E-MENTORING AS A SOCIALLYIZATION STRATEGY FOR
NEW GRADUATE NURSE ROLE TRANSITION AND WORKPLACE ADJUSTMENT

By

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A thesis submitted in conformity with the requirements
for the degree of Doctor of Philosophy
Graduate Department of Nursing Science
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Abstract

Background: Nursing turnover is a critical issue in Canadian hospitals and the transition period from student to RN has been identified as extremely stressful. Mentorship has the potential to address transitional issues and could impact retention in the first year of employment. Further, e-mentoring may address socialization limitations noted in existing mentoring programs, however the optimum design for an e-mentoring intervention is unknown.

Study Objectives: To identify socialization needs, barriers and facilitators for effective role transition and workplace adjustment and understand the state of science on mentorship to develop evidenced-based recommendations for components and design features of an e-mentoring intervention.
Methods: A complementarity mixed method design was used; guided by Van Maanen and Schein’s Socialization Theory and Kalbfleish’s Mentoring Enactment Theory. Phase 1: Scoping Literature Review. Phase 2: In-depth interviews with key informants using content analysis and an exploration of e-mentoring as a possible socialization tactic. Phase 3: Intervention Recommendations for components and design features identified, synthesized and triangulated with scoping review findings. Recommendations were reviewed for acceptability by stakeholder panel of new graduate and experienced nurses.

Results: Mentoring has been lost in preceptoring translation and new graduate nurses are exposed to social shock experiences; entrenched in unwelcoming and hierachical work cultures with cliques and bullying. A relatable mentor, however, may support role transition and foster workplace adjustment to professional practice. Further, e-mentoring may be a viable platform to provide support and address the limitations of traditional face-to-face mentoring such as a lack of time to meet with the mentee, mentor burnout, lack of commitment on the part of the mentor, and scheduling constraints. Evidence-based recommendations for components and design features of an e-mentoring intervention were developed.

Discussion/Conclusion: Preceptor programs for new nursing graduates are not providing adequate social supports to assist with role transition and workplace adjustment within the first year of employment. Study findings have advanced Van Maanen and Schein’s Socialization Theory and Kalbfleish’s Mentoring Enactment
Theory by uncovering the phenomenon of new graduate nurse social shock. In addition, this study has contributed to the design of an evidence-based and relevant e-mentoring intervention for new nursing graduates.
Dedication

“To God be the Glory”
F. Crosby (1875)

To my sons Ryan and David: I love you and thank you for all your love and support and always remember

“with God all things are possible”
Matthew 19: 26 (New Kings James Version)

To my parents Maria de Freitas and the late Urbano de Freitas:
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CHAPTER 1:  INTRODUCTION

Background of the Problem

Socialization is the facilitation of entry to practice for nurses into the nursing profession through social supports and mentoring (Valdez, 2008). The socialization of new graduates into the workplace is vital to the sustainability of the nursing profession (Laschinger, Grau, Finegan, & Wilk, 2012; Smith, 2008; Valdez, 2008; Yonge, Billay, Myrick, & Luhanga, 2007). Role transition includes “transforming one’s professional identity” (Twedell & Gray, 2007, p. 516). The role transition from student to practitioner in North America has been identified as extremely stressful, with the first three to twelve months of practice frequently reported as the most stressful period in a nurse’s career (Valdez, 2008). A newly graduated nurse is often vulnerable, inexperienced and in need of ongoing support, yet the role transition period has been described as a “reality shock” (Kramer, 1974) and “culture shock” (Valdez, 2008).

A variety of terms have been used to describe the new graduate nurse’s role transition and workplace adjustment. These include terms such as job stress, burnout and transition shock. Job stress has been defined as a condition that forces individuals to diverge from their usual functioning due to a change (i.e., disruption or enhancement) in their psychological and/or physiological circumstances (Beehr & Newman, 1978). Burnout has been defined as “a problem that leaves once-enthusiastic professionals feeling drained, cynical, and ineffective” (Maslach & Goldberg, 1998, p. 63). Transition shock is defined as “the experience of moving from the known role of a student to the relatively less familiar role of professionally practicing nurse” (Boychuk Duchscher, 2009, p. 3). Stress, burnout and transition shock reflect the new graduate nurse’s
emotional response to difficulties associated with adjusting to his/her work role (Boychuk Duchscher, 2009) and may for some nurses, result in decisions to leave their employment in the first year of nursing (Bowles and Candela, 2005; Regan et al. 2017). Effective socialization is believed to improve new graduate nurse work role adjustment (Boychuk Duchscher, 2009; Smith, 2008; Valdez, 2008; Yonge et al., 2007).

Several socialization strategies have been employed to support new graduates in their adjustment to the work role. Most new graduates who are hired into an acute care setting receive social supports, such as a general orientation and a preceptored/clinical experience guided by an assigned preceptor (Sandau & Halm, 2011). The Ministry of Health and Long-Term Care (MOHLTC) of Ontario also introduced the New Graduate Nurse Guarantee (NGG) Initiative program in 2007. The purpose of the NGG is to promote new graduate nurse retention through access to a six month extended orientation and mentorship program. However, the NGG is not open to all organizations and is based on hospitals applying for this funding; thus, many new graduates do not benefit from this experience. A number of limitations have been identified in the literature with current socialization programs. Staff nurse mentors are “not well informed about being a mentor” (Baumann, Hundsberger, Crea-Arsenio, 2011, p. 43); new graduates lack mentor availability; mentors report fatigue and burnout, and are overwhelmed with large numbers of new graduates (Baumann et al., 2011). Other transitional impediments are unexpected changes to orientation length, insufficient staffing, uncivil unit cultures and demanding workloads; and as a result, there may be a premature loss of new graduate nurses (Regan et al. 2017).
Nursing turnover is a critical issue in Canadian hospitals with an average turnover rate of 19.9% (O’Brien-Pallas et al., 2010). In 2015, Registered Nurses (RNs) in Ontario in the 18 - 24 age range were the highest reported gains in membership group (2,155 members; 43.9%). Nevertheless, 103 (2.1%) RNs in this age group did not renew their license (College of Nurses of Ontario, CNO, 2016) suggesting that their transition experiences into the profession were not a successful experience. The CNO (2011) also reported that 32.8% of 3,526 new graduate nurses were working part-time, compared to 22.5% in 2010. These part-time nurses would be physically present fewer hours, and hence receive fewer hours of work and less socialization support. Jacobsen’s (2000) study of part-time workers and job commitment findings revealed that part-time workers may not be as well integrated into organizational decision-making processes, which may lead to a decrease in organizational commitment. In light of the Canadian Nurses Association’s (CNA, 2009) prediction of an upcoming nursing shortage of 60,000 Full Time Equivalent (FTE) RNs in Canada by 2022, it is critical to address new graduate nurse role transition and workplace adjustment. Thus, this study explored core components and design features of an e-mentoring intervention in nursing to augment current mentoring practices and address role transition and workplace adjustment for new graduate nurses.

**New Graduate Socialization**

New nursing graduates report a lack of support during their early work experience (Beauregard, Davis, & Kutash, 2007; Boychuk Duchscher, 2009; Regan et al. 2017), and workplace cultures are described as being stressful and unsupportive,
particularly in relation to socialization and treatment by peers (Beauregard et al., 2007; Boychuk-Duchscher, 2009; Laschinger et al., 2012; Smith, 2008; Valdez, 2008). Boychuk-Duchscher and Myrick (2008) identified an oppressive work culture in nursing and Laschinger et al.’s (2012) Canadian study of new graduates further highlighted that one third of new graduate nurses are bullied in the workplace. Sykes and Eden (1985) posited that social support can play a vital role in assisting with work role adjustment and effective mentoring has been identified as a strategy for socialization of the newcomer (Allen, McManus, & Russell, 1999; Kram & Hall, 1989; Valdez, 2008). However the specific socialization needs of new graduates that mentoring could address have not been adequately described in the literature.

Mentoring is not a new concept in nursing, although it may not have always been called “mentoring” (Kopp & Hinkle, 2006). Up until the 1950s, there was a lack of support for mentoring by nurses in nursing, and nursing leaders allowed physicians to determine nursing roles and functions (Ketola, 2009). Support by nurses for nurses to develop their vision and career was minimal (Ketola, 2009). It was not until the early 1980s that senior nurses would volunteer or be assigned to mentor new graduate nurses in the clinical setting in order to support them in their novice careers (Letizia & Jennrich, 1996). Traditionally, nurse mentoring was often conducted informally with the mentor/mentee relationship starting spontaneously and lasting on average about 5 years (Kopp & Hinkle, 2006).

The essence of mentoring is the relationship. Mentoring is a “relationship that transcends time, gender, and culture” and is a “very real relationship that has been an integral part of social life and the world of work for thousands of years” (Ragins & Kram,
A mentor leads by example as a role model. The purpose of such role modeling is to engage the mentee or protégé in a learning journey (Kram, 1985; Ragins & Kram, 2007). The mentor supports the mentee voluntarily by being inspirational, genuinely interested, available and approachable (Kopp & Hinkle, 2006). The mentee, who is usually inexperienced, inexpert and less proficient, receives counseling, approval and affirmation from the mentor (Kopp & Hinkle, 2006).

Although there are a number of preceptor and mentoring interventions to support new graduate nurses’ role transition in the first year of employment, a number of limitations have been identified with current programs, namely lack of mentor availability (Baumann et. al, 2011; Beauregard et al.; 2007; Knouse, 2001; Regan et al. 2017; Valdez, 2008); lack of time for mentoring (Beauregard et al., 2007; Casey, Fink, Krugman, & Propst, 2004; Kopp & Hinkle, 2006; Smith, 2008; Valdez, 2008); issues pertaining to the location and distance from mentor (Miller, Devaney, Kelly, & Kuehn, 2008); and the cost of formalized in-house mentoring programs (Knouse, 2001; Kopp & Hinkle, 2006). Further, new graduates report feeling isolated and unsupported in light of oppressive work cultures (Boychuk Duchscher, 2009; Casey et al., 2004; Laschinger et al., 2012; Regan et al. 2017). McKinley (2004) also argues that there is a mentoring gap in nursing.

More specifically, the researcher’s personal experience of working on the Ontario Nursing Connection e-mentoring program sparked interest in developing a program specifically designed for new graduate nurses.
E-mentoring

One possible solution to address the limitations of traditional mentoring and to assist with socialization and role transition of the new nursing graduate during the first year of workplace adjustment is e-mentoring. E-mentoring is a “computer mediated, mutually beneficial relationship between a mentor and a protégé which provides learning, advising, encouraging, promoting, and modeling, that is often [physically] boundary-less, egalitarian, and qualitatively different than face-to-face mentoring” (Bierema & Merriam, 2002, p. 214). Due to its asynchronous on-line format, e-mentoring has the potential to encourage frequent and detailed sharing of socialization needs not addressed by traditional mentoring models. The e-mentor can be contacted from anywhere and at any time.

In contrast to traditional mentoring, e-mentoring is usually formally established, at least at the outset (Hansen, 2000; Ontario Nursing Connection [ONC], 2008; MentorNet, 2014). E-mentoring may be used by the new graduate nurse to liaise with an alternate nurse mentor when a work mentoring relationship is not available or the relationship has been dissolved (ONC, 2008). A new nursing graduate could also use e-mentoring to obtain impartial opinions from nurses outside of the workplace, who are distanced from the political climate within which the staff nurse works and thus are not influenced by the sociopolitical context of the new graduate’s organization. Thus, “E-mentoring is a viable strategy to link nurses to learning and sharing, and cross the barriers of distance, isolation and busy schedules” (Miller et al, 2008, p. 394). With over 3.2 billion users of the Internet worldwide (https://www.internetsociety.org), Knouse (2001) and Ragins and Kram (2007) argue that e-mentoring can be seen as an outgrowth of Internet social
networking. Technology is used in the everyday lives of students through web-enhanced classrooms (Driver, 2002) and nursing clinical simulation (Prion, 2008, Henderson, 2012). Furthermore, technology is used increasingly in the everyday lives of nursing professionals; some examples include electronic health records, and the Ministry of Health (MOH) Personal Digital Assistants (PDA) initiative (2008). Further, the Registered Nurses Association of Ontario (RNAO, 2011) developed an application for handheld devices for their Best Practices Guidelines.

E-mentoring relationships are becoming more common in nursing in Canada. Examples include the Ontario Nursing Connection (www.ontario-nursing.ca), which was an e-mentoring website established as a project of the MOHLTC to support nurses in on-line mentoring. Another example is the Ontario Oncology Advanced Practice Nurse Interprofessional e-Mentorship Program (http://apn.webexone.com), which was set up to support Ontario oncology and palliative care Advanced Practice Nurses who care for patients affected by cancer across the continuum of care.

**Problem Statement**

To date, there are several e-mentoring programs in nursing, but they have not been designed specifically for new graduate nurses, who could benefit from such programs. Further, it was not clear which socialization needs could be addressed through an e-mentoring program. For this reason, we do not have solid evidence about how to design an e-mentoring intervention to support the role transition and workplace adjustment of new graduate nurses. This knowledge gap in nursing will be addressed by critically appraising the evidence about the effectiveness of mentoring programs to
address new graduate nurse socialization needs. Features of successful mentoring programs, and limitations of existing mentoring programs will be identified and described. Subsequently, the socialization needs of new graduate nurses will be determined from the literature and perspectives of new graduate and experienced nurses along with the optimal core components and design features for an e-mentoring intervention to address those needs.

**Purpose**

The purpose of this study was to advance the understanding of new graduate nurse socialization, role transition and workplace adjustment and examine the extent of existing programs to address these issues and develop evidence-based recommendations for the components and design features of an e-mentoring intervention for new graduate nurses.

**Objectives of the Study**

The objectives of the study were to:

1. Identify socialization barriers and facilitators for effective role transition and workplace adjustment of new graduate nurses;
2. Identify strengths and limitations of existing mentoring interventions regarding the impact on role transition and workplace adjustment of new graduate nurses;
3. Identify features of mentoring interventions that have facilitated the role transition and workplace adjustment of new graduate nurses;
4. Identify specific components and design features of an e-mentoring program;
5. Determine evidence-based recommendations for the components and design features of an e-mentoring intervention.

This chapter will be followed by a literature review and methodology chapter.
CHAPTER 2: REVIEW OF THE LITERATURE

In this chapter the researcher reviewed literature on new graduate nurse role transition and workplace adjustment and programs that have attempted to facilitate a successful transition into the workforce. In the latter case, a particular focus was placed on traditional mentoring and e-mentoring programs. As the following literature review demonstrates, the overall strengths of the literature were its extensive evidence that new graduate nurses struggle during their role transition from student nurse to new graduate nurse. Nonetheless, a major gap existed in the nature of the evidence on new graduate nurse socialization needs, more specifically, on how e-mentoring may play a role as a socialization strategy to support new graduates in their workplace adjustment.

The mentoring literature in nursing revealed that despite preceptorship programs, a vital platform to support new graduate nurse transition, this was not enough. New graduates nurses continue to report stress (Auffrey et al., 2012; Carrion, 2010; Evans, 2008), burnout (Evans, 2008; Gustavsson et al., 2009; Laabs, 2011; Laschinger et al., 2012) and transition shock (Boychuk-Duchscher, 2009). As the literature stands now, we did not know the optimal design for a nursing e-mentoring intervention that would best address new graduate nurse role transition and workplace adjustment. The literature review was therefore structured around this knowledge gap.

A narrative literature review was conducted using informal and formal search strategies. Colleagues associated with the Ontario Nursing Connection (ONC) Mentoring website project were consulted for relevant literature related to the objectives identified above. The full texts of literature citations were located as suggested by informal sources including expert faculty and nurses in the field, and these references
were added to Refworks. Professional nursing associations were contacted to identify relevant sources. For example, the RNAO was contacted to explore the RNAO Telementoring program and the CNO was contacted to obtain current statistics and demographic data on Nursing in Ontario.

A formal search was conducted using keywords and subject headings and revisions of focus and derivatives and alternate spelling of the following terms: mentoring/preceptor, traditional mentoring, e-mentoring, virtual mentoring, electronic mentoring, internet mentorship, nursing, nurse, nurses, new graduates, new nursing graduates, novice nurses, new professionals, intent to stay, retention, turnover rate, burnout, and stress. Inclusion and exclusion criteria for the literature reviewed were research published in the English language on the research topics (noted above) in the past 25 years. The following databases were selected for review: Cumulative Index of Nursing and Allied Health Literature (CINAHL; Premier Nursing Data Base), Google Scholar (General Mentoring Literature), Scholars Portal (General Mentoring Literature), Sociological Abstracts (General Mentoring Literature), and Proquest Dissertations (PhD Dissertations on Peer Support). In subsequent searches, two other databases were explored, Psychinfo and Business Source Premier, using the keywords “e-mentor” or “virtual mentor.” An information specialist was consulted throughout the literature searches. The databases were searched using various combinations of the keywords and subject headings with Boolean operators (“and”, “or”, “not”). CINAHL email alerts were set up for any newly published articles on the research topic. Those articles that met the inclusion criteria were exported to Refworks. Before addressing these targeted areas of the literature, the researcher discusses the socialization literature to provide
background on socialization theory and socialization tactics that will serve as a foundation for interpreting the findings from the literature review, new graduate nurse interviews and panel findings.

**Socialization Tactics**

Saks and Ashforth (1997) posited that socialization tactics are the foundation for information acquisition and this is a key process in achieving socialization outcomes. They identified that institutionalized socialization tactics have a positive relationship with job satisfaction and organizational commitment (Cooper-Thomas & Wilson, 2011; Saks & Ashforth). Institutional socialization tactics are described as those that involve formal structures in role transition such as mandatory training and orientation sessions (Van Maanen & Schein, 1979; Saks & Ashforth). Van Maanen and Schein asserted that while there may be an “infinite” list of socialization tactics for newcomers, their typology examined six dimensional tactics that are commonly evident across organizations where a newcomer gains knowledge on the behaviour, outlook and tasks required to succeed in their new role. Van Maanen and Schein’s typology is situated on a bipolar continuum that is used to structure a newcomers’ socialization experience and influence their new role adaptation.

Van Maanen and Schein’s (1979) six socialization tactics are described below. First, is the tactic of collective (vs. individual) socialization, which refers to grouping newcomers and putting them through a common set of experiences, rather than dealing with each newcomer alone. In nursing, formal orientation programs usually take on this approach (Sandau & Halm, 2011). New nurses to the organization
typically have a period of collective orientation, which may be offered in small group format (Ackermann, Kenny, & Walker, 2007). Second, is the tactic of formal (vs. informal) socialization, which is the practice of segregating a newcomer from regular organizational members during a socialization period, as opposed to not clearly distinguishing a newcomer from more experienced members. Formal socialization tactics have been used in nursing. A prime example is the MOHLTC New Graduate Nurse Guarantee (NGG) Initiative (2007) where new graduates work in an above-staffing complement for 26 weeks as they transition to their new role (http://www.healthforceontario.ca/en/Home/All_Programs/Nursing_Graduate_Guarantee). Third, is the tactic of sequential (vs. random) socialization, which refers to a fixed sequence of steps leading to the assumption of the role, compared to an ambiguous or changing sequence. Sequential socialization occurs when an organization identifies the required steps to meet role targets. In nursing, orientation programs establish sequential steps to meet orientation goals, such as new graduate nurses attending General Hospital Orientation prior to participating in Nursing Orientation (Mount Sinai Hospital Joseph and Wolf Lebovic Health Complex, 2013). Fourth, is the tactic of fixed (vs. variable) socialization, which provides a timetable for the assumption of the role, whereas a variable process does not provide a defined timetable for role assumption. Nursing typically utilizes a fixed approach, such as the new graduate nurse preceptor experience, which consists of a short-term preceptored time frame with a specified start and end date (Yonge et al., 2007). Fifth, is the tactic of serial (vs. disjunctive) process, that enables the newcomer to be socialized by an experienced member, compared to a process where a role model
may not be available. In nursing, this serial process has traditionally been associated with preceptorship programs (Yonge et al., 2007). Sixth, is the tactic of investiture (vs. divestiture) that affirms the incoming identity and personal characteristics of the newcomer rather than deny and strip them away. Investiture processes strive to ensure the newcomer feels valued in the transition experience. In nursing, this could include having a senior nursing staff member welcome the new graduate nurse at orientation and also offer supportive programs such as a Hospital Employee Assistance Program.

E-mentoring in nursing may be a viable socialization tactic to augment traditional preceptorship practices. Van Maanen and Schein’s (1979) six socialization tactics may be applied to e-mentoring in nursing. First, is the tactic of individual (vs. collective) that would enable the e-mentor to assist the new graduate nurse through individual circumstances and experiences without a collective agenda (Kram, 1985; Yonge et al., 2007). Second, is the tactic of formal (vs. informal) socialization that could be broadened to include e-mentoring (Ragins & Kram, 2007), which could be established to augment current preceptorship programs. Third, is the tactic of random (vs. sequential) socialization that could situate e-mentoring as another socialization experience for the new graduate nurse, yet without hierarchical boundaries. This form of socialization could foster creativity and innovation (Van Maanen & Schein), in addressing workplace adjustment issues. Fourth, is the tactic of variable (vs. fixed) socialization that is evident in the mentoring relationship time frame, which is flexible and may last for years (Kram, 1985; Yonge et al., 2007). The mentor could take on the role of a friend with professional knowledge who may be contacted as a resource
in times of need (Kram, 1985; Yonge et al., 2007). Fifth, is the tactic of serial (vs.
disjunctive) process in e-mentoring that enables the newcomer to be socialized by an
experienced nurse for information acquisition and advice (Yonge et al., 2007). Sixth,
is the tactic of investiture (vs. divestiture) that affirms the incoming identity and
personal characteristics of the new graduate nurse. E-mentoring is an investiture
process that can strive to ensure the newcomer is welcomed and valued (Ragins &
Kram, 2007).

Van Maanen and Schein’s (1979) six socialization tactics typology provided one
lens for interpreting the characteristics of new graduate socialization tactics that have
been described in the literature. Study data were also used to explore a more
expansive view of socialization that mentorship may provide.

**Mentoring Conceptual Frameworks and Theories**

Progress in theory advancement in mentoring has been described as limited
(Bozeman & Feeney, 2007). Kram (1985, p.49) conceptualized mentoring as a
staged model in the mentoring relationship. She identified four phases in an informal
organizational mentoring relationship: initiation, cultivation, separation and
redefinition. The initiation phase lasts six months to a year, in which the fantasies of
both the mentor and mentee about establishing a relationship become a reality when
the mentor provides coaching to the mentee. The cultivation phase occurs over a
period of two to five years where the emotional bond between mentor and mentee
deepens. The separation phase occurs over a six-month to two-year period as the
mentee strives for autonomy, creating blocked opportunities for the mentor, resulting
in resentment. Lastly, the redefinition phase is an indefinite period following the separation phase resulting in an end to the mentoring relationship and new beginnings and acceptance of the new relationship, which may take the form of a peer friendship.

Building on and expanding mentoring strategies, the researcher’s study focused on the role transition from student nurse to new graduate nurse and workplace adjustment. The researcher explored how mentoring may provide nurturing and support in environments described in the literature as being fraught with bullying, demoralization, and lack of support for role transition and workplace adjustment for new graduates (e.g., Beauregard et. al.; 2007; Boychuk-Duchscher, 2009; Boychuk-Duchscher & Myrick, 2008; Laschinger et al., 2012; Smith, 2008; Valdez, 2008). Kalbfleish and Bach’s (1998) study of nurse mentees and mentors identified that nurse mentees reported their mentors were supportive and encouraging and likened them to heroes as they stood up to those who treated their mentees unfairly. In 2002, Kalbfleish established the Mentoring Enactment Theory, which is built on communication and relational literature and focuses on mentoring relationships as close personal relationships, which are high quality relationships. In the theory, mentoring is described as a process consisting of three phases. The phases are initiating, maintaining and repairing relationships using routine and strategic communication to achieve success. The relationships may last for a short period or a lifetime. Kalbfleish (2002) defined the mentor as one who has achieved professional success and is willing to share their knowledge and resources with a mentee.
Kalbfleish (2002) defined the mentee as one who is less advanced, yet has the potential and desire to learn from their successful mentor. Kalbfleish (2002) described two aspects of her Mentoring Enactment Theory (initiation of the relationship and ongoing communication) and advanced nine propositions, which relate to her two theoretical aspects. Of these propositions, three are most relevant to the researcher’s study. Proposition 3 proposes that the mentee is provided with a mentor who has agreed to serve as a mentor through a third party, reflecting a general commitment to mentoring. Based on the results of the researcher’s study, a future e-mentoring intervention may include third party involvement where potential e-mentors are recruited by a third party, such as the administrator of a structured mentoring program. Proposition 4 identifies that offers made to a less advanced individual to be a mentee are likely to be accepted when they are made by a more clinically advanced individual. This proposition fits with the notion of establishing an e-mentoring intervention for new nursing graduates where a more experienced registered nurse offers to mentor a new graduate nurse. Kalbfleish’s similar Proposition 5 is also relevant to establishing a mentoring relationship because it suggests that offers of help to a less advanced individual are likely to be accepted when they are made by a more clinically advanced individual. Proposition 4 appeared to suggest what Kalbfleish calls a large relational step, however, Proposition 5 puts less of an onus on the relationship. Therefore, although Proposition 4 and 5 are very similar, Proposition 4 was more pertinent to this research study.
The second aspect of Kalbfleish’s theory focused on relationship maintenance and repair through intentional and/or routine communication, which is consistent with the formal e-mentoring relationship literature (e.g., Kasprisin, Single, Single, Ferrier, & Muller, 2008; Single, Cunningham, Single, & Carlsen, 2005). Kalbfleish’s psychosocial communication strategies, built on the work of Kram (1985), enact the psychosocial functions of role modeling, acceptance, counseling and friendship. Kalbfleish also encouraged messages of assurance, commitment, positive interactions, inclusion in networking, and openness. Kalbfleish’s theory and Kram’s (1985) conceptual framework of mentoring psychosocial functions will be used as lenses to interpret the mentoring literature and used in the development of an e-mentoring intervention.

In the next section of the literature review the researcher discusses role transition and workplace adjustment issues for new graduate nurses that have been reported in the literature and identify how an e-mentoring intervention could be used to address these issues.

**Role Transition and Workplace Adjustment Issues Experienced by New Nursing Graduates**

Role transition is a process of professional growth where a student nurse transitions to the role of a registered nurse (RN). Workplace adjustment is an outcome of role transition, where the new graduate nurse succeeds or fails to transition to the RN role. Workplace adjustment may be measured by outcomes such as confidence (Beecroft et al., 2006; Casey et al., 2004; Madison, 1994) job satisfaction (Giles &
A review of the literature identified four studies that examined role transition and workplace adjustment issues experienced by new graduate nurses (Boychuk Duchscher, 2009; Boychuk Duchscher & Myrick, 2008; Casey, Fink, Krugman, & Propst, 2004; Laschinger, Grau, Finegan, & Wilk, 2012). Two studies utilized mixed methods (Boychuk Duchscher, 2008; Casey et al., 2004), one study used observational quantitative methods (Laschinger et al., 2012), and the final study used qualitative methods (Boychuk Duchscher & Myrick, 2008). Some consistent themes related to new graduate nurse workplace adjustment emerged from this literature that reflect the struggles new graduates experience in transitioning from student to staff nurse. All four studies revealed features of an oppressive culture in nursing that can lead to the development of isolation and stress for new graduates. Lack of confidence was identified as the number one transitional barrier in one study (Casey et al., 2004). Relationship problems with preceptors was a theme that was identified in three studies (Boychuk Duchscher, 2008; Casey et al., 2004; Laschinger et al., 2012). Relationship problems stemmed from perceived inconsistency in assignment of preceptors (Casey et al., 2004), lack of preceptor feedback (Casey et al., 2004), and lack of preceptor and coworker support (Boychuk Duchscher, 2008; Boychuk Duchscher & Myrick, 2008; Laschinger et al., 2012). These studies suggest that some of the most important issues facing new graduate nurses – and impacting new nurse retention – relate to an organizational culture that fails to provide social supports during the transition from
student nurse to new graduate nurse. In fact, the organizational culture can be hostile to new nurses. Such hostility, combined with a lack of social support and relationship problems with preceptors and peers, may be contributing factors when new nurses make the decision to abandon the profession. The studies underscored the need to address the shortfalls of current strategies, policies and initiatives to support the new graduate nurse with role transition and workplace adjustment and to address new graduate nurse socialization needs. Each of these studies is discussed in further detail below.

Casey et al. (2004) conducted an observational mixed methods study focused on reporting new graduate nurse role transition and workplace adjustment issues. They identified a convenience sample of 270 nurses from across six acute care Denver hospitals. A descriptive comparative design was employed using Casey-Fink Graduate Nurse Experience survey questionnaire. The researchers found that lack of confidence, was the number one transitional barrier in the nurses’ first year of hire. The second most difficult transition concern pertained to relationships with preceptors and peers. Many new graduates expressed feeling a lack of respect, sensitivity and acceptance from their experienced colleagues and did not like being called “the new grad” (Casey et al., p. 307). New graduates reported a lack of consistency with their preceptor during the orientation period. They also identified a lack of verbal feedback and positive support from their preceptor, yet they were fearful to report their concerns. A limitation of the study was the survey response rate of 34%, which may limit generalizability of the study findings. Another limitation was a lack of summary statistics, as evidenced in the use of the word “many” in survey response findings without quantifying the term. Strengths of
the study were the medium sample size, as this was relatively large for a study on
preceptoring in nursing. The study results suggested that traditional preceptorship is not
fully meeting the needs of new nursing graduates to reduce their fear levels and instill
the type of confidence necessary for them to feel comfortable in their new roles. In other
words, new nurses may need supportive role models to ensconce themselves into the
profession.

Similar findings were reported by Boychuk Duchscher (2008) in her mixed
methods study of new graduate nurses’ role transition and workplace adjustment.
Boychuk Duchscher used a demographic survey, interviews, focus groups and
questionnaires to explore Kramer’s (1974) assertion of new graduate reality shock. The
sample consisted of Canadian graduate nurses (n = 14). Boychuk Duchscher found that
the lack of a formal mentor for the study participants meant that new nurses
experienced high levels of fear and stress when they moved from a clinical preceptor
experience to full clinical responsibilities. Additionally, the study revealed that traditional
and hierarchical organizational cultures into which new graduates enter are often hostile
and oppressive. For example, participants identified significant dissatisfaction in quality
of work life, such as being “chastised by senior coworkers on the unit” (p. 444), which
resulted in feelings of distrust, stress, and the sense that they had to mask their feelings
of inadequacy.

Boychuk Duchscher and Myrick’s (2008) qualitative literature review of the
experience of new graduate nurses in the acute care setting used Poststructuralist
Theory and Critical Feminist Theory perspectives. They identified an oppressive culture
in hospital nursing as a main obstacle to successful new graduate transition. Some
examples identified included hostile work environments with bullying and new graduate nurses reporting they felt demoralized. Such environments increased both the stress level of new graduates and their feelings of inadequacy in their new roles.

Laschinger et al.’s (2012) observational longitudinal study aimed to examine new graduate nurses’ views of structural empowerment related to workplace bullying and burnout in Ontario hospitals. The study was conducted with 415 newly graduate nurses in the acute care setting, who had less than three years of work experience. Participants surveyed reported emotional exhaustion with almost half (49.9%) identifying that they were severely burned out. Survey findings also revealed that 33% of new graduate nurses reported being bullied in the workplace. A strength of the study was the large sample size, minimizing the chance for a type 2 error. A limitation of the study was the inability to determine a survey response rate due to issues in sample framing which could decrease external validity.

The findings from Laschinger et al.’s (2012) study portray a disturbing picture of new graduate nurses being bullied in the workplace and described a work environment that is oppositional, confrontational, demeaning and generally unsupportive to new graduates, rather than supporting, nurturing and encouraging. This study provided foundational evidence for the current study and suggested that programs aimed at social support are crucial for a new nurse’s successful role transition and workplace adjustment. Yonge et al. (2007) also supported this view, describing a nursing mentor as a professional friend without an agenda who can be called upon in times of need. Simply put, mentoring, with its focus on developing nurturing relationships, is critical.
(Kram, 1985; Ragins & Kram, 2007; Stone 2004; Yonge et al., 2007), yet it is often an untapped solution for new graduate nurse role transition and workplace adjustment.

In conclusion, these studies revealed a striking need to transform the transitional period for both new graduates and more senior staff who interact with them so that it is mutually beneficial for all parties. To date, there is a lack of evidence about how mentoring programs could be designed to address such socialization needs. In the next section of the literature review, the researcher discusses how preceptor programs are designed to meet the socialization needs of new graduate nurses and examines the strengths and limitations of these programs.

**Preceptorship Strengths and Limitations**

Traditional support interventions for new nursing graduates hired into the acute care setting have included a general orientation and clinical experience guided by an assigned preceptor (Sandau & Halm, 2011). A preceptor is defined as an experienced, competent nurse who enters a one-to-one relationship with a novice nurse for a predetermined length of time with the goal of orienting the individual to her or his nursing role and responsibilities (Baxter, 2010). Preceptor programs can range in length of time from eight weeks to 18 months (Baxter, 2010) and vary in intensity (Baxter, 2010; Scott, Engelke, & Swanson, 2008). A key strength of preceptor programs is that they focus on imparting clinical knowledge that is essential to the new graduate nurse’s ability to assume an independent staff nurse role (Valdez, 2008; Yonge et al., 2007). Preceptor programs for new graduate nurses typically consist of an orientation to requirements of the clinical unit (Klein, 2009; Shamian & Inhaber, 1985;
Valdez, 2008; Yonge et al., 2007), clinical teaching, and facilitating socialization (Klein, 2009; Shamian & Inhaber, 1985). The preceptored clinical experience is a critical collective socialization tactic employed prior to the newcomer assuming independence in her or his role (Van Maanen & Schein, 1979).

Salt, Cummings, and Profetto-McGrath’s (2008) systematic literature review of intervention studies designed to increase retention of new graduate nurses reported that preceptorship was the most frequent and strongly supported retention strategy. The systematic review yielded a final inclusion group of 16 studies. Preceptor programs of three to six months duration appeared to be the most effective with regard to retention rates based on quasi-experimental studies (Beecroft, Kunzman, & Krozek, 2001; Giles & Moran, 1989; Salt et al., 2008).

Three quasi-experimental studies (Beecroft et al., 2001; Giles & Moran, 1989; Newhouse, Hoffman & Hairston, 2007) were identified that examined the theme of preceptor impact on nurse retention. One of the studies also explored preceptor impact on new graduate nurse job satisfaction (Giles & Moran, 1989). Two studies used a pretest-posttest design with a control group (Beecroft et al., 2001; Giles & Moran, 1989) and one study used a post-test design with a control group (Newhouse et al., 2007). Preceptorship program duration ranged from six months (Beecroft et al., 2001) to one year (Newhouse et al., 2007). Beecroft et al. (2001) and Newhouse et al. (2007) used the Anticipated Turnover Scale (ATS) developed by Hinshaw and Atwood (1982) with established reliability and validity. Giles and Moran (1989) measured job satisfaction with a 17-item questionnaire, with a reported Cronbach alpha of 0.78 and established face validity.
All three studies included new graduate nurses (Beecroft et al., 2001; Giles & Moran, 1989; Newhouse et al., 2007). Giles and Moran also included experienced nurses in their study. Two studies had similar sample sizes in the control group (n = 45, Beecroft et al., [2001]; n = 46, Giles & Moran, [1989]) and similar sample sizes in preceptored experimental group (n = 50, Beecroft et al., [2001]; n = 69, Giles & Moran, [1989]).

Beecroft et al. (2001) reported a higher voluntary turnover intention in the control group compared to the preceptored intervention group at 6-month follow-up (p = 0.01) and Newhouse et al. (2007) reported higher retention among intervention subjects compared to the control group at 12-month follow-up (p = 0.014). Consistent with these findings, Giles and Moran (1989) reported that turnover rates in the first year of employment decreased from 32% in the year prior to the preceptor program implementation to 18% a year after the program was implemented. Additionally, the experimental preceptored group reported significantly higher satisfaction levels than the control group (F=14, df =1, p< 0.01).

A strength of these studies was their generalizability to the current study, which also focused on new graduate nurses. A common limitation was their lack of an experimental design, specifically randomization, and thus failure to control for possible confounding variables. Beecroft et al.’s (2001) study also lacked in-depth information about the mentor’s role in the preceptor program, hence limiting the ability to replicate the study. Additionally, Giles and Moran’s (1989) study included both new graduate nurses and experienced nurses, thus limiting the study’s generalizability to the new graduate nurse population. Lastly, Newhouse et al.’s (2007) study lacked information
on sample size in the intervention and control groups, limiting the ability to determine statistical conclusion validity.

In summary, the evidence suggested that preceptor program interventions promote nurse retention (Beecroft et al., 2001; Giles & Moran, 1989; Newhouse et al., 2007) and job satisfaction (Giles & Moran, 1989). However, limitations of preceptor programs have been noted. Some of these limitations are: 1) a lack of available preceptors (Baumann et al., 2011; Baxter, 2010); 2) lack of specific expectations of preceptor leadership skills (Giallonardo, Wong, & Iwasi, 2010); 3) lack of reprieve for preceptor from usual workload (Yonge, Krahn, Trojan, Reid, & Haase, 2002); and 4) lack of supportive preceptors (Boychuk Duchscher, 2001; Casey et al., 2004; Clark & Springer, 2012).

Three North American observational studies identified that a preceptor experience can be stressful for a new graduate nurse and for the preceptor (Boychuk Duchscher, 2001; Oermann & Garvin, 2002; Yonge et al., 2002). Two of the studies were conducted in Canada (Boychuk Duchscher, 2001; Yonge et al., 2002) and one study was conducted in the United States (Oermann & Garvin, 2002). Two of the studies examined stress from the new graduate nurse perspective (Boychuk Duchscher, 2001; Oermann & Garvin, 2002) and one study examined stress from the preceptor perspective (Yonge et al., 2002). Two of the studies used quantitative methods (Oermann & Garvin, 2002; Yonge et al., 2002) and one study used qualitative methods (Boychuk Duchscher, 2001). Data were obtained using interviews (Boychuk Duchscher, 2001), the Clinical Stress Questionnaire (CSQ; Pagana 1989; Oermann & Garvin, 2002) and surveys, which were reviewed by an expert panel and pilot tested by 25 preceptors.
Collective findings identified that preceptoring was a stressful experience (Boychuk Duchsch, 2001; Oermann & Garvin, 2002; Yonge et al., 2002). New graduate nurses experienced an oppressive work culture revealed by reports of patriarchal treatment by senior nursing staff, being treated badly by their peers and a demeaning and evaluating role of the preceptor (Boychuk Duchsch, 2001). New graduates raised the issue of inconsistent and difficult preceptors and indicated they had a moderate degree of stress during their role transition period with a mean score of 2.30 on scale of 0 (no stress) to 4 (great deal of stress, Oermann & Garvin, 2002). Additionally, 75% of preceptors reported some degree of stress regarding the preceptor experience (Yonge et al., 2002). The most frequently cited reasons for stress were added responsibility (22.8%), added workload (19.3%), and the time-consuming nature of preceptoring (17.5%).

Strengths of the quantitative studies were their use of valid outcome measures, and the ability of measurement tools to obtain open and closed-ended responses from study participants (Oermann & Garvin, 2002; Yonge et al., 2002). Two data collection points and semi-structured interviews in qualitative study enabled participants to provide in-depth data on their workplace adjustment (Boychuk Duchsch, 2001). All three
studies were limited in that they did not employ an experimental design (Boychuk Duchscher, 2001; Oermann & Garvin, 2002; Yonge et al., 2002), thus failing to control for possible confounding variables. Secondly, while the established CSQ tool has demonstrated reliability in previous research, the authors did not report on its reliability in their study (Oermann & Garvin, 2002). A lack of reported reliability of the measurement tools was a shortcoming in both studies (Oermann & Garvin, 2002; Yonge et al., 2002). Thirdly, while Oermann and Garvin (2002) conducted an evaluation using quantitative methods, they failed to provide an F statistic, significance level, means, and standard deviations. These key limitations make it impossible to properly evaluate the magnitude of effect or strength of the study conclusions.

In summary, preceptor program strengths are: a) they are an essential socialization intervention for new graduates; b) they are critical for new graduate nurse clinical skill development; c) they are associated with improved job retention; and d) they are also associated with improved job satisfaction. Some of the limitations of preceptor programs are: a) they lack available preceptors; b) they add workload for preceptors; and c) there are unsupportive preceptors.

The literature to date has not specifically addressed the optimal design features for preceptor programs. However, Salt et al. (2008) identified seven factors that impacted new graduate nurse turnover, and these factors could inform the design of preceptor programs. The factors identified by Salt et al. were difficulties with role transition, reality shock, low job satisfaction, low pay, negative organizational climate, low self-concept, and horizontal violence. With the exception of pay, Van Maanen and Schein’s (1979) socialization tactics could be considered in the design of preceptor
programs to address these issues. An example would be to ensure the preceptor uses investiture to affirm the incoming identity and personal characteristics of the new graduate nurse by ensuring she or he feels valued in their transition experience. This may include having the preceptor welcome the new graduate nurse at orientation and informing her or him about supportive programs that may be available.

In conclusion, to date, the research evidence is limited with regard to evaluation evidence on intervention programs to support new graduate nurse transition. The literature has identified that work environments can be unsupportive for new graduate nurses (Boychuk & Duchscher 2001; Casey et al., 2004, Clark & Springer, 2012; Oermann & Garvin, 2002; Yonge et al, 2002). It was therefore conceivable that preceptor programs may not be completely addressing the socialization needs of new graduate nurses. In the next section of the literature review, the researcher discusses the role of mentoring programs as a socialization tactic and identifies how mentoring programs relate to and are different from preceptor programs.

**Traditional Mentoring**

Mentoring differs from preceptorship in nursing, which has a primarily clinical focus, a relatively shorter time frame and is an assigned role. Mentoring began in arts and humanities, followed by it becoming commonplace in business and management (Yoder, 1990). Mentoring is widely recognized by many disciplines as a foundational socialization practice for career, leadership development, and employment satisfaction (Kram, 1985; Ragins & Kram, 2007). Clutterbuck (2007) also highlighted that Europe and Australia are prime examples of integrating research and practice into their
university mentoring and coaching research units. Further, Yoder’s (1990) concept analysis examined the concept of mentoring. This author posited that employees who are mentored have greater job satisfaction, productivity, increased professionalism, retention, superior organizational power, and better managerial skills than employees who have not been mentored.

Mentoring is defined as a relationship that promotes career development through supporting, role modeling and networking (Kram, 1985) and is crucial in assisting the newcomer with workplace adjustment (Allen, McManus, & Russell, 1999; Kram & Hall, 1991; Valdez, 2008). Mentoring is a process in which a wise and helpful guide uses his or her experience to show an individual how to avoid mistakes that he or she made earlier in his or her career and/or assist the person to advance her or his career (Stone, 2004). Attributes of mentoring are “knowledge transfer, reciprocal learning, collaboration, collegiality, commitment, trust, respect, negotiation, sustained communications, and honesty” (RNAO, 2005, p. 11). Traditional mentoring typically occurs when a senior individual helps a more junior individual (a “mentee,” sometimes referred to as a protégé) in a face-to-face capacity with or without institutional support (Kram, 1985; Ragins & Kram, 2007). Stone (2004) emphasized the importance of mentees to be willing to learn and be open to receive feedback. More specifically, Daresh and Playko (1995) focused on the need for a good mentee to have skill and knowledge in basic discipline functioning, a general understanding of leadership behaviour, and strong reflective and intentional listening and observational skills. For the purposes of this study, a mentee was identified as the new graduate nurse.
A mentor is defined as an individual who provides support, guidance and advice (Kram, 1985) and is a teacher, friend, advocate and facilitator (Neary, 2000). Kram identified two major roles provided by mentors: career-related roles (e.g., sponsorship, coaching, visibility, protection and exposure) and psychosocial roles (e.g., role modeling, counseling, friendship, and acceptance). In nursing, a mentor is defined as “the accomplished, more experienced professional who extends to a young, aspiring person, within the context of a one-to-one relationship, advice, teaching, sponsorship, guidance and assistance toward her establishment in her chosen profession” (Hamilton, 1981, p. 4). For the purposes of this study, Hamilton’s mentor definition informed the definition used in this study. There was a lack of consensus in the literature on the definition and role of preceptors versus mentors, and many authors use these terms interchangeably (Baxter, 2010; Madison, 1994; Yonge et al., 2007). Nonetheless, both mentoring and preceptoring are critical socialization strategies (Van Maanen & Schein, 1979).

