master's Thesis student with the University of Calgary. The focus of my thesis is to examine nursing students' perceptions of preceptors' attributes and how they relate to students' satisfaction with the clinical learning environment. In my literature search, I came across your published articles on the development of the Clinical Learning Environment Inventory (CLEI).
With permission, I would like to use your preferred and actual Clinical Learning Environment Inventory in my Master's thesis. I will use these questionnaires to gain insight into the students' perception of the clinical learning environments before and after their final practicum.
My supervisor Dr. Cynthia Mannion at the University of Calgary has been cc'd on this email if you have further questions or concerns for either of us.
Thank you in advance for your time and consideration. I look forward to hearing from you soon
Sincerely,
Kendra Carrington, RN, BScN, MN student

APPENDIX J: CLEI SUBSCALES

Personalization
1. The preceptor considers the students feelings
7. The preceptor talks individually with students
13. The preceptor goes out of his/her way to help students
19. The preceptor helps the student who is having trouble with the work
25. The preceptor seldom goes around to the ward to talk to students
31. The preceptor is not interested in students' problems
37. The preceptor is unfriendly and inconsiderate towards students

Student Involvement
2. The preceptor talks rather than listens to the students
8. Students put effort into what they do in the ward
14. Students "clock watch" in this ward (can't wait till the end of the shift)
20. Students in this ward pay attention to what others are saying
26. Students have little opportunity to be involved with the process of handing over to staff in the ward for the next shift
32. There are opportunities for students to express opinions in this ward
38. The preceptor dominates debriefing sessions

Satisfaction
3. Students look forward to coming to clinical placement
9. Students are dissatisfied with what is done in the ward
15. After the shift, the students have a sense of satisfaction
21. This clinical placement is a waste of time
27. This clinical placement is boring
33. Students enjoy coming to this ward
39. This clinical placement is interesting

Task Orientation
4. Students know exactly what has to be done in the ward
10. Getting a certain amount of work done is important in this ward
16. The preceptor often gets sidetracked instead of sticking to the point
22. This is a disorganized clinical placement
28. Ward assignments are clear so that students know what to do
34. Staff are often punctual
40. Workload allocation in this ward are carefully planned

Innovation
5. New ideas are seldom tired out in this ward
11. New and different ways of teaching to the students are seldom used in the ward
17. The preceptor thinks up innovated activities for students
23. Teaching approaches in this ward are characterized by innovation and variety
29. The same preceptor works with the students for most of this placement
35. The preceptor often think of interesting activities for the students
41. Students seem to do the same type of tasks in every shift

Individualization
6. All staff in the ward are expected to do the same work in the same way
12. Students are generally allowed to work at their own pace
18. Students have a say in how the shift is spent
24. Students are allowed to negotiate their work load in the ward
30. Teaching approaches allow students to proceed at their own pace
36. There is little opportunity for a student to pursue his/her particular interest in this ward
42. It is the preceptor who decides the students' activities in the ward