Mentoring is an individual socialization tactic versus a collective tactic (Van Maanen & Schein, 1979) as it may be in some components of preceptorship programs (Ackermann, Kenny, & Walker, 2007). Mentoring is typically voluntarily sought in an informal relationship (Kram, 1985; Letizia & Jennrich, 1996; Ragins & Kram, 2007; Yonge et al., 2007) or may be part of a formal program (Allen et al., 1999; Kram & Hall, 1989; ONC, 2009) as in preceptoring programs (Klein, 2009; Shamian & Inhaber, 1985; Valdez, 2008; Yonge et al., 2007). Mentoring is a random socialization tactic that inspires innovative practices versus a sequential collective socialization tactic (Van Maanen & Schein), where the new graduate nurse is required to master sequential
steps/levels in her or his clinical practice prior to assuming an independent clinical role (Valdez, 2008; Yonge et al., 2007). Mentoring is a variable socialization tactic (Van Maanen & Schein) with no set time limits or end date for the length of the relationship (Baxter, 2010; Yonge et al., 2007), unlike preceptoring, which is a fixed socialization practice (Van Maanen & Schein) of transferring knowledge of clinical skills over a set period of time (Yonge et al., 2007). Preceptoring involves serial socialization tactics, where an experienced nurse grooms a newcomer to assume a similar position in a custodial manner (Van Maanen & Schein). Conversely, disjunctive socialization tactics, involve an innovative orientation, where the newcomer experiences the opportunity to be original and inventive (Van Maanen & Schein), such as in the mentoring relationship (Yonge et al., 2007). Lastly, both mentorship and preceptorship apply the tactic of investiture (Van Maanen & Schein) by affirming the incoming identity and personal characteristics of the new graduate nurse. This tactic may be more apparent in mentoring as random and variable socialization practices in mentoring also come into play (Van Maanen & Schein). Mentoring in nursing is based on socialization in the form of inspiring, supporting and nurturing (Sword, Byrne, Drummund-Young, Harmer, & Rush, 2002). Mentoring does not include an evaluative function, differentiating it from preceptoring, whereby the preceptor may have a role in determining a nurse’s readiness for independent practice (Valdez, 2008; Yonge et al, 2007). Thus, for the purposes of this research, mentoring is defined as a non-evaluative supportive relationship between mentor and mentee established to assist the new graduate nurse in her or his role transition and workplace adjustment.
Mentorship benefits include raising morale, increasing capabilities and developing coaching and counseling skills (Stone, 2004). Allen, Finkelstein, and Poteet (2009) similarly posited that “mentoring relationships are thought to serve a critical role in an employee’s career” (p. 1). For example, the Honor Society of Nursing, Sigma Theta Tau International (2011) promotes mentoring as a key component of professional development. What we do not know, however, is whether mentoring really improves the transitional experience of new nurses. There is a growing body of literature, reviewed below, that examined the impact of mentorship on socialization and mentoring outcomes.

There were seven studies that examined socialization and mentoring outcomes (Allen et al., 1999; Baumann et al., 2011; Beecroft, Santer, Lacy, Kunzman, & Dorey, 2006; Greene & Puetzer, 2002; Ketola, 2009; Kram & Hall, 1989; Madison, 1994). Some of the positive outcomes explored were: decreased stress (Allen et al., 1999; Beecroft et al., 2006; Kram & Hall, 1989), improved work environments and increased confidence (Madison, 1994), and increased retention (Greene & Puetzer, 2002). Conversely, the impact of unsupportive work environments on mentoring relationships were also examined (Baumann et al., 2011; Ketola, 2009). Two of the studies were non-nursing and five of the studies were in nursing.

Three studies examined the impact of mentoring on stress (Allen et al., 1999; Beecroft et al., 2006; Kram & Hall, 1989). One study was a mixed methods exploratory study and the remaining two studies were observational studies. All three studies supported the theme that mentoring decreases stress. Kram and Hall (1989) and Allen et al. (1999) were non-nursing studies. Each of these studies is discussed below.
Kram and Douglas’s (1989) mixed method study examined how mentoring could assist with learning and coping during organizational change. Data were collected using group interviews followed by completion of a questionnaire. Perceived stress was assessed using a scale developed by Maslach (1982) and the Career Concern Inventory developed by Super, Zelkowitz and Thompson (1981) with alpha coefficients ranging from 0.64 to 0.86. The setting was an engineering department in a large manufacturing company and the sample consisted of 161 males made up of managers and engineers. Study findings indicated that mentoring relationships were more commonly sought out when the mentee was under high stress. The mentoring relationship was found to be helpful in reducing stress for the mentee.

Allen et al.’s (1999) observational study found comparable results. The study explored formal peer relationships between 1st and 2nd year graduate students. Socialization data were obtained using four dimensions identified by Chao et al. (1994): politics, people, organizational goals and values, and performance proficiency. Reliability estimates ranged from 0.78 to 0.85 and stress data were collected using two variables: work-induced stress and perceived help with stress. There were also four items used from House and Rizzo’s (1972) Anxiety-Stress Questionnaire. The internal consistency reliability estimate was 0.82 and two additional items were developed to assess the extent to which mentees believed their mentors assisted them to reduce stress. The correlation between these two variables was 0.71. The sample consisted of 75 first-year Master of Business Administration (MBA) students in a large university in southeastern United States. A total of 68.8% participants were male. The survey response rate was 85% with 64 surveys completed. Study findings reported that
mentoring was positively related to politics and establishing successful and satisfying work relationships. Mentoring was also positively related to the amount of assistance from their mentors in coping with stress. This study found that mentoring does help newcomers improve in their work performance. A modest strength of the first of these two studies is its medium sample size ($n = 161$); while the second study had a small sample size ($n = 64$), it had a high response rate of 85%. A limitation of these studies is their generalizability to nursing, as both studies had a majority of males in their sample, in contrast to the nursing discipline, which is mostly female.

Lastly, Beecroft et al.’s (2006) observational evaluation study of a six-year mentoring programme ($n=318$) in Los Angeles found a significant decrease in mentee stress level for those mentees involved in successful mentorship relationships as well as an increase in mentee confidence. Mentors in the study did not have an evaluative role, as did preceptors. Interestingly, study results revealed that a positive mentoring relationship could compensate for a poor preceptor relationship, as evidenced by the mentor providing the mentee with support and advice in working through a toxic preceptor relationship. The study also demonstrated the significance of consistent contact in a mentorship program. This study found that 54% ($n=158$) of mentees met with their mentors on a regular basis and were supported by their mentors (90%), which decreased mentee stress level. A statistically significant difference ($p <0.001$) in stress reduction was evident in mentees who met with their mentors regularly compared with those who did not. Conversely, negative comments reported by mentees about the mentoring experience focused largely on matters pertaining to limitations of face-to-face contact; namely, a lack of time for meetings, a perceived lack of commitment on the part
of the mentors, and scheduling constraints. A strength of the study was its large sample size, and its generalizability to nursing. A limitation of the study was a failure to provide summary statistics, as evidenced in the use of the word “regular” when describing frequency of meetings, without quantifying the term.

While these mentoring studies demonstrated the potential benefits of mentoring on work outcomes, a notable limitation in this literature was the absence of experimental studies and more clarity was needed about specific design features that could be incorporated into an e-mentoring intervention for new graduate nurses. More specifically, it was unclear how to match mentors and mentees, define e-mentor role/job descriptions and structure the experience with regard to level of formality. The current research study was designed to address these gaps in knowledge about the core components and design features for an e-mentoring intervention to inform the design for an experimental study.

Two observational studies examined the impact of unsupportive work environments on the mentoring relationship (Baumann et al., 2011; Ketola, 2009). One study used mixed methods and the other study was a program evaluation (Ketola, 2009). Baumann et al. (2011) conducted a mixed methods research study of the Nursing Graduate Guarantee (NGG) Initiative funded by the MOHLTC for 2009 - 2010. The NGG was set up to provide temporary full time (FT) supernumerary jobs for up to six months for graduate nurses. Baumann et al. (2011) reported that the NGG enrolled 8,123 new graduates into the program with 250 employer participants and over 70% of these employers were in the hospital sector.
The purpose of the study was to determine the impact of the NGG on full-time employment of new graduates in Ontario. The authors also investigated the impact of extended orientation and mentoring on new graduate transition to work. A triangulation design was used, consisting of surveys, focus groups, key informant interviews, and secondary databases. Surveys were conducted with new graduates, employers participating in the program, non-participating employers, and union representatives. Focus groups were conducted with seven employers. Key informant interviews were conducted with 18 new graduates (11 Registered Nurses [RNs] and 7 Registered Practical Nurses [RPNs]). Secondary databases used were the CNO 2009 and 2010 annual membership statistics and the Canadian Institute of Health Information Regulated Nurses: Canadian Trends, 2010.

The quantitative survey response rate for new graduates in the NGG was 29% with 1358 survey respondents, 902 from Registered Nurses (RNs) and 456 from Registered Practical Nurses (RPNs), of a possible 4630 surveys. In contrast, a higher survey response rate (82%, n=162) was achieved for employers participating in the NGG, but from a smaller sample of 197. Baumann et al. (2011) reported that, despite the extended orientation and mentoring period of up to six months, some staff nurse mentors were “not well informed about being a mentor” (p. 43). They also identified that new graduates lacked mentor availability; mentors reported fatigue, burnout, and being overworked; mentor interviews also identified that the mentoring role was “overwhelming at times” (Baumann et al., 2011, p. 54) with large numbers of new graduates hired just as potential mentors went on summer vacation.
When the authors assessed the impact of the NGG experience, they found that approximately 6.5% of new graduates reported having a poor NGG experience and 13.6% rated their experience as fair. A strength of the study was its generalizability to the current researcher's study with new graduate nurses. A study limitation is the report used the term ‘best efforts” in relation to the program goal to assist the new graduate to transition effectively, but did not provide guidelines on what ‘best efforts” meant. A scoping review of nurse mentoring literature was proposed to address this knowledge gap on mentoring guidelines for new nursing graduates.

In summary, the Baumann et al. (2011) report revealed that despite the monetary investment of the MOHLTC in the NGG transitional initiative for new graduate nurses, traditional mentoring limitations exist, such as graduate nurses lacking mentor availability and mentors reporting exhaustion and burnout. An e-mentoring program may be a viable solution to augment government-funded programs to support new graduates while addressing some of the limitations of traditional mentoring programs.

Similar findings were evident in Ketola’s (2009) program evaluation of a mentoring program for undergraduate and graduate nursing students in California who were mentored by nurses in the community. The program was developed based on a student feedback survey (n= 296) followed by a 9-month pilot trial of 13 mentor/mentee pairs. The mentoring program consisted of three to four career sessions for the year, a one-to-one mentee/mentor relationship, a mentor enrichment program and three mentor/mentee meetings facilitated by the mentoring committee. Data were collected using a formal evaluation survey. The sample consisted of 120 undergraduate students and 60 community nurses. After the first year of the study, fewer than one third of
mentees remained in the program. The author attributed the loss of participants to “present-day nursing problems as an inheritance from the past” (p. 248). In particular, Ketola found that mentoring was negatively impacted by what was perceived as intolerable work demands on the part of the mentors, poor support from nursing management, and problematic interrelationships amongst nursing staff as key themes that challenged productive mentoring relationships. A strength of the study was that it provided insight into the viability of traditional mentoring models, this time from the perspective of the nurse mentor. A limitation of the study was that it was non-experimental and lacked information on validity and reliability of instrumentation.

In another California based study, Madison (1994) conducted a quantitative descriptive study of mentoring relationships with nurse leaders. Data were obtained using a descriptive, retrospective survey. Open-ended questions were asked to obtain information about past mentoring relationships. Content validity was established by a team of five nurse administrators who also pretested the self-administered survey tool for face validity. The survey was mailed to 637 nursing leaders with a response rate of 58% (n=367). Ninety-seven percent (n= 356) of study participants reported that changes had occurred in their lives as a result of the mentoring relationship, with the greatest change being a change in self-confidence. In the qualitative survey, the word “support” or a derivative of the word was the most common word, which was noted 61 times in the respondents’ transcripts. This was a particularly important finding as it further suggests that mentorship had a beneficial impact on nursing leaders’ careers through mentor support. In fact, more than 80% reported that the mentoring relationship was valuable, leading Madison to recommend the enhancement of formal and informal mentoring
relationships in nursing leadership. A strength of the study was its relatively large sample size. A limitation of this study was its’ focus on nursing administrators, limiting its generalizability to new nursing graduates. However, it is plausible that these findings may be materialized in the mentoring relationship whereby an experienced nurse provides mentoring to a new graduate nurse through informal leadership behaviours. A mixed methods design would have been more conducive to obtaining in-depth qualitative information about the characteristics of mentoring relationships that were most helpful. The current study addressed this gap in knowledge by advancing the understanding of new graduate nurses’ socialization needs and more specifically, how e-mentoring could address those needs.

Finally, Greene and Puetzer’s (2002) observational program evaluation explored the value of a structured one-year mentoring program, specifically as a strategic approach to recruitment and retention. The overall mentoring program goal was to ensure competent and safe practice. The structured program model utilized both mentors and preceptors to support the mentee to achieve this goal. Data were collected through hiring and retention information, and survey data were obtained from study participants at the completion of the mentoring program. Their analysis of hiring and retention data demonstrated a notable decrease in new nurse voluntary terminations in relation to hiring. The authors reported only five nurses terminating with less than 18 months experience since the implementation of the program, compared to 21 terminations in the prior fiscal year. Study recommendations indicated that job descriptions with identified compensation for the mentor role needed to be created. The authors concluded that staffing and scheduling conflicts needed to be addressed
to ensure time for mentors and mentees to meet regarding learning opportunities, and formal training for the mentors needed to be continued. Limitations of the study were that it was non-experimental, and lacked information on sample size, sample demographics, and survey response rate, making evaluation of the study quality not possible.

This section of the literature review revealed that mentoring has the potential to address new graduate nurse socialization, role transition and workplace adjustment with regard to stress, isolation, lack of confidence, support and retention. Although preceptorship and mentoring are not mutually exclusive, the aim of preceptor programs is to ensure that clinical skills are adequate to serve in the nursing profession. Mentoring, however, focuses on socialization of the newcomer and is therefore more likely to focus on support than evaluating new graduates. While there may be overlaps between the two, mentoring has historically been informal, not time limited, and non-evaluative.

The literature also revealed a significant barrier to attaining the full potential of mentorship programs, namely, the difficulty of balancing work obligations with mentoring duties. The literature consistently demonstrated that it is regular and consistent time spent with the mentor that most positively impacts the mentee’s work adjustment; however, the literature also revealed that the everyday working experience of senior nurses poses obstacles to organizing face-to-face time between mentor and mentee. In particular, senior nurses reported feeling overworked and unsupported by upper administration in their role of mentors, and experienced difficulty in organizing their schedules to meet with their mentees. Thus, it was imperative to explore ways to
provide mentorship outside of the traditional model. In the next section of the literature review the researcher explored e-mentoring.

**E-mentoring**

Millennial new graduates of the future will expect to practice to their maximum potential and will demand the appropriate resources and professional role models to assist them in their professional mission (Boychuk Duchscher & Myrick, 2008). Mentorship is potentially a way to provide such resources and role models to new graduates. The challenge, however, was to deliver mentoring in an efficient, flexible and effective manner within the fast-paced and demanding environments of the hospital setting. E-mentoring may be the solution to address this challenge.

E-mentoring is electronic mentoring (Kasprisin, Single, Single, Ferrier, & Muller, 2008). It is a strategy to enhance mentoring flexibility (Bierema & Merriam, 2002; Ragins & Kram, 2007) and provide mentoring at a distance by transcending established geographical and organizational domains (Eldredge, 2010). E-mentoring is an emerging twenty-first century innovation for professional growth that may address imbalanced power differentials (Eldredge, 2010) which may occur in preceptoring relationships. E-mentoring is key to addressing mentor supply issues that arise in traditional mentoring (Eldredge, 2010). Additionally, in contrast to traditional mentoring, e-mentoring is usually formally established, at least at the outset (Hansen, 2000; Ontario Nursing Connection, 2010).

The literature review identified three e-mentoring program evaluation studies that examined satisfaction as an outcome (Headlam-Wells, Gosland, & Craig, 2005;
Kasprisin et al., 2008; Single, Cunningham, Single, & Carlsen, 2005). One study was experimental (Kasprisin et al., 2008) and the other two were observational (Headlam-Wells et al., 2005; Single et al., 2005). All three quantitative study authors found that e-mentoring was a valuable and effective way to provide mentorship. These studies were explored in depth as e-mentoring is a focus of the current study.

Kasprisin et al.’s (2008) program evaluation of a mentoring program for college/university students in the United States examined the effects of mandatory training for mentees using the MentorNet\(^1\) e-mentoring program.

MentorNet, is an e-mentoring initiative aimed at underrepresented populations in the fields of engineering and science, with undergraduate engineering and science students and mentors. Mentees were matched with a working professional as an assigned mentor in an e-mentoring relationship for one year. The study design was a randomized control trial, where mentees in an experimental group (n=200) were provided with mandatory training compared to a control group (n=200) who were assigned to a voluntary training group. A total of 60% of participants (n=120) completed the mentee tutorial and 56% of this group completed the program survey at the end of one year. Similar survey completion rates were evident in the control group with 52% (n=102) of participants completing the end of year survey. Satisfaction was measured

\(^{1}\) MentorNet is one of the world’s first virtual mentoring websites. This non-profit e-mentoring network was established in 1997. Its clientele have in the main been women and others underrepresented in the science, engineering and technical fields. MentorNet program’s centred on one-on-one, email-based mentoring relationships, and reports having positively affected the success and retention of individuals in engineering, mathematics and science (MentorNet, 2011).
on a 5-point Likert scale. Comparative analyses indicated that mentors in the experimental group were more satisfied with the mentoring experience than mentors in the control group. Strengths of the study were its relatively large sample size and experimental study design. Study limitations were a lack of information on the validity and reliability of measurement tools and a low survey completion rate for both groups.

Similar satisfaction findings were evident in the Single et al.’s (2005) longitudinal evaluation of MentorNet. Study participants’ (n=3442) survey completion rates ranged from 51% to 58% for mentees and 56% to 68% for mentors. These completion rates are higher than the average response rate of 52.7 % (SD 20.4) for individuals who participate in organizational research studies (Baruch & Holtom, 2008). The duration of the program evaluation was two years. Over 92% of participants reported they would recommend the MentorNet e-mentoring program to a friend and/or colleague.

Satisfaction was measured on a five-point scale. Mean satisfaction scores ranged from 3.83 for e-mentees to 3.44 for e-mentors. A strength of the study was the large sample size, supporting statistical conclusion validity. However, both studies in this section were limited in that they did not examine socialization outcomes for mentees, thus, we do not know whether the program had an impact on workplace adjustment.

Headlam-Wells et al. (2005) also explored satisfaction with e-mentoring. They conducted a review of the Empathy-Edge e-mentoring program offered by the Business School at the University of Hull, United Kingdom. Mentees and mentors were women graduate students in the fields of teaching, research, and business (n=122). The average age for mentees was 36 with an average of 13 years of work experience, and 46 for mentors with an average of 23 years work experience. Study results were that
78% of participants felt the website was excellent, and fluency in on-line communication was vital for achieving maximum benefits. The researchers’ results also revealed that the quality of the e-mentoring relationship was the most important program aspect for the majority of participants. A strength of the study was its relatively large sample size, yet a limitation of the study was its lack of generalizability to the current researcher’s study, as it may not represent nurses who are on average younger.

One study was found that examined the impact of e-mentoring programs on socialization outcomes (DiRenzo, Linnehan, Shao, & Rosenberg, 2010). Outcomes examined were satisfaction, career self-efficacy, and fiscal self-efficacy. The study aim was to explore the relationship between program satisfaction, career self-efficacy, and fiscal self-efficacy for mentees in relation to their pre-program experience and motivational attitude. To do so, the authors developed and tested a moderator mediator model of e-mentoring focusing solely on computer mediated communication (CMC). A moderated mediation model is a mediation model in which the mediator variable is moderated by other variables. In the case of this study, the mediator variable was mentor-mentee interaction frequency, which was moderated by the control variables consisting of race, gender, pre-program general self-efficacy, career, and fiscal efficacy.

The study design was quasi-experimental pre-post test without a control group. The study is discussed in detail because of the relevance to the current study. Study data were collected from 50 public high schools located in western and northeastern parts of the United States and was obtained from a larger longitudinal research study. Student participants completed an online survey prior to the one-year, on-line mentoring program, as well as at the completion of the program. The sample included students
from two one-year on-line mentoring programs at each school in the study. Participants totaled 3,473 students over the two-year evaluation period. However, due to attrition and missing values, the final sample size was reduced to 1381.

The validated instrument, the General Self Efficacy Scale (Schwarzer & Jerusalem, 1995) was used to measure self-efficacy scores at time 1 and time 2. General Self Efficacy Scale alpha coefficients were 0.87 for time 1 and 0.94 for time 2. End of program satisfaction was evaluated using six items developed by the investigators. Items were rated on a 10-point scale and explored features of the program such as interaction frequency. Internal reliability was established (α = 0.96). Interaction frequency was measured at time 2 using a 5-point scale. Students were asked to respond to 15 items each for up to three mentors they communicated with most often (α = 0.99).

Study results revealed that females reported higher pre-program motivation attitudes than males (p < 0.01). Males had higher Internet use prior to study (p < 0.01), yet there was no correlation between gender and e-mentoring interaction frequency. Self-reported prior Internet use and student motivation were significantly positively related to study outcomes. Regression results indicated that prior Internet experience and student motivation were associated with general self-efficacy outcome. Prior Internet experience and student motivation were associated with career self-efficacy. Regression results indicated that prior Internet experience and student motivation were associated with program satisfaction. Interaction frequency mediated all program outcomes (p < .01 for all program outcomes): general self-efficacy, career self efficacy, fiscal efficacy, and program satisfaction. Statistical z scores affirmed
moderator effect of mentee motivation on self-efficacy at the end of the program (.016), which was higher for mentees with lower self-efficacy at the beginning compared to those with high self-efficacy.

The authors concluded that computer-mediated-communication is a feasible alternative to traditional face-to-face mentoring. As with the traditional mentoring model, this study demonstrated that frequency of mentor-mentee contact in e-mentoring plays a critical role in e-mentoring relationships and mediates the relationship between prior Internet experience and mentee motivation. Also, mentees who start e-mentoring relationships with low self-efficacy may benefit more from frequent contact with their e-mentors than mentees who start e-mentoring relationships with higher self-efficacy.

A strength of the study was its large sample size. Some study limitations should be noted, however. Firstly, measures of frequency of interactions and study outcomes were self-reported, making results vulnerable to common-method bias and threatening internal validity. Secondly, an attrition rate of 57% for study completion may have impacted the results because outcomes could differ for those who remained from those who dropped out. Thirdly, while research findings provide evidence for the benefits of e-mentoring programs, the study sample utilized adolescent “student” mentees, somewhat limiting its generalizability to the nursing workforce. Finally, the authors did not employ an experimental design, which would have strengthened the internal validity of study findings. A goal of the current study was to explore the extension of ideas from this study and their applicability to a new nursing graduate e-mentoring intervention.

In summary, research findings identified that e-mentoring is a possible mentoring option and computer-mediated-communication is a viable platform. Formal training of
mentors appeared to be more effective than informal training (Kasprisin et al., 2008). Research findings also provided evidence that prior Internet use and student motivation are important variables associated with e-mentoring outcomes such as general self-efficacy, career self-efficacy, fiscal-efficacy, and program satisfaction (DiRenzo et al., 2010). Further, research findings demonstrated that frequency of mentor-mentee contact in e-mentoring plays a vital role to program outcomes (DiRenzo et al., 2010). These research results provided supportive evidence for the value of e-mentoring in nursing, discussed below.

**E-mentoring and the Nursing Profession**

No published studies to date explored e-mentoring with new nursing graduates, undoubtedly because e-mentoring is a relatively new development. For example, a limited number of e-mentoring programs were implemented for nurses in Ontario. One example was the Ontario Nursing Connection (www.ontario-nursing.ca), an e-mentoring website established as a project of the MOHLTC to support nurses in on-line mentoring. Another example was the Ontario Oncology APN Interprofessional e-Mentorship Program (http://apn.webexone.com), which was established to support Ontario oncology and palliative care Advance Practice Nurses (APNs). Evaluation results for www.ontario-nursing.ca and http://apn.webexone.com e-mentoring websites were not available.

One study was located of an e-mentoring nursing program, which evaluated confidence as an outcome but not socialization outcomes (Miller, Devaney, Kelly, & Kuehn, 2008). The authors evaluated the role of e-mentors in supporting students
enrolled in a 16-week public health course. Associate degree nursing students were paired with an experienced nurse e-mentor prepared at the baccalaureate level or higher to assist them with an on-line learning course in population-based practice. Computer-mediated-communication was the main communication method. Some of the goals of the e-mentor program were to work through course assignments, reduce student isolation, enable mentees to cope with busy schedules, and address geographical distances and a lack of faculty resources. A longitudinal pre-post test design over a three-year period was used with a sample of 38 mentee-mentor pairs.

The researchers’ findings demonstrated a course completion rate of 92%, which was attributed to the success of the program with mentees reporting an improvement in confidence. Mentors reported that their role involved coaching instead of an emphasis on course content and student assignments. Survey results indicated mentors experienced an improvement in confidence ranging from moderately improved (41%) to very improved (59%). The program resulted in the development of successful long-distance working connections, creating possibilities for learning and sharing that may not have been feasible with traditional face-to-face mentoring. Limitations of this study were a lack of comparative data about student confidence and course completion rates prior to the introduction of the e-mentoring program and lack of validity and reliability data for measurement tools.

In the next section the researcher provides a summary of literature review findings.
Summary

Results of the literature search demonstrated the underdeveloped nature of the evidence on e-mentoring as a socialization tactic (Van Maanen & Schein, 1979) to support new nursing graduates in their socialization into the profession and assist them with role transition and workplace adjustment. Most of the studies identified in the narrative literature review were descriptive in nature and lacked the rigour of experimental design to substantiate causal effects. Additionally, only one e-mentoring study in nursing was identified and it was an observational descriptive study (Miller et al., 2008). To date, there have been no studies that evaluated the effectiveness of e-mentoring programs for new nursing graduates, who could benefit from such programs.

This chapter demonstrated that there is a gap in the literature with regard to experimental studies of e-mentoring as a socialization tactic for new nursing graduates. There were also gaps with regard to how to design an e-mentoring intervention to support the new graduate. The current researcher’s study was designed to address some of these gaps in knowledge. The researcher provided a review of mentoring and e-mentoring interventions in nursing with an in-depth critical appraisal of the evidence concerning the effectiveness of specific component and design features; updated the review with more recent evidence; described the features of successful mentoring programs; identified the strengths and limitations of existing mentoring programs; and determined, from the literature and perspective of new graduate nurses and experienced nurses, the components and design features for an e-mentoring intervention for new graduate nurses.
This narrative literature review provided information about key search terms that were used to conduct a scoping review study of the literature and it provided evidence about the databases to search. It also provided preliminary evidence about the types of studies, level of evidence, and potential value of an e-mentoring program for new nursing graduates to assist them with role transition and workplace adjustment. The research available, however, was limited with regard to information about components and design features such as optimal length of the program, methods for matching mentee and mentors, training of mentors and mentees, frequency of contact, and role description for mentors. Thus, a scoping study to review the mentoring and e-mentoring literature was undertaken with the purpose of providing more clarity about those components and design features associated with program effectiveness for new graduate nurse role transition and workplace adjustment. The literature was systematically appraised in order to answer study questions. It was unlikely that all issues relevant to the design of an e-mentoring program would be addressed in the scoping literature review; hence, the study also incorporated interviews with new graduate nurses. Further, the study included a panel discussion with new graduate and experienced nurses as a third source of evidence to address the research questions. The findings from the scoping review, nurse interviews and panelists were synthesized to develop evidence-based recommendations for the design and evaluation of an e-mentoring intervention.

In the next section the methodology for the current study is discussed.
CHAPTER 3: METHODS

Study Design

This study used a mixed method design to examine new graduate nurse workplace adjustment and how e-mentoring may play a role as a socialization and mentoring tactic. The purpose of the mixed methods design was complementarity to fully understand the phenomenon under review using qualitative and quantitative methods (Greene, Caracelli, & Graham, 1989). The complementarity mixed methods design was employed to elaborate the research findings and analysis, and to explore and develop the components and design features for an e-mentoring intervention. A scoping literature review was completed while iteratively addressing gaps in understanding through in-depth interviews with key informants. Through triangulation (Mays & Pope, 2000), scoping review and interview results were compared and the first two phases were synthesized to develop evidence-based practice recommendations for the components and design features of an e-mentoring intervention, which was the ultimate aim of this research study. These recommendations were further reviewed by a new graduate and experienced nurse panel.

Purpose

The purpose of this study was to advance the understanding of new graduate nurse socialization, role transition and workplace adjustment and examine the extent of existing programs to address these issues and develop evidence-based
recommendations for the components and design features of an e-mentoring intervention for new graduate nurses.

**Rigour Development**

This study addressed the need for a well-designed descriptive study in nursing to gain an in-depth understanding of new graduate nurse role transition and workplace adjustment and to inform evidence-based components and design features for an e-mentorship program to address these issues. To date, there has been a lack of research studies on theory-based foundation for the development of an e-mentoring intervention for new graduate nurses. The Medical Research Council (MRC) Framework (2006) is a theoretical underpinning that lends itself well to consider in the systematic development of an e-mentoring intervention. The MRC development and evaluation process consists of four main stages: development, feasibility/piloting, implementation and evaluation. This study’s phased approach has met the development stage of the MRC Framework by identifying the state of evidence on mentoring and e-mentoring in nursing and relevant theoretical underpinnings for modeled components and design features for an e-mentoring intervention. The researcher employed an extensive scoping review, interviews with target stakeholders and expert panel to contribute to the study scheme for the components and design of an e-mentoring program for new graduate nurses. This research has provided the bases for further design and feasibility research such as procedures for matching mentees and mentors, policies related to whether the mentor should be from within the mentee’s
organization or outside, frequency of contact, guidelines related to specific topics for discussion, and duration of program.

The new graduate nurses’ role transition needs, workplace adjustment and an in-depth state of the science on mentorship were identified in Phase 1 Scoping Review. In Phase 2 the researcher advanced the understanding of new graduate nurse role transition needs and workplace adjustment. Further evidence-based components for mentorship were generated through semi-structured interviews in Phase 2. Study data were triangulated in the interpretive stage of Phase 3 to formulate an intervention acceptability assessment survey that was reviewed by an expert panel. The results ensued evidence-based recommendations for the components and design features of an e-mentoring program for new graduate nurses.

The methodology chapter is divided into three phases: Phase 1: Scoping Literature Review; Phase 2: Interviews with New Graduate Nurses; and Phase 3: E-mentoring Intervention Acceptability Survey reviewed by an Expert Panel of New Graduate Nurses and Experienced Nurses and the Development of Evidence-based Recommendations for Components and Design Features of an E-mentorship Program. A diagram of the mixed method study design is provided in Figure 1 (below).
Each of the three study phases followed a different methodological paradigm. For each phase I have provided a detailed description of the methods section. The next section discusses the methodology utilized in Phase 1: Scoping Literature Review.

**Phase 1: Scoping Literature Review**

Grant and Booth (2009) defined a scoping review as a “Preliminary assessment of potential size and scope of available research literature [that] aims to identify nature and extent of research evidence” (p. 95). DiCenso et al. (2010) further defined a scoping review as a methodological approach that uses “rigorous and transparent methods to comprehensively search for relevant literature and to analyze and interpret the data” (p. 21). They posited that a scoping review is exploratory, attempts to chart
relevant literature on a general topic and identify common themes and key issues. They also stated that inclusion and exclusion criteria in a scoping literature review are not based on the quality of the study, but on the relevance of the study. This description of a scoping review methodology was consistent with the aims of the current study.

My study utilized an adaptation of Levac, Colquhoun and O’Brien’s (2010) scoping literature review approach that was built on Arksey and O’Malley’s (2005) framework. Levac et al. (2010) posited that scoping studies differ from narrative reviews as scoping reviews require critical reinterpretation of the literature. Davis, Drey and Gould (2009) concurred that a scoping review is substantive and a multidimensional approach to deepen the understanding of a wide range of evidence; with the potential to add new understanding when there is limited evidence or a more focused inquiry is needed.

The six stages of Levac et al.’s (2010) scoping review methodology are elaborated upon below.

**Stage 1: Identifying the Research Question**

Levac et al. (2010) posited that initially a broad research question should be established. In the current study, the broad research question was: To what extent does e-mentoring function as a socialization tactic and mentoring strategy to address new graduate nurse role transition needs related to workplace adjustment? This broad research question lead to a more focused enquiry about the role of e-mentoring as a socialization strategy for new graduate nurses. As e-mentoring was expected to incorporate socialization elements of mentoring and because, to date, there was more literature on mentoring in nursing than e-mentoring, the review started with a broad
focus, which was then narrowed to examples of e-mentoring interventions in nursing. The spans of inquiry for the scoping literature review addressed the following research questions:

1a. What are the socialization and role transition needs in workplace adjustment of new graduate nurses? and b. What are the factors that influence this adjustment and need to be considered in regards to designing an e-mentoring intervention?

2. What is the evidence of effectiveness of mentor and preceptor programs as socialization and mentoring strategies for new graduate nurse workplace adjustment outcomes, specifically, job satisfaction, work-related stress, intention to stay in nursing (or at the organization), and turnover from nursing?

3. What e-mentoring components and design features (e.g., e-mentor selection, program duration, structure, and policies) have been utilized to support e-mentees?

4. What is the evidence of e-mentoring programs as socialization and mentoring strategies for new graduate nurse workplace adjustment outcomes, specifically, job satisfaction, work-related stress, intention to stay in nursing (or at the organization), and turnover from nursing?

Stage 2: Identifying Relevant Studies

The researcher worked in consultation with doctoral supervisor, committee members and an information specialist from the University of Toronto to develop the search strategy for the scoping review in order to identify relevant studies to include in
the scoping review. This iterative approach provided the methodological and contextual expertise for methodological rigour in selecting relevant studies for inclusion (Levac et al., 2010). Further, strategies for searching the grey literature were developed through consultation with the information specialist and experts in the field. The grey literature was also reviewed to explore nursing mentoring programs.

**Stage 3: Study Selection**

The third step in the scoping review methodology was to select studies based on inclusion and exclusion criteria (Levac et al., 2010). In consultation with my research supervisor, the supervisor and I independently screened titles and/or abstracts of 352 literature resources to establish inter-rater reliability regarding the selection of studies for inclusion. Areas of disagreement were resolved through discussion and/or consultation with other doctoral committee members. The inclusion and exclusion criteria are discussed in the inclusion and exclusion section below (p. 71) and were reviewed by the thesis committee.

**Stage 4: Charting the Data**

A scoping study is a comprehensive review of qualitative, quantitative and grey literature, which was necessary to address the aims of this study. Data were extracted from included studies (Levac et al., 2010). Data were extracted and summarized about new graduate nurse role transition, workplace adjustment and specific design features of mentoring and e-mentoring interventions. Secondly, studies were reviewed using evaluation criteria that reflected features of study design and thus informed a judgement about the methodological rigour of intervention studies and are summarized in Tables 3 - 7 (Appendix B). Further, to explicate the design features of an e-mentoring program,
mentoring program components and design features were reviewed and are discussed next.

**Data Extraction: Mentoring Program Components and Design Features.**

Data about components and design features of mentoring programs were summarized. More specifically, the following is a list of some of the program characteristics identified:

- the mentor-mentee matching process;
- duration of mentoring program;
- frequency of communication between mentor and mentee;
- whether the mentoring relationship was formally established or emerged informally;
- whether the mentor was internal or external to the mentee’s workplace; and
- whether the intervention involved elements of preceptorship, mentorship or both.

A literature synthesis of orientation programs that included preceptorship, mentoring, and elements of both was included because it was important to understand the full range of socialization interventions, their effectiveness, and the role of mentorship in facilitating role transition and workplace adjustment of new graduate nurses. Following this general review, the literature on e-mentoring, a subset of mentoring, was reviewed. Data about the components and design features of e-mentoring programs were extracted from published literature and grey literature and summarized.

**Methodology for Critical Appraisal.** A critical appraisal of experimental and quasi-experimental studies was conducted in order to determine the strength of the evidence
of effectiveness of mentoring and preceptor programs with regard to new graduate nurses’ socialization outcomes. Findings were reviewed for size of intervention effect and preciseness of the estimate of intervention reflected by confidence intervals or standard deviation. The applicability of results for e-mentoring interventions were examined for applicability to the current study setting and context of study. The Consolidated Standards of Reporting Trials (CONSORT, 2010) and Shadish, Cook and Campbell’s (2002) criteria for ruling out threats to validity were used to critically examine quasi-experimental studies. The researcher examined threats to internal validity, such as ambiguous temporal precedence, where there is a lack of clarity about which variable is the cause versus the effect. Further, the researcher identified threats to statistical conclusion validity, as applicable, such as low statistical power, which may result in incorrectly deducing that the cause and effect of an intervention and its outcome is not significant. Construct validity was also reviewed to ensure a matching of study procedures and constructs. Lastly, external validity threats, such as interaction of causal relationship with groups was reviewed, where an effect found with a particular group may not be supported when other types of groups are studied. Evaluation criteria for critically appraising experimental and quasi-experimental studies were adapted to the current study and are summarized in Table 3 (Appendix B).

Second, although observational studies are less rigorous than experimental or quasi-experimental studies, these studies can at times provide the best available evidence with very compelling results (DiCenso & Guyatt, 2005). The STROBE (STrengthening the Reporting of OBservational studies in Epidemiology) was used to critically examine observational studies. I reviewed studies for statistical and
methodological biases, such as, ensuring missing data were explained, and the study sample was representative of the population under review. **Observational study** evaluation criteria are displayed in Table 4 (Appendix B).

Third, qualitative data were extracted followed by critical appraisal of qualitative studies. Information about the nature of role transition issues, workplace adjustment, perceived gaps and limitations in existing preceptor and mentoring interventions were explored. Qualitative studies also provided insight into outcomes of mentoring intervention and design features. The Critical Appraisal Skills Programme (CASP) for Qualitative Studies and Mays and Pope (2000) validity of qualitative methods were used to critically appraise qualitative data in this study. In qualitative research, it is important to determine whether the results generated are valid, credible, and trustworthy. To do so, the researcher evaluated whether the way in which subjects were selected for participation resulted in a representative sample, and whether data collection methods could render a comprehensive, rich reflection of participants’ experiences. In the critical appraisal, and narrative synthesis the researcher also focused on the procedure for analyzing the data and validation of data analysis. The relevance of the research findings to the study purpose was determined by considering whether the study advanced theory about role transition and workplace adjustment or whether the study results advanced understanding about the socialization needs of new graduate nurses and strategies for addressing those needs. Qualitative evaluation criteria are displayed in Table 5 (Appendix B).

Fourth, correlational studies were reviewed for the purpose of identifying factors associated with new graduate role transition and workplace adjustment. This...
information would assist in understanding how an e-mentoring program could facilitate new graduate role transition and workplace adjustment, and the factors that influence variation in workplace adjustment outcomes and potentially influence variation in a new graduate nurse's response to an e-mentoring intervention. Mitchell's (1985) criteria to appraise methodological rigor of correlational studies was used. The researcher determined whether the sampling methodology could have introduced a bias through non-random selection or incomplete response rate. The researcher also evaluated the validity of data collection methods and assessed evidence of reliability and validity of data collection tools. Correlational evaluation criteria are displayed in Table 6 (Appendix B).

Lastly, Program Evaluation studies were reviewed to explore the evidence of e-mentoring programs as socialization tactics for new graduate nurse workplace adjustment outcomes; specifically job satisfaction, work-related stress, intention to stay in nursing (or at the organization), and turnover from nursing. Program Evaluation studies were appraised using the Context Input Product Process (CIPP) Program Evaluation Model (Stufflebeam, 2003). The model consists of the four core concepts of context, input, process and product evaluation. Context evaluation defines the applicability of the program evaluation. Input evaluation identifies information about the program such as its’ mission, goals and plans. Process evaluation examines the implementation process and product evaluation assesses the program’s outcomes. Program Evaluation Criteria are displayed in Table 7 (Appendix B).
Stage 5: Collating, Summarizing and Reporting the Results

Data were analyzed by reporting the results and applying meaning to the data (Levac et al., 2010). Study findings were linked to study objectives and research questions (Levac et al., 2010). Data were summarized in tables and reported using a narrative synthesis to identify themes, socialization strategies utilized, and methodological rigour of intervention, observational, correlational and program evaluation studies. A critical review of intervention studies to determine whether particular types of interventions were associated with improved socialization outcomes for new graduates was completed. The level of evidence was reviewed to determine specific recommendations for e-mentoring program components and design features.

Stage 6: Consultation

Preliminary findings from stage 5 were used as a foundation to inform the consultation step recommended for stage 6 by Levac et al (2010). A consultative process with new nursing graduates was adopted through individual interviews. This phase entailed the consultation process of the scoping study methodology. The methodology for this consultation is described fully under Phase 2 of the current study. Respondent validation (member checking, Mays & Pope, 2000) was established by consultation with an expert panel of new graduates and experienced nurses and will be discussed further in Phase 3 of the study. Before describing Phases 2 and 3 of the study, inclusion and exclusion criteria for the scoping review are discussed next.
Inclusion and Exclusion Criteria

The scoping review included research articles published in English from 2008 - 2013, except for seminal research and theoretical articles that were cited in narrative research and informed the conceptual basis for the research questions such as Van Maanen & Schein (1979), Kram (1985), and Kalbfleish (2002). The five-year inclusion span provided the most current research to identify facilitators and barriers to mentoring in contemporary times and enabled generalizations and relevancy of findings to the current healthcare environment. This time frame was selected given the widespread use of electronic communication in the last five years (e.g., social media). Inclusion criteria included literature on topics that matched the research key words and subject headings, which were identified in consultation with an information specialist. Articles were not eliminated based on study design. Article titles were reviewed for the following criteria: intervention studies in nursing to assist new graduate nurses with role transition and workplace adjustment, correlational articles that provide evidence about the factors which explain workplace adjustment specific to new nursing graduates, such as attributes of mentors. Articles were also reviewed with forward reference searching. Exclusion criteria were articles that were not written in English, published more than five year time frame, and did not address identified research concepts. The process for searching the literature will be described next.

Search Process and Databases

An information specialist was consulted throughout the literature search in order to ensure the search strategy was comprehensive. The databases were searched using various combinations of the keywords and subject headings with Boolean operators
(and, or, not). The researcher met with the University of Toronto Gerstein Nursing information specialist on February 21, 2013. The information specialist recommended the following health databases: CINAHL, due to its cumulative nature and because it contains fundamental content for nursing, and MEDLINE, which is the premier database for biomedical journal articles. This database allows for expert searching when conducting scoping reviews. It covers approximately 4000 international journals. PsycINFO, due to its scholarly peer-reviewed research in behavioral sciences in a variety of disciplines, including nursing, was also searched. The information specialist also recommended the SCOPUS database, which is a major multidisciplinary source for social sciences, life sciences, health sciences, physical sciences, arts and humanities. SCOPUS was a useful resource for the scoping review as it covered research literature, including nursing, published in academic journals, Open Access journals, conference proceedings, trade publications, and book series. CINAHL, MEDLINE and SCOPUS email alerts were set up for any newly published articles on the research topic. A search in Google Scholar and SCOPUS for grey literature on nursing mentoring programs in Canada, USA, Australia, New Zealand and the UK was also conducted and websites of professional nursing associations were reviewed for grey literature related to the research topic, for example, the Canadian Nurses Association, Registered Nurses Association of Ontario and the College of Nurses of Ontario. Titles and abstracts of all sources identified were reviewed to determine if they met inclusion and/or exclusion criteria. Specific articles were selected and citations exported to Refworks and EndNote X7 Reference Management Database. Author searching was used to identify additional literature.
Prior to beginning the scoping review search strategy, a preliminary formal search using the subject headings and keywords identified in the narrative literature review was conducted on February 21, 2013, using Ovid MEDLINE (Table 1). Based on these results and further discussions with the information specialist and research supervisor, keyword and subject headings were further refined (Appendix A: Table 2) and searches were conducted in Ovid MEDLINE, PsycINFO, SCOPUS, CINAHL and EBSCO. The methodology for analyzing and summarizing the results of the scoping review is discussed next.

**Analysis of the Literature**

Scoping literature review findings were analyzed by incorporating a numerical summary, identifying the frequency and type of literature and a narrative synthesis approach using qualitative thematic analysis (Levac et al., 2010). The narrative synthesis approach was used to develop qualitative themes that reflected study data on role transition needs, workplace adjustment and e-mentoring as a socialization strategy for new graduate nurses’ workplace adjustment.

Phase 2 of the study is discussed in the next section. Phase 2 involved in-depth interviews with new graduate nurses in order to explicate their socialization needs, explore the relevance of themes identified in the literature, and determine their perspective on e-mentoring components and design features.

**Phase 2: Qualitative Phase**

The purpose of the qualitative phase of the study was to build on the first phase of the scoping literature review findings and to further determine from new graduate
nurses’ perspectives what their role transition needs were for a successful workplace adjustment and to explore how an e-mentoring intervention could be used as a socialization strategy. Experiences identified in the literature on design features, and potential acceptability of an e-mentoring intervention were explored with interviews in the qualitative phase of the study.

This methodology ensured the views and preferences of the target population were sought. The following qualitative research questions were proposed for the target user population, and incorporated Van Maanen and Schein's (1979) socialization typology of socialization tactics, Kram’s (1985) conceptual framework on mentoring and Kalbfleish’s (2002) Mentoring Enactment Theory. The research questions that guided this phase of the study to obtain additional insights were further refined as a result of the scoping literature review as follows:

1. What are new graduate nurses’ role transition needs in workplace adjustment within their first year of employment?

2. What features of socialization tactics and mentoring strategies have been found to be effective in the new graduate nurse’s own role transition experience?
   a. Did the organization engage in strategies such as collective vs. individual socialization processes, and to what extent were these strategies helpful in facilitating new graduate transition to an RN role, and how?
   b. Did the organization provide the new graduate nurse with a mentor through a third party?

3. What gaps and limitations have new graduates experienced in existing mentor
and preceptor interventions designed to facilitate their retention in the organization and/or in nursing?

4. What recommendations do new graduate nurses have for a proposed e-mentoring program to facilitate their workplace adjustment?

**Methodology**

Phase 2 used a qualitative descriptive methodology to address research questions with the goal of enhancing understanding of the experience of new graduates in regards to their role transition and workplace adjustment. As noted by Sandelowski (2000) a qualitative descriptive methodology deepens understanding of the everyday life of an individual. This phase of the study utilized semi-structured interview questions and probes, which are considered necessary, to elicit a broad range of authentic data (Silverman, 2000).

**Rigour and Validity**

The validity of qualitative methods was established using Mays and Pope (2000, p. 51) strategies: triangulation, respondent validation (member checking), clear exposition of methods of data collection and analysis, reflexivity, attention to negative cases and fair dealings. These strategies were operationalized as follows:

1. Triangulation was established to ensure comprehensiveness by comparing the results of scoping review and interview data sources.

2. Respondent validation (member checking) was established by comparing participant interview accounts with researcher’s findings.
3. Clear exposition of methods of data collection and analysis was established by revealing how the coding process progressed from the simpler to more complex themes (see Appendix P).

4. Reflexivity was established by clarifying the researcher’s role and biases in the data collection process as she functioned as the main data collection instrument. The researcher is a doctoral candidate at the University of Toronto and has been a registered nurse for 33 years. Her clinical nursing background is in medicine/telemetry and cardiology. The researcher has preceptored many nursing students and newly graduated nurses. She has acute care management experience and has worked as a faculty member teaching nursing students at York University in Toronto for the past 14 years. While working at York University, the researcher participated in the Ontario Nursing Connection e-mentoring program for nurses. This experience influenced the researcher’s interest in e-mentoring as a socialization and mentoring intervention for new graduate nurses.

5. Attention to negative cases was pursued through data interviews that are identified as a negative case, and stand out as different than other interviews i.e., a new graduate nurse participant who reported having an excellent role transition experience.

6. Fair dealing was established by including a broad range of perspectives from participants.

   In addition, Graneheim and Lundman’s (2004) strategies of credibility, dependability and transferability were used to establish trustworthiness of the
qualitative methods used in this study. Credibility was established by conducting 1:1 one-hour interviews with new graduate nurse participants, an approach that was also used in Evans et al. (2008) study. Further, participant interview texts were divided into meaning units that identified words and sentences or paragraphs relating to content or context of other words and sentences (Graneheim & Lundman). Lastly credibility was established by providing representative quotations from participant accounts of transcribed text (Graneheim & Lundman). To ensure consistency of data collection (Graneheim & Lundman), dependability was established by using an interview script and a semi-structured interview guide when conducting interviews (Evans et al, 2008). Transferability was addressed by interviewing participants from across Ontario who worked in various acute care units. Interview setting and sample are discussed next.

**Interview Setting and Sample**

The setting was Ontario, Canada. The target population was newly graduated nurses with less than one-year employment experience. The College of Nurses of Ontario research database was used to obtain the sample. The CNO (2012) reported that there were 4,185 new members in 2012.

**Inclusion and Exclusion Criteria**

The inclusion criteria for new graduate nurse interviewees were acute care registered nurses. The rationale for selecting acute care nurses was that 90% of new graduate nurses transition from student nurse into the hospital setting (CNO, 2009). Additional inclusion criteria were new graduate nurses who had been employed within the past year and were employed in Ontario. Exclusion criteria were new graduate
nurses with previous RPN (Registered Practical Nurse) practice experience and international work experience as an RN (Registered Nurse) or RPN, as this group of nurses would not be new to the clinical work environment and their role transition needs were likely different from those of a new RN graduate.

Sample Size

Sandelowski (1995a) posits that a sample size of ten is sufficient for less complex subjects. Given the unknown complexity of e-mentoring in nursing programs, and in anticipation of a potential loss of participants, a sample size of 15-20 participants was proposed. Nevertheless, the sample size was adjusted based on data saturation, determined from reviewing the data after each interview and not having any new themes emerge in my analysis. The final interview sample size was 14 participants.

Data Collection and Procedures for Conducting Interviews

An electronic list of potential study participants was obtained from the CNO. A purposive sample was obtained to reflect target population characteristics (Polit & Beck, 2012) with respect to the following criteria: a) type of nurse – registered nurse; b) years in nursing – under 1 year; c) nursing employer – acute care hospital; d) position in nursing – staff nurse; e) primary area of practice – no restriction with regard to role and practice setting. The CNO data file was read into SPSS. In order to ensure a sample size of 20 participants, the following calculation was performed: 20/0.2 =100. Hence, 100 subjects were randomly selected from the CNO list by using the “select case” function. Sampling continued based on evidence of achievement of data saturation.

New graduate nurses were invited to participate in an interview. The invitation study letter (Appendix C) along with consent information (Appendix D) was sent by mail
prior to the interview to allow the participant to review information, ask questions as needed, and sign the consent form. A telephone number and email address was provided for participants should they have had any questions. Participants were requested to mail or fax back their consent to a secure fax line housed in the doctoral supervisor’s office. Further, a Demographic Form (Appendix L), was used to provide an overview of the characteristics of study participants.

Before beginning the interview, the researcher reviewed her role with the interview participant. The researcher followed the Interview Schedule (Appendix E) and reviewed the definitions of mentoring and preceptoring (Appendix E). Interviews were conducted at a time and location that was mutually convenient for study participants and the researcher. For participants in remote areas of Ontario, a telephone interview was conducted. In a literature review conducted by Rahman (2015) that compared telephone versus in-person interviews, the researcher found that both data collection methods were accurate within acceptable error for qualitative research.

The interviews began with an introduction of the doctoral candidate, nurse and past preceptor who is committed to supporting a positive role transition experience for newly graduated nurses. The researcher explained to study participants that the study purpose was to explore new graduate nurse role transition and workplace adjustment and to solicit their feedback on the development of an e-mentoring intervention for a future study. Participants were informed that they would be invited to speak about their role transition process and act as a key informant in the exploration of workplace adjustment and mentoring as a socialization tactic to assist new graduates transition into their work role. They were informed that the interview would be audio taped, but
that no identifying information would be included in transcribing the interview data. Participants were asked to introduce themselves, as an icebreaker, and to provide a brief description of their nursing background.

The interview schedule (Appendix E) included the following: an introductory script, interview questions with an icebreaker question at the beginning, probes for the questions, a concluding statement, and a thank you statement. Interview questions explored the following content areas: role transition needs and relationships with co-workers in workplace adjustment, information access needs, orientation program features, mentorship program features, e-mentoring features, and essential elements and design features of acceptable e-mentoring programs. Interview questions were refined based on the results of the scoping literature review.

**Data Analysis**

Descriptive validity was obtained by providing factual accuracy of participant accounts (Sandelowski, 2000) by reviewing the written interview transcript and listening to the audio-tape (Sutton & Austin, 2015). The audio recording was transcribed verbatim and transcripts were read while listening to the audio recording (Sutton & Austin, 2015). The first transcript was transcribed by the researcher, which was followed by employment of professional transcription services. The first two interview transcripts were reviewed with the doctoral supervisor to ensure interview account accuracy was maintained and to ensure congruence regarding study themes. Transcripts were carefully read and reread by the researcher and double-checked with the audio recording, prior to data analysis.
To maintain anonymity, participants were identified numerically and no identifying information was retained in analysis. Data analysis was iterative and reflective to ensure richness of the data was accommodated and reported (Sandelowski, 2000). Coding of data was done by hand (Sutton & Austin, 2015) through constant comparison of codes across interviews. Data analysis was concurrent with participant interviews to enable the researcher to explore areas of interest that arose in an interview in subsequent interviews. Each interview participant was asked to complete a participant Demographic Form (Appendix L), which was used to provide an overview of the characteristics of study participants. Phase 2 content analysis is discussed next.

**Content Analysis**

Participants’ views of new graduate nurse role transition, workplace adjustment and e-mentoring as a possible socialization and mentoring strategy were summarized using content analysis to organize and integrate information by key concepts and themes. Qualitative content analysis (Graneheim & Lundman, 2004) was used to ensure content provided by study participants was grounded in the data as it was presented. Participant texts were divided into meaning units that identified words and sentences or paragraphs relating to content or context of other words and sentences (Graneheim & Lundman). Condensation was used to maintain the core message in a brief format. Additionally, abstraction was used to underscore descriptions and interpretations with the creation of codes, subthemes and themes (Graneheim & Lundman). Through content analysis, interview themes were identified. These themes were compared and contrasted to data and findings from the literature review and expanded overall understanding. Interview findings deepened the complementarity
mixed-methodology to assist with the components and design features of an e-mentoring program for new graduate nurses’ role transition and workplace adjustment. What follows is the methodology for Phase 3: Synthesis of Scoping Literature Review and Interview Data.

**Phase 3: Synthesis of Scoping Literature Review and Interview Data**

In Phase 3, thematic analysis of the literature and interviews was synthesized to bring together main and recurring themes (Mays, Pope, & Popay, 2005) through triangulation (Mays & Pope, 2000) in order to address study research questions. Themes were iteratively compared and contrasted with scoping review findings. Using the lenses of e-mentoring as a socialization tactic and mentoring strategy for new graduate nurse role transition and workplace adjustment, key informant interview findings were synthesized with scoping literature review findings. Further, findings from both sources of evidence were compared and constrained. Areas of congruence and non-congruence were identified and were subsequently explored with panel members. These findings generated an understanding of newly graduated nurses’ role transition needs and workplace adjustment, and provided the foundation for design recommendations for an e-mentoring program that could address new graduate nurse workplace adjustment. E-mentoring intervention recommendations for the components and design features to address the role transition needs and workplace adjustment of new graduate nurses were formulated regarding e-mentoring program features such as length of program, matching process, desired mentor qualifications, desired content of e-mentoring, and frequency of contact. Data were also interpreted with regard to the
socialization theory proposed by Van Maanen and Schein (1979) and the mentoring enactment theory proposed by Kalbfleish (2002) in order to situate the research findings in the broader empirical and theoretical literature and thus contribute to advancing evidence regarding socialization and mentoring theories.

**Determining Evidence-based Recommendations**

Based upon the synthesis of findings, evidence-based intervention recommendations were formulated for an e-mentoring program. The evidence-based recommendations addressed e-mentoring program components and design features such as the matching process for mentors with mentees, and whether mentors should be from within or outside the mentee’s organization. In addition, intervention recommendations addressed e-mentoring program features such as program length, frequency of communication, and e-mentor and e-mentee qualifications. Factors that could explain individual variation in response to interventions and outcomes were identified. These factors (e.g., facility with technology, coping style, willingness to seek information) were considered in the development of recommendations for an e-mentoring intervention.

**Methodology**

Escaron, Weir, Stanton and Clarke (2015) employed a multi-stakeholder expert panel approach to define and rate the effectiveness of enabling services. The expert panel members provided their views and participated in a structured discussion to develop a list of interventions, which were quantitatively decided upon by the group to determine acceptability for a particular scenario. Similarly, in the current study
evidence-based e-mentoring intervention recommendations for components and design features were externally reviewed by an expert stakeholder panel. This review was conducted prior to obtaining structured panel feedback on the recommendations. The expert stakeholder panel explored the acceptability of each e-mentoring intervention recommendation and provided further insight on e-mentorship. Acceptability was determined from the views and judgements of those who may participate in the intervention (Sidani & Braden, 2011), for example, new nursing graduates and experienced nurses. Acceptability was based on appropriateness to address presenting problem, convenience of the intervention (Sidani & Braden, 2011), and likeliness that the e-mentoring intervention would support the socialization and role transition needs of the new graduate.

**Expert Panel Setting and Sample**

The setting was a meeting room at the University of Toronto, Ontario, Canada. The expert panel consisted of new nursing graduates and experienced nurses. New graduates represented the target audience, whereas experienced nurses represented potential e-mentors. The CNO research database was used to obtain the expert panel sample.

**Inclusion and Exclusion Criteria**

One inclusion criterion for new graduate nurse and experienced nurse expert panel members was acute care registered nurses. The rationale for selecting acute care nurses was that 90% of new graduate nurses transition from student nurse into the hospital setting (CNO, 2009). Additional inclusion criteria were new graduate nurses
who had been employed within the past year, and were employed in Ontario. Exclusion criteria were new graduate nurses with previous RPN practice experience and international work experience as an RN or RPN, as this group of nurses would not be new to the clinical work environment and their role transition needs would likely be different from those of a new RN graduate. The experienced nurses for this study consisted of experienced nurses who were employed in Ontario, with five or more years of current Ontario work experience, and had preceptored one or more new graduate nurses.

**Sample Size**

Seven panel appraisers assessed e-mentoring intervention recommendations. The sample was made up of five new graduate nurses and two experienced nurses. These nurses were potential stakeholders of the proposed e-mentoring intervention.

**Data Collection and Procedures for Conducting Expert Panel**

A similar approach as described in Phase 2 was used to obtain the sample. An electronic list of potential study participants was obtained from the CNO. A purposive sample (Polit & Beck, 2012) was obtained with respect to the following criteria: a) type of nurse – registered nurse; b) years in nursing – under 1 year for new nursing graduates and greater than 5 years for experienced nurses; c) nursing employer – acute care hospital; d) position in nursing – staff nurse; e) primary area of practice – no restriction with regard to role and practice setting.

The CNO data file was read into SPSS. Previous new graduate nurse interview subjects in Phase 2 of the study were “filtered out” to ensure the initial group of potential
interview participants was not part of the potential pool of subjects for the expert panel. Escaron et al. (2015) utilized a modified Delphi expert panel made up of four patients, four enabling service providers, and five CHC leaders and policymakers. Similarly, however on a smaller scale, an expert panel, made up of three new graduate registered nurses and three experienced nurse stakeholders was sought to make up the panel. To achieve the planned sample size of new registered graduate nurse participants, the following calculation was performed: 3/0.2 =15; hence, 15 subjects were selected by using the SPSS “select case” function. The same calculation and selection procedure for experienced nurse sample was conducted. Five new graduate registered nurses and two experienced registered nurses responded to the invitation and participated in the expert panel for a total of seven panel participants.

An invitation study letter (Appendices F & G) along with consent information (Appendices H & I) was sent by mail prior to the expert panel to allow the participant to review information, ask questions as needed, and sign the consent form. Participants were requested to mail back or fax back consent to a secure fax line housed in the researcher’s supervisor’s office.

Data collection for the study commenced after consent was obtained. Participants were sent study material to review ahead of time to provide a rating of acceptability for each intervention recommendation. These initial ratings were summarized and shared with panel members at the start of the panel interview.

The expert panel interview was conducted at a time that was convenient for study participants. Before beginning the expert panel, the researcher reviewed her role as a doctoral candidate and facilitator for the expert panel who were invited to review the
proposed e-mentoring recommendations. The researcher also reviewed the purpose of the panel, which was to obtain structured feedback on each e-mentoring intervention recommendation. The expert panel began with the researcher and the expert panel sitting together. The doctoral candidate introduced herself as a nurse and past preceptor who is committed to supporting a positive role transition experience for newly graduated nurses. Participants were informed that they would be invited to act as key informants in the e-mentoring intervention recommendation development. They were informed that the panel was audio-taped, but that no identifying information would be included in transcribing the expert panel data. Expert panel participants were asked to introduce themselves as an icebreaker and to provide a brief description of their nursing background. The interview was conducted using a semi-structured schedule (Appendix J). Acceptability of each e-mentoring recommendation were assessed using a Likert scale from 1-7, with 1 being the lowest possible acceptability score and 7 being the highest possible accessibility score (Appendix K).

Some examples of e-mentoring recommendations reviewed by the expert panel were: e-mentor and e-mentee qualifications, frequency of communication between e-mentor and e-mentee, and e-mentee-e-mentor matching process. Following discussion, panelists were asked to re-rate each recommendation independently. The final rating of panelists was numerically summarized using frequencies and mean scores for acceptability. Verbal feedback was content analyzed (described below).

Data Analysis

As per Phase 2, descriptive validity was obtained by providing factual accuracy of account (Sandelowski, 2000). Data analysis was reflective and iterative to ensure
richness of the data could be accommodated and reported (Sandelowski, 2000). The audio recordings were transcribed verbatim. A professional organization was employed for transcription. Transcripts were read and re-read by the researcher while listening and comparing them to the audio recordings (Sutton & Austin, 2015). In order to maintain anonymity, participants were identified numerically and no identifying information was retained in analysis. Coding of data was completed by hand (Sutton & Austin, 2015) through constant comparison of codes across panel participant accounts. Each expert panel member was asked to complete a participant Demographic Form (Appendices M & N) to provide an overview of the characteristics of panel participants.

**Content Analysis**

As per Phase 2, panelists’ views of new graduate nurse role transition and e-mentoring as a possible socialization tactic and mentoring strategy were summarized using content analysis to organize and integrate information by key concepts and themes. Similar to Phase 2, a content analysis method was used to identify themes that represented the perspective of the expert panel members. These themes were compared and contrasted to build on data and the gaps in knowledge from the literature review and interviews and deepened my understanding. Confirmatory panel findings strengthened the scoping literature review and interview findings. The panel findings provided an opportunity to further explore different view points, based on the perspectives of expert panel members, and reexamine the literature and interviews to ensure the researcher’s interpretations were correct and to re-explore differences in new emergent findings.
Analysis of Expert Stakeholder Panel Data

Expert Panel demographic profile data are displayed in table format (pg. 206). Intervention recommendations were reassessed and refined based on structured feedback from the expert panel. Intervention agreement ratings were identified by a mean score of 3.5 out of 7 and disagreement ratings were identified by a mean score of less than 3.5 out of 7. Intervention scores of five or higher on a 7-point Likert Scale, represented a moderately high level of acceptability and were considered acceptable for inclusion in proposed e-mentoring intervention components and design features.

Clarity of Presentation

Intervention recommendations were specific to the target population of new graduate registered nurses. Key recommendations were prepared in an easily identified format that provided the level of evidence from the literature and ratings of acceptability from the stakeholder panel. Key recommendations were also established from common themes in Phases 1, 2, and 3, as well as new trends that emerged in study phases.

Ethical Considerations

University of Toronto Health and Science Research Ethics Board approval was obtained prior to commencing the study. Participation in the interview and expert panel process was voluntary. Participants were requested to complete a study enrollment form that was used to document participant demographic data such as age, and education. While there were no perceived risks to participants, all interview and expert panel participants were informed that they could withdraw from the research study at
any time without any effect on their employment. Should a participant have withdrawn from the study, all of their study data would be destroyed, however none withdrew. Interview participants were provided with a $20 token of appreciation gift card and panel participants were provided with a $50 token of appreciation. There was no financial cost to study participants except transportation if they chose to drive to the location of the interview and expert panel. To minimize this potential cost the researcher offered to drive or take public transportation to a mutually agreeable location for interviews. Transit tokens were provided as needed to interview participants who took public transit to and/or from the interview at the University of Toronto. New graduate nurses and experienced nurses donated one hour of their time to participate in either an interview or expert panel. Further, panelists spent approximately 20 minutes of their time to complete the initial e-mentoring recommendations acceptability assessment survey prior to attending the panel. Some benefits of the study were: 1) an opportunity to discuss role transition experiences, and 2) to contribute to the design of an intervention to enhance the integration of future newly graduated nurses into the nursing workforce. If participants had any questions about the study they were provided with the researcher’s contact information and the contact information for her doctoral supervisor. Participants were also provided with the phone and website contact information for the University of Toronto Research Ethics Board.

Interview participants were notified that their data would be kept confidential. Confidential files were password protected and encrypted, with access limited to the researcher and her supervisor. Consent forms were kept separately from hard copy raw data in locked filing cabinets. All study forms and audiotapes were secured at the
University of Toronto in a locked/fireproof cabinet, with keys held by the research team (PhD candidate and supervisor). A summary of research findings will be shared with participants at the conclusion of the study.

**Summary**

This chapter has provided a detailed description of the methodology and methods used in each of three phases of the study. The ultimate goal of the study was to produce evidence-based recommendations for the components and design features of an e-mentoring intervention for a future study, which may assist with new graduate nurse role transition and workplace adjustment. Results of the scoping literature review are discussed next.
CHAPTER 4: SCOPING REVIEW RESULTS

This chapter describes the results of the Phase 1: Scoping Literature Review using Levac et al.’s (2010) scoping review methodology. Each of the six stages of Levac et al.’s (2010) scoping review methodology has been applied and is discussed in detail below.

Stage 1: Identifying the Research Question

The following broad research question was identified in this proposed study:
To what extent does e-mentoring function as a socialization and mentoring strategy for new nursing graduates and what are new graduate nurses’ socialization and role transition needs in workplace adjustment? The span of inquiry for the scoping literature review began with the broader topic of mentorship interventions that are designed to assist with new employee workplace adjustment and was subsequently narrowed to mentorship interventions for new nurses and addressed the following research questions:

1a. What are the socialization and role transition needs in workplace adjustment of new graduate nurses? and b. What are the factors that influence this adjustment and need to be considered in regards to designing an e-mentoring intervention?

2. What is the evidence of effectiveness of mentor and preceptor programs as socialization and mentoring strategies for new graduate nurse workplace adjustment outcomes, specifically, job satisfaction, work-related stress,
intention to stay in nursing (or at the organization), and turnover from nursing?

3. What e-mentoring components and design features (e.g., e-mentor selection, program duration, structure, and policies) have been utilized to support e-mentees?

4. What is the evidence of e-mentoring programs as socialization and mentoring strategies for new graduate nurse workplace adjustment outcomes, specifically, job satisfaction, work-related stress, intention to stay in nursing (or at the organization), and turnover from nursing?

Stage 2: Identifying Relevant Studies

A consultation was held with an information specialist from University of Toronto Library Services to identify relevant databases and to refine search terms. As a result of the consultation CINAHL, EBSCO, Ovid Medline, PsycINFO and Scopus databases were searched using various combinations of keywords and subject headings with Boolean operators (and, or, not). Some examples of keywords/subjects were derivatives of mentor, preceptor, protégé and new graduate, employee, profession, workplace and job. These were combined with e-mentoring intervention keywords/subjects: virtual, computer, electronic and online. Keyword subject headings are described in full detail in Appendix A (Table 2). Preliminary database results were: CINAHL (n=181), EBSCO: (n=130), Ovid Medline (n=13), PsycINFO: (n=748) and Scopus: (n=495) for an initial total of 1,685 articles. Duplicates were then purged resulting in 669 articles. To narrow the focus of the articles on “nursing”, titles and abstracts results were limited to articles...
containing nurs* (using the Reference Management System, Refworks, search function) which produced 352 article titles and abstract results (see Figure 2 below).

![Figure 2. Scoping Literature Database Results](image)

A summary of the search process for empirical and grey literature using the PRISMA (2009) Consort Diagram is provided next in Figure 3 (below).
Figure 3. PRISMA 2009 Flow Diagram
Reference lists relating to authors who have published on new graduate nurse transition interventions were also searched. A search in Google Scholar for nursing mentoring programs and websites of nursing associations in Canada, USA, Australia, New Zealand and the UK was conducted simultaneously with the Scoping Review in order to identify grey literature as per Table 10 below. These geographical areas were chosen because of the similarities in nursing practice to Canada.

**Table 10**

*Mentoring Programs in Grey Literature*

<table>
<thead>
<tr>
<th>Province</th>
<th>Source</th>
<th>Mentoring Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>Aboriginal Nurses Association of Canada (A.N.A.C., 2009)</td>
<td>Aboriginal Nursing Student Mentorship Program <a href="http://anac.on.ca/mentorship-program/">http://anac.on.ca/mentorship-program/</a></td>
</tr>
<tr>
<td>Province</td>
<td>Organization/Strategy</td>
<td>Description</td>
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<tr>
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<td>-----</td>
<td>------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>NL</td>
<td>Association of Registered Nurses of Newfoundland and (2014)</td>
<td>Mentor for New Council Members</td>
</tr>
<tr>
<td>ON</td>
<td>College of Nurses of</td>
<td>Practice Guideline: Supporting Learners</td>
</tr>
<tr>
<td>Country</td>
<td>Organization</td>
<td>Resource/Link</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
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<td></td>
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<td><a href="http://www.arnpei.ca/default.asp?id=190&amp;pagesize=1&amp;sfield=content.id&amp;search=23">http://www.arnpei.ca/default.asp?id=190&amp;pagesize=1&amp;sfield=content.id&amp;search=23</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6&amp;mn=1.59.64</td>
</tr>
<tr>
<td>SK</td>
<td>Saskatchewan Ministry of Health</td>
<td>Nursing The Future (NTF)</td>
</tr>
<tr>
<td>Australia</td>
<td>Independent Practitioner Network (IPN) Medical Centres</td>
<td>Nurse Graduate program</td>
</tr>
<tr>
<td>USA</td>
<td>American Association of</td>
<td>Hallmarks of the Professional Nursing</td>
</tr>
</tbody>
</table>
Titles and abstracts of all sources identified were reviewed to determine if they met inclusion and/or exclusion criteria. What follows is a detailed description of the methodology used to search, log, and compile the findings from the scoping review.

**Stage 3: Study Selection**

Articles were selected with the goal of answering the broader research question: To what extent does e-mentoring function as a socialization and mentoring strategy for new nursing graduates and what are new graduate nurses’ socialization and role transition needs in workplace adjustment? This broad overarching research question aligned with the overall study research questions. Articles were selected using a study inclusion criteria abstraction form that was used to record data related to the following two specific questions:

1. Does title/abstract identify an intervention to assist new graduate nurses with workplace adjustment, such as mentoring or socialization program?
2. Does title/abstract identify factors that explain workplace adjustment specific to new nursing graduates, such as attributes of mentors?

Scoping review titles and abstracts of articles were compiled into the EndNote X7
Two independent reviewers, the doctoral candidate and thesis supervisor, reviewed 352 titles and abstracts identified through the database. Inter-rater reliability was assessed in order to determine the accuracy of the selection strategy. The inter-rater reliability assessment exercise was completed based on study inclusion criteria questions described above. Each reviewer entered their findings in a table document created in Word to record each of the citations identified. The tables were combined to determine matches for inclusion in the scoping review. This interactive approach reduced the uncertainties about which articles to include that arise when a single researcher reviews them independently (Levac et al., 2010). There were 32 sources that could not be identified as eligible from title and abstract. For example the title “Graduate nurses: Learning how to feel the thrill” (Punnara & Barta, 2009) was vague and ambiguous in relation to the research study topic of new graduate nurse transitioning and mentoring and therefore the full text was reviewed. Percent agreement was calculated by counting the number of matches by both reviewers. Incongruence was handled through a mutual review using the study inclusion criteria questions. The inter-rater reliability exercise resulted in 92.3% agreement. There were 27 sources that were reconciled between reviewers. Upon reconciliation, 17 sources were included and 10 sources were excluded as they did not meet study inclusion criteria questions. In total there were 162 full text articles of which 34 were excluded for various reasons (e.g. not in English). Additional grey literature (n = 21) was then reviewed for a final total of 149 eligible sources that met study inclusion criteria. The section below describes the review of eligible sources, analysis and data abstraction.
Data Abstraction and Management

The eligible sources were exported to the Endnote X7 Reference Management System and were reviewed in more depth by charting the data as described in the following section. Data were extracted using data extraction tables (Appendix B) to address research questions and topic areas, for example, qualitative studies on new graduate nurse role transition (Appendix B, Table 5). Data extraction templates were completed for empirical literature (Appendix O). A summary of the methodology for critical appraisal and charting the data is provided below and described in detail in the methods chapter.

Stage 4: Charting the Data

Empirical studies were reviewed using critical appraisal evaluation criteria that reflected features of study design and informed a judgement about the methodological rigour of intervention studies as follows: Consolidated Standards of Reporting Trials (CONSORT, 2010) and Shadish et al. (2002) for experimental and quasi-experimental studies, STROBE (STrengthening the Reporting of OBservational studies in Epidemiology) for observational studies, and Mitchell (1985), a seminal article which is still used as the basis for critical appraisal of correlation studies as cited in Scandura & Williams (2000). The Critical Appraisal Skills Programme (CASP, 2014) Qualitative Research Checklist was used for review of qualitative studies. Program Evaluation articles were reviewed using the Context Input Product Process (CIPP) Program Evaluation Model (Stufflebeam, 2003) which can be used to evaluate educational programs. Data were extracted from included studies (Levac et al., 2010) using data
abstraction tables based on critical appraisal criteria (Appendix B Tables 3 - 7).

Discussion articles, that were empirically based papers with references to the scholarly literature to substantiate their study aim were compiled into a Discussion Data Extraction Table (Appendix B Table 8). Papers with limited references such as editorials, opinion pieces, announcements and news bulletins were compiled into an Other Data Extraction Table (Appendix B Table 9).

**Overview of the Scoping Review Data**

Of the 149 eligible sources that met study inclusion criteria, there were 96 empirical articles consisting of quasi-experimental studies, qualitative studies, observational studies, correlational studies, program evaluation studies, literature reviews and discussion articles. Nine of the empirical studies were PhD dissertations. The other scoping review data consisted of brief articles such as opinion pieces.
Figure 4 (below) provides an overview of the distribution of the types of literature in the scoping review.

![Types of Literature in Scoping Review](image)

**Figure 4. Types of Literature in Scoping Review**

**Stage 5: Collating, Summarizing and Reporting the Results**

Findings were analyzed by extracting data from eligible scoping review sources through an iterative review process and linking the data to study research questions (Levac et al., 2010). Through comparing and contrasting relevant scoping review literature on new graduate nurse role transition and workplace adjustment, seven socialization transition themes emerged as follows: 1) Adjustment to Professional Practice, 2) Need to Feel Safe and Accepted, 3) Need to have Confidence in Practice, 4) Need Positive Role Modeling, 5) Need Peer Support, 6) Need Coping Skills, and 7) Need to have Learning Strategies Supported. Each of these themes is discussed below:
1. Adjustment to Professional Practice

There were five articles that explored adjustment to practicing as a professional (Arizona Nurse, 2011; Boychuk Duchscher, 2009; Turner & Goudreau, 2011; Zauszniewski, 2009). One was a descriptive program evaluation study (Steen, Gould, Raingruber & Hill, 2011) another was a qualitative study (Turner & Goudreau, 2011), one was a theoretical paper (Boychuk Duchscher, 2009), one was a position paper (Arizona Nurse, 2011) and the fifth was a discussion paper (Zauszniewski, 2009).

Steen et al. (2011) conducted a descriptive program evaluation study in California to explore a nurse intern program for student nurses. The sample consisted of 50 new graduate nurses in one acute care hospital. The researchers measured peer camaraderie, confidence, education and career advancement and pressure to perform related to nursing tasks using a researcher-designed questionnaire. The authors’ findings were that knowing personnel as a student on the unit eased their transition. Further, participants reported beliefs of increased confidence when conducting nursing tasks, patient care and interacting with patients and their families following the intern program. The program created opportunities for career advancement and job placement. Strengths of the study were the use of Benner’s theoretical framework; however, the researchers’ results were not reflective of Benner’s concepts. Author-acknowledged limitations were a lack of questionnaire reliability and the absence of a control group. An additional study limitation was a lack of generalizability to other settings. Further, mean ratings for outcome variables rather than percentage reporting would provide more meaningful results. There was also a lack of information on program specifics such as how preceptors were matched.
Turner and Goudreau (2011) conducted a qualitative study (n = 5) to identify potential improvements in a series of seminars for new graduate nurses in their first year of emergency room (ER) nursing in Canada. The researchers used a qualitative case study design. They found new graduate nurse transition to be difficult, yet bearable. Study themes were: being nurtured, learning, retention, attraction and integration and towards professionalism. The researchers noted that self-reported new graduate nurse loneliness vanished with the internship program, peer, clinician and nurse manager support. A strength of the study was in-depth description of the analysis process (Critical Appraisal Skills Programme, CASP, 2014). Study limitations include lack of generalizability of the findings beyond the ER setting, because of the specialized nature of the ER and the nurse researcher role as seminar facilitator could have influenced/biased study results. The authors also mentioned a potential recall bias, as study participants were 3 - 6 years post seminar. Nevertheless, the researchers cited the work of Van Der Maren (1996) who found that emotional souvenirs dominate cognitive memories. Further, it was noted that data saturation (CASP, 2014) was unclear, hence making study findings at risk for premature data closure.

In her theoretical paper, Boychuk Duchscher (2009) described the development of her Transition Shock Theory. Her theory was developed using grounded theory methodology to provide a theoretical framework for new graduate nurse role transition with the goal of supporting and facilitating professional adjustment. Boychuk Duchscher’s (2009) theory was also based on Kramer’s (1974) work on new graduate reality shock. Boychuk Duchscher defined transition shock as “the experience of moving from the known role of a student to the relatively less familiar role of professionally
practicing nurse” (p. 3). She reported the transition period was one of exhaustion and isolation and conceptually explored the themes of new graduate nurse role transition through loss, confusion, disorientation and doubt. Boychuk Duchscher posited that the initial one to four months post orientation period were highly stressful for new graduate nurses. She further described the first three to four months of practice for new graduate nurses as a formative period in which new graduate nurses form an initial reaction, which then extends to an adjustment period. Boychuk Duchscher recommended an extended orientation and structured mentoring program to address role transition issues during this formative time of workplace adjustment. She also recommended that educational and industry settings provide nursing students with information on role transition theory.

A strength of her theoretical paper was that it was built on a span of 10 years of research, which included a review of over 1000 publications related to new graduate transition, acute care nursing, and professional nursing practice. Boychuk Duchscher reported that over 400 of these publications were related to new graduate nurse transition or integration, however there was a lack of information on her literature search, that is, inclusion and exclusion criteria and types of research reviewed and the level of evidence for theory development in her grounded theory study. Compared to Boychuk Duchscher’s results published over a 10-year period, the current researcher located 352 relevant articles published over a 5-year period. The 5-year period was chosen based on the development of technology allowing virtual, computer, electronic and online interventions. A limitation of Boychuk Duchscher’s study was a lack of clarity in her Transition Shock Model. She posited an association between new graduate
nurses’ responsibilities, relationships, knowledge and roles and their experience of confusion, doubt, loss and disorientation, but lacked an explanation to support these relationships. Further, her Transition Conceptual Framework appeared to lack consistency; that is, “energy consumed to conceal feelings and transitional responses” and “emotional extremes” were categories listed under the “Physical” domain versus the “Emotional” domain. Nevertheless, this stressful state of transition was echoed in the Arizona Nurse (2011) position paper on new graduate nurse transition. The position paper described Benner’s (1984) novice to expert theory on clinical competence stages, a theory in which Benner identified new graduate nurses as advanced beginners who are curious and enthusiastic. Benner argued that the disparity between the graduate nurses’ previous structured academic setting and their new chaotic clinical practice setting results in a state of reality shock.

In a discussion paper, Zauszniewski (2009) highlighted mentoring as a strategy for professional transition into mental health nursing. She described mentoring as a dance, as the new mental health nurse moved through Benner’s novice to expert stages with her mentor as supporter, counsellor, advisor, role model, guide, network and friend who has a desire and the reputation to help and provide a positive experience. Zauszniewski added that the dance progresses through the mentoring relationship using Kram’s (1985) four mentoring phases as follows: 1) Initiation, which includes the first 6 - 12 months of the relationship where role modeling is present and the mentor is ready to dance. She described the mentee at this stage as more reluctant to rely on his/her own knowledge and therefore relying mainly on the mentor’s knowledge and experience to lead the dance; 2) Cultivation/ Functioning, which is a phase of two to five
years where the mentee learns to dance and is promoted and protected by the mentor;
3) Separation/Termination, a stage of 6 - 24 months, which is informal as changes are
negotiated in partnership and the mentee may dance with others; although the mentor
may feel the loss of the 1:1 mentor relationship; and lastly, 4) Redefinition, where the
dance may never end and the mentor and mentee dance collaboratively as peers with
varying turns to lead. In the next section the researcher discusses the importance of the
need to feel safe and accepted in the mentoring relationship, yet also be able to
manage environmental and inner moral conflict.

2. Need to Feel Safe and Accepted

Unfortunately, the mentoring dance in nursing described by Zauszniewski (2009), is not always a smooth dance as identified in four empirical studies (Baumberger-Henry, 2012; Evans et al, 2008; Hazelton, Rossiter, Sinclair & Morrall, 2011; Laabs, 2011), a program evaluation article (Ellisen, 2011) discussion article (LaSala, 2009) and an editor’s commentary (Parish, 2011) imploring nurses not to “eat their young” (p. 1). In their qualitative studies, Baumberger-Henry, Evans et al. and Hazelton et al. identified conflict issues with new graduate nurses in the work setting. Laabs in a qualitative descriptive study, highlighted the new graduate nurse’s inner moral conflict in practice. Baumberger-Henry conducted a qualitative descriptive study in the mid-Atlantic region of the USA and identified RN (n = 31) perspectives and recommendations for working with new graduate nurses in the Emergency Department. The researchers used six RN focus groups with 3-10 participants in each group with a mean age of 38 and a mean years of experience of 14. Study participants were asked
the question: “Do we really eat our young?”. Registered nurses reported they were able to relate to the familiarity of this question. Participants identified unsupportive behaviours by nurses and how new graduate nurses try to work around these issues and the harsh personalities they encounter in the workplace. The RNs reported that “some nurses turn their backs when the new graduate asks a question or asks for help, which is a shame” (p. 302); “sometimes new graduates don’t make it just because of other personalities on the unit” (p. 302); and “I work with a nurse who is a very rough person but also one of the most brilliant …however, she has ‘killed’ so many nurses. She would …say that some of them won’t make it, that they shouldn’t be nurses, or that they are stupid” (p. 302). The researchers identified two study themes. The first theme was that new graduate nurses lacked confidence and the second theme was new graduate nurses lacked gaining acceptance in the culture of unit. The RN focus group participants recommended a 6-month unit orientation for the new graduate nurse with a preceptor (the same one if possible) followed by a 6-month mentoring period. They recommended that a list of uncivil behaviours, such as making sarcastic comments and criticizing remarks to new graduate nurses, be developed. They also recommended that education on uncivil behaviours be provided for nurses who are often unaware of their actions towards new graduate nurses. Further, uncivil behaviour should be discussed in orientation and followed up with the mentor. They also recommended that education on conflict resolution was important and may be established through role-playing and simulation (p. 304). A strength of the study was the data collection strategy; using participant quotes in relation to study themes and the identification of data saturation (CASP, 2014). Study limitations, however, were a lack of information on how
data saturation was achieved (CASP, 2014), compromising the study’s internal validity/credibility (Guba, 1981). The study also lacked analytic rigour with no evidence of in-depth description of analysis processes, such as coding scheme.

Evans et al. (2008), in a qualitative descriptive study of established new graduate nurse transition programs conducted in Sydney, Australia, vividly described work environments fraught with “horizontal violence” (p. 21). Horizontal or lateral violence may include bullying and disruptive behaviours (Hubbard, 2014). In nursing, the Canadian Nurses Association (CNA) and the Canadian Federation of Nurses Unions (CFNU) strongly support the fundamental principle of violence-free work environments. Evans et al.’s study aim was to determine the strengths and weaknesses of established transition support programs for new graduate nurses. The researchers used face-to-face semi-structured interviews with new graduate nurses (n=9) and experienced nurses (n=13) who worked with new graduate nurses during their transition to practice. The interviews were transcribed verbatim and themes were extracted using the “Pile on the kitchen table” method (Roberts & Taylor [2002] Nursing Research Processes: An Australian Perspective, 2nd Edition p. 430, as cited in Evans et al [2008]). More specifically the researchers cut out any texts that had a theme connection and organized themes in piles and then consolidated them into fewer piles. Evans et al identified that transition programs in clinical environments resulted in a lack of supportive behaviour for new graduate nurses. They reported examples of wards where bullying was known to exist and noted that the consequences of bullying resulted in two interviewees choosing not to work in their chosen specialty area. One new graduate nurse reported that when the feelings of disaffection are too much, it may
result in the new graduate nurse leaving the profession and impacting his or her professional and personal life. The researchers described reports of inequitable staff rosters where new graduate nurses were scheduled to work unpopular shifts such as afternoons, nights and weekends and they had minimal opportunities for shift changes. One new graduate nurse reported, “don’t ask for the day off – just be sick!” (p. 19). The authors reported there was limited experienced nurse availability; at times experienced nurses had to be a resource to several new graduate nurses, making it difficult to get their own work done (p. 19); and that one unit was structured without preceptors. The researchers highlighted the importance of the nursing unit manager’s influence in setting the tone to promote an accepting and welcoming environment for new graduate nurses. Some new graduate nurses, however, reported they did not feel acknowledged by their unit managers and expressed concerns about the unit manager completing their performance appraisal by simply building on the evaluative feedback from other staff. The study authors reported a common pattern of new graduate nurses having 3 – 4 rotations to various clinical areas during the transition program; as a result, neither new graduate nurses nor experienced nurses viewed the new graduate nurses as permanent members of the unit. Thus new graduate nurses experienced a lack of belonging and acceptance as part of a team. One new graduate nurse reported that a new nurse belongs to the transition program rather than to the hiring unit; however, a main focus of the new graduate nurse assessment and evaluation was on clinical competencies for the area in which they were hired. Strengths of the study were its rich data using participant quotes (CASP, 2014), an interview schedule that was developed and pilot tested, and the study’s coherent results. Some study limitations were that the
literature review did not provide database sources and data inclusion criteria. The trustworthiness (rigour) of the study was not clearly evident (CASP, 2014) as evidenced by a lack of reporting of data saturation and recruitment information and there was no information about who conducted the study interviews. There was also no evidence of a coding scheme for data analysis and the study lacked discussion about external validity. Further, the study was conducted in Australia and the results may not be transferable to other countries. Nevertheless, the issues of bullying and unhealthy work environments in nursing are a reality in Canada (Boychuk Duchscher, 2009). This reality was also highlighted in Laschinger et al.’s, (2012) research study with new graduate nurses in Ontario hospitals, discussed in Chapter 1 and the narrative literature review in Chapter 2. E-mentoring may prove to be a supplemental solution to assist with new graduate nurse transition and acceptance into the profession and ultimately assist with retention of this vital workforce.

Hazelton et al. (2011) conducted a qualitative research study using participatory action in New South Wales, Australia to explore needs of new graduate nurses for structured support as they transitioned into the mental health work setting. The sample consisted of new graduate nurses (n =18) and mentors (n= 5). Multiple modes of data collection were gathered from group discussions that were audio taped. Data collection involved participatory observation and summaries of participant group discussions by researchers. The researchers reported that new graduate nurses had difficulties fitting into their work environment and they observed neglect and hostile treatment of patients by experienced staff, which hindered their desire for skill acquisition. While some new
graduates reported some helpful colleagues, they reported numerous occasions when they worked with others who were hostile towards new graduate nurses.

The authors highlighted a dark side to mental health nursing, as evidenced by choosing quick and dehumanizing methods to deal with patients, which prompted the authors to recommend further research into mental health nursing in Australia. New graduate nurses reported being challenged by experienced staff who resisted the development and implementation of new models of care. One new graduate nurse was asked if she had come over to the dark side yet. The new graduate nurse reported that this would not happen as she was “too positive” yet she was told she would change (p. 180). The authors recommended that new graduate nurses be provided with support to consolidate strategies learned in academia for modeling progressive role models and be able to manage their exposure to staff who are noncompliant. A strength of the study was the rich qualitative data such as participant quotes (CASP, 2014), yet the findings from various multi-method data collection were not reported. Additionally, the researchers did not address issues of rigour i.e. trustworthiness (CASP, 2014; Guba, 1981). For example, there was a lack of information about data collection methods, length of time for group sessions, attendance at the sessions, and mentor selection and matching processes. There was also limited information on guidelines for recruitment or data collection. The authors acknowledged the limitation of using one mental health service, which could be different from other units and health settings and thus limit external validity.

Besides reports in the literature on conflict in the work environment, new graduate nurses have identified their experiences of moral inner conflict (Laabs, 2011).
Laabs conducted a qualitative descriptive study using an on-line short answer survey with a convenience sample of newly graduated BScN nurses (n=25) from an educational program in the USA to determine how they perceived moral integrity and how prepared they felt to manage moral conflict. The survey response rate was 30%. The author reported 44% of participants did not respond to a follow-up email inviting their clarification regarding data coding for the purpose of ensuring trustworthiness of participant responses. The researcher used conventional content analysis and reported that moral integrity was perceived by new graduate nurses as being honest, trustworthy and always defending what was right despite the consequences. New graduate nurses reported, however, that they were expected to set aside their morals to follow what those in authoritative positions (medical staff, employers and other nurses) asked of them. Some strategies employed by new graduate nurses to deal with moral conflict were to build relationships with others such as a mentor and engage in reflection to minimize the risk of burnout. Strengths of the study included new knowledge on new graduate nurse moral contradiction, the use of participant quotes (CASP, 2014), piloting the survey tool (STROBE Statement: Guidelines for Reporting Observational Studies, von Elm, 2008) and providing concept definitions. For example moral distress was defined as a consequence of a challenge to one’s moral integrity, which is a powerfully negative experience (Epstein & Hamric, 2009). Study limitations were a lack of rigour in identifying themes and no information on data saturation (CASP, 2014). The study also lacked depth in description of the analysis process and there was a lack of clarity on how study themes emerged from the data. Additionally, while the online survey limited the depth of participant responses, the researcher provided a defensible rationale
regarding the benefits of an anonymous online survey and also provided the recruitment strategy rationale, based on evidence, that a $10 incentive is more effective than a $5 incentive. The need to have confidence in practice is another theme that emerged from the current researcher’s analysis of the literature and is discussed next.

3. Need to have Confidence in Practice

Several authors in the scoping review (n=6) highlighted the importance of confidence for successful transition of the new graduate nurse. These findings were evident in three empirical studies (Banks et al., 2011; Evans et al., 2008; Williams, 2013), two discussion articles (Snow, 2013; Smith, 2008) and a nursing association president’s message (Quell, 2010). Banks et al. (2011) conducted a mixed methods study in Scotland to evaluate the impact and effectiveness of the Flying Start Program, a student to registered health professional transitional web-based program, on confidence, competence and career development. The program was established to support nurses, midwives and allied health professionals in their first year of employment. The program was made up of ten learning units, as follows: communication, clinical skills, teamwork, safe practice, research for practice, equality and diversity, policy, reflective practice, professional development and career pathways. The setting was acute care and community and the sample was made up of program coordinators (n = 21), mentors (n = 22), and newly qualified practitioners (n = 547) whose mean time in practice was just over one year. Banks et al. used multi-method sequential data gathering consisting of interviews, focus groups and a post-program cross-sectional online survey of newly qualified practitioners, which was based on study interview findings. The researchers reported that while 9500 emails were sent out, they
were unable to determine the survey response rate as there was inconsistency across the settings as to whether the program was considered mandatory or not and they were unsure how many participants were registered in the program.

Approximately 60% of participants who completed the safe practice, clinical skills and reflective practice learning units reported that the program was useful in increasing their confidence to practice. Learning on the job was ranked as the highest career development need followed by becoming a member of the team. Approximately 10% of participants in the qualitative data gathering reported that the program helped them to understand their future career options, yet 31.6 % reported that the program did not help them to understand their career options. This is important as the transition program appeared to be more clinically focused and an e-mentor may provide support for this career development gap. The study also revealed organizational transition issues with delays in obtaining a mentor of up to 9.06 weeks, lack of time to meet with their mentor due to work pressures, and 24.1% of participants reported that their assigned mentor was not consistently the same individual. Several respondents reported examples of poor mentor support and as a result one participant withdrew from the program. The researchers stressed the importance of having the mentor and mentee be on similar work schedules, which included having protected time and access to the Internet in a non-clinical area. They also reported on the need for mentor training and time to support new graduates, and highlighted the need to have appropriate transition program funding. An e-mentoring program designed specifically for new nursing graduates may assist in addressing traditional mentoring issues such as mentor selection delays, lack of time to meet with their mentor during working hours, lack of
funding and mentor inconsistencies. One of the strengths of the study was its multi-
method data gathering strategies, which included open-ended responses (n = 197) from
113 participants. Another strength was the comprehensive statistical analysis of survey
data. Despite these strengths, the study lacked details on sample demographics, hence
limiting the study’s external validity, and the authors did not report on sample size
calculation or reliability and validity of their survey tool (STROBE, 2008). The study
used the word “impact” in the study aim, yet lacked comparison baseline data as
measured in a randomized controlled trial (RCT) or experimental methodology.
Additionally, there was a lack of detail on qualitative analytical rigour. For example,
while the study aim was reported, research questions and data analysis were not
evident, thus limiting the ability to judge the study’s internal validity (Guba, 1981).
Additionally, the researchers did not provide information on focus groups such as group
dynamics. There was also a lack of information on the mentor’s role in the web–based
program and a lack of information about sample demographics, also minimizing the
ability to gauge the study’s external validity (STROBE, 2008).

Williams (2013) in a quantitative thesis study conducted in the USA, also focused
on new graduate nurse confidence in practice. The author contended that the study
measured the impact mentoring and debriefing had on gains in confidence, competence
and comfort in the staff nurse role at the end of the residency program. The researcher
used a convenience sample of nurse residents (n = 641) based on a secondary nurse
residency program database. The study methodology was reported as descriptive
correlational. Independent t-tests and chi-squares were used to determine
relationships. Williams found that mentoring and debriefing had a positive influence on
confidence, competence, comfort and job satisfaction. These results were moderated by a bachelor’s educational preparation and previous health care experience, which resulted in improved comfort in assuming the staff RN role if participants had baccalaureate education or health care experience.

Williams (2013) recommended continued evaluation of the effectiveness of mentoring circles with regard to economic feasibility. A strength of the study was the large sample size and identification of the methodology used to gather data (Mitchell, 1985). The author’s use of secondary data was acknowledged by the researcher as a study limitation. Additionally, a study limitation was that while the author contended that the study measured impact, the study was not experimental and thus this would not be appropriate. Lastly, some of the study tables were vague and did not total 100%, for example, a description of previous heath care experience. There were several inconsistencies with reported data throughout the dissertation study more specifically noted in the Results and Methodology chapters.

Confidence in practice was highlighted as a need in Evans et al.’s (2008) qualitative descriptive study of established new graduate nurse transition programs conducted in Sydney, Australia described above. The researchers posited that transition support programs were established due to the perceived lack of university preparation for new graduate nurses. New graduate nurse interviewees identified that academia was too theoretical versus practical, and only one of the nine new graduate nurses interviewed felt confident to work as a new graduate nurse, while the other new graduate nurses expressed vulnerability. One new graduate nurse described the transition as follows: “first four months pretty bad, feeling unsafe and you just didn’t like
going to work. I think most nurses are like that” (p. 20). Snow (2013), in a discussion article from the United Kingdom, highlighted the importance of preceptoring as a strategy to build new graduate nurse confidence. She reported on qualitative study findings by the Royal College of Nurses (RCN) Commission Report that included interviews with new graduate nurses and midwives to seek their feedback on preceptored programs. One new graduate nurse reported she was "shy and meek" and she still thought of herself as a student. Being a new graduate nurse on her own was a "shock to the system" yet the support she received from the preceptor program boosted her confidence. Snow also reported on a Nursing Standard survey of 15 facilities and while preceptor programs differed, the author proposed the need for mandatory preceptorship programs for all new nurses. Quell (2010) discussed mentoring in her President's Message from the Connecticut Nurses Association (C.N.A.), USA, as a transition strategy to create a culture that inspires confidence. She encouraged experienced nurses to be mentors modeling quality to students and new graduates, and thanked those who were mentors. While Quell discussed mentoring, her article’s content appeared to pertain to preceptoring pointing to the fine line between mentoring and preceptoring. The author highlighted that to preceptor a new graduate nurse in Connecticut, a registered nurse must have a BScN degree and two years of experience. In another discussion article, Smith (2008) reported on the use of a formal mentoring program in her Danbury, Connecticut hospital. The program was used as a transitional strategy to address clinical and professional socialization issues and to increase new graduate nurse confidence and comfort. The author described the new graduate nurse experience as stressful and the new graduate nurse reality as different from nursing as
a student. Smith stated that the first year turnover at the hospital was 15% and the hospital had a 3-month preceptor program, yet the nurse educators noted it took about one year to adjust to the new graduate nurse role; hence, additional support of a mentor was provided for the year. Mentors in the organization were recruited by nurse managers, clinical leaders and educators and the ideal mentor was reported as a mentor that was clinically focused. Mentors attended a 2.5-hour mentoring course on learning, communication and personality styles, feedback skills and generational diversity (p. 4). While the discussion article lacked empirical program evaluation, the article points to mentoring as a possible transition strategy to assist the new graduate nurse when the typical 3-month preceptored orientation period has ended. In the scoping review the researcher also identified the need for the new graduate nurse to have a positive role model, which is discussed next.

4. Need Positive Role Modeling

Murphy-Rozanski (2008) conducted a phenomenological qualitative study (n = 19) using three focus groups to explore new graduate nurses' perceptions on helping behaviours of their preceptors, mentors and coaches in a Pennsylvania nursing residency program. The researchers concluded there was a need for positive role modeling and mentor availability for new graduate nurses. They highlighted the importance of providing realistic guidelines and expectations for new graduate nurses. The mentor role appeared to have a clinical focus as in the preceptor role. The researcher identified the study limitations of lack of generalizability of the results, and noted that as a teacher, registered nurse, educator and researcher, her knowledge base may have influenced the study findings. A further study limitation was that the
researcher mentioned triangulation in data collection; however, the only means of data collection and analysis reported was from focus group data. Lastly, there was a lack of evidence about data saturation.

Weng et al. (2010) conducted an observational study in three acute care hospitals in Taiwan using a cross-sectional personally/self-administered questionnaire, in order to explore the impact of mentoring functions (role modeling, career development and psychosocial support) as perceived by new graduate nurses in the mentoring program. Outcomes measured were job satisfaction and organizational commitment. The sample (n=306), with a mean age of 26.83, consisted of new graduate nurses who worked in the hospital for two years or less. Using regression analysis researchers found a significant positive relationship between role modeling and job satisfaction on organizational commitment of new graduate nurses. The new graduate nurses reported that mentors produced a role modeling effect; however, they perceived limited career and psychosocial support from their mentor. Strengths of the study were the rigorous statistical methods employed, good evidence of validity and reliability of study instruments, use of confirmatory factor analysis for convergent and discriminatory validity, the use of Harman’s one-factor test to detect common method biases in the data, controlling for confounders, and a response rate of 99.35%, which seemed implausible. The authors acknowledged limitations of using a cross-sectional survey and recommended future longitudinal studies. They also acknowledged generalizability/external validity limitations for global implications of their study, which was based in Taiwan. The researchers identified the need to further explore perceived limited career and psychosocial support from the new graduate nurse’s mentor.
Limitations of the study were a lack of clarity in the sample description, as sample information in the discussion text differed from what was reported in Table 2 related to nurses’ years of experience. Also, there was no evidence of sample size rationale. While components of mentoring functions were studied, the mentorship program appeared to have a clinical/preceptor focus as evidenced by reports of “mentor’s clinical evaluation ability” which may have influenced the findings on new graduate nurses’ perception of limited psychosocial support from their mentors. Additionally, the mentor program appeared to be clinically focused, consisting of the following components: communication skills, clinical evaluation, teaching ability, evaluation and feedback, medical ethics and laws and mentors experience sharing. The researchers highlighted the nursing manager’s role as key in assigning mentors with previous experience.

As noted above, Evans et al. (2008) highlighted the pivotal role of the nurse manager to ensure successful new graduate nurse transition. Hazelton et al. (2011) posited that new graduate nurses needed support to consolidate strategies learned in academia, identifying and benefiting from positive role models. Further, Rea et al. (2013) conducted a qualitative grounded theory study in New Zealand in general practice on how practice nurses utilized evidence and the information they considered useful for their practice. The study sample consisted of new graduate nurses (n = 5) in first year following registration and experienced nurses (n = 6) with greater than 3 years of experience. The authors identified role modeling as a main theme, which led to the researchers’ development of the Reciprocal Role Modeling Theory. Using grounded theory, they gathered data for two years using unstructured interviews, field notes, documented meetings with research team, and manuscript data to describe steps in
theory development. The Reciprocal Role Modeling Theory was comprised of 3 parts: Becoming Willing, Realizing Potential, and Becoming a Better Practitioner.

In the first part of the theory, Hoarea et al. (2013) focused on Becoming Willing through 1) respectful relationships between the new graduate nurse and experienced nurse; 2) being able to prove yourself by demonstrating nursing skills relating to clinical, communication and knowledge about the work practice environment; and 3) discerning decision making where the new graduate nurse is comfortable with whom they seek advice and information from and the experienced nurse feels she can delegate some tasks safely to the new graduate nurse. The second part of the theory focused on Realizing Potential. The researchers reported that the new graduate nurse is an “unconscious expert in information”, for example, through website and computer program knowledge and application, yet does not recognize this as a skill, and the experienced nurse recognizes this potential to expand her professional development. The last part of the theory focused on Becoming a Better Practitioner, where the new graduate nurse becomes a critical thinker and has a significant influence on the experienced nurse, who is using new skills she has learned from the new graduate nurse. The study authors suggested that reciprocal role modeling may minimize transition shock as the new graduate nurse demonstrates her or his expertise as an information finding expert and in turn learns how to apply theory to practice from a clinically experienced nurse. Strengths of the study were its extensive data collection and in-depth discussion regarding theory development. Study limitations were a lack of information on how the initial study sample was recruited by the researchers and a lack of information on data saturation (CASP, 2014), however data were collected over 2-
year period. Further, there were no details on the sample demographics, analysis of memos and field notes and the authors did not identify information on unstructured interview processes. Together, these study results provide evidence that the new graduate nurse needs a good role model. Further, Zauszniewski (2009) in her discussion article on the mentor and mentee’s harmonious dance described the importance of the mentor’s characteristics of openness, receptiveness, having a positive attitude and good communication and interpersonal skills with up to date knowledge, time and energy. She also described the mentee as a dance partner who is accepting of feedback, responsible, goal oriented, and a good communicator; can apply what they learn; and is willing to keep the flow of the dance through regular meetings with their mentor. Finally, Koenig (2011) in her editorial on the role of a mentor encouraged nurses to be amazing role models who guide, motivate, and counsel new graduate nurses through role modeling. In the scoping review, I also identified the need for new graduate nurse support from their peers as discussed next.

5. Need Peer Support

The authors of three studies highlighted the importance of peer support (Laabs, 2011; Bahouth & Esposition-Herr, 2009) and group mentorship (Bahouth & Esposition-Herr, 2009; Hazelton et al., 2011). Laabs, in a qualitative descriptive study designed to determine how new graduate nurses perceived moral integrity reported that a strategy used by new graduate nurses to manage conflict and preserve moral integrity was to communicate, build relationships and seek support from others, including co-workers. Further, Hazelton et al.’s study designed to explore needs of new graduate nurses for
structured support comprised three mentorship groups that met over the course of a year. The meeting groups included new graduate nurses and clinical nurse consultant mentors. The meetings began with group members reviewing main points from previous meetings and identifying issues and possible strategies and solutions. After conducting their study, Bahouth and Esposition-Herr (2009) fostered the implementation of peer support and mentoring group meeting for new graduate nurses with less than two years of work experience with the goal of reducing anxiety and frustration. The study will be discussed in detail below.

Group mentoring involves the mentor having more than one mentee (Lennox & Foureur, 2012; Scott & Smith, 2008; Tinio, 2012). Tinio conducted an exploratory cross-sectional secondary data analysis study (n=2032) in Chicago to compare the value of one on one mentoring versus group mentoring. She measured work empowerment using the Conditions of Work Effectiveness Scale (CWEQ), group cohesion using the Group Cohesion Scale, and turnover using a self-reported Turnover Intention Tool. Regression analysis revealed statically significant results supporting negative associations between 1:1 mentoring and group mentoring in regard to work empowerment, group cohesion and turnover intent. Strengths of the study were its robust sample size and methods of analysis using a regression model. Study limitations identified by the author were the use of secondary data and low squared regression coefficients for effect of independent variables on outcomes, which could be considered evidence of the existence of other potential contributing factors to study results. Further, the author noted the inadequacy of using only quantitative results to support study findings and recommended further qualitative studies to support her results. Of note, the
highlighted value of the cost effectiveness of group mentoring in the mentioned study should not be disregarded as a mentoring strategy.

Lennox and Foureur (2012) conducted a program evaluation of newly graduated midwives in New Zealand to evaluate a one-year midwifery transition to practice program. The sample consisted of four new graduate midwives and four experienced midwives. The authors used data triangulation of confidence ratings, program logs and transcripts of audio taped interviews. The researchers found that group mentoring improved confidence. Strengths of the study were its context evaluation (CIPP, Stufflebeam, 2003) and response to midwifery student request for a mentoring program and input strategies (CIPP, Stufflebeam, 2003) of group mentoring as 1:1 mentoring was not available. Use of process evaluation (CIPP, Stufflebeam, 2003) for the 24-hour on-call mentor schedule and holding 31 meetings throughout the year was also noted. Program contact frequency ranged from 11 – 27 phone contacts and 1:1 meeting contacts ranged from 1 to 9 sessions. Reasons for contact were categorized as advice, assistance, giving information and discussion. Product evaluation (CIPP, Stufflebeam, 2003) of improved confidence was noted. The authors acknowledged the small sample size limitation. A further limitation in regards to the small sample size is the study’s lack of generalizability. Although the results of this study cannot be generalizable to nursing, it may serve as motivational research for the exploration of group mentoring with new graduate nurses.

Scott and Smith (2008) in their discussion article also contended that group mentoring is a cost-effective strategy to assist new nurses to gain confidence and competence. Additionally, as noted earlier in the chapter, Williams (2013)
recommended additional evaluation of the usefulness of mentoring circles with regard to financial viability. The need for new graduate nurse coping skills was also identified in the scoping review and is discussed next.

6. Need Coping Skills

The authors of several empirical studies in the scoping review identified that new graduate nurse transition and workplace adjustment are a stressful time period, highlighting the importance of developing good coping skills to reduce stress and emotional exhaustion (Duchscher, 2009; Dyess & Parker, 2012; Kent, 2012; Kramer et al, 2012; Laabs, 2011). Further, Gustavsson et al (2009) conducted a prospective longitudinal cohort study in Sweden to test a sequential development model of early career burnout by Cherniss (1980). Cherniss explored new graduate burnout that resulted from exhaustion followed by dysfunctional coping. Gustavsson’s initial study sample consisted of graduating nursing students (n=1155). The final study sample consisted of early career nurses (n = 933), three years after graduation, with a mean age of 31. The researchers used a mailed questionnaire, yielding a response rate of 81%. They analyzed study data using correlation and Rasch analysis. The authors noted that among early career nurses, burnout was experienced as exhaustion first and worsened when dysfunctional coping was utilized, which is consistent with Cherniss’s work on new graduate burnout. Strengths of the study were the use of objective, reliable and valid measurement instruments, for example, the Oldenburg Burnout inventory and the use of back translation. A limitation was that the study was conducted in Sweden, and thus the results may not apply to a North American environment, limiting the study’s external validity. However, burnout is not a new phenomenon for
newly graduated nurses in Ontario, Canada, (Laschinger et al., 2010), consistent with the area where the current study is being conducted.

The importance of supporting new graduate nurse learning strategies was another approach to support workplace adjustment and is discussed next.

7. Need to have Learning Strategies Supported

Hoarea et al. (2013) proposed the theory of reciprocal role modeling, in which they highlighted the millennial new graduate nurse as an information finding expert, specifically in the area of computer technology. The authors built on this idea by suggesting that new graduate nurses need to have their learning style supported. Autonomy as identified by Murphy-Rozanski, (2008) can be considered one of the components of supporting learning strategies. Curtis’s (2011) qualitative study conducted in the USA also supported this notion. The researcher explored nurses’ evaluation of orientation and their preferred learning strategies. The study utilized an exploratory case study methodology \((n = 3)\). The sample consisted of nurses who were working in case management or utilization management for a minimum of three years. Data were collected using face-to-face interviews or an on-line survey and the Lynch Learning Style Inventory. Study findings were that nurses preferred learning in small groups, group discussion was valuable and use of technology was a preferred teaching strategy. Some of the benefits of using technology were that no classroom space was required; participants could work at their own pace at anytime and anywhere. Strengths of the study were the author’s rigorous data analysis (CASP, 2014) as participants were able to review the researchers field notes. A study limitation was small sample size and no apparent mention of data saturation (CASP, 2014).
Woodworth’s (2012) program evaluation article utilized a faculty member to provide orientation support for new graduate nurses using a 4:1 ratio at a local hospital in New York. Summative verbal feedback quotations on the innovative orientation experience from new graduate nurses were provided. The authors reported successful retention of all four new graduates at one-year employment mark. A limitation of the study was a lack of a formal comparator group.

Additionally, two literature reviews (Olejniczak, Schmidt & Brown, 2010; Willemsen-Mcbride, 2010) were conducted on non-traditional forms of orientations. Willemsen-Mcbride conducted a literature review on preceptorship and how to augment traditional orientation styles. She concluded that preceptors and new graduates should be matched based on preceptor teaching style and new graduate nurse learning style. Additionally, Olejniczak et al.’s literature review supported the use of simulation as an orientation strategy for new graduate nurses. A strength of Olejniczak et al.’s literature review was the use of established inclusion criteria, unlike Willemsen-Mcbride.

In summary, through the scoping review, I identified peer support (Laabs, 2011; Bahouth & Esposition-Herr, 2009) and group mentoring (Bahouth & Esposition-Herr, 2009; Lennox & Foureur, 2012; Scott & Smith, 2008; Tinio, 2012, Woodworth, 2012) as possible strategies to foster new graduate nurse workplace adjustment.

What follows are some common trends regarding new graduate nurse workplace transition interventions.
Common Workplace Transition Interventions

Three common workplace transition interventions identified by the current researcher in the scoping review were orientation, which included a preceptored experience, residency programs and mentoring programs, however the terms mentoring and preceptoring were used interchangeably (Carrion, 2010; & Parker, 2012, Murphy-Rozanki, 2008; Witter, 2012) making a distinction between the two roles difficult. Each of these interventions are discussed below.

Orientation/Preceptor Programs

An orientation is a period of time in which a new nurse is trained and prepared for a new job. Traditional new graduate nurse orientation interventions include a preceptored experience. An experienced nurse precepts a novice nurse in the workplace for a predetermined time frame to orient them to their role and responsibilities (Baxter, 2010). The typical orientation time frame is 3-months (Smith, 2008). While traditional preceptor programs with 1:1 ratio of preceptor to new graduate nurse were previously discussed, several authors (Baxter, 2010; Murphy-Rozanski, 2008; Woodworth, 2012) identified a lack of preceptor resources. Baxter (2010), in her literature review on providing effective orientation programs to new graduate nurses, identified a lack of available preceptors and reported that senior staff were often selected to be preceptors while those with less experience may not have been considered. She discussed the need to have a framework for orientation programs and the importance of preceptor and mentors which are “critical in the clinical socialization of NGNs [New Graduate Nurses]” (p. E14). Baxter (2010) noted that mentors are able to provide informal support to the new graduate nurse by providing encouragement, feedback and answering questions.
Baxter also identified the importance of a comfortable and welcoming environment for orientation and continuation of meetings. She reported that new graduate nurses require a 12-week orientation program. She noted that outcome measurement of successful orientations were recruitment and retention of new graduate nurses resulting in decreased organizational costs, increased job satisfaction and quality patient care (p. E16). Although Baxter generated useful findings from her literature review with regard to new graduate nurse orientation programs, she did not provide information on the search strategy methodology used to conduct the literature review, a limitation my study was designed to address.

Among the articles explored, three program evaluation studies examined orientation programs (Altimier, 2009; Auffrey, Cormier-Daigle & Gagnon-Ouellette, 2012; Bahouth & Esposition-Herr, 2009). Two of these studies focused on on-line orientation. The authors of the studies reviewed on-line orientation programs for new nursing graduates. In a program evaluation study, Altimier (2009) initially conducted a literature review on the benefits of on-line learning. These benefits included: increased learning, interaction and learner control, cost savings, ease of updating learning information, increased learner satisfaction and retention. As a result of these findings, 30 on-line learning modules were developed and implemented for an acute care facility in Cincinnati, Ohio. The on-line learning modules were linked to a learning manual used by preceptors. Program evaluation outcomes focused on cost benefits. The authors reported orientation saving costs of $56,400.00, identified by $30,000.00 savings by replacing the 5-day instructive class with the online orientation program and 1056 hours saved multiplied by an hourly wage of $25.00.
Auffrey et al. (2012), in a program evaluation study, conducted a literature review on the stressful transition of new graduate nurses. They conducted interviews with new graduate nurses and mentor stakeholders from a university hospital centre in New Brunswick, Canada, to aid in the hospital’s goal to transform traditional face-to-face orientation model to a user-friendly on-line delivery format. Outcome measures of success were the creation of 30 on-line francophone orientation modules, a mentor-training program and satisfaction expressed by users. The authors reported on the flexibility of the on-line program, specifically that new graduate nurses did not have to wait for the start of an orientation training cycle and the on-line modules served as a reference point for learning. Additionally, the on-line format was well received by the new generation of graduate nurses who are accustomed to online learning. A strength of the study was its context evaluation as identified in the CIPP Evaluation Model (Stufflebeam, 2003). A limitation of both of these studies (Altimier, 2009; Auffrey et al. 2012) was a lack of information on the literature search and a formal comparator group; nonetheless, the delivery of orientation by an online platform points to a promising transition intervention.

The third program evaluation by Bahouth and Esposition-Herr (2009) was a mixed methods study designed to evaluate a comprehensive orientation program implemented at the University of Maryland Medical Center, which included simulation as part of the formal orientation strategies. Study authors reported that new graduates working in critical care areas were required to take a fundamental critical care course that used didactic and simulated teaching approaches. They obtained program evaluation information for the new orientation program through nurse exit interviews and an
internal survey for nurses and physicians. The authors highlighted that new graduates reported a lack of support to assume new role responsibilities in high acuity settings, despite their orientation program. Study results indicated the new orientation program was a key variable to successful integration of new graduate nurses. Study limitations were a lack of information on interview procedures (Guba, 1981), quantitative survey (STROBE, 2008) and retention data (Stufflebeam, 2003). A strength of the study was its context evaluation and input development (CIPP, Stufflebeam, 2003).

**Residency Programs**

A residency or transition program is an orientation program for new graduate nurses to assist with transition to the role of professional nurse (Bratt, 2009; Kramer et al., 2012,). Typically, residency programs are longer than orientation programs, and can vary in duration from 4 weeks to 2 years and may incorporate 13 to 376 classroom hours (Murphy-Rozanki, 2008). Residency program goals are usually focused on clinical practice goals (Kramer et al, 2012; Murphy-Rozanki, 2008; Nied, 2009). Residency programs include supportive programs and activities for new graduate nurses such as reflective/seminars (Williams, 2013) and skill demonstration classes (Bratt, 2009; Nied, 2009). Some hospitals provide observational experiences in other departments and mentoring opportunities (Kramer et al, 2012). Kramer et al (2012) reviewed 20 Magnet hospitals’ residency programs and found that all of the programs had an initial 2 – 4 month orientation program with a preceptor, followed by a residency program that lasted a total of 10 – 15 months. The authors of two articles in the scoping review examined residency programs (Bratt, 2009; Kramer et al., 2012). One was a mixed method study that was primarily qualitative (Kramer et al., 2012) and the other was an evaluation
study using quantitative methods (Bratt, 2009). Kramer et al. conducted their study by interviewing new graduate nurses (n=330), experienced nurses (n=401), nurse managers (n=138) and nurse educators (n=38) to elicit their feedback on components and strategies of effective nurse residency programs. The researchers found that nursing residency programs increased new graduate nurse job satisfaction, retention and performance and facilitated integration into professional practice through competency development in the following areas: delegation, prioritization, getting work done, managing patient care delivery, RN/MD collaboration, constructive conflict resolution and feedback to restore self-confidence. Strengths of the study were its large sample size, multiple modes of data collection and use of participant quotes (CASP, 2014).

Nied (2009) conducted her doctoral research work in Florida in a community acute care hospital to examine evidence relative to the gap between nursing education and nursing practice. She designed a 16-week residency program for new graduates. Nied used a quasi-experimental pre-post-test design to evaluate the program with a self-designed questionnaire to measure the competency of new graduate nurses (n = 7). Mentors’ and preceptors’ perceptions for the pre-test questions were based on general perceptions of new graduate nurses versus directed at specific study participants. The program appeared to be focused on clinical skills. The sample was purposive based on the objectives of the study. All but one new graduate nurse reported higher scores on the post-test in most of the categories; however, the results were not significant, which is not surprising given the small sample size. Interestingly, most of the new graduate nurses scored themselves higher on outcomes than their preceptors and
mentors; however, this difference was not significant.

Strengths of the study were that it provided grounds for future research on the importance of the mentor role and the need for nurse residency programs. The researcher provided information on the preceptor and mentor role, although the mentor role lacked clarity, yet noted that mentors in the program did not need to have a clinical focus. They were required to be good communicators with a passion for nursing and were to be confidential. The mentors’ main functions were to be available to the nurse resident in person, by phone or online and to be willing to meet and listen in a supportive and non-judgemental way. The mentor was not assigned from the same unit as the mentee and both the preceptor and mentor were assigned by a 3rd party (e.g., nurse manager) based on areas of interest and personal and professional experience, yet there was a lack of information on the matching process. The author recommended an online discussion board or chat room for program participants, which could assist with distance, as new graduates were located in various buildings and significant distances from their mentors. At times nurse residents had more than one preceptor assigned due to differences in work schedules, which was perceived to be a negative by the nurse resident, as they had established a positive relationship with their initial preceptor. Mentor email contact frequency varied from little to frequent. One new graduate nurse expressed that she did not trust her mentor and another perceived her mentor was “nosey”, yet two mentors reported they were very close to their mentee and one new graduate nurse reported the mentor was key to their success. The author acknowledged study limitations of a small sample size, and the new graduate nurses had an associate degree, which may not be generalizable to BScN new graduate
nurses. She also noted that study results could differ based on residency program length. Further study limitations were that while the survey tool was evidenced based, and covered a wide range of concepts that appeared to be clinically focused including critical thinking skills, clinical judgement, clinical competence, and ability to utilize evidence in practice, many of these concepts could have been measured with established, valid and reliable tools or procedures. Additional study limitations were a lack of evidence supporting the reliability of the measurement tool. Although the author reported using a Cronbach’s alpha as evidence of internal consistency (reliability), she reported the alpha coefficient based on an insufficient sample size of 7. Also, test-retest reliability was not reported to provide evidence for stability of the results over time. Further study limitations were reliance on measurement of perception by self-questionnaire, rather than valid and reliable methods such as Objective Structured Clinical Examinations (OSCEs) and use of scenarios. Additionally, a confounder to the study findings were that the pre-residency perceived competencies as measured by mentors and preceptors were based on their judgement of previous experience with other new graduates and did not reflect their views about the current sample. Finally, while the researcher provided an intervention outline, the outline lacked sufficient clarity to be replicated.

Bratt’s (2009) program evaluation study of a 15-month Wisconsin Nurse Residency program involving over 50 hospitals consisted of formalized preceptor training, mentoring by clinical coaches and monthly educational sessions for new graduate nurses on clinical topics, conflict resolution and lateral violence, and giving and receiving feedback. Study results showed that across program sites at one year
after program completion, retention rates were 79 - 97% with mean average of 84% in comparison to over 50% retention rates in some of the hospitals prior to implementation of the residency program. The programs’ success was attributed to a cohesive planning team with a common agenda. While Bratt addressed the core concepts of context, input, process and product evaluation in the CIPP program evaluation model (Stufflebeam, 2003), a limitation of Bratt’s evaluation study is that she did not employ an experimental design with a control group and thus it is not possible to rule out confounding factors such as a placebo effect.

Nurse residency/transition programs may also be used for professional adjustment to a new clinical setting or specialty (Cleary, Matheson, & Happell, 2009). Cleary et al. in a quasi-experimental study in Australia with nurses new to mental health practice (n = 44, 33 females and 11 males) studied the outcomes of a 12-month transition program. Results indicated that there were statistically significant findings with self-rated knowledge and confidence after attending the transition program as well as improved communication and caring as measured with the Nurses’ Self Concept Questionnaire. Nevertheless, other aspects of self-concepts including general, staff relations, knowledge and leadership did not show any significant change. Strengths of the study were the use of a coherent, valid and reliable tool for measuring self-concept. The author acknowledged the limitations of using a small sample size and a lack of a control group, which limits internal validity of the study’s results. Further limitations were the use of self-reported tools to measure knowledge and confidence, which may have been influenced by participant self-evaluation bias.
Ng et al. (2010) also conducted a study in mental health settings. They designed, implemented and evaluated a 12-week mental health residency program for nurses new to mental health. The goals of the program were to support nurses new to mental health clinical practice so that they could develop the required competencies for patient care and to dispel myths about mental health nursing and the stigma attached to working in this area. The study was conducted in Ontario, which is where my study was conducted. The sample consisted of new graduate nurses (n = 12) and experienced nurses (n = 8) in one of five acute care hospitals. The authors used confidence and recovery attitude as outcomes for the residency program. Confidence was measured using the Mental Health Nursing Clinical Confidence Scale and recovery attitude was measured using the Recovery Attitudes Questionnaire. The researchers’ results indicated statistically significant improvement in clinical confidence. Similarly, there was 75% improvement in the recovery attitudes of nursing residents. Further, the program provided nurse mentors an opportunity to improve their own skills, while supporting the nurse residents. Strengths of the study were use of valid and reliable tools, and an evaluation structure based on program evaluation that consisted of program planning, implementation and evaluation. The program provided context evaluation, input evaluation as evidenced by program information and timelines, process evaluation by an implementation team, and product evaluation of program study aims (CIPP, Stufflebeam, 2003). The authors acknowledged the limited generalizability of program outcomes and highlighted the need for further sustainable program development. Tables reflecting statistical analysis for Mental Health Nursing Clinical Confidence Scale and Recovery Attitudes Questionnaire would add more clarity to their research findings.
Mentoring Programs

In the acute care setting, a nursing mentoring program is a program in which a senior nurse mentor helps a more junior nurse mentee with professional development (Brediger, 2009; Carrion, 2010; Dyess & Parker, 2012). Typically mentoring programs start when the preceptor program has ended (Smith, 2008). Mentoring programs have varying goals and can also vary in program length (Brediger, 2009; Carrion, 2010; Dyess & Parker, 2012). Four studies explored mentoring programs (Brediger, 2009; Carrion, 2010, Dyess & Parker, 2012; Stewart, 2008), however, throughout the literature reviewed the terms preceptor and mentor appeared to be used interchangeably, hence making it difficult to differentiate between a mentor and a preceptor program. An example of a study with these blurring roles is Dyess and Parker’s (2012) mixed methods study that used a pre-post evaluation design. The researchers used a convenience sample (n = 109) of new graduate nurses to describe and evaluate a collaborative mentoring program aimed at increasing competency in clinical skills, coping skills and instilling leadership. The authors identified that the Novice Nurse Leadership Institute (NNLI) program was 10-months in duration and supported by grant funding. The NNLI consisted of a collaboration of 13 mid-sized community healthcare organizations and a university in South Eastern USA. The NNLI sessions were held in an academic setting and were coordinated as part of new graduate nurses’ work schedule. The sessions were mainly facilitated by nurse educators from participating organizations. Program participants were asked to select their own mentor who was an experienced RN in their organization to provide day-to-day guidance in the practice setting. The mentors attended a 2-hour information session on program goals and
content and they were invited to attend four feedback sessions during the program. It appeared though, that this role was clinically focused and more of a preceptor or clinical coach role because the evaluation of program outcomes focused on increased skill acquisition related to practice. More specifically, the authors reported statistically significant differences between pre-post scores for increased skill acquisition for the subscales: planning and evaluation, member of the discipline, leading care and patient care. There was no statistically significant difference noted for the communication subscale. The researchers also reported there were statistically significant differences between pre-and post scores for leadership competencies subscales: modeling the way, inspiring a shared vision, challenging the process and encouraging the heart.

Retention results were 100% (n=109) for nurses who had participated in the program since 2006 and were still practicing in 2010. Of the 109 study participants 87/ (80%) remained with their original employer. This 80% retention rate was reported as being higher than 65% of RN employers not participating in the NNLI program. The researchers reported the following information on 22 of the 109 program participants: 7 (6%) relocated with life partner, 3 (3%) relocated for higher nursing education program, 6 (5.5%) changed positions based on family and scheduling needs and 6 (5.5%) left practice employer due to dissatisfaction with clinical environment and wages. They also reported that following one-year of practice in the USA, the pay rate can increase up to 30%; hence participants may have changed employers for this opportunity. The authors recommended that the new graduate nurse needs enhanced socialization through the complex transition process. Strengths of the study were the use of valid and reliable measurement tools and use of 2-tailed statistical tests. Study limitations were the use
of a convenience sample, which limited the study’s external validity. Further, the authors reported that they used a mixed methods approach, yet the study used a pre-test/post-test quasi-experimental design. There was also a lack of information about the mixed method design as there was no evidence that the researchers gathered qualitative data and/or integrated qualitative and quantitative data (Creswell, 2015). Also, there were no specific criteria to guide mentor and mentee interactions, which may have been a confounder for some mentors who had previous mentoring experience. Lastly, as the study used a self-report approach, a response bias may be evident.

In her program evaluation article, Brediger (2009) reviewed a formal mentoring program for graduate nurses hired into the cardiovascular intensive care unit (CVICU) at a Boston acute care children’s hospital. A mentor and mentee survey was used to assess satisfaction with the program. Survey results indicated that both mentors and mentees were satisfied with the program and with the quality of the mentor/mentee relationship. A strength of the author’s program evaluation was that she provided a detailed description of the content of the CVICU mentor-training program. For example, training was focused on what was needed to develop a mentoring relationship, setting goals and objectives, addressing lateral violence, effective communication and professionalism. However she did not describe the length of the training and the duration of the mentoring relationship. A mentoring committee was responsible for establishing guidelines, objectives, agreements/contracts and training for mentors and matched mentors with their mentees. The mentoring committee provided support and encouragement of mentoring pairs and facilitated the mentoring relationship. The researcher reported that mentors were volunteers from the CVICU who formed the
mentoring pool. Brediger reported that during orientation mentees were invited to select a mentor from a list/pool of mentors and asked to submit their selection to the mentoring committee. The committee would then approach the mentor with the mentoring request and the mentor could decline without judgement, however if the mentor accepted the mentor role the committee would send the mentor a contract, which specified how meetings would take place and the expected goals of the relationship. The mentor then contacted the mentee to review the relationship expectations, boundaries and meeting schedules. The contract and agreement included length of time, schedule and method of contact. Goals and objectives were formalized by signage by the mentoring pair and returned to the mentoring committee. The researcher reported that a mentoring resource binder was created, however there was a lack of information on how (i.e., based on what evidence) or by whom the resource binder was created, and if the mentor received any recognition or stipend for taking on the mentoring role. There was also lack of information on what would occur if a mentee chose the same mentor as someone else and the average length of the formal mentoring relationship. Additionally the author did not identify whether the mentee or mentor could break the contract with each other. Nevertheless, the researcher’s reported participants were satisfied with the mentoring program. It is possible that a formal mentoring relationship, such as that described by Brediger, may transfer to satisfaction with a formal e-mentoring relationship between an e-mentor and e-mentee, which the current study will explore further.

Limitations of Brediger’s (2009) program evaluation were decreased clarity about the program sample size; a lack of information on participant demographics and the
author did not identify possible confounders of outcome measures. Lastly, internal validity was threatened by a lack of reported response rate and respondent versus non-respondent information. In terms of program evaluation, the researcher provided limited evidence of a context/needs assessment, data collection and there was no evidence of assessing program activities (CIPP Model, Stufflebeam, 2003).

In another program evaluation study, Carrion (2010) conducted a program evaluation using survey methodology in an acute care hospital in Las Vegas to examine the perceptions of medical surgical nurses regarding new graduate nurses’ knowledge and skills that could be considered for induction programs. Carrion also provided an outline of a six-week mentorship program, which appeared to be clinically focused and the terms preceptor and mentor appeared to be used interchangeably. The researcher used a convenience sample of medical surgical nurses (n= 275) with a moderate response rate of 37% (n= 102). The study author reported no significant difference between the level of education of medical surgical nurses’ and the perceptions of new graduate nurses’ knowledge and skills. Strengths of the study were the evidence of a power analysis, construct and content validity, through piloting of the survey tool, and the use of Bonferonni correction statistical test to minimize the potential of a type 1 error. Limitations of the study were a lack of information on how missing data were computed, a lack of reported means and standard deviations. While Cronbach’s alpha coefficient data were provided for evidence of reliability, the results were questionable for yes or no survey questions, which may have been determined using chi-square. Additionally the study lacked external validity as the program was based in one acute
care facility in the United States and the results may not be generalizable to other medical surgical units, which could vary in structure and culture.

Nevertheless, there was no reported baseline data for comparison or discussion about how agreement and empowerment was reached with stakeholders in the action research. In terms of program evaluation, Carrion identified study context through personal communication with relevant stakeholders and program inputs were generally reported, however process evaluation and product evaluation results lacked depth and clarity (CIPP, Model, Stufflebeam, 2003). Lastly, there was a lack of information about whether the mentorship program was part of the research study or perhaps developed for another intention e.g. the author worked in the organization as an educator and was asked to lead the project. What follows is a summary of the intervention studies.

**Summary of Intervention Studies**

Evidence from the scoping review indicates that mentoring and residency programs vary in content and length, with the mentor role not well defined, hence making comparisons between mentoring and residency programs difficult. Some of the approaches identified in mentoring and residency programs may be useful in designing an e-mentoring program intervention. Some of the approaches identified were: volunteering for the mentor role; having the mentee select their mentor, which was later formalized by a mentoring committee; establishing a mentoring contract; and having mentoring program components such as goal setting, addressing lateral violence, effective communication and professionalism (Brediger, 2009). Williams’ (2013) study on residency programs highlighted the need for debriefing with the new graduate nurse,
which was echoed in Bratt’s (2009) study identifying the need to give and receive feedback. While the evidence highlighted that positive role models were sometimes unavailable, the evidence pointed to the need for positive role modeling and mentor availability (Hazelton et al., 2011; Murphy-Rozanski, 2008). The role of the unit manager as a pivotal role model for new nursing graduates was also evident (Evans et al., 2008; Turner & Goudreau, 2011). Further, Bratt (2009) highlighted the need for educational information sessions on conflict resolution and lateral violence.

An e-mentoring intervention could be designed to augment traditional preceptor roles in order to address issues such as lack of available time with the preceptor. E-mentoring is mentoring using an electronic platform (Kasprisin et al., 2008; Banks et al., 2011). Published literature in the scoping review on e-mentoring in nursing was limited. Some examples were Banks et al.’s (2011) study that recognized e-mentoring as a potential intervention for workplace transition; however, her study was not specifically about e-mentoring. The researchers explored the impact and effectiveness of a professional transitional web-based program for nurses, midwives and allied health professionals. The program appeared to have a clinical focus with learning units on: clinical skills, teamwork, safe practice, research for practice, equality and diversity, policy, reflective practice, professional development, communication and career pathways. Another example was Stewart’s (2008) qualitative study on the experience of a New Zealand midwife who e-mentored two new graduate midwives. One of the new graduate midwives was mentored for one year and the other was mentored for six months. Both e-mentees reported satisfaction with their mentoring experience. The author highlighted geographic isolation challenges and how e-mentoring could increase
access to a mentor through computer mediated communication (CMC). The researcher noted that information was provided to the e-mentee at their request, however the e-mentor also provided the e-mentee with unsolicited information i.e. about job opportunities. E-mentoring was found to provide a venue for discussion about professional issues, which appeared to be clinically focused, however the e-mentor highlighted that she was not involved in evaluating the e-mentee’s practice. One e-mentee highlighted that despite the face-to-face support she received in the clinical setting, it was limited, as her clinical mentor was very busy. Having time for reflection away from the clinical setting was helpful. Further, the mentee expressed, “E-mail is almost like an anonymous confession and I feel free to divulge sensitive thoughts this way” (p. 110).

The e-mentor described the ease of CMC and its’ practicality to be able to respond to the e-mentee when it fit into her busy schedule. The e-mentor expressed her achievement and satisfaction in assisting the e-mentee to build their experience and confidence despite the barrier of distance. Emails towards the end of the mentoring relationship were described as having more of a social connotation. Further, one of the e-mentees noted that at the one year mark the association had come to a natural conclusion and went from a mentoring relationship to a collegial friendship. The author acknowledged that study conclusions were not generalizable and highlighted the limitations of a small sample size. She recommended a larger experimental study. The researcher also noted the potential bias of the participants knowing her, the e-mentor, prior to the study. Further, while e-mentees experiences were well reported, data saturation was not discussed.
What follows is a thematic and comparative analysis of the grey literature on mentoring in nursing.

**Thematic and Comparative Analysis of Grey Literature**

Twenty-one sources were identified in the grey literature as per Table 11 (p. 172). Grey literature included sources from Australia, New Zealand, United Kingdom, USA and nine provinces in Canada. The span of e-mentoring programs in the literature was wide ranging from non-nursing programs such as MentorNet, which focuses on mentoring science, technology, engineering and mathematics post-secondary students to nursing programs such as the Provincial Nursing Mentorship Program – Begin, (2012) from Prince Edward Island. The program focuses on mentoring new graduate nurses and internationally educated nurses.

Reading the grey literature enabled reflection on themes identified in the empirical literature and added to the mentoring program information; however, it was not possible to identify mentoring program design features through the grey literature. Additionally, the grey literature enabled me to further understand the transitional socialization needs of new graduate nurses.

Authors in the grey literature echoed empirical literature findings on the stressful adjustment from graduate nurse to practicing professional (Nursing The Future, SK; Provincial Nursing Mentorship Program – Begin, PEI; Let’s Go Make a Difference, NS). Three authors in the grey literature cited the work of Boychuk Duchscher’s (2008) Transition Shock Theory (Nursing The Future, SK; Provincial Nursing Mentorship Program – Begin, PEI; Let’s Go Make a Difference, NS) and in several grey literature
The need to address conflict resolution during workplace transition was identified (Canadian Nurses Association, 2004; College of Registered Nurses of Manitoba, 2013; Registered Nurses Professional Development Centre, NS, 2011). Authors of the grey literature reinforced the need for new graduate nurses to have a positive role model (Canadian Nurses Association, 2004). Reciprocal mentoring, whereby the mentee shares information such as technical knowledge that the mentor may lack, was also supported in the grey literature (Registered Nurses Professional Development Centre, NS (2011). Finally, authors of the grey literature identified the need to ensure the new learner’s learning style was supported (Canadian Nurses Association, 2004; Registered Nurses Professional Development Centre, NS, 2011).

Similar to the empirical literature, authors of the grey literature used the terms mentor and preceptor interchangeably (Alberta Health Services, 2006; Health Authorities of British Columbia, 2013). Mentoring appeared to have a clinical focus as identified in an internship program of six months to one year (The Native and Inuit Nurses Association of British Columbia, NINA-BC, 2012). Further, a clinical focus for mentoring programs appeared to prevail in the international grey literature (American Association of Colleges of Nurses, USA, IPN Medical Centres, Australia, and Flying Start, UK).

As reported by authors of the empirical literature, mentoring program characteristics varied considerably in the grey literature. For example, mentoring program lengths ranged from 6 months (The Native and Inuit Nurses Association of British Columbia, NINA-BC, 2012) to 24 months (Prince Edward Island Nursing Association - ARNPEI (2012). Mentoring relationships were established within facilities
(Registered Nurses Professional Development Centre, NS, 2011) as well as within professional organizations (Aboriginal Nurses Association of Canada, A.N.A.C., 2009; The Native and Inuit Nurses Association of British Columbia, NINA-BC, 2012).

As underscored by authors of the empirical literature (Brediger, 2009; DiRenzo et al., 2010) mentors were identified as volunteers in the grey literature (Canadian Nurses Association, 2004; Registered Nurses Professional Development Centre, NS, 2011). However, monetary rewards, lighter workloads and educational days were recommended as incentive strategies (Canadian Nurses Association, 2004). Mentor matching processes were wide-ranging from matching being completed by the nurse manager and educator (Registered Nurses Professional Development Centre, NS, 2011). This process was consistent with Van Maanen and Schein’s (1979) socialization typology of organizational socialization tactics. Alternatively, being matched by an external 3rd party (Prince Edward Island Nursing Association – ARNPEI, 2012) was consistent with Kalbfleish’s (2002) Mentoring Enactment Theory.

The modality and frequency of contact between mentor and mentee was diverse across the grey literature. An example is the Provincial Nursing Mentorship Program – Begin (2012) from Prince Edward Island, which identified that mentoring program methods of communication varied among voice-mail, texting, emailing and in-person meetings, yet meeting logistics and schedules were not specific. Authors identified in the empirical and grey literature review did not consistently identify the length of mentor training and training program lengths varied from six weeks to one year.

Lastly, there were identified gaps in the description of program characteristics for e-mentoring programs such as lack of detailed information on mentor-mentee
matching processes, time commitment to the mentoring relationship, cost implications, and program evaluations. Finally, some of the mentoring programs were not specifically designed for new graduate nurses. They included, for instance, new nursing staff and internationally educated nurses. Internationally educated nurses come from a different nursing context, have work experience, and hence do not have the same workplace adjustment needs as new graduate nurses.

Following the narrative literature review, scoping review and grey literature, the chapter continues with an overview of program characteristics regarding the design features of an e-mentoring program which includes: modality of contact, frequency of contact, length of program, recruiting of mentors, mentor and mentee matching, and training. These characteristics are discussed below.

**Modality of Contact**

While virtual mentoring may include face-to-face meetings or telephone conversations, e-mail has been the main medium in establishing and developing the e-mentoring relationship (Headlam-Wells et al., 2005; MentorNet, 2011; Ontario Nursing Connection, ONC, 2010; Single et al., 2005). However, it is reasonable to assume that modality of contact will expand with changes in electronic modalities.

**Frequency of Contact and Length of Program**

E-mail frequency between mentor and mentee has typically been weekly (MentorNet, 2011; ONC, 2010) for about 20 minutes (MentorNet, 2011) or up to one to two hours weekly (ONC, 2010). The length of the e-mentoring relationship was up to one year (Kasprisin et al., 2008). The Ontario Nursing Connection e-mentoring website
reported a nursing e-mentoring relationship cycle that was typically 12 weeks in duration (ONC, 2010).

**Recruiting of Mentors**

Mentors were recruited through volunteers and corporate sponsors familiar with the mentoring program (DiRenzo et al., 2010) and/or through advertisement for mentor volunteers (ONC, 2009). Advertising for e-mentor volunteers was done through the ONC website, recruitment posters, advertising in professional journals and through networking. A token honorarium for e-mentors in the ONC program was provided; however, Nettleton and Bray (2008) underscored the importance of the mentor volunteering to perform the mentor role.

**Mentor and Mentee Matching**

Mentors were matched by an e-mentoring website administrator based on areas of interest (ONC, 2010) and/or computer generated through an algorithm-driven data program based on protégé preferences (Headlam-Wells et al., 2005; MentorNet, 2011).

In the MentorNet (2014) Program, student mentees were matched with a mentor in the workforce and detailed mentor information was requested for mentor-mentee matching process. Mentors joined on-line, provided an email address and created a password. They reviewed terms of service that included codes of conduct and privacy policies. Once the mentor’s email was validated they were prompted to create a profile about themselves that included their name, tagline, short biography and photograph. They were also asked to provide background information on their employment history, job title and position, which would be used to facilitate the matching process with the e-mentee. The mentor was requested to provide information about the university they
attended, including information about their major and degree(s) obtained. Additionally, mentors were asked to provide information on the country they lived in, zip code and country of citizenship. They were asked to provide information on their field of interest. Optional demographic questions were asked about the mentor’s gender, first generation of college graduate, ethnicity and race. Mentors were asked whether or not they attended community college and which language was spoken in the home as a child. Lastly, they were asked about their preferred e-mentee match and level of student they were willing to work with as well as topics they felt comfortable discussing with their e-mentee. Mentors were provided with program resources about common e-mentee question topics and they were asked to complete a one-hour on-line training module.

The Registered Nurses Association of Ontario (RNAO, 2006) in its Telementoring Tool Kit identified selection criteria for mentors and mentees, yet did not provide a matching process (pp. 20, 21). Nonetheless, in recent literature it has been suggested that mentees should select their own mentors (Nettleton & Bray, 2008).

*Mentor/Mentee Training*

Kasprisin et al. (2008) non-nursing study examined the effects of mandatory training for e-mentees using the MentorNet, e-mentoring program. The designers of the ONC (2008) e-mentoring program recommended mandatory on-line training for both mentors and mentees. There has been no formal program evaluation of the ONC and the program was suspended when the founders relocated to other academic institutions.

The next section will address the scoping review conclusion and synthesis.
Scoping Review Conclusion and Synthesis

Researchers in the scoping literature review confirmed that the transition from nursing student to graduate nurse is an extremely stressful time in the career of a nurse (Duchscher, 2009; Dyess & Parker, 2012; Kent, 2012; Kramer et al, 2012; Laabs, 2011) and can impact whether or not the nurse remains in the field (Baxter, 2010; Bratt, 2009; Dyess & Parker, 2012; Sandau et al, 2011). The new graduate nurse transitions from a student in a structured academic setting to a professional registered nurse in an unstructured and at times chaotic work setting (Boychuk Duchscher, 2009). The work transition is made even more difficult when the work environment is unwelcoming and/or marked with entrenched conflict. New graduate nurses may find themselves in a vulnerable position in the workplace hierarchy when they are confronted with bullying, horizontal violence, and other forms of uncivil and unsupportive behaviours from those in more senior positions (Baumberger -Henry, 2012; Evans et al, 2008; Hazelton et al., 2011). It is not surprising that research has identified both that "burnout" (experienced as exhaustion) is not unusual amongst early career nurses (Gustavsson et al. 2009) and that there is a need for professional adjustment support for new graduate nurses (Baumberger-Henry, Boychuk Duchscher, 2009; Evans et al, 2008; Hazelton et al 2011; Laabs, 2011; Zauszniewski, 2009). It was also noted that at times experienced nurses were unaware of the impact their negative comments had on new graduate nurses (Baumberger-Henry, 2012). During this formative transition period new graduate nurses may experience transition shock (Boychuk Duchscher).

Authors included in the scoping literature review identified that new graduate nurses lacked confidence (Banks et al., 2011; Evans et al., 2008; Williams, 2013);
However, it was also noted that a clinical focus for new graduate nurse transition was
not enough to increase their confidence (Evans et al). Lack of confidence was amplified
by the new graduate nurse’s need to belong (Evans et al); however, despite craving
acceptance to be part of a team, at times, positive role models were unavailable
(Hazelton et al., 2011).

Weng et al. (2010) and Williams (2013) reported that there was a positive
relationship between role modeling and job satisfaction. Further, Hoarea et al. (2013)
concluded that their reciprocal role modeling theory provided the foundation for the
development of a strategy where both the experienced nurse and new graduate nurse
learned from each other. Application of the theory would occur, for example, when the
experienced nurse learned more about technology from the millennial new graduate
nurse and the new graduate nurse built on his or her clinical competence through
working with the experienced nurse. Additionally, Evans et al. (2008) and Turner and
Goudreau (2011) highlighted that the unit manager role model was pivotal in ensuring a
conducive and welcoming work environment for the new graduate nurse. Study authors
reported that new graduate nurses sometimes feel that they added to their already
stressful workplace transition.

Hazelton et al. (2011) recommended that new graduate nurses be provided with
supports to consolidate strategies learned in academia in identifying and benefiting from
positive role models in order to manage their exposure to staff who were poor role
models. A strategy identified in Laabs (2011) study, discussed earlier, was to engage in
reflection to “remain balanced” and avoid getting “burned out” or end up as “one of the
‘crabby old nurses” (p. 435). One study participant reported that moral integrity meant
“having a clear conscience and not hate yourself after you’ve done something, [being] able to sleep” (p. 435).

Authors identified in the scoping review revealed that the nursing profession has not been unmindful of the need to improve the transition from nursing student to graduate nurse, and a number of programs and strategies have been introduced to help mitigate the stress new graduate nurses endure. Banks et al. (2011) found that following completion of a student-to-registered health professional transition program, confidence was increased. Further, in their evaluation study of a transitional program for 3rd and 4th year nursing students, Bates et al. (2012) reported program outcomes of positive relationships, career planning, students feeling empowered and the program easing transition into the profession. The study authors highlighted that the mentoring support system assisted new graduate nurses with job satisfaction, a willingness to mentor a student, and decreased burnout.

Preceptoring and mentoring interventions were identified as transitional strategies; however, mentoring and preceptoring roles were blurred in the literature, as scoping review authors used the terms interchangeably (Carrion, 2010; Dyess & Parker, 2012, Murphy-Rozanki, 2008). Preceptoring and mentoring were shown to be particularly successful in terms of helping the new graduate nurse to address and overcome the stress of workplace transition in the following ways:

(a) Improving the socialization of new graduate nurses (Baxter, 2010);

(b) Increasing confidence (Williams, 2013; Evans, 2008);

(c) Improving a sense of belonging (Evans, 2008);
(d) Improving levels of job satisfaction (Weng et al., 2010; Williams, 2013,) and recruitment and retention (Baxter, 2010; Bratt, 2009; Dyess & Parker, 2012; Sandau et al., 2011)

Further, in their quasi-experimental study of an 8-hour mandatory preceptor education session, Sandau et al. (2011) reported significantly more orientees were retained one year following the preceptor intervention (chi square, p < .05). Nevertheless, researchers identified in the scoping literature review found that new graduate nurses perceived a lack of time with their preceptor (Bahouth & Esposition-Herr, 2009; Baxter, 2010).

Nurse Residency Programs were another effective new graduate nurse transition intervention. While these programs were costly, both Kramer et al. (2012) and Bratt (2009) found positive retention rates in relation to nurse residency programs, which may point to the positive effects of a longer mentoring relationship. Further, Bratt identified decreased isolation, increased self-assurance, time management, increased confidence, and improved relationships with the team. One nurse's feedback was, “This was the support group I needed for my career!” (p. 421).

Despite the existence of such programs, ultimately, authors identified in the scoping literature review revealed that there is much room for improvement in both mentoring programs and in the research on mentoring programs. A gap in the scoping literature review was that there were limited studies that identified evidence of e-mentoring programs as socialization tactics and mentoring strategies for new graduate workplace adjustment. Bates et al.'s (2012) review of a transitional program for 3rd and 4th year nursing students reported that students in the program were able to
communicate with their mentors using a closed Facebook site which was accessible by the program leader and was organized by leader invitation only. As discussed earlier, new graduates in Bates et al.’s study reported favourable program outcomes on working relationships, career planning, empowerment and transition into the profession. Additionally, the researchers reported that the mentoring program assisted study participants with job satisfaction, decreasing burnout and a willingness to mentor a future student.

This scoping review supports the need to create an e-mentoring program for new graduate nurses. E-mentoring may prove to be a supplemental solution to assist with traditional preceptoring limitations such as lack of time with preceptor during work hours and the need for formalized supports beyond the typical 3-month orientation period. E-mentoring may also be a cost-effective strategy to support millennial new nurses as they are socialized into the profession.

The research uncovered in the scoping review suggests that e-mentoring programs for new graduate nurses should consider including the following design features:

1. Debriefing: to improve new graduate nurse confidence.
2. Conflict resolution: to preserve moral integrity and minimize the risk of new graduate nurse burnout. Activities such as role-playing and simulation may be used.
3. Education on uncivil behaviors: to promote a positive work environment
4. Means of establishing a sense of belonging: to promote confidence and enhance recruitment and retention
5. Training Session for e-mentors on the importance of being a positive role model: to enhance the mentoring relationship and create a sense of belonging for new graduate nurse

6. Theoretical based education for program participants, specifically, Reciprocal Role Modeling (Hoarea et al., 2013), Novice to Expert (Benner, 1984) and Transition Shock Theory (Boychuk Duchscher, 2009) and the four mentoring phases (Kram, 1983, 1985): to provide a foundational platform for the mentoring program and promote an understanding of new graduate nurse workplace adjustment experience.

7. Peer Mentoring and Group Mentoring: to foster and enhance new graduate nurse support systems and to assist in managing conflict and maintain moral integrity.

8. Program Policies: to structure and standardize program information such as volunteering to be a mentor, matching process, mentor selection, mentor profiles, time commitment, frequency of communication and modality of communication and confidentiality policies.

**Summary of Critique of Scoping Review Literature**

A limitation of the literature reviewed to date was the absence of randomized controlled trials. For this reason it is not possible to rule out a placebo effect and conclude with confidence that the mentoring intervention practices had an effect on new graduate workplace adjustment/transition outcomes. Further, the variation in research designs and study limitations described in the review make it difficult to infer general conclusions.
In summary, no studies were located that specifically focused on e-mentoring for new nursing graduates however e-mentoring may augment current traditional preceptoring practices. E-mentoring may address issues such as lack of time with the preceptor during work hours and the need for formalized supports beyond the typical 3-month orientation period. E-mentoring may also prove to be a cost-effective strategy to support the millennial new nurse as they are socialized into the profession. In conclusion, there is a need for a well-designed mixed methods study to review the state of new graduate nurse transition socialization. My study has addressed this research gap by providing information through the scoping literature review and through consultations with new nursing graduates and experienced nurses to develop recommendations for an e-mentoring intervention that may enhance current transition and socialization practices. What follows next is Phase 2: Interview Results, which constitutes one of the consultation phases of the Scoping Review.
CHAPTER 5: PHASE 2 QUALITATIVE RESULTS

The qualitative phase of the study explored new graduate nurses’ perspectives on their role transition needs and e-mentoring as a possible socialization strategy. Themes identified in the literature with regard to design features and potential acceptability of an e-mentoring intervention were explored to ensure the views and preferences of the target population were sought.

The following qualitative research questions were refined for Phase 2 of the study based on scoping review findings and deepened the exploration as follows:

1. What are new graduate nurse workplace adjustment needs within their first year of employment?
2. What features of socialization tactics and mentoring strategies have been found to be effective in the new graduate nurse’s own role transition experience?
   a. Did the organization engage in strategies such as collective vs. individual socialization processes, and to what extent were these strategies helpful in facilitating new graduate transition to an RN role, and how?
   b. Did the organization provide the new graduate nurse with a mentor through a third party?
3. What gaps and limitations have new graduates experienced in existing mentor and preceptor interventions designed to facilitate their retention in the organization and/or in nursing?
4. What recommendations do new graduate nurses have for a proposed e-mentoring program to facilitate their workplace adjustment?

The research questions were operationalized using study interview questions, which included acceptability questions on e-mentoring (see Appendix E).

**Qualitative Analytical Approach**

This phase of the study used an inductive analysis approach. The theoretical lens of Van Maanen and Schein’s (1979) socialization typology and tactics, Kram’s (1985) conceptual framework on mentoring and Kalbfleish’s (2002) Mentoring Enactment Theory informed the design and development of the interview questions, however inductive themes emerged that were grounded in participant experiences. This approach aligns with a qualitative descriptive methodology (Sandelowski, 2000) described in Methods Chapter 3.

Qualitative content analysis (Graneheim & Lundman, 2004) was used to ensure the information provided by the study interviewees was based in the data as it was presented. Phase 2 of the study utilized semi-structured interview questions and probes to elicit a broad range of authentic data (Silverman, 2000). The unit of analysis was interview texts divided into meaning units that identified words and sentences or paragraphs relating to content or context of other words and sentences (Graneheim & Lundman, 2004).

**Rigour and Validity**

The trustworthiness of the qualitative methods used in this study was established using Mays and Pope (2000, p. 51) approaches of triangulation, respondent validation,
clear exposition of methods of data collection and analysis, reflexivity, attention to
negative cases and fair dealings and Graneheim and Lundman’s (2004) strategies of
credibility, dependability and transferability, described in Methods Chapter 3 (pp. 80, 81,
82). These strategies were operationalized and are described next.

Triangulation was established by comparing the results of scoping review and
interview data sources to ensure comprehensiveness. Respondent validation was
established by comparing participant interview accounts with researcher’s findings.
Clear exposition of methods of data collection and analysis were, established by
identifying how the coding process progressed from the simpler to more complex
themes (see Appendix P: Summary of Main Interview Themes). Codes were identified
and combined to create sub-themes, which were then grouped under overall themes.
Reflexivity was established by clarifying the researcher’s role and biases in the data
collection process as she functioned as the main data collection instrument. Attention to
negative cases was pursued as they arose during the interviews. Fair dealing was
established by including a broad range of perspectives from participants.

Credibility was established by conducting 1:1 one-hour interviews with new
graduate nurse participants, an approach that was also used in Evans et al. (2008)
study. Participants vividly recalled their experiences of struggle during the transition
from a university student to a new graduate nurse in the workplace environment.
Representative quotations of their transition experiences were highlighted to capture the
issues they encountered. Dependability was established by using an interview script
and a semi-structured interview guide (Evans et al, 2008). Transferability was
addressed by interviewing participants from across Ontario who worked in various acute care units. Participant interviews, setting and sample are described below.

**Interview Setting and Sample**

The study setting was Ontario, Canada, and the target population was newly graduated nurses. The College of Nurses of Ontario (CNO, 2015) reported that there were 4,718 members who became RNs in 2014. These numbers justified a large eligible pool of participants from which to draw the sample. As noted in Chapter 3: Methods, the CNO research database was used to obtain the sample. The CNO permission process was obtained by completing the CNO request form for Home Mailing Addresses for potential participant names with less than 1 year in nursing. The CNO permission form was downloaded from the CNO website and completed by hand. The CNO request form was completed, scanned and sent by email to the CNO. Once the request was approved, the CNO sent the researcher a list of potential study participant names and contact information for registered nurses who met the study inclusion criteria for participants who had indicated a willingness to have their name and contact information released for research purposes at the time they registered with the CNO. Study inclusion and exclusion criteria are discussed below.

**Inclusion and Exclusion Criteria**

Potential participants were reviewed to ensure they met study inclusion criteria for new graduate nurse interviewees, namely, that the participants were acute care registered staff nurses in a hospital setting, employed in Ontario in the past year. In order to increase sample size, the study’s initial research plan was subsequently
modified during the data implementation phase to include some new graduate nurses with more than 1-year experience, but under two years experience who were still able to describe their transition experience. This modification is consistent with Dyess and Parker’s (2012) study that included new graduates nurses who worked for 18 months in their new graduate nurse sample. This study sample demonstrates that nurses were still able to access their experience and articulate their thoughts and feelings about their transition experience.

Exclusion criteria were reviewed to ensure new graduate nurses with previous Registered Practical Nurse (RPN) practice experience and international work experience as a Registered Nurse (RN) or RPN were not included in the interview sample.

**Sample Size**

Sandelowski (1995a) posited that sample size in a qualitative study is “a matter of judgement and experience in evaluating the quality of the information collected against the uses to which it will be put” (p. 179). Sandelowski suggests that a sample size of 10 is sufficient for less complex cases. At interview 11, no new themes emerged during the interviews. Three more participants were then sampled to ensure data saturation was achieved. This approach is consistent with setting a stopping criterion for data collection after an additional three interviews with no emergent themes (Francis et al., 2010). Thus interviews were stopped after 14 participants.
**Data Collection and Procedures for Conducting Interviews**

An electronic list of potential study participants was obtained from the College of Nurses of Ontario (CNO). The CNO data file was read into SPSS. Based on a conservative response rate of 20%, the following calculation was performed: \( \frac{20}{0.2} = 100 \). Hence, 100 participants were randomly selected from the list by using the “select case” function. This process was repeated for the second study sample mail out.

A modified Dillman procedure (Dillman, 2007) of three mailed invitations was used for each group of potential participants. While Dillman (2007) noted that a token of appreciation, in the form of an incentive, in a mail-out prior to receiving a response could produce favourable results, this option was not feasible due to incurred stationery and multiple mailing costs. Study invitation letters and consent forms were mailed to potential study participants; reminder cards were sent out after two weeks; and a final reminder letter and consent form was sent two weeks later. Interviews were approximately 1 hour in length.

**Sampling Results**

Fourteen interviews were conducted. Two interviews were conducted in person and the other twelve interviews were conducted by telephone. While telephone modality was feasible for booking interview appointments, it also facilitated recorded interview possibilities for some participants who lived inconveniently far from the research setting. Telephone interviews were also conducted with participants who identified that this was their preference. Both in-person and telephone interviews were audio taped using two tape recorders; further a conference phone was used for
telephone interviews to facilitate the recording. Lastly, Novick (2000) highlighted that telephone interviews may have promoted a relaxed environment during the interview and enabled the sharing of sensitive experiences.

**Sample Demographics**

Sample demographic data were entered into SPSS Statistics 23. There were 13 female participants and one male participant. The sample age range was 23 – 31 years of age. Interview participants’ employment in months ranged from 8 months to 19 months. Thirteen participants had undergraduate degrees and one participant had a master’s degree in a program other than nursing. All study participants reported currently having one employer in nursing, yet two had changed facilities to different employers. One went to public health and the other relocated closer to home. Eight participants worked full-time, five worked part-time and the other worked part-time and casual prior to the interview. Thirteen of the participants reported having a mentor in their career thus far. One participant reported having an e-mentor since university. All of the participants had Internet access and accessed the Internet daily. Demographic information is summarized in Table 11 below:
Table 11

**New Graduate Nurse Demographic Information**

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Mean</th>
<th>Median</th>
<th>Group SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>23 years</td>
<td>4</td>
<td>28.6%</td>
<td>25.43</td>
<td>24</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>24 years</td>
<td>5</td>
<td>35.7%</td>
<td>years</td>
<td>years</td>
<td></td>
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<tr>
<td></td>
<td>25 years</td>
<td>1</td>
<td>7.1%</td>
<td>24</td>
<td>years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>27 years</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30 years</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>31 years</td>
<td>2</td>
<td>14.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Months</td>
<td>8</td>
<td>1</td>
<td>7.1%</td>
<td>12.7</td>
<td>13</td>
<td>2.84</td>
</tr>
<tr>
<td>Employed As RN</td>
<td>9</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered RN</td>
<td>10</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse (RN)</td>
<td>11</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>2</td>
<td>14.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>4</td>
<td>28.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>1</td>
<td>7.1%</td>
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<tr>
<td>Unit</td>
<td>Medicine</td>
<td>2</td>
<td>14.3%</td>
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<tr>
<td>Worked</td>
<td>Surgical</td>
<td>3</td>
<td>21.4%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emergency</td>
<td>6</td>
<td>42.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Med/Oncology</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Med/Mental</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Med/Surg</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Integration of Findings: Conceptual Map I

A conceptual map, depicted in Figure 5: The Process of New Graduate Nurse Role Transition and Workplace Adjustment and E-Mentoring Socialization Tactics (below), was generated to provide a culmination of analysis for this chapter. The figure frames the discussion that follows which demonstrates the integrated relationship of the new graduate nurse role transition and workplace adjustment process and e-mentoring socialization tactics.
Figure 5. The Process of New Graduate Nurse Role Transition and Workplace Adjustment and E-Mentoring Socialization Tactics
Themes and e-mentoring tactics were developed, as shown in Figure 5 (above), by analyzing transcript text using an inductive approach. Codes were organized under overarching themes and subthemes to answer study research questions. A discussion of the interview findings is provided in the Themes and Subthemes section below.

**Themes and Subthemes**

After the researcher carefully reviewed participant responses, the following content analysis themes emerged about new graduate nurse role transition and workplace adjustment: 1) Gaining Independence; 2) Gaining Equal Status; 3) Social Shock; and 4) Stress. Each of these themes are summarized in Appendix P and is discussed below:

1) **Gaining Independence**

The theme of Gaining Independence as a new graduate nurse emerged from the subthemes of “Wonderful Accomplishment”, “Autonomy” and “Exciting and Liberating” (see Appendix P). Collectively these subthemes reflected the overarching concept theme of Gaining Independence. Study participants reported that becoming a registered nurse was a wonderful accomplishment and a time of growth. They identified this milestone towards autonomy as a truly exciting and liberating time. As one participant put it:

“Exciting as I finally felt like you’re not kind of being watched like a hawk anymore”

(Participant 2)

Similarly, another participant noted:

*I could do things on my own time and not be dependent on other people, to just actually do my job*”
Still another participant commented on her feelings of independence:

“Just being able to introduce myself as a registered nurse to my patients, and having that autonomy to make decisions on my own”

Participants reported that their role as a new registered nurse supposedly meant that they were now on equal footing with their colleagues as a fellow registered nurse and hence they could attain equal status. However, their experience suggested that gaining equal status was still a challenge as described below.

2) Gaining Equal Status

In addition to gaining independence, new graduates highlighted their status change of becoming a Registered Nurse (RN) and the impact this status change had on their ability to gain equal status with other unit staff. The subtheme of Status Change, the change of status when the new graduate nurse transitioned from the role of student nurse to a new graduate Registered Nurse, emerged from participant comments and concerns. Interviewees reported accounts of the student brain now being equal to a Registered Nurse’s brain, an awareness of still being treated as a student and a felt need to bridge the status gap (see Appendix P). The theme of Gaining Equal Status is evident in the following participant’s quotation:

“I kind of had a student brain, if you will, a student nurse brain. At school I always had a preceptor or someone to follow. I was always working under the wing of somebody else, under their guidance. …[but now] I was slowly being given more responsibility while they were still kind of watching me. I found it hard to grasp the fact that the person I was following I was an equal to them”
Participants also felt challenged to establish a new status role. They commented on the need to develop skills to advocate for equal access as a registered nurse. This concern is noted by the following participant quotation:

“they would treat me like a student…they would tell me to do things that people didn’t necessarily want to do themselves… I knew how to do bedside care, I needed to learn how the hospital works and how admissions would come up to the floor or instead of starting an IV they would be like go clean up this patient…I did speak to my preceptor about that…and then it changed – It was kind of really difficult for me to say anything as I was new”

(Participant 5)

The sub-theme of Needing to Build Confidence to Gain Equal Status as a registered nurse; specifically Bridging a Perceived Status Gap between their old role as student nurse and their new role as independent practitioner was developed through participant accounts. These findings were exemplified in the following comments:

“It’s tough because when you start somewhere you want to be confident … my problem was, because I was hired as a student, to bridge the idea of me being a student and then me actually being able to do things by myself and being able to tell someone that I can do it on my own. So that was my personal difficulty…so it was kind of the building my confidence and having them see me as something else, something more than just a student.”

(Participant 1)

Another participant identified the need for confidence during the status change:

“I think the first few times making those decisions myself I found, you know, very stressful and the self-doubt and not having the confidence that I did before…it could have been part of my nervousness and lack of confidence transitioning”

(Participant 1)
Facilitators or Enablers to Gaining Equal Status was also a subtheme.

Facilitators identified were preceptorship programs, supportive managers and participation in the New Graduate Nurse Guarantee (NGG) Program. Nevertheless, despite these initiatives the subtheme of Facilitation of Respect emerged. Facilitation of Respect was described as key and built on confidence in order to attain equal status.

Evidence of this process is reflected in the following participant quotation:

“I felt very confident coming out of the six months that it was great just having that preceptorship. And it was nice because you weren’t under the microscope anymore so you could relax a little bit and I still felt confident at the same time I think kind of that she [preceptor] quote-on-quote grew respect for me as a colleague so that so she could kind of be like now you’re on your own and I feel confident saying that I was your preceptor and that way we can be friends”

(Participant 1)

Additionally, the importance of positive role modeling provided by the nurse manager during the new graduate nurse transition was highlighted in facilitating the new graduate nurse status change:

“My manager is phenomenal. She makes everyone kind of feel like she’s on top of the goings on…but not in a watching over you sense it’s just that she’s interested”

( Participant 2)

While the New Graduate Nurse Guarantee Program provided some positive experiences in terms of facilitating transition, some participants felt that the program was actually a barrier to transition (see Appendix P, Barriers to Gaining Equal Status subtheme). This sense that the program was an obstacle to successful transition emerged where there was a lack of continuity of training when replacement preceptors

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2 The NGG Program is an Ontario government funded program that provides eligible employers (i.e., those who have made an application and demonstrated they have hired new graduate nurses) with funding to hire new graduate nurses into supernumerary positions for the first six months of employment.
were utilized to cover assigned preceptor. One participant identified the significance of such continuity towards a sense of whether or not the program facilitated or was a barrier to transition:

“For my new grad initiative portion – I was assigned one nurse to be my preceptor but she ended up taking a lot of vacation during the summer and so I was put with various other nurses and in one way that was really awesome because I obviously saw how other people do things… But at the same time, it was a little bit frustrating because I would be comfortable with one task with one of my preceptors and then I would switch, and the other preceptor might not know where my skill level is at with something or where my knowledge is, so I was almost taking a few steps back some of the time just because some of the unfamiliarity between the preceptor and me and my skill level. So it definitely had it’s pros and cons”

(Participant 4)

Further, lack of preceptor consistency was identified as a barrier to new graduate nurse transition as identified in the following quotation:

“My preceptor was on a day-day-night schedule….she would take some of her nights as vacation so I would be with somebody else…In the beginning…I wasn’t really comfortable with that because I was just getting comfortable with her as a preceptor and because I didn’t really know anybody else that well so I was really nervous to try and work with somebody else…maybe my manager could’ve set me up with somebody who maybe had a more consistent schedule or who wasn’t taking a vacation until later in the summer”

(Participant 4)

Interestingly, despite the fact that some participants found that having an inconsistent preceptor created barriers towards a successful transition, other participants suggested that having a consistent preceptor could actually limit the new graduate nurse’s ability to develop his/her own style, as evidenced in the following quotation:

“Consistent preceptor felt like you’re kind of a slave to the way they do things”… “don’t really get to develop your own style”

(Participant 2)
The emergent theme of Social Shock was evident in participant interview responses and is discussed next.

3) Social Shock

While new graduate nurses reported that they were exposed to the nursing culture from an etic or outsider perspective in their role as student nurses, they now described their emic or lived insider transitional experiences in the emergent theme of Social Shock where new graduate nurses’ new social role within a familiar culture caused a sense of shock. The theme of Social Shock emerged from participant accounts in the subthemes: Being Reprimanded When Questioning Status Quo, Trying to Fit their Practice into Social and Cultural Norms, Feeling Isolated and Unsupported and Avoiding Conflict at All Costs (see Appendix P). New graduate nurses reported they were treated differently than they had been as a student in the protected environment of academia. As students they were welcomed with open arms and now they were isolated and made to feel like ‘company that overstayed their welcome’.

Participants spoke about the work environment being nerve racking in that they liked the new independence of being a registered nurse which was nice – but it was scary too. Hence new graduates vacillated between feelings of new independence and scariness. Participants reported they lacked social resources and supports on their units. These notions are evident in the following participant quotation:

“Nerve-racking” as now lack resource to bounce ideas off of and feel kind of “left, alone which is nice but also scary… alone and a lot is expected of you”

(Participant 2)

Additionally, interviewees provided accounts of being treated in unsupportive ways and bullied - bound by dominant negative hierarchical work cultures and social
norms, such as, *our way or the highway*. This unsupportive work environment is noted in the following participant account:

“She was screaming, “You’re not supposed to do this! In our work culture…this surgeon has been working there for like 30 years already… We have one preceptor and then we share her… my friend was a little bit scared to cross the nurse”

(Participant 8)

As student nurses they were sheltered, pampered and nurtured yet now they were trying to fit into a new hierarchical work culture. They now had to function independently and work within cultural and social norms. Some participants reflected on how they weren’t even sure how to request a day off as evident in the following participant quotation:

“It is complicated when you’ve never seen it before …I struggled…I think XXX, our assistant manager, could have sat down with me and gone through these things, but it never happened… Or maybe I came to XXX with a question and he tried, but I didn’t get a straight thorough answer and so, you’re just kind of left in the dark and every time you try and get a day off, you have to go and ask someone, “Hey, am I doing this right? I don’t really know.”

(Participant 12)

New graduate nurses were challenged in seeking their new professional identity within a patriarchal workplace hierarchy, which they suggested stifled their creativity. As a result they suppressed their own innovative thinking in order to fit in, avoid conflict at all costs or not *rock the boat*. They were still the same individual - what changed? These socialization experiences were definitely not a smooth ride. For example, one participant commented:

“Try not to “butt heads” with the preceptor by asking other people how to access information. “Don’t feel as comfortable asking how someone else might do something”

(Participant 2)
Unsurprisingly, *social shock* appeared to result in new graduate nurse stress, another important theme to emerge, which is described next.

4) Stress

The theme of stress was highly evident in interviews when participants described their transition process. Two subthemes of stress emerged: *Multiplicity of Emotions* and *Uncomfortable to Demeaning*. Participants identified their new work experiences as triggering a multiplicity of emotional responses as a result of the stressful transition, which coupled with the social shock made for a poor transitional experience. Some of the *multiplicity of emotions* captured included “difficult”, “overwhelming”, “scary”, “frustrating”, “lack of trust” and lack of respect and support. Interviewees also discussed numerous accounts of “uncomfortable to demeaning” situations as evident in the following quotations:

“I had a really bad first experience with my preceptor because [on] our first day...she was late to work and so I just went up to her and introduced myself and I said, “I think I'm supposed to be with you today.” And she actually didn’t even say anything to me, she just walked away. So like I kind of followed her, and it was like, it was awful, like by lunch I was in the bathroom crying, thinking: “There's no way I can do this!” She was just really, really, really, really rude to me.”

(Participant 4)

Participant nine reflected on the lack of trust between her and her preceptor:

“My preceptor and I didn’t build the proper rapport between the two of us, so, you know, then, like things just fall through the cracks from there. Trust becomes an issue”.

(Participant 9)

Participant ten emphasized a lack of respect toward new graduate nurses:

“I do have a friend who, really, struggled [with her preceptor] with every single thing… I know she really struggled…like, a lot of gossiping…overhearing talking about her”

(Participant 10)
Additionally, participants identified a work culture of “sink or swim” towards new graduate nurses as contributing to their stressful transition, evident in the following quotation:

“Yeah, and I was just overwhelmed… it was towards the middle of my preceptorship… she kind of just sat back and watched me instead of coming in – she did come in eventually and helped but it was very overwhelming… I felt like I disappointed her and I was a bad nurse… It was just a very stressful situation. So again, being under that microscope … the pressure… I knew she was watching me. It’s a tough situation. I wasn’t just focusing on the patient; I was also trying to focus on what she was thinking of me. She apologized for making me feel that way. But she said, “You know, you are under a microscope so.” Yeah. It was stressful that part”

(Participant 7)

Given the emergent transitional issues experienced by new graduate nurses, the researcher explored the phenomenon of interest: What? Where? How? When? and Why? e-mentoring might be a possible socialization strategy to support new graduate nurse transition. However, through structured questioning to elicit participant feedback on the tactics of e-mentoring (See Figure 5), inductive themes emerged, providing a new understanding of how e-mentoring could be supportive to new graduate nurses. E-mentorship themes and subthemes are discussed next.

**E-Mentoring Themes and Subthemes**

E-mentoring was explored with the study participants as a possible strategy to assist with new graduate nurse transition in light of the themes and subthemes that participants identified as emerging from the transition from student to graduate nurse. Participants spoke to reasons why they believed that an e-mentor might improve the
transition period for new graduate nurses. They also provided recommendations on the logistics of delivering an e-mentor program as discussed later in the chapter.

Participants were asked about the potential role of an e-mentor and the theme of Support Person emerged. This theme is discussed below.

**E-mentor as Support Person**

Participants consistently indicated that an e-mentor would be a good support person in a wide range of areas associated with the transition from student to graduate nurse. These areas were broadly organized into two subthemes of *Navigating Career Development* and *Work Relationships*, particularly when dealing with bullying. A number of participants, including the two examples below, noted that some of the difficulties that graduate nurses had were in finding information on their unit pertaining to navigating their careers and suggested that an experienced e-mentor might serve as a source of such information.

“I think anything from how do you know how the pension works, to you know how does HR benefits work, to you know, this is the way that I decided to handle this situation, can I have feedback, was that the right thing to do, would you do the same thing?”

(Participant 2)

This participant elaborated further about the need for specific information as noted below:

“I guess you could always ask your colleagues but if you don’t feel comfortable, you could be like how do I submit an incident report to the college? How do I send in my tax returns for what I paid for in this or just things you don’t want to really – You’d have somebody to ask that might have a better idea”.

(Participant 2)
Further, Support Person subthemes emerged as participants suggested that an e-mentor might be able to foster their professional growth and development in their role as an e-mentor whose debriefing observations and advice were not explicitly tied to their performance review. For example:

“So, I feel like if an e-mentor would probably be a good opportunity for that, for the debriefing and especially if it was confidential and not tied to any sort of performance”

(Participant 14)

A number of participants raised concerns about the graduate nurse’s vulnerability to abuse and bullying by more senior co-workers. They suggested that an e-mentor would be a valuable resource to support the graduate nurse in navigating and managing these work relationships by Providing Knowledge on How to Address Conflict and by Offering Emotional Support (subthemes to Support Person) as described in the quotations below:

“I think it would be comforting and again reduce a bit of anxiety just knowing that you always have somebody there in your corner that you could ask questions to or you could share your, you know if you’re frustrated, share some of your experiences with”

(Participant 3)

Another participant shared a similar perception about the need for support as follows:

“I think there would be a ton [of support]. . . . I think anything from . . . is [this] the way that I decided to handle this situation, can I have feedback, was that the right thing to do, would you do the same thing? To I’m being bullied on my unit by another nurse, how do I handle that?”

(Participant 2)
Interviewees were asked about what characteristics they would look for in an e-mentor and the theme of E-mentor Qualities and Experience Requirements emerged and are discussed next.

**E-Mentor Qualities and Experience Requirements**

Study participants recommended several *E-mentor Qualities*, a subtheme. Many of those qualities were associated with guiding e-mentees in the development of their professional skills. Interviewees recommended that an e-mentor should be up-to-date on evidence-based practice, even if s/he was not necessarily the best skilled practitioner. Participants also recommended that an e-mentor should be *An Individual with Some Experience*, another subtheme, however participants ideas about what an appropriate level of experience might be ranged from someone who could relate to a recent new graduate nurse experience to someone that had at least 5 or more years experience. Further, participants recommended that the e-mentor should be someone who was *Involved in Professional Development*, an additional subtheme. Also, Personal Qualities, specifically the importance of possessing e-mentor traits such as being passionate, responsive and able to relate to the new graduate nurse transition experience were identified as important characteristics for an e-mentor as well as having similar work backgrounds and clinical experience.

Another participant expressed the importance of someone who could relate to you versus someone who is a senior nurse:

> Yeah, I think sometimes more experienced nurses from what I’ve seen on my unit. Sometimes the most senior nurses aren’t really making the best mentors because they’re just, like everything is so second nature to them, then they don’t really think
things through, or whatever. They just do things. Whereas someone who’s been out for maybe five years, they can kind of relate to you a bit more, but they also have so much knowledge and experience to share, but I mean it really depends on the person. There are some senior nurses who are really great mentors. But, just someone who can relate to you and understand your situation”

(Participant 12)

Finally, an e-mentor’s ability to facilitate connections with the graduate nurse’s peers was identified as an important e-mentor quality in the transition strategy:

“It would be good to have new grads you could connect with who are in the same situation as you maybe in the same department as you having the same problems so you could talk things through that way.”

(Participant 6)

In the last part of the interview, participants were asked about proposed e-mentoring design features and the following data emerged and is discussed next.

**E-Mentoring Design Features**

Interviewees provided emergent recommendations on how an e-mentoring program might be delivered, specifically, helpful design features such as e-mentor selection, e-mentor matching, modality of contact, frequency of contact, response times and ‘checking in’. Their suggestions for design feature subcomponents are described below.

**E-mentor Selection:** Participant responses to e-mentor selection varied from selecting an e-mentor who was internal to the organization and who would be familiar with the
institution setting, culture and players involved, to selecting an e-mentor who would be external to the organization as this would allow the e-mentor to be unbiased on organizational issues. Some examples of participant feedback regarding the importance of using an external mentor in an e-mentor program were as follows:

“Someone external to the organization?” That’s what I guess would work”

(Participant 5)

“I think external would be better simply because then they would not be too biased with the working culture in this organization. ‘Cause if they were working here for a few years, they might be – how do you say it – they might be influenced already by the working culture here”

(Participant 8)

“If it is somebody that is outside of your organization, that sort of removes them from some of the internal politics and the personalities that, you know, if they don't know the people you work with, then that removes some biases I guess from them and you know, if you’re having a problem or a challenge, they could be more unbiased in their interpretation and maybe some of their suggestions because they don’t have their own personal feelings about that person or that situation”

(Participant 3)

Participants also provided feedback on the advantages of familiarity and relatability with an internal e-mentor as evident in the following quotes.

“That might be one pro is that they would be at the same workplace or at the same unit”.

(Participant 11)

And another participant went on to say:

“For instance, like because I’m with [unit], perhaps someone who was an […] nurse either existing [unit] nurse or previous one who could relate to some of the issues and provide some insight and how to manage”

(Participant 14)
Conversely, participants expressed some comfort in potentially having an anonymous e-mentor who was apolitical to limit organizational bias, evaluation and judgement. The following statements are examples of participant recommendations in support of the emergent subtheme of anonymous e-mentor:

“Would be anonymous, but it’s always nice to know that it is an actual person on the other side”  
(Participant 7)

“If I’m interested in doing the nurse practitioner (np) program and I don’t really feel comfortable telling my new employer that I plan on – So sometimes it’s like they want your five year plan but they don’t want to hear that you’re leaving cause like – So who can I ask – Oh I’m interested in this kind of education or you know I’m actually interested in this type of nursing but you don’t feel comfortable telling people at work because you don’t want your loyalty to be questioned. And because you’re so new – why would you be thinking that so early? So I think it would be nice to have someone who is kind of anonymous to your life so you could be like I’m thinking of maybe trying this out without having the fear of someone being like oh you know XXX might be leaving at some point because she wants to try something else. So I think that that would be helpful”  
(Participant 1)

The importance of confidentiality alongside anonymity was highlighted in the following quotation:

“I wouldn’t see it as a problem being anonymous. I think as long as what I was communicating with them, it was private and that other people wouldn’t have access to those conversations.

(Participant 11)

Participants also reported being unsure that anonymity in a relationship with an e-mentor would always be the best approach, as evidenced in the following two quotations:
“I’m torn about that. I mean, I think anonymity is a plus in that you don’t feel pressured to in some way, like you wouldn’t feel as judged by someone you don’t necessarily know and doesn’t know you. But at the same time, having someone in the same facility, they could truly relate to what is going on in terms of the issue”

(Participant 10)

“It just depends on if it more of an anonymous e-mentor, or someone who I know had worked in the organization or she knows more specifically, like, what my situation is. Honestly, I would prefer not anonymous”

(Participant 11)

E-mentor and E-mentee Matching: Participant recommendations varied in terms of the logistics of matching mentors and mentees in an e-mentoring intervention program, that is, whether or not the mentee should choose his/her mentor; the mentor should choose the mentee; or the mentor and mentee should be matched by a third party for participants with similar interests and experiences. These varying viewpoints are evident in the following three quotations:

“I think it would be neat to have maybe different ones that you could choose from.”

(Participant 6)

And

“I almost would want to put what I was looking for out there and hope that someone would choose me thinking that they would be able to provide the best help based on what I’m looking for.”

(Participant 2)
And

“I don’t think I have to choose someone specifically, but maybe if people were matched to similar experiences, it would make sense …I think that’s as far as I was thinking in terms of matching.”

(Participant 11)

Modality of Contact:  Modality of contact recommendations varied, with participants’ suggestions ranging from emailing and texting to using Skype. Some of this variation regarding modality of contact is evident in the following quotes:

“I actually like the idea of email or online would be good.”

(Participant 14)

This participant went on to say:

“text messaging isn’t necessarily a bad idea if it is something more urgent.”

(Participant 14)

And

“I think Skype could be okay for some people”

(Participant 5)

This participant went on to say:

“I think that having to go home and Skype my preceptor and say oh, this is what my day was about, that’s taking away from my own time to kind of relax and do what I want to do, outside of work.”

(Participant 5)

Participants further advised the researcher that the e-mentor should be responsive and communicate with the new graduate nurse using an informal and open door policy approach.
Frequency of Contact: The frequency of felt need for communication between the e-mentor and e-mentee identified by the participants also varied. A two-week window between contacts was a popular time period, although some informants felt that contact every two weeks was the minimum amount of contact that should occur between an e-mentor and e-mentee while others advocated for decreasing contact between e-mentor and e-mentee during the e-mentor transition period. In the latter model, the e-mentor might communicate with the mentee every two weeks initially, and then contact might taper off to monthly, and then only as necessary. In all cases, a certain level of informality in the contact between e-mentor and e-mentee appeared to be prized as evidenced in the following quotation:

“Yeah. 20 minutes per week is – like even if it’s a quick email, which was like, “How is your week going? Do you have any questions? I’m available these hours if you want to chat.” That – I think that’s good. But I wouldn’t want it to be an email with like 15 questions I had to answer”

(Participant 5)

Participants also reported that the e-mentor could communicate with their e-mentee approximately every two weeks as follows:

“I still feel like it’s every two weeks. I feel like when I started there was so much that you already had to focus on. I feel like for me it would be more of a burden, obligation to do it every week – I feel like it’s just too much. I feel like it would be every two weeks unless I might need you a little before that – like if you’d be open to knowing I’d give you an e-mail prior to our two week”

(Participant 1)

Response Times and Checking In: In terms of response times to emails, participant responses varied, but overall participants did not expect a short-turn around response as the following two quotations reveal:

“I think the open door policy would be good but more checking in every two weeks. I feel like every week as a person who sometimes not really the best at replying (laughs). I feel like I’d either be letting that person down if I didn’t get back to them right away and
sometimes you’re so busy, it becomes your last priority because it’s more of an option rather than something you have to do. So yeah, I would personally choose every two weeks”

(Participant 1)

“So I think that one extra thing if it was an appointment style where you had to sit down and communicate with someone – that I think would be harder. But if it was just sending out an e-mail and then within a couple of weeks you’d hear a response that would be different I think”

(Participant 2)

A summary of participant interviews is provided in the section below.

Summary

Participant interviews provided the researcher with a deeper understanding and new knowledge on new graduate nurse role transition needs and workplace adjustment within the first year of employment. Participants indicated that new graduates were looking for support strategies, which would foster their independence as RNs and help them navigate the emotional and workplace challenges that are inherent in the transition from student nurse to the new graduate RN.

Participants also identified a need for new graduates to be mentored as a means for managing situations of social shock as well as stress. Interviewees recognized that there were currently various strategies in place to facilitate new graduate transition, such as having a preceptor, an effective manager, or utilizing the NGG Program. Nevertheless, they suggested that these strategies were not entirely successful in helping new graduates transition. For example, participants pointed to a lack of preceptor availability and bullying in the workplace as barriers to a successful transition.
that are not addressed by current transition programs. It was suggested that e-mentoring programs might be able to address such barriers by taking advantage of technology that would allow for more availability of the mentor.

In addition, if the e-mentor was anonymous or external to the organization, a possibility that might be more easily facilitated if the mentoring relationship was conducted electronically rather than in person, issues of bullying might also be addressed more effectively as the mentee might be more willing to discuss bullying with the e-mentor.

Participants found the possibility of a certain level of informal communication between e-mentor and e-mentee that electronic interactions facilitate as being one of the attractive elements of an e-mentoring program. Interestingly, the two study participants who reported having a positive transition experience also reported that they had family members who worked in the health-care field (one of the informants had a parent who worked in the same facility). It would appear that the “type of support” that participants were looking for from a program like an e-mentoring program would be quite similar to the type of support that these individuals received from their family members: a somewhat informal relationship with someone who was highly knowledgeable and invested in the success of the individual rather than in the organizational culture during the new graduate transition. Thus, the proposed integrated relationship of new graduate nurse transition and e-mentoring as a viable socialization strategy was further explored. Such a model of mentoring, combined with the findings from the scoping literature review, were synthesized to formulate proposed e-mentoring intervention recommendations that were subsequently explored with a panel of new
graduate nurses and experienced nurses. This synthesis and panel results are described in Chapter 6: Phase 3 discussed next.
CHAPTER 6: PHASE 3 PANEL RESULTS AND E-MENTORING FEATURES

Synthesis Process: E-Mentoring Intervention Acceptability Survey

Results from the narrative literature review provided foundational knowledge to define the problem statement, narrow the research questions and pointed to promising directions for an e-mentoring intervention. Nevertheless, explicit evidence for the design of an e-mentoring intervention was not clearly revealed. This gap in knowledge informed the rigorous methodology in Phase 1: Scoping Literature Review and Phase 2: Qualitative Phase.

Phase 1 and 2 data results were the primary sources of evidence in the development of a proposed E-mentoring Intervention Recommendation Acceptability Assessment Survey (Appendix K). The e-mentoring intervention recommendations were reviewed to synthesize and triangulate previous study findings as per methods specified by Mays & Pope (2000). The acceptability assessment survey was posed to panel participants in the Phase 3 Consultation Phase. Evidence from Phase 1 and 2 was carefully reviewed. This was achieved through review and scrutiny of different sources of data, and attention to contradictory evidence in the scoping review and interview findings. Themes that were generated from the scoping review and from individual interviews were logged in electronic data files and were examined for consistency. Instances of inconsistency between Phase 1 and 2 data results were addressed by developing separate questions and probes to explore areas of discrepancy with Phase 3 panel members. A discrepancy example was the scoping review finding that e-mentors should be selected internally (Stewart, 2008). While new
graduate nurse interviewees concurred with this finding, they also suggested that an e-mentor may be selected externally or anonymously, hence all three e-mentor selection options were posed in the acceptability assessment survey and explored with panel participants in Phase 3.

The acceptability assessment survey explored the following e-mentoring program intervention features: e-mentor and e-mentee qualifications, frequency of communication between e-mentor and e-mentee, modality of contact, length of e-mentoring, e-mentor and e-mentee selection, e-mentor matching process, e-mentor training and e-mentor program orientation training topics. The survey utilized a Likert Scale from 1 - 7, with 1 being ‘strongly disagree’ and 7 being ‘strongly agree’. This ordinal scale enabled panelists to choose the extent to which they agreed or disagreed with the proposed intervention recommendation statement (Sullivan & Artino, 2013).

Participants were also provided with an area in the acceptability assessment survey document to share further written recommendation and further feedback for each proposed recommendation. The Phase 3 Consultative approach follows.

**Phase 3 Consultative Approach**

This phase of the study utilized a consultative approach, as in Phase 2 and is consistent with Levac et al.’s (2010) six-stage scoping review methodology. The current phase used a 2-Step Approach that included a pre-survey in Step 1 and a discussion panel and post-survey in Step 2.

In Step 1 an Acceptability Assessment Survey (see Appendix K) was sent to expert panel stakeholders by email 6 days prior to the panel session. One panel
member enrolled late in the study and agreed to receive her survey by email 2 days prior to the panel. The panel was made up of new graduate nurses and experienced nurses. Panel participants rated and provided comments on proposed e-mentoring intervention acceptability assessment recommendations. The acceptability assessment survey was designed by identifying the proposed evidenced-based recommendation feature and possible recommendation options. A Likert Scale was chosen to enable participants to select the extent to which they agreed or disagreed with the recommendation. Participants were requested to complete the Likert Scale and invited to share any comments or feedback related to the recommendation and/or options. An example was modality of contact between e-mentor and e-mentee feature with the possible options of emailing, texting or Skyping. Participants were also provided with an opportunity to offer written feedback on the modality of contact between e-mentor and e-mentee. This feedback was used to stimulate discussion and deepen understanding of the panel’s perspective of e-mentorship during the expert panel meeting.

Step 2 involved expert stakeholder panel members participating in a small group panel meeting to review a summary of the Acceptability Assessment Survey findings, provide further feedback and independently re-rate and comment as able on the proposed e-mentoring intervention recommendations.

In the next sections the researcher discusses the quantitative and qualitative analytical approaches taken to address the study research questions, which is consistent with a mixed methods study design (Creswell, 2009, 2015).
Quantitative Analytical Approach

This phase of the study used a quantitative consultative approach through an Acceptibility Assessment Survey. The survey was administered to the panel with the goal of obtaining structured feedback on the proposed e-mentoring intervention characteristics designed to assist with new graduate nurse transition from student to Registered Nurse. Participants were requested to independently rate the extent to which they agreed with each recommendation using a Likert scale from 1 - 7, with 1 being 'strongly disagree' and 7 being 'strongly agree'. Participants were also requested to submit their survey scores and responses to the researcher prior to participating in the expert panel meeting. Study participants were advised that their individual ratings would be kept confidential and data would be aggregated and shared at the expert small group panel discussion. Intervention results that received an average re-rate score of five or higher on a 7-point scale, representing a moderately high level of agreement and were considered acceptable for inclusion in proposed e-mentoring intervention features, which will be discussed at the end of this chapter.

Additionally, participants were invited to provide comments on each proposed e-mentoring program component and design feature. A detailed discussion of this qualitative analytical approach follows.

Qualitative Analytical Approach

This phase of the study used a qualitative consultative approach utilizing the same panel participants who completed the Acceptibility Assessment Survey. Participants were invited to provide feedback on the acceptability of the proposed e-mentoring intervention features, which again is consistent with Sidani’s (2014) approach to solicit
feedback on the appropriateness, effectiveness, convenience and posed risks of an intervention. Participants were invited to provide their independent written feedback on the Acceptability Assessment Survey and the re-rated Acceptability Assessment Survey for each proposed e-mentoring feature after receiving a summary from the first Acceptability Assessment Survey. Panelists were also requested to provide their verbal feedback among other panel members at the small group discussion meeting. While e-mentoring questions were structurally posed to panel participants with the goal of establishing consensus, inductive study themes emerged based on participant feedback, which is congruent with qualitative descriptive methodology (Sandelowski, 2000, as described earlier in Methods Chapter 3, p. 92).

Qualitative content analysis (Graneheim & Lundman, 2004) was implemented in Phase 3 of the study, as in Phase 2, to ensure information provided by study participants was based on participants’ accounts. Again, the unit of analysis was interview texts, which were divided into meaning units to words and sentences or paragraphs relating to the subject or context of other words and sentences (Graneheim & Lundman, 2004). Condensation was used to ensure the core message was in a brief format and abstraction was used to highlight descriptions and interpretations through the creation of codes, subthemes and themes (Graneheim & Lundman, 2004, p. 106).

Rigour and Validity

Graneheim and Lundman’s (2004) strategies of credibility, dependability and transferability and Mays and Pope (2000) approaches of triangulation, respondent validation, clear exposition of methods of data collection and analysis, reflexivity, attention to negative cases and fair dealings as described in Methods Chapter 3 (pp. 80,
81, 82) were utilized to ensure the trustworthiness of Phase 3 qualitative methods. Credibility was established by including both new graduate nurses and experienced nurses on the panel to ensure that the views of both groups were represented in the small group discussion on the proposed e-mentoring intervention features. Trustworthiness of data analysis was established using clear exposition of methods of data collection and analysis. Written feedback from participants in Step 1 Approach was utilized to formulate probes in order to illuminate further qualitative findings in Step 2 Approach. Representative quotations were captured to highlight feedback on the proposed e-mentoring recommendations. Varying views were incorporated into the analysis, described below in the results. Dependability was established by using a panel script to obtain structured feedback on the proposed e-mentoring intervention features. Dependability was also established by the review and re-rating of the Acceptability Assessment Survey by panel participants. Transferability was addressed by including the views of both new graduate nurses and experienced nurses on e-mentoring in the expert discussion panel. Non-traditional member checking was established by reviewing proposed e-mentor program recommendations identified through the scoping review and current study interviews with the expert panel. Reflexivity was established by reviewing my role and background as the panel facilitator, by expressing my openness and fair dealings to divergent ideas and encouraging panelists to provide varying perspectives on the proposed e-mentoring features. Lastly, Phase 3 e-mentoring intervention recommendations for components and design features were identified, synthesized and triangulated with scoping review
findings. Recommendations determined from this process were reviewed for acceptability by the expert panel comprised of new graduate and experienced nurses.

Participant interviews, setting and sample are described next.

**Panel Setting and Sample**

The study setting was Ontario, Canada, and the target population was newly graduated nurses and experienced nurses. As noted in earlier chapters, the College of Nurses of Ontario (CNO) research database was the source of the sample. The CNO permission process was followed by completing the CNO request form process for Home Mailing Addresses for potential participant names. Potential study participants were new graduate registered nurses and experienced registered nurses with 5 or more years of experience. The CNO request form was completed by hand, scanned and sent by email to the CNO. When the CNO request was accepted, the CNO generated a list of potential study participant names and contact information from a pool of nurses who indicated permission for release of their name for research purposes at the time of registration and who met study inclusion criteria as described below.

**Inclusion and Exclusion Criteria**

Potential participants were screened in a phone call by the researcher after expressing an interest in the study to ensure they met study inclusion and exclusion criteria.

Inclusion Criteria for new graduate nurse panel members:

- acute care registered staff nurses in a hospital setting
- employed in Ontario in the past year and/or less than two years

Exclusion criteria for new graduate nurse panel members:
- previous Registered Practical Nurse (RPN) experience
- international work experience as a Registered Nurse (RN) or RPN

Inclusion Criteria for experienced registered nurses:

- worked in an acute care hospital setting in Ontario
- preceptored one or more new graduate registered nurses
- five or more years of experience

The panel sample size information is discussed in the next section.

**Sample Size**

A purposive sample \((n = 7)\) of new graduate nurses \((n = 5)\) and experienced nurses \((n = 2)\) was recruited. Recruitment was limited to the Greater Toronto area (GTA) as participants had to be willing and able to attend an on-site expert panel at the University of Toronto downtown campus. Additionally, due to scheduling preferences, two small group expert panels were held on the same day. One group had four new graduate registered nurses and one experienced nurse; the second group had one representative from each panel category. Employing two groups provided the researcher with further member checking regarding prevailing inductive themes, which will be discussed later in the chapter.

**Data Collection and Procedures for Conducting Panel**

Further electronic lists of potential study participants were obtained from the CNO. In anticipation of three new graduate registered nurses and three experienced nurse appraisers and a conservative response rate of 20%, the following calculation was performed: \(3/0.2 = 15\) for new graduate registered nurse group and experienced nurse group. However, in order to ensure an adequate response rate oversampling of
50 participants in each group was employed. A $20 token of appreciation was offered to potential study participants with Ethics Review Board approval. Despite this data gathering strategy, no respondents agreed to attend the panel session at the University of Toronto. In an attempt to buildup the response rate, the token of appreciation offered to study participants was increased with Ethics Board approval from $20 to $50. Further, a $50 token of appreciation for nursing study participants is consistent with studies conducted by nursing professional associations (Canadian Nurses Association, 2013) and nursing scholars (Meyers, 2009). The increased incentive generated the current panel sample. The recruitment process is summarized in Figure 6 (below).

**Figure 6. Panel Recruitment Process**

A modified Dillman procedure (Dillman, 2007) that included three mailed invitations was used for each group of potential participants. The procedure included mailing study invitation letters and consent forms initially, followed by reminder cards that were sent out two weeks later; and a final reminder letter and consent form sent out
two weeks after the reminder card. The mailing sequence is summarized in Figure 7 (below).

![Study Participation Mailing Sequence](image)

**Figure 7. Study Participation Mailing Sequence**

The first panel session was 1 hour and 16 minutes (n= 5) and the second panel was 1 hour and 10 minutes in length (n= 2). Study participants provided written consent prior to attending the panel and were informed in writing and at the expert panel that the discussion would be audiotaped. Participants were also advised in writing and at the panel session that information obtained would be held in strict confidence and that participants would only be identified by study number.

**Sampling Results**

The sample consisted of two expert panels made up of the same panel participants who completed the pre and post E-Mentoring Acceptability Assessment Survey. After meeting with the expert panel members, it was apparent that data saturation had been achieved based on the fact that the participants completed the pre and post-survey E-mentoring Intervention Acceptability Assessment Survey with no missing data and stated at the end of the panel that they had nothing new to add. The
panels were conducted in person in a meeting room at the University of Toronto Lawrence S. Bloomberg Faculty of Nursing. Expert panel sample demographic information is below.

**Sample Demographics**

Sample demographic data were entered into SPSS Statistics 23. There were 7 female panel participants. Panelists consisted of five new graduate nurses and two experienced nurses. New graduate nurse panel members average age was 27 with a mean of 19.6 months employed as a Registered Nurse. All new graduate nurses had an undergraduate degree, worked in acute care and each reported having one employer. Four new graduate nurses worked full-time and the fifth new graduate nurse worked casual. Four new graduate nurses reported having a mentor and the fifth new graduate nurse reported she did not have a mentor. No new graduate nurses reported having an e-mentor. All new graduate nurses had Internet access and were able to access the Internet daily. Experienced nurse panel participants mean age was 47 with a mean of 17 years employed as a Registered Nurse. They had an undergraduate university degree and worked full time. One experienced nurse indicated having one employer and the second advised that she had more than one employer. They reported having had a mentor in the past with one reporting that she also had an e-mentor. Both experienced nurse panelists had Internet access and could access the Internet daily. Demographic information for the expert panel is summarized in Table 12 below:
Table 12

**Expert Panel Demographic Information**

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Graduate Nurse (NGN)</td>
<td>Age in Years</td>
<td>24, 26, 29, 32</td>
</tr>
<tr>
<td>NGN Months Employed As</td>
<td>Registered Nurse (RN)</td>
<td>14, 19, 21, 22</td>
</tr>
<tr>
<td>NGN Unit Worked</td>
<td>Medicine</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Surgical</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Emergency</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Surgery/Pediatrics</td>
<td>1</td>
</tr>
<tr>
<td>Experienced Nurse (EN)</td>
<td>Age in Years</td>
<td>38, 56</td>
</tr>
<tr>
<td>EN Years Employed As</td>
<td>Registered Nurse (RN)</td>
<td>6, 28</td>
</tr>
<tr>
<td>EN Unit Worked</td>
<td>Emergency</td>
<td>2</td>
</tr>
</tbody>
</table>

What follows is a summary of the Acceptability Assessment Survey Results.

**Acceptability Assessment Survey Results**

Acceptability rating results are summarized in Table 13. The ratings depict mean and range results from round 1 initial scores and round 2 re-rate scores on e-mentoring program features (below). The goal of the expert panel meeting was to reach consensus on proposed e-mentoring program features. E-mentoring program features
with greater than 3.5 mean score out of 7 represented a consensus to agree with the feature and e-mentoring program features with less than 3.5 mean score out of 7 represented consensus to disagree with the e-mentoring program feature. Further, interventions that received a re-rate score of five or higher met the criteria of a moderately high level of acceptability.

Table 13

E-Mentoring Program Components and Feature Ratings

<table>
<thead>
<tr>
<th>E-mentor Program Feature</th>
<th>1st Round Mean, SD and Range</th>
<th>Agree / Disagree</th>
<th>2nd Round Mean, SD and Range</th>
<th>Agree / Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Mentor Qualification: RN should volunteer</td>
<td>6.4 ± 0.79 (5 – 7)</td>
<td>Agree</td>
<td>6.6 ± 0.53 (6 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-Mentor Qualification: RN with at least 5 years of Experience</td>
<td>5.1 ± 1.46 (3 – 7)</td>
<td>Agree</td>
<td>4.6 ± 1.13 (3 – 6)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-Mentor Qualification: RN with strong evidence-based practice</td>
<td>5.6 ± 0.98 (4 – 7)</td>
<td>Agree</td>
<td>5.0 ± 1.29 (4 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-Mentor Qualification: RN who has engaged in ongoing professional development</td>
<td>5.3 ± 1.11 (3 – 6)</td>
<td>Agree</td>
<td>5.1 ± 1.21 (3 – 6)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-mentee qualification: New grad RN Volunteer</td>
<td>5.3 ± 1.38 (3 – 7)</td>
<td>Agree</td>
<td>6.4 ± 0.79 (5 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-mentor Program Feature</td>
<td>1st Round Mean, SD and Range</td>
<td>Agree / Disagree</td>
<td>2nd Round Mean, SD and Range</td>
<td>Agree/ Disagree</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>-----------------</td>
<td>----------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>E-mentee qualification: Willing to actively participate in e-mentoring relationship by maintaining regular contact with e-mentor</td>
<td>6.0 ± 0.82 (5 – 7)</td>
<td>Agree</td>
<td>6.4 ± 0.53 (6 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>Frequency of communication between e-mentor and e-mentee: Weekly</td>
<td>4.7 ± 2.43 (1 – 7)</td>
<td>Agree</td>
<td>5.7 ± 1.11 (4 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>Frequency of communication between e-mentor and e-mentee: Every two weeks</td>
<td>4.6 ± 2.23 (1 – 7)</td>
<td>Agree</td>
<td>5.7 ± 0.76 (5 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>Frequency of communication between e-mentor and e-mentee: Monthly</td>
<td>3.1 ± 2.12 (1 – 7)</td>
<td>Disagree</td>
<td>4.0 ± 1.0 (3 – 5)</td>
<td>Agree</td>
</tr>
<tr>
<td>Modality of contact: Email</td>
<td>6.7 ± 0.49 (6 – 7)</td>
<td>Agree</td>
<td>6.4 ± 0.53 (6 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>Modality of contact: Skype</td>
<td>5.3 ± 1.50 (3 – 7)</td>
<td>Agree</td>
<td>3.0 ± 1.29 (1 – 5)</td>
<td>Disagree</td>
</tr>
<tr>
<td>Modality of contact: Text</td>
<td>6.4 ± 0.79 (5 – 7)</td>
<td>Agree</td>
<td>6.0 ± 0.00 (6)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-mentor Program Feature</td>
<td>1st Round Mean, SD and Range</td>
<td>Agree / Disagree</td>
<td>2nd Round Mean, SD and Range</td>
<td>Agree/ Disagree</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------------</td>
<td>-----------------</td>
<td>----------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Length of E-mentoring Program: Three months</td>
<td>5.4 ± 2.07 (2 – 7)</td>
<td>Agree</td>
<td>4.6 ± 2.07 (2 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>Length of E-mentoring Program: Six months</td>
<td>4.3 ± 2.06 (1 – 7)</td>
<td>Agree</td>
<td>5.6 ± 0.79 (4 – 6)</td>
<td>Agree</td>
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<tr>
<td>Length of E-mentoring Program: One Year</td>
<td>3.6 ± 1.90 (1 – 6)</td>
<td>Agree</td>
<td>4.0 ± 1.53 (2 – 6)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-mentee - mentor selection: E-mentor should be internal to organization</td>
<td>6.6 ± 0.53 (6 – 7)</td>
<td>Agree</td>
<td>6.6 ± 0.53 (6 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-mentee - mentor selection: E-mentor should be external to organization</td>
<td>2.9 ± 1.21 (1 – 4)</td>
<td>Disagree</td>
<td>3.6 ± 1.40 (2 – 6)</td>
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<td>E-mentee - mentor selection: E-mentor is anonymous (i.e. identification of first name only)</td>
<td>2.9 ± 1.77 (1 – 5)</td>
<td>Disagree</td>
<td>2.6 ± 1.62 (1 – 5)</td>
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<td>E-mentee - mentor matching process: E-mentor selects e-mentee based on biographical description</td>
<td>3.7 ± 1.70 (1 – 6)</td>
<td>Agree</td>
<td>3.6 ± 1.27 (1 – 5)</td>
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<td>E-mentor Program Feature</td>
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<td>Agree / Disagree</td>
<td>2nd Round Mean, SD and Range</td>
<td>Agree/ Disagree</td>
</tr>
<tr>
<td>--------------------------</td>
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<tr>
<td>description</td>
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</table>
| E-mentee - e-mentor matching process: Third party assigns e-mentor and e-mentee | 5.3 ± 1.25  
(4 – 7) | Agree | 4.9 ± 1.57  
(2 – 7) | Agree |
| E-Mentor Training: One day of training | 5.9 ± 1.07  
(4 – 7) | Agree | 6.1 ± 0.69  
(5 – 7) | Agree |
| E-Mentor Training: Two days of training | 5.1 ± 2.19  
(1 – 7) | Agree | 4.1 ± 1.21  
(2 – 6) | Agree |
| E-mentor Program Orientation/Training Topics: Positive role modeling | 6.4 ± 0.98  
(1 – 7) | Agree | 5.7 ± 0.95  
(1 – 7) | Agree |
| E-mentor Program Orientation/Training Topics: Debrief with e-mentee about a concern and/or experience that occurred | 6.6 ± 0.79  
(5 – 7) | Agree | 6.4 ± 1.13  
(4 – 7) | Agree |
| E-mentor Program Orientation/Training Topics: Conflict Resolution | 6.7 ± 0.49  
(6 – 7) | Agree | 6.7 ± 0.49  
(6 – 7) | Agree |
| E-mentor Program Orientation/Training Topics: Maintain patient/client | 5.9 ± 1.07  
(4 – 7) | Agree | 4.6 ± 1.72  
(2 – 7) | Agree |
<table>
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<tr>
<th>E-mentor Program Feature</th>
<th>1st Round Mean, SD and Range</th>
<th>Agree / Disagree</th>
<th>2nd Round Mean, SD and Range</th>
<th>Agree / Disagree</th>
</tr>
</thead>
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<td>confidentiality</td>
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<tr>
<td>E-mentor Program Orientation/Training Topics: Maintain workplace confidentiality</td>
<td>5.9 ± 1.07 (4 – 7)</td>
<td>Agree</td>
<td>4.6 ± 1.72 (2 – 7)</td>
<td>Agree</td>
</tr>
<tr>
<td>E-mentor Program Orientation/Training Topics: Education on how to respond to uncivil behaviours from co-workers</td>
<td>6.3 ± 0.76 (5 – 7)</td>
<td>Agree</td>
<td>6.0 ± 1.15 (4 – 7)</td>
<td>Agree</td>
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**Conceptual Map II**

A conceptual map, depicted in Figure 8: Process of Transition Support Themes (below), was developed to provide an overview of analysis for emerging qualitative themes for this chapter. The figure was used to structure the emerging panel discussion themes on the process of transition support for new graduate nurses.
Figure 8. Process of Transition Support Themes

Themes were developed, as shown in Figure 8 (above), by analyzing transcript text using an inductive approach. Codes were organized under overarching themes and subthemes to answer study research questions. A discussion of the expert panel findings is provided in the Themes and Subthemes section below.
Themes and Subthemes

The following content analysis themes arose from the expert panel about new graduate nurse transition through structured inquiry about proposed e-mentoring program intervention features: 1) Voluntary Versus Mandatory E-mentoring; 2) Relatability and Availability of Experienced E-Mentor; 3) E-mentoring may Support New Graduate Nurse Social Shock, and 4) E-mentoring May Result in Reciprocal E-mentoring. Each of these themes is discussed below:

1) Voluntary Versus Mandatory E-Mentoring

The theme of Voluntary Versus Mandatory E-Mentoring emerged when participants were invited to provide verbal feedback concerning the ideal qualifications of an e-mentor and e-mentee. One of the qualifications posed to the group was whether or not the e-mentor and e-mentee should volunteer for the e-mentoring program. In response to this qualification, many of the panel members emphasized what they saw as the importance of the e-mentor and e-mentee volunteering for the program. Consensus among participants, as evidenced by no dissenting view, cited willingness to actively engage in an e-mentoring relationship as crucial, while also emphasizing the critical role of the e-mentor. The importance of the e-mentor volunteering for the position was also highlighted in the acceptability assessment survey, where e-mentor as volunteer received an initial mean score of 6.4 and a re-rate mean score of 6.6 (see Table 13). The panel described how in their own minds mentorship was wrapped up in preceptorship or a part of preceptorship. This perception was also identified in the scoping review and interview results, where the terms mentor and preceptor were used interchangeably. Participants reported how leadership and preceptor roles are
sometimes forced on experienced nurses. As a result, preceptors experience a variety of emotional reactions such as “frustration”, “uncomfortable”, “resentment”, “hard work” and “no remuneration” (see Appendix Q). These notions were evident in the following quotations from experienced nurses when they described the importance of the e-mentor volunteering, which was not always the case for preceptors:

“I see it in practice where a manager kind of forces nurses to be in a team leader role when maybe they don’t want to be; it makes them uncomfortable. I don’t think that’s a positive for anybody. And I think that that might affect the mentee if their mentor wasn’t doing it on a voluntary accord” 

(Participant 6)

Similarly, another experienced nurse noted:

“I think it should be volunteer but as you know sometimes it’s not volunteer... they might be a mentor...but the whole thing sometimes it’s kind of forced on you. And so some people have a bit of resentment with it. And I guess sometimes it’s hard ‘cause there’s no remuneration for it, like there’s a lot of time put into it. I think now there’s a bit of remuneration but you put in a lot of time.

(Participant 5)

New graduate nurses concurred that some experienced nurses are being forced to be preceptors. They noted that, when this occurs, preceptors lack the buy in, motivation, and enthusiasm to be effective mentors, as evidenced by the following new graduate nurse quotation:

“Yeah. So they’re not being forced to do it; they want to do it. And maybe that is like they’ve precepted a bunch of people, but you know if you’re getting years into your career and you just want to go to the job and leave and not worry about that, but if ... you want to be a part of this, it would be a great option for people to have.”  

(Participant 1)

New graduate nurses also suggested that the impact of forcing experienced nurses into leadership roles, including preceptoring results in negative outcomes such as lack of genuine support for new graduate nurses. This was verbalized by a new graduate nurse:
“Just from personal experience as well, I could tell the difference between nurses who volunteered to help students and nurses who are forced to or are asked to but they don’t really have an option to say yes or no, and that does affect the mentee.” (Participant 7)

Further, forcing experienced nurses to become preceptors may lead to a decrease in knowledge translation and to their mentees being entrenched in the “sink or swim” culture (see Chapter 5 Interview Results for further discussion), as highlighted by Participant 3:

“So based on experience...preceptors that...had volunteered compared to people who hadn’t. You do see a difference in terms of their attitude. So people who have volunteered, they’re willing to help out. They know that you’re new. They’re willing to transfer their knowledge to the new ones, whereas the older nurses – not to stereotype them, but the older nurses who aren’t really – they’re forced into this role, they kind of sit back. They kind of let the new nurses do their own thing. They’re not as, I guess, participant or participatory as others who have volunteered. So I think that the RN should volunteer.” (Participant 3)

In summary, panelists related the e-mentor role to the preceptor role, which contained some mentoring and for the majority of panelists, preceptoring served as their only experience with mentorship in nursing. Panelists appeared to distinguish the roles of preceptor and mentor as separate entities with the preceptor role assisting with an introduction to the organization and having a more clinical focus. This distinction and clinical focus is evident in the following quote:

“I think that the new grad should have the e-mentor as an option no matter what. And because they don’t have to use that as a resource but it’s always there if needed because it is just extra support. The preceptor might be there for the clinical assistance and for most of the clinical learning. But the e-mentor is more for the socialization” (Participant 7)

Many participants expressed their critical perspectives about preceptoring, citing frustration and resentment arising from aspects like the degree of difficulty, being forced to be a preceptor and a lack of remuneration for the preceptor role. Panelists believed
that an e-mentor should volunteer for the e-mentoring program to ensure genuine *buy in* into the e-mentoring relationship with their e-mentee and e-mentoring program.

Another theme that emerged was experienced e-mentors may not be available or relatable and this theme is discussed below.

**2) Relatability and Availability of Experienced E-Mentor**

Having an e-mentor with experience was identified as being useful, however the importance of an e-mentor being relatable to new graduate role transition needs and workplace adjustment was deemed crucial. Participants commented on the need for the e-mentor to be able to relate to new graduate nurse transition issues such as “writing the NCLEX” (National Council Licensure Examination), “The New Grad Initiative”, and “Looking for jobs”. The theme of Relatability of Experienced E-Mentor emerged from the subtheme of “*Experienced Nurses Need to be Relational*” (see Appendix Q). The significance of this quality in an e-mentor was highlighted in the Acceptability Assessment Survey on having an e-mentor with at least 5-years of experience. Results indicated a slight change in scores (5.1 vs. 4.6) following consensus rating, indicating that having an e-mentor who is relatable to the new graduate may be more important than having an e-mentor with a minimum of 5-years experience (see Table 13). The importance of having a relatable e-mentor is evident in the following quotation:

“Yes, so I do agree with the experience having to be 5 years, however it just occurred to me that sometimes there’s this kind of relational aspect, you know, so if you’ve gone through the transition from school into nursing pretty recent to the mentee, it might be beneficial as well. Do you know what I mean?”

(Participant 6)
The theme of Availability of Experienced E- Mentors emerged from the subthemes of “Lack of Experienced Nurses” and “Experienced Nurses Leaving Urban Areas” (see Appendix Q). Study participants reported that they believed new graduate nurses would value an e-mentor who was engaged in evidence-based practice and ongoing professional development and had 5 years of experience, however, panelists suggested a very real possibility of the e-mentor having less than 5 years of experience due to a lack of experienced mentor availability. Panelists observed that experienced nurses don’t always stay in city hospitals due to the high cost of urban living or a desire to move away to raise their families. This notion was evident in the following new graduate nurse quotation:

“Some places don’t have five years experience...my unit...is notorious where there’s only a handful of nurses on each unit that have probably been there more than like 3 years ‘cause generally 2-3 years people start having kids or they start moving out of the city, especially downtown hospitals. It’s not very affordable for people to live down here... So if you’re trying to match new grads to an actual facility it might be difficult if you have an actual cap of 5 years. Plus the preceptors are only maybe 2 years fresh.” (Participant 1)

Additionally, the need to have an experienced nurse as an e-mentor was challenged in discussions about the stagnant nature of some experienced nurses’ practices. As another participant put it:

“So people who are working more than five years, policies of hospitals and protocols, they keep changing. So someone who’s been working for a lot longer, they’re not aware of the new changes compared to new nurses who are looking up the new policies and they’re up-to-date with all the new protocols compared to the nurses who aren’t willing to change and they go back to their old routines. So it’s hard with people, for nurses who are working for longer and aren’t going to change policies and change their routine. That’s hard too.” (Participant 3)
I discerned from the participants perspectives that while 5-years of e-mentor work experience would be valued by an e-mentee, experienced nurses in acute care facilities may not be available. Further, it was really the relational connection between e-mentor and e-mentee that was desired far more than the e-mentor’s years of work experience. Participants identified that in preceptoring relationships, the relationship may not always be relational and as a result new graduate nurse social shock situations become a reality.

E-mentoring may be a viable strategy to support new graduate nurse social shock and is discussed in the next section.

3) E-mentoring may Support New Graduate Nurse Social Shock

The theme of E-mentoring may Support New Graduate Nurse Social Shock was identified when new graduate nurses were confronted with social environments fraught with cliques and bullying. Social shock was evidenced by the following subthemes: “a lot of conflict”, “that way or the highway”, “getting them to see there is another side of this”, “exclusion”, “cliques’ and “not being considered for some things because they’re trying to bridge into being part of the team” (see Appendix Q). While such issues are not new to nursing’s culture, these reported accounts of patriarchal treatment by their peers was now the graduate nurses’ new reality. Thus, it was perhaps unsurprising that, with an initial score and re-score of 6.7 (see Table 13), the study participants identified assisting new graduate nurses to address conflict resolution as paramount for any proposed e-mentoring program. This rating was followed by a recommendation to educate new graduate nurses on how to respond to uncivil behaviours from their co-workers with a re-rate score of 6.0 (see Table 13). Patterns of bullying and patriarchal
treatment were evident in the following panelist’s recommendation for the need to educate new graduate nurses on conflict resolution:

“One of the things I think conflict resolution is a high thing ‘cause there’s always a lot of conflict. People don’t always agree and some people don’t actually – if you don’t agree with them they don’t exactly take it the right way ‘cause they’re always right or it should be that way or the highway. So I think there has to be some sort of way to tell people. Not everyone’s going to agree with you but maybe there’s another way of going around or maybe getting them to see that there’s another side of this”

(Participant 5)

Another participant highlighted the importance of conflict resolution skill support for the new graduate nurse as she described being challenged by a senior peer when she was a new graduate nurse:

“I remember starting as a new grad, even the practical skill component of what I’m doing was perhaps not the same as a nurse who’s been there for 15 years so if you’re working with them and then they’re challenging what you’re doing and what you know. So having to educate, “Well, actually in nursing school now the standard is to do this.” So having a voice to be able to do that. I think support from a mentor is really important with that piece as well.”

(Participant 6)

A further panelist added how critical it is to know how to respond to bullying and uncivil behavior as in the quotation that follows:

“Just about the education and how to respond to uncivil behaviour from co-workers. I’ve been working on the unit for just over a year and they’re still giving workshops on how to treat each other and bullying and that kind of thing. And you know, it’s a topic that people know about.... and there’s so many different people on the unit working together. There’s going to be some uncivil behaviour. It just happens. And I think it is important that nurses do learn about it consistently and talk about it instead of just this is just a one-time thing. Just to emphasize on the importance of that.”

(Participant 7)

This participant went on to speak about exclusive workplace practices that exclude new graduate nurses:

“Just one thing I wanted to add to uncivil behaviour. I think things like exclusion are – I think it’s a big part of that. When people are speaking in other languages or you know when you’re not talking to – you’re talking about something really specific to one person in the lunchroom...
and not to somebody else, it's automatic exclusion, especially with the language. Just something I had to say.”  

(Participant 7)

Social shock as a result of exclusionary practices such as cliques was further illuminated in the following quotation:

“It just makes me think when we talk about the socializing in bridging the new grad into an environment like that, I know definitely in my workplace setting I see it all the time. There’s definitely really cliques. And it’s actually, when I can step aside and do a bird’s eye view it’s pretty sad to see the kind of behaviours that go on and the exclusion that happens. So with the new grads are, you know, they’re not even considered for some things because they’re still trying to bridge into being part of the team, right?”  

(Participant 6)

Despite these unwelcoming work environments for some new graduate nurses, experienced panel members indicated the value and promise of new graduate nurses and felt that they could learn from them, an idea also identified by authors in the Scoping Literature Review: Chapter 4.

The notion of transferring traditional reciprocal mentoring to the e-mentoring platform is discussed next in reciprocal e-mentoring section below.

4) E-mentoring May Result in Reciprocal E-mentoring

Panel participants hypothesized about the Possibility of Reciprocal E-mentoring. This theme emerged from the subthemes: “mentoring is a two-way street”, “learning goes both ways” and “we’re meant to be mentoring each other” (see Appendix Q). The possibility of reciprocal e-mentoring is evident in the following quotation about mentoring students:

“learning, it never ends. And when you’re teaching students you learn a lot from them as well. And there are a lot of nurses who are old fashioned and do things the old way, but there are a lot of new ways that are more efficient or more effective and nursing students, they can help a lot with that. There’s a learning that goes both ways.”  

(Participant 7)
A more specific example of the potential for reciprocal e-mentoring for the new graduate nurse was provided by one of the panelists as noted below:

“I think mentoring can also be a two-way street. Say I have 5 years experience and someone’s new and they’re just new off the street, I’m going to teach you things and you’re going to teach me things. So I may not be tech savvy. New people are tech savvy. I’m not tech savvy. So you can teach me to be. We’re meant to be mentoring each other.”

(Participant 5)

Participants identified that e-mentoring may result in reciprocal e-mentoring where e-mentee and e-mentor learn from each other and foster a relatable culture of e-mentoring support. Further, e-mentoring may be a possible socialization strategy, where voluntary versus mandatory mentoring occurs, which may augment traditional preceptor relationships, which at times are forced and not relational. Lastly, relational e-mentoring may support new graduate nurse social shock.

**Conceptual Map III**

A conceptual map, depicted in Figure 9 (below), was developed to provide an overview of analysis for the study topic of interest for this chapter: e-mentoring as a possible socialization strategy and to explore e-mentoring program intervention features to support new graduate nurse transition. The figure is used to structure the findings from the panel discussion about specific e-mentoring program features.
Figure 9. Panel Results: E-Mentoring Program Intervention Features
The researcher/panel facilitator provided panel members with an e-mentoring website example (https://primarytech.com) in order to stimulate discussion about e-mentoring program features. A screen shot of the website example is shown in Figure 10 below:

![Sample E-mentoring Website](image)

**Figure 10. Sample E-mentoring Website**

Through structured questioning, specific program logistics emerged, providing a deeper understanding on how e-mentoring may play a supportive role for new graduate nurse transition. Specific e-mentoring program features are discussed next.

**E-Mentoring Program Intervention Features**

**Program Length.** Participants were asked about their preference for proposed e-mentoring program lengths of 3 months, 6 months or 1-year. A pre-survey mean score of 5.4 indicated the majority of participants believed an e-mentoring program should be three months in duration. However, following the panel discussion, the mean score dropped to 4.6, indicating 3-month duration was no longer considered desirable. The
3-month program duration was believed to be too brief to offer the new graduate nurse effective support during the early phase of workplace transition as evident in the following panel discussion quotations:

“I definitely think 3 months should be the bare minimum. It establishes trust and communication, your expectations. And the relationship kind of builds. And then I do think after that, you know, it can vary depending on the needs that are required”  
(Participant 6)

Other panel participants echoed this viewpoint as follows:

“I think 3 months is, as [Participant 6] said, the bare minimum... but I think it can range as well depending on the placement. So 3 months I think is a good step into it and then if you do need more assistance or mentoring then an extension of the program would be helpful”  
(Participant 7)

A program duration of 6-months was identified as the preferred e-mentoring program length with a 2nd round mean survey score of 5.6/7. The 6-month time frame would enable the new graduate nurse to establish familiarity with potential supportive resources on her/his unit and after which the new graduate nurse would not have to rely on the e-mentor support as much. This recommendation was evident in the following panel discussion comments:

“So after 6 months I feel like the new nurse would have gotten accustomed to the environment, had gotten to know some of the nurses so that, at the moment, if there’s any concerns they can just reach out to any of the nurses who are working on the floor, the nurse manager if they have any issues, and educators. So they don’t necessarily have to go to the e-mentor ‘cause by then you’d know the resources that are available at the hospital or any organization.”  
(Participant 3)

Participants also felt that the 6-month mentoring relationship could be extended to 1-year if the mentee felt she or he still needed e-mentor support. This viewpoint is evident in the following panelist’s written survey feedback:

“Set it at 6 months as an expectation with the option of 1 year”  
(Participant 1)
Other discussion panelists expressed similar sentiments as follows:

“I think maybe a year is a good time...within the year usually there’s something that comes up...you might not need anything for a couple months and then like a few months later you might need them. So I think it would be a good idea to keep it for a year...the new grad would feel there’s always someone that I can come to in this first year...’cause I mean things do come up and they don’t always come up the first little bit during orientation or whatever. Some things come up a little later.” (Participant 5)

Conversely, designing the e-mentoring program to be 1-year in duration was identified by some discussion panelists as a major time commitment that may deter potential e-mentors as evidenced in the following quotation:

“I feel like if you propose an e-mentorship for a year you’d get not a lot of people signing on just because I think that commitment, that idea of like “I have to do this for a year. That’s such a long time. What if I decide to like get a new job somewhere else? I feel limited... so I feel like the 1-year is a big commitment. For me as an e-mentor I’d be like that’s kind of a long time...I think in terms of getting someone to commit for 1 year, I think that’d be more difficult than a 3-month or 6-month stint”

(Participant 2)

As e-mentee transition needs may vary, in the ensuing discussion, panelists suggested that one way to address this issue was to create an e-mentoring program that could renew after 6 months as evident in the quotations below:

“Maybe 6 months with option for renewal for another 3 – 6 months”

(Participant 5)

Another participant concurred as follows:

“I like the idea of a year, maybe more like a 6-month renewal contract sort of deal”

(Participant 4)

**E-mentoring Models.** Participants were asked to offer their perspective on whether an e-mentor should be someone who is internal to the organization, external to the organization, or even anonymous. The majority of participants expressed the viewpoint that an e-mentor should be internal to the organization (see Table 13). As the following
written feedback suggests, an internal e-mentor would be familiar with the organizations’ culture and practices:

“Having a mentor in your own organization will make all the rules, code of conduct, polices, patient population, etc. relatable.” (Participant 1)

However, participants recognized that there could be challenges associated with finding an ideal internal mentor because of a lack of experienced nurses on the unit. Discussion continued about other possible models that could result in securing an experienced and relatable e-mentor such as utilizing an experienced nurse from another unit in the facility that had similar experience or clinical background as the e-mentee. The following is an example of this discussion:

“But I do agree with your point that sometimes maybe that unit doesn’t have [experienced nurses] – but I guess you don’t necessarily need to be paired with someone on your unit ‘cause it’s e-mentorship. I guess it could be someone elsewhere, like in the whole hospital I guess or within – or who has like a similar experience or background as you.” (Participant 2)

When participants were asked to indicate their level of agreement regarding having an internal or external mentor, post-discussion scores indicated a shift in opinion. There was a modest increase in acceptability towards having an external mentor with an initial disagreement survey mean score of 2.9 to 2nd round agreement survey mean score of 3.6 (see Table 13). This shift in opinion may have prevailed as an external mentor might be “unbiased” and an external mentor may create an environment where the new graduate nurse was “not being judged”.

For example, participants suggested that while an external e-mentor might not be familiar with the organizations’ specific practices and culture he/she could perhaps be more unbiased and non-judgemental in her/his support of the new graduate nurse.
Similarly, participants suggested that an external e-mentor who was outside of the organization could serve as a source of comfort for a new graduate nurse who is unable to approach a colleague on the unit due to their “inappropriate”, “uncivil” or “bullying” behaviour. This perspective is evident in the following panelist’s quotation:

“I tend to be split between internal and external because I think internal, there’s this knowledge of the organization the mentor has, they have experience there, they might know the inner workings, people, blablabla. Externally though, it goes without this known bias, feeling comfort of disclosure, that they’re not being judged.” (Participant 6)

Another nurse further elaborated on the benefits of an external mentor when she expressed:

“There are some good points about the e-mentor being external because there is that unbiased opinion. Also, as [Participant 6] said, no judgement.” (Participant 7)

It was also suggested that an external mentor may be able to provide unbiased career advice as per the following panelist quotation:

“But if it was someone far away, not in the same organization, maybe I would want to ask them questions about like career trajectory. I’ve been here 6 months and now I’m thinking I want to be... so what’s your path or what’s your advice?” (Participant 4)

Overall, study data revealed that participants believed that both internal and external e-mentors could be beneficial as evident in the following written survey feedback:

“Both Internal and External have merits.” (Participant 5)

The researcher inquired with study participants about the possibility of having an anonymous e-mentor. This line of discussion was pursued because having an anonymous e-mentor had been highlighted as a viable possibility by Phase 2 study
participants. This anonymous e-mentoring program feature received a disagreement consensus mean score of 2.9 in step 1 Panel Acceptability Assessment Survey. Panel discussion ensued to explore the feasibility of this option, however there continued to be consensus about not having an anonymous e-mentor as reflected in a mean survey score of 2.6 in the second acceptability round (Table 13).

Conversely, one participant expressed the merits of having an anonymous e-mentor suggesting that anonymity might be helpful in producing action about sensitive issues rather than maintaining the status quo. The following quote from an experienced nurse illustrates this view:

“having someone anonymous can say, “Hey look, maybe you’ve got to stop and think about this. What’s going on is wrong and you might be - ” And the mentee might think, “Oh I’m going to get people in trouble.” And you might say, “Hey listen, they’re wrong and what you’re going through is wrong and you should step up to – not step up to the plate – but you should actually take some action or go to the appropriate people to get this sorted out.” Whereas people who are in the organization might say, “Well, they’ve done it – it’s been like that for 10 years and so-and-so is always like that, so just kind of accept it,” when that behaviour is not acceptable. (Participant 5)

Another expert panel member added:

“I agree with what [Participant 5] was saying too that if there’s behaviour that’s going on, everybody’s probably been told that person’s just like that and it’s not appropriate behaviour so that external piece might be helpful” (Participant 1)

Matching Process. Panelists were asked about how they would propose that an e-mentee and e-mentor be matched. Participant views were mixed between having the e-mentee choose their e-mentor (see Table 13) versus having the e-mentoring pair matched by a third party (see Table 13). Participants suggested that having the e-mentee choose his/her e-mentor could promote his/her vested interest in the selection
of a specific role model and may also enhance their commitment to the relationship.

This viewpoint is evident in the following quotes:

“I think the e-mentee should be picking their mentor ‘cause ideally I think this program is meant for them. So the mentor and the mentee, this is their relationship. I think like who is to say their relationship isn’t a good one? You aren’t focusing on the right things, like these people, these 2 people are the ones to decide what they want out of this connection and what’s going to help them with their practice”

(Participant 2)

Another participant went on to say,

“If the e-mentee selects their own mentor based on biographical information, they may be more likely to select someone who best reflects their ideal role model, etc. to fit their needs”

(Participant 7)

Further, another participant agreed as follows:

“I think it may be more valuable to the e-mentee to match their own mentor, as they may be able to find someone with similar characteristics to themselves.”

(Participant 1)

There was a modest shift in opinion concerning having a third party assign the mentoring pair as a viable feature as evidenced by a change in score between the first and second acceptability assessment survey. The first round agreement mean score was 5.3 and the second round agreement mean score was 4.9 (see Table 13). While this was a new approach for some participants, it was identified as perhaps being unbiased and could be further advanced with some objective/demographic data to formulate the match. Further, having an e-mentor who possessed different characteristics and experiences from the e-mentee was viewed favourably by some panelists whose perspective was that further learning could be achieved in this type of e-mentoring relationship. Evidence of support for having a third party match the
e-mentor and e-mentee is apparent in the following quotation:

“I’d say a third party, if they select it, there’s a non-bias review to it. It can get a little sticky when the e-mentor/e-mentee starts choosing. You know, they’re looking for something in particular but sometimes we learn new things from an individual who’s completely different from us. So they don’t have that – so whoever is choosing, they’re not looking at the wide scheme of things whereas a third party looking at it, it’s a bigger picture thing”  (Participant 3)

Another participant went on to say:

“I also didn’t think about the third-party assignment at first. Like I thought the same thing: the e-mentee should be the one picking. But...sometimes you pick like, if you’re talking like group work, you pick a friend as the person you want to do your group work with. Sometimes that ends up being a bomb and doesn’t work at all just because like it ends up being less about growing and growing together... and just like getting the basics done”  (Participant 5)

Overall participants in this phase of the study indicated that, while the concept of e-mentor selection is relatively new, having the e-mentee choose her/his e-mentor (see Table 13) was their first preference and a third party assigning the e-mentoring pair was their second choice (see Table 13).

**Program Modality.** Participants were asked to express their preference for three different modalities of contact for an e-mentoring program, specifically the use of email, texting or Skype. The majority of participants identified emailing and texting as the preferred program modalities of contact noting the importance of mobility and convenience of these real time modalities. This was evident in the re-rate survey mean score being above the threshold average of 5.0 (see Table 13) and panel discussion. These modalities were identified as forms of communication that would promote the sharing of relationship issues with co-workers. The use of text messaging was explicitly highlighted as a viable method of contact that would encourage timely and less formal communication exchanges. Nevertheless, participants highlighted that generational
issues related to the use of technology could exist, specifically noting the high usage of cell phones by the millennials as compared to older generations. This statement is supported in the following quotation:

“E-mail, so texting and e-mail...I’m wondering...is there an age gap?...because there’s a younger generation and an older generation. And the younger generation always has a phone and is always texting, whereas the older generation does not always have their phone with them, so that could make the difference there.”

(Participant 5)

The use of Skype as a modality of communication was not viewed favourably by panel participants in the 2nd round Acceptability Assessment Survey. Panel consensus results indicated disagreement with Skype as a program feature with a mean score of 3.0, which was a shift in perspective from the panel’s initial acceptability agreement mean score of 5.3. Skype was not viewed as an optimal way to communicate because of the need to formally set up a meeting in a timely manner as identified in the following written statement:

“Giving people opportunity to text or email may allow them to be a little more candid or seek advice in stressful times as opposed to waiting for their mentor to also be available for a Skype session.”

(Participant 1)

Participants concurred about the frequency and difficulty of scheduling contacts as evident in the following panelist discussion quotation:

“Yeah, I think some of this modality of contact kind of plays into the frequency. So you know, if you’re more frequently connecting I feel like the easiest way is through e-mailing and texting. Skype is kind of structured. You need to maybe text them to arrange a Skype time and date, and presumably the mentor is working and practicing and perhaps busy so that doesn’t always work out. So I think I would agree with the scores there”

(Participant 6)

Further, some participants expressed concerns about revealing their personal and environmental image when using Skype, and would not feel comfortable sharing this
information with others. This consensus about not using Skype was evident in the following quotation:

“I feel like if you were Skyping with somebody, you’d feel a sense of a super tiny house or be aware of what environment you’re in. It wouldn’t be as, like you can’t do it from anywhere. Whereas people would have a phone, you can send an e-mail. At work, you can send an e-mail. Texting is another way. And also people might be more candid if they’re having relationship problems with co-workers, they could still respectfully – typing it or whatever – but kind of give you more information, whereas if you’re face-to-face with somebody, I don’t know. I don’t know if somebody would be as candid.”

(Participant 1)

Conversely, another participant noted the global advantages of using Skype and not requiring a cell phone to connect as evident in the following written survey feedback:

“With Skype you could be anywhere in the world”

(Participant 5)

**Frequency of Communication.** Panelists were asked to provide their perspective on the frequency for which e-mentors and e-mentees should communicate. Participants expressed the opinion that there should be regular contact between the e-mentee and e-mentor. More specifically, they suggested contact should be weekly or bi-weekly during the initial phase of the program and could become monthly as needs of the mentee change during workplace transition and the mentoring relationship develops.

Panelists supported this notion in their written feedback as follows:

“Going from more often to less often as time goes on.”

(Participant 1)

As e-mentee needs may vary, another participant provided further time specifications as follows:

“Weekly/biweekly & PRN. Frequency may vary with mentee needs.”

(Participant 2)
**Response times.** Participants discussed their viewpoints on the acceptable length of time for e-mentors to respond to communication from mentees. The panel discussion identified that response times could vary from “24 – 48 hours” based on other commitments and could also include regular check-ins. Further, response times would be dependant on the needs of the e-mentee. These response time viewpoints are evident in the following quotations:

“I think a response in 48 hours is reasonable. For nurses, we work long shifts and sometimes we work multiple in a row and it can be hard to get back to someone right away” (Participant 7)

Another participant went on to say that just a “check in” would be helpful as a regular contact:

“I would hope within the next, like, day. If I e-mailed somebody I would hope that someone was e-mailing me back within the next day. So maybe having like, maybe having set check-ins. If we’re talking weekly, you say like by every Tuesday you send an e-mail out. Whether it’s like, “Everything has been fine this week, don’t really need any help but I’ll check in next week.” (Participant 1)

Participants also suggested that supplementing e-mentoring with a phone call could be helpful depending on the transition needs of the e-mentee. This was evident in the following quotation:

“Sometimes there’s just so much information that you want to tell someone that you can’t include all that in an e-mail, all the details. So sometimes it’s easier just to pick up the phone” (Participant 1)

**Length of Program Training.** Participants were asked to provide input into how much time they would be willing to commit to e-mentor training. Re-rate survey mean score of 6.1 for one-day of e-mentor training versus survey mean score of 4.1 for two-days of training reflected an understanding of the need to develop skilled mentors, but also
stressed the time limits to which nurses would be willing to commit to such training. The consensus among participants was that one day of training would be acceptable.

**E-Mentoring Program Training Topics.** Participants were provided with a list of program training topics and were asked to rate their level of agreement for each. The highest scored topic was conflict resolution with a 6.7 mean score (see Table 13) in both the first and second acceptability assessment survey. This topic was followed by education on how to respond to uncivil behaviours from co-workers with a re-rate mean score of 6.0. These scores support the notion that both of these topics are highly needed for new graduate nurse workplace adjustment and ultimately may assist with new graduate nurses’ experiences of social shock discussed earlier in the chapter. Positive role modeling and debriefing were also deemed as important topics for an e-mentoring training program. Maintaining workplace and patient confidentiality was not seen as needed in the training program, with a mean score of 4.6 (see Table 13). Expert panel feedback was that confidentiality issues are ingrained into nursing practice. The importance of the e-mentor being able to relate to current issues facing new graduate nurses was evident and is reflected in the following written quotation:

“Also provide info on what’s facing new grads, changes to testing patterns, where jobs currently are. Changes to entering the nursing work force that might be new.”

(Participant 1)

The importance of providing constructive feedback was noted as an additional orientation topic as follows:

“Constructive Criticism as a topic”

(Participant 6)
A participant’s written comment highlighted the need for administrative ‘buy-in’ but also expressed a sense of doubt as to whether all hospitals would see e-mentoring as a good idea:

“How would you get all hospitals to do this (it’s a good idea)” (Participant 5)

What follows is a summary of themes and specific e-mentoring features.

Summary

Panel participants provided the researcher with additional insight and new knowledge about the needs that arise during the first year of employment as the new graduate nurse transitions into the role as independent practitioner and adjusts to their workplace environment. In the first part of the chapter inductively role transition needs in workplace adjustment were identified and in the second part of the chapter e-mentoring program intervention design features that could support these needs were identified.

Panel participants provided feedback on proposed e-mentoring intervention features through a pre-acceptability assessment survey, group discussion and post-survey. The group expressed their views that an e-mentor should be a volunteer, use evidence-based practice, engage in ongoing professional development, be a good role model, have some technical expertise and nursing experience. Five years nursing experience was proposed as a qualification for an e-mentor; however, panel members believed that nurses with 5-years of experience are often not available in work settings resulting in the need sometimes for nurses with less than 5-years experience to serve as mentors. While the overall panel consensus was that having an e-mentor would be a valuable experience, a common sentiment expressed by panelists was the necessity for
e-mentors to be relational, hence be able to relate to new graduate role transition needs in their workplace adjustment such as finding a job, writing the NCLEX registration exam and settling into a new job. Panelists believed that the e-mentee should be a volunteer and be willing to actively engage in the e-mentoring relationship.

Frequency of communication between e-mentor and e-mentee was recommended to be weekly or bi-weekly in the beginning of the e-mentoring program and could decrease to monthly as the needs of the e-mentee changed. The panel favoured emailing as the modality of contact between e-mentor and e-mentee followed by texting. While Skyping was not a popular option, it was favoured by some of the participants who reported that it could be used from anywhere in the world and did not require the use of a cell phone. E-mentoring program length was recommended to be 6-months. Some participants felt that 3-months would be the bare minimum program duration and that participants should have the option to extend the program to 1-year at the 6-month point.

The panel recommended that the e-mentor be internal to the organization because the e-mentor would be knowledgeable about internal policies, procedures and organizational culture. Some panelists, however, felt that an external e-mentor could have merit when an internal mentor is not available or when an e-mentee wants an unbiased or non-judgemental opinion. Further, having an anonymous e-mentor was felt to be a possible option for e-mentees who need advice on sensitive issues.

The panel favoured having the e-mentee buy-in or choose their e-mentor based on an e-mentor biographical description, closely followed by having a third party assign
the e-mentoring pair. This latter option could be an objective method in formulating the match.

Social shock was highlighted as a very real possibility for the new graduate nurse during his/her workplace adjustment. Panelists cited many instances of unwelcoming and exclusive workplace practices. Study participants believed an e-mentoring program could assist with new graduate nurse transition and workplace adjustment. The following e-mentoring program orientation topics were rated highly by participants: conflict resolution and education on how to respond to uncivil behaviours from co-workers. Panelists identified that they would be willing to commit to one day of training for the e-mentoring program, however training recommendations could vary based on individual program pedagogy such as role-playing conflict and social shock encounters. Positive role modeling and debriefing were also deemed to be important topics for an e-mentoring program. Maintaining patient/client and workplace confidentiality were not considered an important topic for e-mentor training as it was believed that these topics were ingrained in nursing practice.

Overall, panelists agreed that an e-mentoring program for new graduate nurses was “a good idea” and there was hope of finding a volunteer e-mentor who could relate to their needs. Further, e-mentoring was identified as a potentially viable platform that could provide an opportunity for reciprocal mentoring and assist new graduate nurses to cope with feelings of social shock.

In conclusion, panelists were able to provide initial and re-rate acceptability assessment survey scores on e-mentoring program intervention features and provide feedback on specific program component and design features. The results of this study
phase suggest that e-mentoring could augment current traditional preceptoring approaches that focus more on clinical issues and do not emphasize relatability in the mentoring relationship. Panel results established that an e-mentoring program for new graduate nurses is an acceptable strategy to pilot test for new graduate nurse transition and workplace adjustment.

Despite the promising direction of this study for a proposed e-mentoring program intervention to support new graduate nurse transition and workplace adjustment, there are contrary views to consider such as lack of availability of experienced nurses to serve as mentors, guardedness by some to commit to a long-term relationship, doubt about organizational buy-in, and a lack of technical competence for some. These contrary views are explored further in the Discussion Chapter.

Study results indicated that an e-mentoring program may foster the new graduate nurse’s ability to fit in and be welcomed into the nursing profession. Further an e-mentor may be able to provide the new graduate nurse with relational mentoring and minimize the impact of social shock.

What follows is Chapter 7: Discussion, Synthesis and Interpretation of Phase 1, 2 and 3 Results where the notion of relational e-mentoring and it's ability to provide relational e-mentoring for new nursing graduates is further developed.
CHAPTER 7

DISCUSSION, SYNTHESIS, INTERPRETATION AND IMPLICATIONS

The purpose of this chapter is to provide a synthesis and interpretation of results for the research questions addressed in Phase 1, 2 and 3 of the study. The overall research objectives were to identify new graduate nurse socialization needs as they related to new graduate nurse role transition and workplace adjustment; identify strengths and limitations of existing mentoring interventions; explore e-mentoring as a possible socialization tactic and identify evidence-based recommendations for the components and design features of a proposed e-mentoring intervention. Key findings across the three study phases (scoping literature review, interview and panel results) will be reported and the discussion will be framed based on Figure 11, The Process of New Graduate Nurse Transition, Transition Support and E-Mentoring Socialization Features, which is a schematic conceptualized interpretive synthesis of the three data sources. The model provides an overview of new graduate nurse workplace adjustment and transition. It depicts the new graduate nurse’s journey to gaining acceptance and achieving equal status with her/his peers. This journey, however, may be fraught with hierarchical cultures, cliques and bullying, resulting in social shock and stress. E-mentorship may be able to support new graduate nurse socialization through fostering his/her adjustment to professional practice and workplace relations. Further, an e-mentor may assist the new graduate nurse with conflict resolution and provide him/her with emotional support. Key e-mentorship program components include positive role modeling, building confidence while gaining equal access, strengthening coping
strategies and fostering feeling safe. Ultimately, e-mentoring may result in the goal of a successful adjustment to workplace practice. Furthermore, theoretical and empirical findings across the three phases of data collection will be identified. Finally, study limitations, and proposed evidence-based recommendations for the design of an e-mentoring intervention will be discussed.

Figure 11. The Process of New Graduate Nurse Transition, Transition Support and E-Mentoring Socialization Features
Study results from the three phases of data collection confirm that the new graduate nurse undergoes a period of adjustment transitioning from the role of student nurse to staff nurse. New graduate nurses identified *gaining independence* as a staff nurse is an exciting, liberating and autonomous experience. Nevertheless, this independence was often reported as being undermined by a lack of confidence on the part of the new graduate nurse that was linked to a fear that they could not meet the job demands of the profession. Further they experienced a sense of “outsidership” as the newest staff members of the nursing team. As was the case in this study, authors within the scoping review found that new graduate nurses lacked confidence in meeting the new job demands of a practicing professional nurse (Banks et al., 2011; Baumberger-Henry, 2012; Evans et al., 2008; Quell, 2010; Snow, 2013; Smith, 2008; Williams, 2013). However, there is some evidence that being a student on the same unit to which you are hired increases new graduate nurse confidence (Steen et al, 2011). New graduate nurses also craved acceptance as part of the nursing team (Evans et al., 2008). The participant data collected in the interview accounts in Phase 2 confirmed the findings of these earlier studies. Based on these study results, the evidence suggests that the new graduate nurse’s sense of confidence in his/her ability to meet the expectations of the profession and manage workplace conflict plays a significant role in his/his adjustment to the workplace, particularly to his/her sense of belonging and being part of a nursing team. Preceptorship has been touted as the main strategy to
assist with new graduate nurse transition and workplace adjustment, however the evidence suggests that there is an underestimation of the transitional aspect of gaining independence for the new graduate nurse as they start their professional career in environments that are not conducive to fostering their independence and for some result in a sense of social shock and stress.

Study findings across the three phases provide evidence that traditional preceptorship is not fully meeting the needs of new graduate nurses in terms of reducing their fear levels and workplace conflict - factors that could impede confidence building. Unlike mentorship, preceptorship is evaluative in nature and focuses on the achievement of clinical goals as directed by ones’ preceptor. These data would suggest that traditional preceptorship models are sometimes failing to instill the confidence necessary for new graduate nurses to feel comfortable in their nursing roles and achieve independence (Evans et al., 2008; Smith, 2008). The evidence in the current study suggests that new graduate nurses need more than clinical skills as they adjust to the profession. They need to develop confidence in their ability to navigate the demands of their new profession. The support required to foster such confidence would be better provided through a mentoring relationship than through the inherently hierarchical and evaluative relationship embedded in preceptor models.

**Gaining Equal Status**

Study participants across the three phases identified their acceptance as a full-fledged registered nurse on equal status with the rest of the nursing team as an important adjustment in their transition from student to graduate nurse. Study findings
however, provide evidence that this transition could be made more difficult due to the oppositional culture that has become an endemic aspect of the nursing profession (Baumberger-Henry, 2012; Boychuk Duchscher, 2009; Evans et al., 2008; Parish, 2011). New graduate nurses described work environments that were uncomfortable, lonely and demeaning and gave rise to a multiplicity of emotions ranging from difficult to overwhelming and scary to frustrating. Participants vividly described situations in which they lacked social resources and supports. For example, they reported accounts of being reprimanded if they questioned the status quo, a response that made them feel scared and alone. Based on current study findings, new graduate nurses require relational supports throughout their transition from student nurse to colleague. Again, this type of support is beyond what the traditional preceptor role is able to offer and points to a gap in the assistance that could be provided during the workplace transition of the new graduate nurse. Further, providing new graduate nurses with a supportive mentor colleague to address these social shock encounters could address the relational component that appears to be missing in new graduate nurse workplace adjustment and transition processes.

**Social Shock**

Current study results revealed that new graduate nurses suffered from social shock during their transition to staff nurse. In their role as student nurse, they had often been treated as welcomed visitors to the nursing unit. As new graduate nurses, however, the experience could be quite different. Study interviewees and panelists described accounts of new graduate nurse exclusion, through workplace cliques and
bullying behaviours, which resulted in new graduate nurse feelings of *social shock*. More precisely, as new graduate nurses they were now *insiders* within a familiar culture; however, they felt socially unsafe and unaccepted. Literature reviewed in the narrative literature review and scoping review echoed the findings of the current research (Baumberger-Henry, 2012; Boychuk Duchscher, 2009; Evans et al., 2008; Laschinger et al., 2012, Parish, 2011). Additionally, the evaluative nature of the preceptor relationship may have contributed to new graduate nurse social shock, by reinforcing traditional nursing hierarchies that are known to be oppressive and unwelcoming (Boychuk Duchscher & Myrick, 2008).

Hence, data from this study identified that new graduate nurses need to be socialized into the profession to facilitate their entry to practice and while mentoring was found to assist with socialization, it appeared to be lost in preceptor translation. As a result, organizational cultures in the nursing profession have failed to provide adequate social supports for new graduate nurses during their workplace transition. In fact, Phase 2 and 3 study participant data and authors within the narrative literature review and scoping review noted that some organizational cultures were actively hostile to new nurses (Evans et al., 2008; Hazelton et al., 2011; Laschinger et al, 2012). Such hostility, combined with a lack of social supports creates the ideal environment for the new nursing graduate to develop stress.

**Stress**

Current study findings confirmed Boychuk-Duchscher’s (2009) Transition Shock Theory where she also identified the initial new graduate role transition period as a very
stressful time. Study participants across the three phases described work environments where experienced nurses were at times unaware of the impact their negative comments had on new graduate nurses (Baumberger-Henry, 2012). Additionally, study participants in Phase 2 and 3 provided numerous accounts of cliques and bullying in the workplace, which lead to highly stressful situations. Once again, current study results corroborate that existing preceptor models have not effectively addressed the relational component of new graduate nurse transition and workplace adjustment.

This research confirms that the process of transition and workplace adjustment for new graduate nurses involves an increasing sense of independence, a journey towards full acceptance by one’s peers, a sense of social shock, as well as the stress that comes from navigating the new role in an environment that is often oppositional. The interviewees and panelists who participated in this study suggested a need for relational and social support during this difficult period. The traditional preceptor model was not deemed to provide the type of relational and social support that would support the new graduate nurse during the process of transition and workplace adjustment. Hence, a different model of relationship between new graduate nurses and experienced nurses is needed to assist the new graduate nurse to navigate through his/her adjustment to professional practice and to foster feelings of safety and acceptance.

Kram (1985), in her mentoring framework, posits that mentoring is focused on socialization. Additionally, Kalbfleish’s (2002) Mentoring Enactment Theory highlights mentoring as a close personal relationship. Finally, Van Maanen and Schein’s (1979) socialization tactic of individual socialization ensues that the newcomer is provided with individualized attention to their unique range of experiences without collective agendas.
or hierarchical borders. Hence, mentoring socialization supports may assist in the psychosocial management of stress for the new nursing graduate. Further, an e-mentoring relationship may be an untapped supportive role for the new graduate nurse because of its ability to be focused on the relational, rather than clinical part of workplace adjustment and may provide the new graduate nurse with transitional mentorship guidance and support.

**Mentorship Support Needs**

**Fostering Adjustment to Professional Practice**

The current research across the three Phases suggests that traditional preceptorship is not fully meeting the needs of new graduate nurses as they adjust to professional practice. More specifically, traditional preceptorship models are not reducing new graduate nurse stress and instilling the type of confidence necessary for them to fit in and feel comfortable in their new roles (Evans et al., 2008; Smith, 2008). Current study findings revealed that new graduate nurses need to have a positive role model to foster their adjustment to professional practice (Evans et al., 2008; Hazelton et al., 2001; Hoarea et al., 2013; Weng et al, 2010).

Fostering adjustment to professional practice involves demonstrating a vested interest in the new graduate nurse’s successful transition. Study participants suggested that evidence of investment in the mentoring role is also accomplished when the mentor volunteers for the role. Furthermore adjustment to professional practice is promoted through positive role modeling, demonstrating to the new graduate nurse successful
coping and conflict resolutions skills and providing the new graduate nurse with support and advice.

Traditional new graduate nurse orientation and preceptor programs did not provide the vested long-term social support new graduate nurses identified as key for successful transition and adjustment to professional practice, which included fostering workplace relations. Additionally, study participants reported that preceptors who were not volunteers could be more harmful than helpful because they were not truly vested in their mentee’s success. By extension, it is likely that mentors should be volunteers, fully committed to their relationship with a new graduate nurse.

Fostering Workplace Relations

Fostering workplace relations involves having a mentor who is willing to commit time to the relationship and who has the requisite skills and knowledge to support the development of effective workplace relations. Data findings across the three study Phases provided evidence that new graduate nurses need to feel safe in their workplace environments. Study findings revealed that the everyday work experience of preceptors posed a significant obstacle to organizing face-to-face time with the new graduate nurse (Baxter, 2010; Woodworth, 2012). Phase 2 participants suggested that confidential debriefing with an e-mentor that was not linked to a performance indicator could foster support and workplace relations. Additionally, authors in the narrative and scoping literature reviews and study participants noted that using technology was a viable communication and support strategy to enable flexible time for the mentee and mentor to correspond (Banks et al, 2011; McMurry, 2012, Phoenix, 2013). E-mentoring
has the potential to encourage frequent and more in-depth social support for the new nursing graduate, than that which is provided by traditional preceptorship models and as such, has the potential to enhance workplace relations.

Study participants believed that a mentor should have experience and knowledge of the transition challenges for new graduate nurses and knowledge about organizational policies and procedures in order to be in a position to provide advice. Five years of work experience was identified as optimum, however, they also highlighted the importance of the mentor being relatable and invested in the relationship as being more important than having the optimum years of experience qualification. Further, Phase 2 new graduate nurse interviewees reported that an e-mentor may assist them with workplace navigation of practical matters such as, understanding their paystubs, making requests for days off and other workplace entitlements.

Study participants identified the need for new graduate nurses to have good emotional support during the process of transition into practice and workplace adjustment. Having an experienced nurse mentor who is relational and emotionally supportive to new graduate nurse transition may assist the new graduate nurse with fostering workplace relations.

**Providing Emotional Support**

Study results across the three Phases identified the need for emotional support for new graduate nurses to address transition, workplace adjustment, and social shock. Participants emphasized that having an e-mentor would be comforting and could
provide emotional support by “always having somebody there in your corner” or likened to a hero (Kalbfleish & Bach, 1998). Mentoring was identified by interviewees and panelists as having the potential to improve the transition experience for the new graduate nurse because mentoring has the ability to create a more relational perspective than that created through preceptoring. Further, mentoring has the potential to create a collegial friendship, which may assist the new graduate nurse to cope with issues when adjusting to professional practice. Additionally, without emotional support the new graduate nurse may become burned out (Gustavsson et al. 2009; Laabs, 2011) and end up as “one of the crabby old nurses” (Laabs, 2011, p.425) which could have negative consequences for patient care and the health care system. Overall, current study participants agreed that exploring the relational aspect of mentoring between e-mentor and e-mentee using an on-line platform appeared promising. This type of mentor support could also assist with resolving conflict issues for new graduate nurses.

**Supporting Conflict Resolution**

Current study findings revealed a disturbing picture of the workplace environment for new graduate nurses (Baumberger-Henry, 2012; Evans et al, 2008). Interviewees described the workplace culture as oppositional, confrontational, demeaning and generally unsupportive to the new graduate nurse rather than nurturing, inspiring and encouraging. These study findings are consistent with Kramer’s (1974) Theory of Reality Shock for the new graduate nurse, which underscores workplace conflict as the main source of reality shock for the new graduate nurse. A mentor may provide the new
graduate nurse with conflict resolution assistance by sharing his/her knowledge and experiences on managing conflict, which may serve as an excellent source of transition and workplace adjustment support. As previously noted, the mentor can also demonstrate conflict resolution skills through positive role modeling (Hoarea et al, 2013; Kalbfleish & Bach, 1998).

This study aimed to empirically explore new graduate nurse role transition and workplace adjustment and to explore whether e-mentoring may be suitable as a social support strategy during this period. Study findings provided evidence of numerous encounters of social shock and stress while new graduate nurses attempted to seek independence and gain equal status as registered nurses. Study data confirmed that new graduate nurses would benefit from an e-mentor to foster their adjustment to professional practice and workplace relations, and provide them with emotional and conflict resolution support. Study results revealed key mentoring program components and design features that would assist with new graduate nurse transition and workplace adjustment. In the next section the researcher will discuss these mentorship program components as follows: positive role modeling, building confidence to gain equal access, strengthening coping strategies and fostering feeling safe.

**Mentorship Program Components**

**Positive Role Modeling**

Participants reported that a mentor could fill a positive role-modeling void, particularly when the preceptor was not a positive role model and/or lacked the ability to be relational, supportive and available. Through collegial interactions with the mentee,
the mentor may role model positive interpersonal skills and provide support for the mentee through the transition and workplace adjustment period. Current study findings support Hoarea et al.’s Reciprocal Role Modeling Theory (2013) where mutual role modeling for the new graduate nurse and experienced mentor may result from the mentorship relationship. More specifically, the e-mentor may find mentoring to be fulfilling because it advances the nursing profession, shows gratitude to their own mentors and gives back to the profession, and assists with new graduate nurse retention (Baxter, 2010; Bratt, 2009; Dyess & Parker, 2012; Sandau et al., 2011). E-mentors may also benefit from their role by gaining confidence in their ability to mentor (Miller et al. 2008). The e-mentee may gain conflict resolution skills, increased coping skills, decreased job stress and increased job satisfaction. Positive role modeling by the mentor may also assist the new graduate nurse to build confidence while working on gaining equal access as a registered nurse.

**Building Confidence to Gain Equal Status**

The current study has provided further evidence that new graduate nurses lack confidence (Banks et al., 2011; Beecroft et al, 2006; Evans et al, 2008; Quell, 2010, Snow, 2013; Smith, 2008; Williams, 2013). Nevertheless, new graduate nurses desire to fit in and belong in the workplace (Evans et al). Phase 2 study participants highlighted that earning their colleagues’ respect would require the new graduate nurse to act in a confident manner in the workplace. By sharing knowledge and past experiences, a mentor could support and reassure the new graduate nurse that confidence takes time to build, and will come with experience. The mentor could review
Benner’s (1984) Novice to Expert Theory with the mentee to provide insight on the transition process and the stages of becoming an expert nurse. Having a mentor who is a positive role model may assist new graduate nurses to build confidence, strengthen their coping strategies and achieve equal status as a registered nurse and valued member of the team.

**Strengthening Coping Strategies**

Besides being a positive role model, a relatable mentor could provide the new graduate nurse with emotional support and strengthen their coping skills. Across the three Phases study results revealed that preceptor models in nursing are lacking in the ability to provide time for new graduate social support for transition and workplace adjustment (Baxter, 2010; Woodworth, 2012). Study findings highlighted that at times positive role models for new nursing graduates were unavailable (Hazelton et al., 2011; Laabs, 2011; Laschinger et al., 2012). Study participants reported that at times experienced nurses were forced to preceptor new graduate nurses. Thus, these nurses lacked the motivation to be effective mentors and left new graduate nurses to ‘sink or swim’.

The study findings point to e-mentoring as a possible strategy to provide the new graduate nurse with much needed fundamental social support to strengthen their coping strategies by fostering mentor availability, collegiality and truly being supportive. Having access to an available and relatable e-mentor may promote new graduate nurse feelings of emotional safety in the workplace.
Fostering Feeling Safe

Across the three Phases, this study provided further evidence that new graduate nurses are exposed to hostile work environments and lack the social supports needed in the workplace to meet job demands (Baumberger-Henry, 2012; Evans et al., 2008; Hazelton et al., 2011; Laabs, 2011; Turner & Goudreau, 2011). Study participants described work environments where they felt alone, nerve racked, and scared, and lacked the necessary resources; however, they still needed to fulfill steep job requirements. Study findings revealed accounts of oppressive hierarchical work environments bound by social and cultural norms where the phrase “Do we really eat our young?” was very familiar to experienced registered nurses who described harsh work encounters directed towards new graduate nurses (Baumberger-Henry, 2012). Current study participants described numerous accounts of new graduate nurse exposure to demeaning behaviours and criticizing comments from their workplace peers such as screaming and oppressive attitudes of “our way or the highway”. These results of demeaning behaviours toward new graduate nurses by experienced nurses are of long standing as evidenced by past (Laschinger et al., 2012) and recent empirical studies in Ontario (Boatent & Adams, 2016).

An available, supportive and relatable e-mentor may be able to assist new graduate nurses to cope with harsh work environments. An e-mentor could share past work experiences and approaches to conflict resolution and social shock with the e-mentee such as effective communication, negotiation and the importance of reporting bullying behaviour (Baumberger-Henry, 2012).

Theoretical implications of this study are examined in the next section.
Theoretical Implications

There are numerous reasons for proposing an e-mentoring intervention for new graduate nurse role transition and workplace adjustment, however anchoring them with theoretical implications revealed the following findings. Saks and Ashforth (1997) highlighted the importance of institutional socialization tactics for information acquisition to improve employee job satisfaction and organizational commitment. They concurred with Van Maanen and Schein’s (1979) organizational socialization theory.

Van Maanen and Schein’s (1979) socialization theory was advanced in this study by explicating some of the socialization experiences that new graduate nurses undergo in their role transition and workplace adjustment. New graduate nurses crave acceptance to be part of the team, yet they encounter social shock and stress as they are entrenched in unwelcoming and hierachial work cultures filled with cliques and bullying. Social shock develops when new graduate nurses are faced with the reality that the once familiar and welcoming culture they were in as a student nurse becomes somehow unfamiliar in their role as a new graduate nurse.

The phenomenon of social shock was developed in this research study and overlaps to some extent with Kramer’s (1974) reality shock theory. Kramer’s reality shock theory consists of the following four-phases: honeymoon, shock or rejection, recovery, and resolution. Social shock overlaps with Kramer’s shock or rejection phase in that both concepts address the broader conflict that arises between the student nurse experience and the new graduate nurse experience. However, social shock focuses specifically on the social dynamics of bullying and cliques from which the new graduate nurse...
nurse was sheltered as a student but now finds him or herself embedded in as a new practicing professional. Further, Kramer’s social shock phase did not only focus on social issues resulting in reality shock but also on clinical issues. She noted that new graduate nurses experienced reality shock when they did not live up to competency expectations from coworkers and employers.

Further, Van Maanen and Schein’s socialization theory was illuminated and advanced in this study through the individualized socialization tactic of individual socialization (vs. collective) as in a one-to-one mentoring relationship. A mentor could assist the new graduate nurse through individual circumstances and experiences in role transition and workplace adjustment without collective evaluative agendas or hierarchical borders, which are evident in traditional preceptor models. This research study provided evidence that a mentor may be able to mitigate new graduate nurse stress by assisting with role modeling, conflict resolution and ultimately a successful transition and workplace adjustment for the new graduate nurse.

This study introduced e-mentoring in acute care nursing as a proposed viable organizational socialization strategy to augment current preceptor programs that have fallen short in new graduate nurse socialization. E-mentoring may be a feasible platform to provide support to assist with social shock, conflict resolution and stress, while addressing the limitations of traditional face-to-face mentoring such as a lack of time to meet with the mentee, mentor burnout, lack of commitment on the part of the mentor, and scheduling constraints.
Mentoring has been identified as a feasible strategy for socialization of the new graduate nurse. In fact, Kalbfleish and Bach (1998) found that nurse mentors were likened to heroes for being supportive and encouraging to their mentees. Kalbfleish (2002) went on to establish the Mentoring Enactment Theory. Her theory is built on communication and relational literature and focuses on mentoring as a close personal relationship. Current study findings are congruent with Kalbfleish’s theory in that new graduate nurses are seeking to be socialized into the profession by a relatable mentor. Kalbfleish’s theory proposes that the mentee is provided with a mentor through a third party. Study findings parallel this recommendation of new graduate nurses being provided with an e-mentor through a third party and this tactic was proposed as a viable e-mentoring matching strategy. Additionally study findings support Kalbfleish’s theory that an experienced mentor who offers to mentor a less advanced individual is likely to be accepted by the mentee.

Further, findings from this study are consistent with Benner’s (1984) Novice to Expert Theory. Benner suggested that an expert nurse has five or more years of experience. Study participants recommended that an e-mentor should be an experienced nurse with 5 years of experience. Participants however reported that nurses with five years of work experience were not always available. They also suggested that having a relatable e-mentor is more important than years of experience, which was an ongoing theme of this study.

Lastly, Van Maanen & Schein’s (1979) variability socialization tactic may be applied to e-mentoring program components and design features such as the potentially
long-term e-mentoring relationship that develops through a professional friendship between e-mentor and e-mentee versus having a fixed timetable as in preceptorship. The e-mentoring relationship may enable the new graduate nurse to foster their professional adjustment, workplace relations, and conflict resolution while providing them with emotional support. Finally, being socialized by an experienced and relatable nurse e-mentor role model, the new graduate nurse will receive information acquisition and advice, while being acknowledged, valued and welcomed for the unique individual they are.

What follows is a review of e-mentoring program characteristics and features for a proposed evidenced-based e-mentoring intervention. The intervention is based on this study’s narrative literature search, scoping review, interviews and panel findings.

**E-Mentoring Intervention Program Components and Design Features**

Authors of the empirical and grey literature used the terms preceptor and mentor interchangeably, making mentoring program comparisons difficult. There was limited literature on e-mentoring in nursing with gaps in the literature on program specifics. Further, transition and work-place program evaluation studies lacked rigour using the CIPP evaluation model. Nevertheless, the researcher was able to interview new graduate nurses about their role transition to professional practice and workplace adjustment. Through participant interviews the researcher discovered potential e-mentoring intervention program components and design features that could assist with new graduate nurse role transition and workplace adjustment. Additionally, experienced
nurses and a different group of new graduate nurses in Phase 3 completed a pre-panel and post-panel assessment survey and provided feedback on potential e-mentoring program components and features. This research methodology is consistent with Sidani and Braden’s (2011) intervention theory of soliciting feedback from intervention stakeholders about the intervention to inform the phenomenon of new data that was uncovered in this study. In the next section the researcher will review the following e-mentoring program components and design features: internal versus external mentoring, modality of contact, frequency of contact, length of program, recruitment of mentors, mentor and mentee matching, and training.

**Internal or External E-mentoring**

Overall Phase 3 study participants agreed that an internal e-mentor in nursing is preferred given that the mentor would be familiar with the stakeholders involved and the organizational culture, practices and policies. However, participants expressed concerns about the lack of available internal, experienced and relatable e-mentors in an institution. Further, based on study data, there were strong arguments for an external and confidential e-mentor. An external and confidential e-mentor would potentially be unbiased and not be influenced by organizational culture, practices and influences. Additionally, an external e-mentor may provide a source of comfort to an e-mentee who is unable to address an internal conflict or bullying issue. Phase 2 study participants expressed similar sentiments about the benefits of having an external e-mentor such as having someone who was not swayed by the organizational culture, internal politics and personalities.
Phase 2 interviewees who described difficult transition and workplace adjustment experiences supported the notion of having an anonymous e-mentor. An anonymous e-mentor could be available to discuss sensitive issues and provide the e-mentee with the comfort of non-disclosure and of being apolitical, unbiased, non-evaluative and non-judgemental. While Phase 3 participants did not support an anonymous e-mentor, it was noted that an anonymous e-mentor could be helpful in resolving sensitive issues when someone internal to the organization is more likely to maintain the status quo. Based on these study findings the evidence suggests that the new graduate nurse be provided with the option of an internal, external or even anonymous e-mentor based on his/her individual and relational role transition needs for as successful workplace adjustment. Future research could explore the relative benefits and feasibility of each approach.

**Modality of Contact**

While virtual mentoring may include face-to-face meetings or telephone conversations, e-mail was identified in the narrative and scoping literature review as the main medium in establishing and developing an e-mentoring relationship, (Headlam-Wells et al., 2005; MentorNet, 2011; Ontario Nursing Connection, ONC, 2010; Single et al., 2005). Data from Phase 2 and 3 supported these findings and highlighted that the dialogue between e-mentor and e-mentee should be informal with an open-door policy approach. Texting was identified as viable communication option to promote less formal, candid and timely communication between e-mentor and e-mentee, especially if it is used to seek feedback on an urgent issue. Skyping was noted by Phase 2 study participants as an alternative communication medium when texting was not possible. However, most Phase 3 study participants were not in favour of Skyping in an e-
mentoring program as it would increase the formality of setting up a communication meeting in a timely manner and may infringe on an individual’s privacy in terms of revealing his/her personal space and location. Nevertheless, it was noted that Skyping does not require a cell phone. Skyping has global and older generation age-gap advantages such as not requiring a cell phone, providing a visual image for the e-mentor and is a cost effective global communication strategy. Further, interaction with peers may be included in an e-mentoring peer forum to facilitate peer interaction and socialization. Based on these modality of contact study results, e-mailing as the main medium to establish the e-mentoring relationship is recommended and texting may be a communication alternative as appropriate. Skyping and phone call meetings could be utilized if both parties were agreeable to these communication methods. Future research could explore the feasibility and benefits of modality of contact options.

**Frequency of Contact and Length of Program**

E-mail frequency between mentor and mentee in the narrative and scoping literature review was typically weekly (MentorNet, 2011; ONC, 2010) for about 20 minutes (MentorNet, 2011) or up to one to two hours weekly (ONC, 2010). While the optimum frequency of contact varied amongst study participants, a two-week informal time frame was recommended by Phase 2 interviewees with frequency of communication intervals decreasing over time as the new graduate nurse gains in workplace adjustment. Phase 3 participants concurred with Phase 2 interviewees, noting that weekly contact would initially be appropriate. They added that regular contact between e-mentor and e-mentee was important. The e-mentor would be requested to correspond with the mentee every two weeks at a minimum with less
frequent communication as the e-mentoring relationship progressed. The suggested response times varied from the next day to within 48 hours.

The length of the e-mentoring program in the narrative and scoping literature review and study participant data varied from 12 weeks (ONC, 2010) to one year (Kasprisin et al., 2008) in duration. Phase 3 study participants suggested that 3 months would be the minimum time frame for an e-mentoring program to support the new graduate nurse through the transition to professional practice. Panelists recommended a 6-month e-mentoring program to establish a trusting and collegial relationship and provide the e-mentee with further workplace adjustment support. Additionally, Phase 3 study participants recommended that e-mentees could be provided with the option to extend the e-mentoring relationship to one year if they felt they still required e-mentor support. Based on study data is, it is recommended that the program be six months in duration to provide the new graduate nurse with transition and workplace adjustment support. Future research could evaluate the ideal program length and determine whether having an option to extend to 12 months is a viable option.

**Recruiting of E-mentors**

In the narrative and scoping literature review it was noted that e-mentors were recruited through volunteers and corporate sponsors familiar with the mentoring program (DiRenzo et al., 2010) and/or through advertisement for mentor volunteers (ONC, 2009). Advertising for e-mentor volunteers was done through websites, recruitment posters, advertising in professional journals and through networking (ONC, 2009). While Nettleton and Bray (2008) highlighted the importance of the mentor volunteering to perform the mentor role, some e-mentoring programs provided a token
honorarium for e-mentors (ONC, 2009). Further, the Canadian Nurses Association (2004) recommended monetary rewards, lighter workloads and educational days as mentor recruitment incentive strategies. Study participants also discussed the need to have an e-mentor who had volunteered for the role and was experienced as a registered nurse. Five years was identified as the optimum level of experience, which is consistent with Benner’s Novice to Expert Theory. Nevertheless, Phase 3 participants pointed to a lack of available e-mentors with five years experience in their facilities. Additionally, panelists highlighted the significance of the e-mentor being relational as more crucial than having five years of experience. Participants in Phases 2 and 3 identified that e-mentors with five years experience would be preferred, however they may not be available within the organization. The e-mentor should volunteer for the e-mentor role and be relatable by virtue of their knowledge of new graduate nurse transition and workplace adjustment issues. Some of the new graduate nurse transition issues may include adjusting to professional practice, lacking confidence, experiencing conflict and bullying in the workplace, trying to fit in, and navigating through workplace practices, politics and policies. Future research should explore the extent to which years of experience and/or specific workplace skills and knowledge are desirable attributes of e-mentors. Future research also needs to explore the feasibility of recruiting e-mentors.

**Mentor and Mentee Matching**

Mentor matching processes in the narrative and scoping review were wide-ranging from matching being completed by the nurse manager and educator (Registered Nurses Professional Development Centre, NS, 2011), which is consistent with Van Maanen and
Schein’s (1979) socialization typology of organizational socialization tactics, to being matched by an external third party, (Nied, 2009; Prince Edward Island Nursing Association – ARNPEI, 2012), which is consistent with Kalbfleish’s (2002) Mentoring Enactment Theory. There were reports of mentors being matched by an e-mentoring website administrator based on areas of interest (ONC, 2010) and/or computer generated through an algorithm-driven data program based on protégé preferences (Headlam-Wells et al., 2005; MentorNet, 2011).

In the MentorNet (2014) Program, student mentees were matched with a mentor in the workforce and detailed mentor information was requested for mentor-mentee matching process. Mentors joined on-line, provided an email address and created a password. They reviewed terms of service that included codes of conduct and privacy policies. Once the mentor’s email was validated s/he was prompted to create a profile about him/herself that included a name, a short biography and photograph. Mentors were asked to provide background information on their employment history, job title and position, which would be used to facilitate the matching process with the e-mentee. Further, mentors were provided with program resources about common e-mentee question topics and they were asked to complete a one-hour on-line training module.

The Registered Nurses Association of Ontario (RNAO, 2006) in its Telementoring Tool Kit identified selection criteria for mentors and mentees, yet did not provide details on a process for matching mentors and mentees (pp. 20, 21). Nonetheless, in recent literature it has been suggested that mentees should select their own mentors (Brediger, 2009; Dyess & Parker, 2012; Nettleton & Bray, 2008). Phase 2 participant data varied in their recommendations from the mentee choosing their mentor, the
mentor choosing their mentee or the mentor and mentee being matched by a third party. Phase 3 participants recommended that the e-mentee buy-in to the e-mentoring process by selecting their e-mentor based on the e-mentors biographical data. This recommendation was closely followed by a proposed objective method of having an external third party formulate the match, which again is consistent with Kalbfleish’s (2002) Mentoring Enactment Theory. Future research should evaluate the feasibility of having the e-mentee choose their e-mentor based on the e-mentor’s biographical data and/or having an external third party match the e-mentoring pair.

**E-mentor/E-mentee Training**

Training recommendations for e-mentors and e-mentees varied both in my narrative literature review and my scoping review. Kasprisin et al.’s (2008) non-nursing study, discussed in Chapter 2, examined the effects of mandatory training for e-mentees using the MentorNet, e-mentoring program. Conversely, the Ontario Nursing Connection (ONC, 2008) e-mentoring program recommended mandatory on-line training for both e-mentors and e-mentees. There has been no formal program evaluation of the ONC and the program was suspended when the founders relocated to other academic institutions. The current study Phase 3 panel participants recommended that one-day of e-mentor program training would suffice to develop educated e-mentors. They recommended that the topics of conflict resolution and how to respond to uncivil behaviours from co-workers be included in the training program. The topics of positive role modeling and debriefing were also identified as important to address in training. Workplace and patient confidentiality were topics that were judged unnecessary to include in the program, as they were judged to be inherent in nursing practice.
Participants highlighted the need to have a relatable e-mentor. In particular, the mentor needs to have awareness of new graduate nurses’ challenges in transition and workplace adjustment. They need to know about changes to testing processes and changes to entering the workforce.

Based on current study data, a feasibility study is recommended where the researcher would provide the training and might negotiate with the organization to free up time for mentors to attend a training program. Further, the e-mentoring program should include the topics of conflict resolution, how to respond to uncivil workplace behaviour, positive role modeling, debriefing, and current issues facing new graduate nurses, such as lack of confidence, changes to testing processes, and new graduate nurse job market. A summary of e-mentoring program components and design features based on study data is displayed in Table 14: E-mentoring Program Components and Design Features (below).

Table 14

*E-mentoring Program Components and Design and Features*

<table>
<thead>
<tr>
<th>E-mentor Program Component/ Design Feature</th>
<th>Recommendation</th>
<th>Qualifier(s)</th>
</tr>
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<tbody>
<tr>
<td>E-Mentor Qualifications</td>
<td>1. RN should volunteer</td>
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<td></td>
<td>2. RN with at least 5 years of experience</td>
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<td></td>
<td>3. RN with strong evidence-based practice</td>
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<tr>
<td>E-mentor Program Component/ Design Feature</td>
<td>Recommendation</td>
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<td>4. RN who has engaged in ongoing professional development</td>
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<td></td>
<td>5. RN who is relatable to new graduate nurse role transition needs in their workplace adjustment</td>
<td></td>
</tr>
<tr>
<td>E-mentee qualifications</td>
<td>1. New Graduate Nurse willing to actively participate in e-mentoring relationship by maintaining regular contact with e-mentor</td>
<td></td>
</tr>
<tr>
<td>Frequency of communication between e-mentor and e-mentee</td>
<td>Weekly to every two weeks</td>
<td>Initially weekly to every two weeks with less frequent communication as the e-mentoring relationship progressed</td>
</tr>
<tr>
<td>Modality of contact:</td>
<td>1. Email as main medium</td>
<td>1. Skyping a possible medium alternative when texting not possible, and use of cell phone not required. Skype is a cost effective global communication strategy, however Skyping increases the formality of setting up a communication meeting and may</td>
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<tr>
<td></td>
<td>2. Texting as a viable option to promote less formal, candid and timely communication</td>
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<tr>
<td>E-mentor Program Component/ Design Feature</td>
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<td></td>
<td></td>
<td>infringe on an individual’s privacy regarding personal space and location</td>
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<td></td>
<td>2. Peer e-mentoring forum may be set up to facilitate peer interaction and socialization</td>
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<td></td>
<td></td>
<td>3. Phone call meetings could be utilized if both parties were agreeable to this communication tool</td>
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<tr>
<td>Length of E-mentoring Program</td>
<td>Six months to develop a trusting and collegial relationship, with 3 months as a minimum time frame</td>
<td>3 months an option with possibly continuing in the mentoring relationship for up to one year</td>
</tr>
<tr>
<td>E-mentee - e-mentor selection</td>
<td>E-mentor should be internal to organization, however an external mentor may be feasible</td>
<td>1. There may be a lack of available internal, experienced and relatable mentors in an institution</td>
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<tr>
<td></td>
<td></td>
<td>2. An external e-mentor would potentially be unbiased, and not influenced by organizational culture, practices and influences. An external e-mentor may also provide a source of comfort to an e-mentee who is unable to address an internal conflict or bullying issue</td>
</tr>
<tr>
<td>E-mentor Program Component/Design Feature</td>
<td>Recommendation</td>
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<td>3. There was some support for an anonymous e-mentor who is apolitical and may be able to address sensitive issues, without an evaluative agenda, judgement or bias</td>
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<td>E-mentee - e-mentor matching process</td>
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<td></td>
<td>1. E-mentee selects e-mentor based on biographical description OR 2. Third party assigns e-mentor and e-mentee</td>
<td>Some participants recommended the e-mentor may select e-mentee based on biographical description</td>
</tr>
<tr>
<td></td>
<td>One day of training</td>
<td>1. Training could be held in two half day sessions 2. Training recommendations may vary based on individual program pedagogy such as role playing</td>
</tr>
<tr>
<td>E-mentor Program Orientation/Training Topics:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Positive role modeling 2. Debriefing 3. Conflict Resolution 4. Education on How to Respond to uncivil behaviours from coworkers</td>
<td>1. Patient and workplace confidentiality inherent in practice 2. Training should cover logistics on e-mentoring platform (e.g. participants may be provided with e-mail accounts for purpose of the mentoring relationship)</td>
</tr>
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</table>
E-Mentoring Limitations

The current study provides promising insights on e-mentoring as a potentially viable social support strategy for new graduate nurse transition into professional practice. This study also surfaced data reflecting contrary points of view where participants felt that e-mentoring might not work and expressed misgivings about e-mentoring. For example, one participant noted that it could be challenging to get organizational buy-in for an e-mentoring program. Another participant noted she wasn’t sure she would want to engage in a mentoring exchange during non-work time, because this is time to focus on her own personal needs and distance herself from workplace issues. Further, recruitment of e-mentors for more than 6 months may limit the ability to recruit e-mentors and could result in a lack of willingness to commit to a long-term e-mentoring relationship, especially given the pressures of a registered nurse’s busy work-life. It would be important to note in a future feasibility study the extent to which it may be difficult to recruit e-mentors willing to commit to a prescribed time period, and the extent to which an organization is willing to participate in an e-mentoring intervention that would augment current orientation practices and or replace components. It would also be important to evaluate the extent to which new graduate nurses are willing to enroll in an e-mentoring program.

Discussion Summary

Data from multiple sources and different types of data (quantitative and qualitative) in this mixed-method study offers a deeper understanding and advances
knowledge of new graduate nurse role transition and workplace adjustment within the first year of employment. The study identified e-mentoring as a potential socialization strategy to support new nursing graduates transition to professional practice. Further, the study provided evidenced-based e-mentoring program components and design feature recommendations to assist with new graduate nurse role transition and workplace adjustment.

While the process of transition and workplace adjustment is ‘a rite of passage’ for a newly registered nurse, study findings confirm that the passage is not an easy one. Authors of the narrative literature review, scoping literature review and Phase 2 and 3 study participants consistently reported encounters of new graduate nurse social shock as evidenced by workplace environments that exhibited cliques, exclusion, conflicts and bullying. No longer were new graduate nurses welcomed to the work environment in their protected role of student nurse, they now struggled to gain acceptance to be part of the team as new registered nurses in a once familiar culture. As new insiders, they felt socially unsafe, scared and alone.

Authors of narrative literature review, scoping literature review and study participants highlighted that new graduate nurses need a transition and workplace adjustment intervention that will assist them to breakdown oppressive cultural barriers in traditional preceptor roles and models. Interestingly, authors in the narrative and scoping literature reviews and study participants used the terms preceptors and mentors interchangeably.
For decades preceptorship programs have been touted as the main strategy to assist with new graduate nurse role transition and workplace adjustment. Further, an extensive amount of human and financial resources have been poured into preceptorship programs with a focus on the achievement of clinical goals. Preceptor models sometimes include an evaluative component for new nursing graduates, which may undermine the collegial relationship new graduate nurses expressed they need for successful workplace adjustment. Participants in this study suggested there has been little time spent on developing the relational component of nursing socialization.

Preceptors were reported by authors in the narrative literature review, scoping review and Phase 2 and 3 study participants to help with new graduate nurse confidence. However, through these sources of evidence study findings revealed that preceptors didn’t have time to help with the relational social component of new graduate nurse transition and workplace adjustment. Based on these findings, the evidence concludes that this social component is a fundamental, missing part of preceptorship programs for new nursing graduates who are trying to fit in, build confidence for teamwork and navigate through workplace environments and systems. Group mentoring was also identified as a means to enhance new graduate nurse empowerment and group cohesion. Additional research on group mentoring and co-worker support would further our understanding of the need for peer support and the role of group mentoring for new graduate nurse role transition and workplace adjustment.
Study findings point to e-mentoring as a possible social support strategy to augment current traditional preceptor systems for new nursing graduate role transition and workplace adjustment. The evidence uncovered identified that an e-mentoring program could be time saving for mentors and mentees, asynchronous and cost effective. The extent to which e-mentoring is a time saving and cost effective intervention would need to be determined in future studies. The e-mentoring program would be based on an on-line platform with e-mail as the main communication method and texting as a possible alternative communication method. The program should be six months in duration with an option to continue to one year based on the e-mentee’s needs. E-mentors would be chosen by the e-mentee based on the e-mentor’s biographical data or an external third party could match the e-mentoring pair. E-mentors would be volunteers with, preferably, five years of experience as a registered nurse, however the relational component to new graduate nurse transition and workplace adjustment was perceived to be more important than years of experience. In other words, knowledge of new graduate transition challenges and skillful role modeling of effective problem solving and conflict resolution may be more important than years of nursing experience. The e-mentor would be requested to correspond with their e-mentee every two weeks at a minimum and less frequently as the e-mentoring relationship developed, with a commitment to a 48 hour response time. Proposed evidence-based e-mentoring program components and design features would include: 1) being relational to new graduate nurse transitional needs in workplace adjustment by being a positive role model 2) being responsive and an active listener, by debriefing with mentee about transition to practice, and workplace adjustment issues; and 3) providing
information on conflict resolution and how to respond to uncivil behaviour in the workplace. As with any study, limitations existed and are discussed next.

**Study Limitations**

This research study had potential limitations. The first limitation was a likely response bias for Phase 3, as study participants were invited from the greater Toronto area (GTA) to participate in a panel held at the University of Toronto. Results may not be generalizable to all nurses in the province. Nevertheless, through the study’s mixed method design, Phase 3 findings were found to be consistent with narrative literature review, scoping review and Phase 2 study themes. The second limitation was an independent review of scoping review research articles by the doctoral candidate following a two reviewer approach for scoping review article selection, nevertheless article data were collated in a transparent manner and organized into data extraction tables which are available in the appendix section of the dissertation. Thirdly, an expert panel was employed using a focus group approach to obtain detailed and wide-ranging information about the e-mentoring intervention. This methodology provided the researcher with depth and insight of scoping review and interview findings. Nevertheless, focus group methodology may lack in-depth discussion and inclusivity of participation, and some participants may influence the group discussion. In order to mitigate these potential limitations, the facilitator encouraged all to participate by requesting structured feedback on the e-mentoring intervention from each panelist. Further, each panelist was able to complete an individual acceptability assessment.
survey before and during the panel discussion. Lastly, Phase 2 and 3 data were collected and analyzed by the researcher, which may have created a potential confirmation bias. To minimize researcher confirmation bias, study participation was voluntary, and interview and panelists were informed that their data would be kept confidential. Reflexivity was ascertained by clarifying the researcher’s role and biases in the data collection process. Further, participant responses were transcribed verbatim.

In the conclusion section, discussed next, a summary is provided while identifying key findings and conclusions drawn from the study. The researcher will also address how this study has advanced knowledge of new graduate nurse role transition and workplace adjustment and how e-mentoring may be a viable socialization strategy. Lastly, recommendations for nursing policy, education and practice and future research will be discussed.
CHAPTER 8

CONCLUSION

I commenced my mentoring research journey as doctoral student by exploring a research gap on e-mentoring as a socialization strategy for new graduate nurse role transition and workplace adjustment. To date there have not been any rigorous studies to evaluate the impact of e-mentoring relationships on the socialization of new nursing graduates. A limited number of e-mentorship programs were implemented for nurses in Ontario, yet little is known about their impact on new nursing graduates. It was important to investigate how effectively such programs could address the felt needs of this group.

Although on the hierarchy of experimental research, a Randomized Controlled Trial (RCT) would provide the most robust evidence about which e-mentoring intervention may or may not work, the initial exploration of the topic revealed that there was not enough data in the literature to design an e-mentoring intervention for new graduate nurses. Hence, I took a step back to determine this study’s research design, which led me into my current study. It was clear at the end of my scoping literature review and participant interviews that I would have missed key intervention component and design features if I had not undertaken this research study. Evidence-based components and design feature recommendations were advanced that will provide a foundation for the design of a feasibility study exploring e-mentoring as a social support strategy for new graduate nurse transition and workplace adjustment. Further, based on
the Medical Research Council Framework (MRC, 2006) this research has provided the bases for further design and feasibility research discussed next.

**Future Research**

My future research will explore e-mentoring with new graduates, however before a fully powered randomized controlled trial (RCT) can be conducted there are critical questions that need to be addressed. Hence, the study will be an e-mentoring pilot RCT (Lancaster, Dodd & Williamson, 2004). The main objectives of the study are to test the feasibility of the e-mentoring intervention with new graduates for a definitive trial and to explore: (a) estimates of recruitment rates for mentors and mentees; (b) acceptability of the intervention; (c) compliance with the intervention; (d) common barriers to the intervention, and (e) satisfaction with the intervention. Pilot RCT data will provide estimates of effect size to inform sample size calculations for a future large-scale trial. This study will serve as an attempt to seek knowledge on e-mentoring interventions locally, yet has global implications for international mentoring in nursing.

**Policy, Education and Practice Implications**

This study confirms the struggles new graduate nurses face during their transition to practice and workplace adjustment and provides evidence that there is a clear need of support for new graduate nurses as they transition and adjust to professional practice. Through this study the evidence suggests that preceptor programs appear to be missing the relational socialization component of transition to practice, which is fundamental to new graduate nurse success and retention. This
research study takes a step forward to explore e-mentoring as a potential socialization strategy to augment current preceptor practices.

Findings from the current study have important implications for health care organizations, nursing education and policy development. Recent changes to the New Graduate Guarantee (NGG) employment program as of April 2017 have stipulated that employers are only eligible to participate in the program if they “commit to transitioning new nurses into permanent, full-time employment within one year of the new nurses’ start dates” (Health Force Ontario, 2017). This commitment from employers may not always be possible; hence new graduate nurses may not be able to participate in the program. This would leave new graduate nurses without this employment transition program. E-mentoring may be a viable, non-evaluative, relational and collegial, time efficient and cost effective socialization strategy to support new graduate nurses transition to practice and promote successful workplace adjustment.

Relational mentoring was highlighted in Nowell, Norris, Mrklas and White’s (2017) mixed methods systematic review that explored mentorship outcomes in nursing academia. The authors found that relational mentoring fostered positive peer relations and quality relationships. The researchers highlighted that those who were mentored wanted to mentor others, which could enhance retention and professional development of nursing faculty, whose mandate is to educate nursing students; our new graduate nurses of the future. Further, schools of nursing must build mentoring skills, such as conflict resolution, coping strategies and relational role modeling, into their policy course curriculum to raise awareness of the challenges associated with new graduate nurse
role transition and enable students to anticipate some of the social issues they may encounter.

Professional associations such as the Registered Nurses Association of Ontario (RNAO) must also recognize that the new graduate nurse role transition is not a smooth one. They must lobby government to speak out for nursing and to advocate for organizational level change that preceptoring is not the only strategy to assist with new graduate nurse role transition and workplace adjustment. Further, study findings confirm that the terms preceptors and mentors are used interchangeably, and there is a lack of clarity on mentorship definitions, which is also evident in academia (Nowell, White, Benzies & Rosenau, 2017). The evidence has demonstrated that preceptoring no doubt has mentoring components, however mentoring needs to be a separate entity with distinct features and a clear definition. I plan to work with nursing leaders on national strategies to validate the current study findings and pilot the proposed e-mentoring program intervention to further test components and design features of the proposed e-mentoring program intervention.

In closing, it is important to welcome new graduate nurses into the work environment to foster their role transition and workplace adjustment, yet findings from authors such as Boychuk-Duchscher (2009); Kramer (1974) and Laschinger et al. (2012) concur that a warm welcome has not been a reality for new graduate nurses. This study confirms that a key reason that new graduate nurses struggle with their transition into the workplace is because the focus of current preceptorship programs is on clinical goals with evaluative outcomes, and the fundamental relational component of
transition to practice is missing. Findings from this study pointed to e-mentoring as a possible socialization strategy to mitigate new graduate nurse social shock and stress during role transition to practice and workplace adjustment.
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Auffrey, M., Cormier-Daigle, M., & Gagnon-Ouellette, A. (2012). New Brunswick: Development of a web-based orientation program and enhancing senior nurses' mentoring skills. *Nursing Leadership (Toronto, Ont.)*, 25(Spec), 71-76.


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CASP Checklists *(http://www.casp-uk.net/casp-tools-checklists)* Oxford, CASP


https://www.mrc.ac.uk/documents/pdf/complex-interventions-guidance


Witter, J. (2012). *Mentoring of medical surgical nurses, assessment of patients, clinical decision-making, cultural competency, commitment to professional nursing standards, positive feelings about nursing at this hospital, and willingness to remain in the nursing profession.* Dowling College), 171 p. (UMI Order AAI3519946.). (2012250656).


297
## Appendix A:

### Table 1: Preliminary Ovid MEDLINE Literature Search

<table>
<thead>
<tr>
<th>Subject Headings</th>
<th>Key Words</th>
<th>Number of Articles</th>
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<td>1. Mentoring</td>
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<td>2. New Nursing Graduate</td>
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<td>4. (english language and humans and yr=&quot;1988 - Current&quot;)</td>
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<td>39</td>
</tr>
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<td>5.</td>
<td>e-mentor* or (virtual adj2 mentor*) or (electronic adj2 mentor*) or (e adj2 mentor*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept]</td>
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<td>8.</td>
<td>(mentee* or protege*) adj2 nurs*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept]</td>
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<td>13</td>
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<td>6 or 13</td>
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<td>expand re Evaluation Studies as Topic</td>
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<td>COMBINE 20 and 21</td>
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## Table 2: Refined Key Words, Subject Headings and Databases

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<th>Keyword(s)</th>
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<td>(Mentor* OR eMentor* OR Preceptor* OR mente* OR protégé* OR preceptor*) ADJ2 Computer* OR electronic* OR online OR virtual*</td>
<td>Mentors</td>
<td>Ovid Medline, Psycinfo</td>
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<tr>
<td>new ADJ2 (Occupation* OR graduate* OR employment OR profession OR workplace OR job* OR nurs*)</td>
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</tr>
<tr>
<td></td>
<td>Mentorship</td>
<td>CINAHL, EBSCO</td>
</tr>
<tr>
<td>(Mentor* OR Preceptor* OR mente* OR protege* OR preceptor*) N2 (Computer* OR electronic* OR online OR virtual*)</td>
<td></td>
<td>CINAHL, EBSCO</td>
</tr>
<tr>
<td>new N2 (Occupation* OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>graduate* OR employment OR profession OR workplace OR job* OR nurs*)</td>
<td></td>
<td>Scopus</td>
</tr>
<tr>
<td>(Mentor* OR Preceptor* OR mente* OR protege* OR preceptor*) W/2(Computer* OR electronic* OR online OR virtual*)</td>
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Appendix B: Scoping Literature Review Data Extraction Tables

**Table 3: Experimental and Quasi-Experimental Study Design Evaluation Criteria**

<table>
<thead>
<tr>
<th>Author, Year and Country</th>
<th>Study Aim</th>
<th>Sample</th>
<th>Design and Intervention</th>
<th>Outcome Measured</th>
<th>Important Results and Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleary et al 2009 Australia</td>
<td>To assess nurses’ satisfaction with a 12-month transition to practice programme for mental health nursing</td>
<td>Nurses new to mental health practice n = 44</td>
<td>Quasi-experimental: Program Evaluation</td>
<td>Perceived knowledge, confidence and self-concept.</td>
<td></td>
</tr>
<tr>
<td>Komaratat and Oumtanee 2009 Thailand</td>
<td>To study the level of nursing competency of newly graduated nurses after using a mentorship model</td>
<td>New graduate nurses n = 19</td>
<td>Quasi-Experimental: Program Evaluation based on Pre-test/ Post-test</td>
<td>Clinical Competency</td>
<td></td>
</tr>
<tr>
<td>Dyess and Parker 2012 USA</td>
<td>To describe and evaluate a collaborative program that supports new graduate nurses</td>
<td>New graduate nurses n = 109</td>
<td>Quasi-Experimental: Program Evaluation based on Pre-test/ Post-test</td>
<td>Skill Acquisition, Retention, Transition Support</td>
<td></td>
</tr>
</tbody>
</table>

- Statistically significant findings with self-rated knowledge and confidence after attending the transition program as well as improved communication and caring as measured with the Nurses’ Self Concept Questionnaire
- Other aspects of self-concepts including general, staff relations, knowledge and leadership did not show any significant change
- Mentor program increased nursing competency of newly graduated nurses
- Level of nursing competency of newly graduated nurses was higher using the mentor model
- Newly graduated nurses were evaluated on nursing competency by “head nurse” two times, with a 1-month interval between evaluations
- Selected experienced nurses were prepared in mentoring roles
- Statistically significant differences between pre-post scores for increased skill: acquisition for planning and evaluation, member of the discipline, leading care and patient care
- Statistically significant differences between pre-and post scores for leadership competencies: modeling the way, inspiring a shared vision, challenging the process and encouraging the heart
- No statistically significant difference noted for communication
- Of the 109 study participants 87/ (80%) remained with their original employer
- Program participants were asked to select their own mentor who was an experienced RN in their organization to provide day-to-day guidance in the practice setting
- Mentors attended a 2-hour information session on program goals and content and invited to attend feedback sessions during the program
- Program appeared to be clinically focused and more of a preceptor or clinical coach role because the evaluation of program outcomes focused on increased skill acquisition related to practice
- New graduate nurse needs enhanced socialization through the complex transition process
<table>
<thead>
<tr>
<th>Author, Year and Country</th>
<th>Study Aim</th>
<th>Sample</th>
<th>Design and Intervention</th>
<th>Outcome Measured</th>
<th>Important Results and Observations</th>
</tr>
</thead>
</table>
| Nied 2009 USA            | To examine the evidence relative to a disconnect between nursing education and nursing practice, design a formal residency program and implement and evaluate the program | New graduate nurses n = 7 | Quasi-Experimental: Program Evaluation based on Pre-test/Post-test Intervention: 16-week new nurse residency program | Competency Confidence | - Residents were very confident of their clinical skills and abilities and this remained unchanged post-residency  
- Most new graduate nurses scored themselves higher on outcomes than their preceptors and mentors; however, this difference was not significant  
- The program appeared to be focused on clinical skills  
- Seven out of the original 10 Residents completed the Residency  
- Preceptors and mentors were much less confident of the resident’s clinical skills and abilities  
- Post-residency, preceptor and mentor confidence level was improved, however only significantly for mentors |
| Sandau et al 2011 USA    | To examine the effect of mandatory preceptor education | New hired nurses and preceptors  
Cohort 1: Past Preceptors (P): n = 74  
Past Orientees (O): n= 39  
Cohort 2 Pre-intervention: n = 300  
Post intervention, P: n = 131, O: n = 53 | Quasi-Experimental using Mixed Methods Pre-Post Intervention: 8-Hour Preceptor Workshop | Satisfaction, Comfort, Retention and Frequency in Critical Thinking & Positive and Constructive feedback | - Preceptor reported confidence and comfort were not significantly greater in intervention group, compared to non-intervention cohort  
- Paired t-tests had significant improved confidence and comfort in preceptor roles and coaching of critical thinking was increased, yet provision of formal feedback was not  
- No significant improvement for orientee satisfaction with preceptors for cohort whose preceptor was in the intervention group and orientees with 3 - 4 preceptors reported the highest satisfaction  
- Retention one year post intervention was significant (Chi-square, p<.05)  
- Preceptor workshops effective to prepare preceptors/experienced nurses to preceptor new nurses as measured by preceptored self-reports |
| Witter 2012 USA          | To compare new graduate medical-surgical nurses with less than 3 years of experience in medical-surgical nursing with and without mentoring | New graduate nurses with 3 years or less experience n = 50  
Experienced nurses with five or more years experience n = 14 | Intervention: 8 week mentorship program | Assessment of Patients, Clinical Decision Making, Cultural competency, Commitment to Professional Nursing Standards, Positive Feelings towards nursing at hospital study setting, and intent to remain in nursing | - Mentored group showed significant correlation: intent to remain in nursing profession on the dimensions of clinical decision making, commitment to professional nursing standards and positive feelings about nursing at study hospital  
- Mentorship curriculum based on quality and safety education for nurses: clinically focused on competency of safety, knowledge skills and attitudes for clinical practice  
- Mentor appeared to have clinical focus and completed an anecdotal evaluation about their mentee’s strengths and weaknesses regarding the mentoring experience  
- Mentors were assigned to have more than one mentee |
<table>
<thead>
<tr>
<th>Author/Year/Country</th>
<th>Study Aim</th>
<th>Sample</th>
<th>Study Design and Outcome Measured</th>
<th>Important Results and Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks et al 2011 Scotland</td>
<td>To evaluate impact and effectiveness of 2 year Web-based program: Flying Start</td>
<td>Program Coordinators n = 21&lt;br&gt;Mentors n = 22&lt;br&gt;Newly qualified practitioners: nurses, midwives and allied health&lt;br&gt;Focus groups: n = 95&lt;br&gt;Online survey n = 547</td>
<td>Cross Sectional&lt;br&gt;Outcome Measured: Confidence, competence, and career development of newly qualified practitioner</td>
<td>• Increased clinical skills development and confidence following program&lt;br&gt;• Competence: approximately 75% of participants who completed the clinical skills development learning found program useful for clinical skills development, yet 22.4% did not, and 3% did not know&lt;br&gt;• Confidence: Approximately 60% of participants who completed the safe practice, clinical skills and reflective practice-learning units thought the program was useful in increasing their confidence.&lt;br&gt;• Program was considered mandatory by some and some received protected time (1-6 hours a month)</td>
</tr>
<tr>
<td>Gustavsson et al 2009 Sweden</td>
<td>To test a sequential-developmental model of early career burnout by Cherniss (1980) using a psychometric approach</td>
<td>Graduate nursing students n = 933</td>
<td>Prospective Cohort Longitudinal study&lt;br&gt;Outcome Measured: Early career burnout</td>
<td>• Burnout may be operationalized as a one-dimensional sequential-developmental model&lt;br&gt;• Authors found exhaustion occurs first and worsens if dysfunctional coping is applied</td>
</tr>
<tr>
<td>Kent et al 2012 New Zealand</td>
<td>To conduct an exploratory survey of nurses responses to death as a stressor</td>
<td>New graduate nurses n = 500</td>
<td>Cross Sectional&lt;br&gt;Outcome Measured: Experience with patient death</td>
<td>• Early career experiences with patient death may have major impact on career choices and retention&lt;br&gt;• Nurses reported being unprepared educationally or socially for these experiences&lt;br&gt;• About one quarter of sample experienced unexpected patient death&lt;br&gt;• Undergraduate education seen to be lacking regarding patient death experience</td>
</tr>
<tr>
<td>Weng et al 2010 Taiwan</td>
<td>To explore the impact of mentoring functions (role modeling, career development and psychosocial support)</td>
<td>New graduate nurses n = 306</td>
<td>Cross Sectional&lt;br&gt;Outcome Measured: Job satisfaction and organizational commitment</td>
<td>• Career development and role modeling functions had positive effects on job satisfaction and organizational commitment&lt;br&gt;• New graduate nurses reported that mentors produced a role modeling effect, however they perceived limited career and psychosocial support from their mentor - the researchers identified this finding as a critical issue that needed further attention&lt;br&gt;• While components of mentoring functions were studied, the program appeared to have a clinical/preceptor focus as evidenced by reports of “mentor’s clinical evaluation ability” which may have influenced findings regarding new graduate nurses perception of limited psychosocial support from their mentor&lt;br&gt;• Mentors chosen by nurse managers, 83.66% had previous mentoring experience, 62.09% had mentor training Mentor ranked by nursing ladder level 1-5, most mentors had nursing ladder level 3; length of training unclear&lt;br&gt;• Mentor program appeared to be clinically focused and consisted of: communication skills, clinical evaluation, teaching ability, evaluation and feedback, medical ethics and laws and mentors experience sharing</td>
</tr>
<tr>
<td>Author, Year and Country</td>
<td>Study Aims</td>
<td>Sample</td>
<td>Study Design</td>
<td>Important Results and Observations</td>
</tr>
<tr>
<td>----------------------------------</td>
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<td>----------------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| Baumberger & Henry 2012 USA       | To provide experienced nurse perspectives on new graduate nurses working in Emergency or Critical Care | Experienced nurses n = 31 | Qualitative Descriptive | • Study participants were asked the question: “Do we really eat our young?”  
• Participants identified unsupportive behaviours by nurses and how new graduate nurses try to work around these issues and the harsh personalities  
• New graduate nurses lacked confidence and gaining acceptance into unit culture  
• Researcher recommended a list of uncivil behaviours, such as making sarcastic comments and criticizing remarks to new graduate nurses, be developed and that education was needed for nurses on uncivil behaviours, as nurses are often unaware of their negative actions towards new graduate nurses |
| Boychuk & Ducheser 2009 Canada    | To provide theoretical framework for new graduate nurse role transition and professional adjustment | New graduate nurses | Grounded Theory | • Transition Shock Theory based on Kramer’s (1974) Reality Shock Theory  
• Transition shock defined as “the experience of moving from the known role of a student to the relatively less familiar role of professionally practicing nurse” (p. 3).  
• Transition Shock described as transition period of exhaustion and isolation and conceptually explored the themes of new graduate nurse role transition through loss, confusion, disorientation and doubt  
• Three to four months of practice for new graduate nurses described as a formative period in which new graduate nurses form an initial reaction, which then extends to an adjustment period  
• One to four months after orientation period were highly stressful for new graduate nurses  
• Recommended extended orientation and structured mentoring program  
• Recommended education institutions and industry should educate nursing students on Role Transition Theory |
| Curtis 2012 USA                   | To explore nurses’ evaluation of orientation and preferred learning strategies | Nurses who were working in case management or utilization management n = 3 | Exploratory Case Study | • Nurses preferred learning in small groups, group discussion was valuable and use of technology was a preferred teaching strategy  
• Some of the benefits of using technology were that no classroom space was required; participants could work at their own pace at anytime and anywhere  
• Both traditional and non-traditional methods utilized (classroom, preceptor, web based and online sessions)  
• Findings: there are various effective learning strategies |
| Evans et al 2008 Australia        | To determine strengths and weaknesses of established transition support programs for new graduated RNs. | New graduate nurses n = 9  
Experienced nurses n = 13 | Qualitative Descriptive | Outcome: Strengths and weaknesses of established transition support programs for new graduated RNs | • Experience gained by new graduate nurses was program strength  
• Lack of supportive behaviour for new graduate nurses was program weakness  
• New graduate nurses experienced a lack of belonging and acceptance to be part of the team |
<table>
<thead>
<tr>
<th>Author, Year and Country</th>
<th>Study Aims</th>
<th>Sample</th>
<th>Study Design</th>
<th>Important Results and Observations</th>
</tr>
</thead>
</table>
| Hazelton et al 2011 New Zealand | To explore needs of new graduate nurses for structured support as they transitioned into the mental health work setting | New graduate nurses n = 18 Mentors: clinical nurse consultants usually with postgraduate qualifications n = 5 | Participatory Action Research | • “Dark side” to mental health nursing highlighted, as evidenced by experienced staff choosing quick and dehumanizing methods to deal with patients  
• New graduate nurses had difficulties fitting into their work environment as they observed neglect and hostile treatment of patients by experienced staff, which hindered their desire for skill acquisition  
• Some new graduates reported on helpful colleagues, however others reported numerous occasions when they worked with staff who were hostile towards new graduate nurses  
• Authors recommended that new graduate nurses be provided with support to consolidate strategies learned in academia for modeling progressive role models and be able to manage their exposure to staff who were from the “dark side” |
| Henderson 2012 USA | To explore common encounters experienced by novice baccalaureate nurses as they transition into the nursing profession | New graduate nurses n = 5 Experienced nurses n = 6 | Mixed methods | • Theme: Need for nurturing and supportive work environment  
• Theme: Need for autonomy in clinical setting to develop independent style  
Recommend further research on the effectiveness of residency program as part of orientation for new graduate nurses along with opportunities to augment critical and technical abilities using simulation labs |
| Hoarea et al 2013 New Zealand | To determine how practice nurses utilize evidence and information they consider useful for their practice | New graduate nurses n = 5 Experienced nurses n = 6 | Grounded Theory | • Role modeling was a main theme of study, which led to development of Reciprocal Role Modeling Theory between new graduate nurse and experienced nurse  
• The Reciprocal role modeling theory is comprised of 3 parts: Becoming Willing, Realizing Potential, and Becoming a Better Practitioner  
• Researchers suggested that the theory may minimize transition shock as the new graduate nurse demonstrates his or her expertise as an information finding expert and in turn learns how to apply theory to practice from a clinically experienced nurse |
| Hollywood 2011 Ireland | To explore the lived experiences of newly qualified registered children’s nurses transition from postgraduate student nurse to staff nurse | Newly qualified registered children’s nurses n = 6 | Phenomenological Approach | • Main Theme: support was most important aspect of transition experience  
• Mentorship and preceptorship programmes facilitated support |
| Kaihlanen et al 2013 Finland | To describe the mentor’s support in the transition from nursing student to registered nurse | Nursing students n = 16 | Qualitative Descriptive: Modulated Narrative | • Mentor role themes: role change support, mentor actions and qualities  
• Recommend resources be allocated to mentor's work |
| Kramer et al 2012 USA | To elicit the components and strategies of nursing residency programs for new graduate nurse integration into professional practice | New graduate nurses n = 330 Experienced nurses n = 401 Nurse managers n = 138 Nurse educators n = 38 | Mixed Methods | • Participants worked on clinical units in Magnet hospitals with very healthy work environments  
• Nursing Residency programs lead to transformative changes in organization and the practice of delegation, prioritization, managing patient care delivery, autonomous decision-making, collaboration with other disciplines, constructive conflict resolution, and utilizing feedback to restore self-confidence |
<table>
<thead>
<tr>
<th>Author, Year and Country</th>
<th>Study Aims</th>
<th>Sample</th>
<th>Study Design</th>
<th>Important Results and Observations</th>
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</table>
| Kramer et al 2013 USA    | To identify effective components and strategies of Nursing Residency Programs. | New graduate nurses n = 330
Experienced nurses n = 401
Nurse managers n = 138
Nurse educators n = 38 | Qualitative | - Residency Programs facilitate the integration of new graduate nurses into professional practice role through competency development
- Identified evidenced based management practice team projects, preceptor councils, clinical coaching presentations, administrative support and nursing and medical committees as effective Nursing Residency program components and strategies |
| Laabs 2011 USA           | To determine how newly graduated BScN nurses perceive moral integrity and how prepared they feel to manage moral conflict | New graduate nurses n = 25 | Qualitative Descriptive | - Moral integrity was perceived as being honest, trustworthy and always defending what was right despite the consequences of doing so
- Some strategies identified to deal with moral conflict were communicating and building relationships with others
- Moral integrity and conflict resolution may be a feasible topic to address in mentee and mentor training |
| Lalani and Dias 2011 Pakistan | To explore transitional experiences from student to staff nurse | New graduate nurses no sample size evident | Grounded Theory | - Four major themes emerged highlighting the core category of “sailing forward”: stepping into the new role, initial adjustment, support systems, and resolution phase |
| McKenna and Newton 2008 Australia | To explore how new graduate nurses develop their knowledge and skill over the first 18 months following graduation | New graduate nurses n = 25 | Phenomenological Exploration | - Themes: Sense of belonging, knowing and moving on
- Recommend the development of nurses beyond the graduate year
- Further work is needed to explore the time frame beyond the graduate year in a nurse’s professional development |
| Mills et al 2008b Australia | To explore rural nurses’ experiences of mentoring | Rural Nurses n = 7 | Constructivist Grounded Theory | - Main theme: Walking with another
- Mentoring reported as a way to support new or novice rural nurses
- Experienced nurses in clinical practice may help to support new or novice rural nurses |
| Mills et al 2008a Australia | To explore rural nurses’ experiences of mentoring | Rural Nurses n = 7 | Constructivist Grounded Theory | - Mentoring found to be integral part of experienced rural nurses’ practice
- Main Theme: Getting to know a stranger was first step for mentor
- Experienced nurses in clinical practice may help to support new or novice rural nurses |
| Murphy-Rozanski 2008 USA | To evaluate new graduate nurses perceptions of helping behaviors of their preceptors, mentors, or coaches, during their nurse residency program | New graduate nurses: n = 19 | Phenomenology | - Themes: Facilitative learning environment in academic and clinical setting is beneficial, more “hands on” interactions in nursing education is needed
- Researchers highlighted the importance of providing realistic guidelines and expectations for new graduate nurses
- The mentor role appeared to have a clinical focus - as in preceptor role |
| O’Kane 2012 UK            | To investigate newly qualified nurses experiences of starting their career in the ICU | New graduate nurses n = 8
Experienced ICU nurses | Comparative Qualitative | - New graduate ICU nurse themes: Expectations, challenges, preconceptions and support
- New graduate ICU nurses experienced anxiety about time management, accountability and socialization |
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| Romyn et al 2009 Canada  | To gain a deeper understanding of the process of making the transition from student to graduate nurse | New graduate nurses n = 19  
Staff nurses, managers and educators n = 167 | Qualitative | Discussion group themes: Practice readiness a myth; more hands on experience required in academic settings; unrealistic expectations to meet urgent needs and "hit the floor running"; importance of mentoring  
Recommended creating formal preceptor and mentor positions and bringing back unit clinical educator positions |
| Ryan et al 2010 Canada   | To explore how perinatal nurses engage with each other and engage with birthing women on a journey of learning in perinatal nursing practice | Registered nurses practicing on a tertiary level Labour and Delivery unit n = 5 | Qualitative Feminist Phenomenological | Themes: nurse-to-nurse mentoring, mentoring as relational learning, mentoring as embodied learning and a contextual understanding of nurse-to-nurse mentoring  
Relational learning revealed that nursing knowledge was enhanced with positive role model mentoring relationships |
| Sevean 2012 Canada       | To explore new graduate nurse learning transition into cancer nursing practice | New graduate nurses with less than 2 years of practice n = 15 | Interpretive Phenomenology | Themes: Getting In - related to the nurses recruitment to cancer nursing practice, Surviving In - related to challenges of working with patients living and dying with cancer, Staying In - retention factors such as strong nursing leadership, quality of work life, and available supports such as preceptors, mentors and professional education |
| Sneltvedt and Sørlie 2012 Norway | To explore what leaders and colleagues can do to foster new graduate nurse competency and retention | New graduate nurses n = 9 | Phenomenological Hermeneutic | Themes: Show trust, provide competence time and support new graduate nurse with competency issues  
Researcher reported new graduate nurses seek knowledge and have good computer use, and can be valuable team members |
| Stewart 2008 New Zealand | To describe the experiences of one New Zealand midwife who mentored two new graduate midwives using computer mediated communication (CMC) | Midwife n = 1  
New graduate midwives n = 2 | Qualitative | Researcher highlighted geographic isolation challenges and how e-mentoring could increase access to a mentor through computer mediated communication (CMC)  
E-mentoring: A discussion venue for professional issues; appeared to be clinically focused  
Reported limited face-to-face support in clinical setting; due to busy mentor  
Having time for reflection away from the clinical setting was helpful  
Reported: "E-mail is almost like an anonymous confession and I feel free to divulge sensitive thoughts this way" (p. 110)  
Reported CMC was easy and practical. E-mentor responded to e-mentee as able  
Emails towards the end of the mentoring relationship were described as having more of a social connotation  
Reported that at the one year mark the association had come to a natural conclusion and went from a mentoring relationship to a collegial friendship |
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| Tabor 2012 USA          | To explore the perceptions of experienced nurses lived experience in mentoring relationships | Experienced nurses n = 20 | Phenomenology | • Themes Reported: teamwork and trust, online tutorials or technology mentoring, communication, supportive and nurturing relationship and leadership encouragement  
• Nurse mentors reported that they completed on-line tutorial or technology mentoring before they began e-mailing their mentee  
• Internet mentoring helped new nurses see the big picture of mentoring |
| Turner and Goudreau 2011 Canada | To identify potential improvements in a series of seminars for new graduate nurses in their first year of emergency room (ER) nursing | New graduate nurses n = 5 | Qualitative Case Study | • Researchers found new graduate nurse transition to be difficult, yet bearable  
• Themes: being nurtured, learning, retention, attraction and integration and towards professionalism  
• Self-reported new graduate nurse loneliness vanished with the internship program, peer, clinician and nurse manager support |
| Williams 2013 USA       | To explore the influences on transition to practice outcomes for new graduate nurses in a residency program | New graduate nurses n = 641 | Descriptive Correlational Using secondary data analysis  
Outcome: Competence, confidence, comfort  
Intervention: 1-year residency program | • Mentoring and debriefing were positive influences on gains in competence, confidence, comfort and job satisfaction in transitioning to staff nurse role after completing the program  
• Results were moderated by a bachelor’s educational preparation and previous health care experience, which resulted in improved comfort in assuming the staff RN role if participants had baccalaureate education or health care experience |

**Table 6: Correlational Study Design Evaluation Criteria**
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<tr>
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| Altimer 2009 USA            | To explore neonatal online nursing orientation                             | New graduate nurses                         | Implicit Program Evaluation           | • Literature review benefits of online learning: increased learning, interaction and learner control, flexibility, cost savings, ease of updating learning information, increased learner satisfaction and retention  
  • 30 on-line learning modules were developed and implemented for an acute care facility  
  • On-line learning modules were linked to a learning manual used by preceptors  
  • Program evaluation outcomes: Cost benefits of saving costs of $56,400.00, identified by $30,000.00 savings by replacing the 5-day instructive class with the online orientation program and 1056 hours saved multiplied by an hourly wage of $25.00  |
| Auffrey et al 2012 Canada   | To develop Web-based orientation in French and develop volunteer mentor training program for senior nurses | New graduate nurses and experienced nurses | Quasi-experimental Mixed Methods: pre-post-test; focus groups | • Identified new graduate nurse transition as stressful  
  • 30 orientation modules created  
  • Mentorship resources and guides produced in French  
  • Mentors reported their desire for further professional development opportunities  |
| Bahouth and Esposition-Herr 2009 USA | To evaluate a comprehensive orientation program which included simulation as part of the formal orientation strategies | New graduate nurses in Critical Care and experienced nurses | Mixed Methods Cross-sectional survey; interviews | • Program evaluation information for the new orientation program obtained through nurse exit interviews and an internal survey for nurses and physicians.  
  • New graduates reported a lack of support to assume new role responsibilities in high acuity settings, whereas physicians and medical directors expected new graduate nurse autonomous patient care upon being hired  
  • A monthly peer support and mentoring group meeting for new graduate nurses was started to decrease anxiety and frustration  
  • The nurse mentor’s role was to provide reflection, support and guidance to new nursing graduates.  
  • New orientation program was a key to successful integration of new graduate nurses.  |
| Bellefontaine and Eden 2012 Canada | To evaluate and explore recruitment and retention projects | New graduate nurses and experienced nurses | Mixed Methods                          | • Three retention and recruitment projects were explored: a new-nurse graduate orientation/transition framework, guidelines for nursing mentorship and an online employment tool to assist in the hiring of new nurse graduates  
  • Multimodal data collection eg. Inventory of orientation programs and employment tool piloted with nursing students  
  • Partners in the project continued to work collaboratively to enhance these projects  |
| Bratt 2009 USA              | To evaluate a 15-month Nurse Residency program                              | New graduate nurses and experienced nurses | Implicit Program Evaluation           | • Program included formalized preceptor training, mentoring by clinical coaches and monthly educational sessions for new graduate nurses on clinical topics, conflict resolution and lateral violence, and giving and receiving feedback  
  • Study results: one year after program completion, retention rates were 79 - 97% with mean average of 84% in comparison to over 50% retention rates in some of the hospitals prior to implementation of the residency program  
  • Programs’ success was attributed to a cohesive planning team with a common agenda  |
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| Brediger 2009 USA     | To evaluate a formal mentoring Program for new graduate nurses hired into CVICU | New graduate nurses hired to CVICU | Cross-sectional: survey | • Survey: Respondents reported satisfaction with mentoring program and mentoring relationship  
  • A detailed description of the content of the CVICU mentor-training program provided, example: training was focused on what was needed to develop a mentoring relationship, setting goals and objectives, addressing lateral violence, effective communication and professionalism  
  • Length of the training and the duration of the mentoring relationship not available  
  • Mentoring committee was responsible for establishing guidelines, objectives, agreements/contracts and training for mentors and matched mentors with their mentees  
  • Mentoring committee provided support and encouragement of mentoring pairs and facilitated the mentoring relationship  
  • Mentors were volunteers from the CVICU who formed the mentoring pool  
  • During orientation mentees were invited to select a mentor from a list/pool of mentors and asked to submit their selection to the mentoring committee  
  • The committee would then approach the mentor with the mentoring request and the mentor could decline without judgement, however if the mentor accepted the mentor role the committee would send the mentor a contract, which specified how meetings would take place and the expected goals of the relationship  
  • The mentor then contacted the mentee to review the relationship expectations, boundaries and meeting schedules  
  • The contract and agreement included length of time, schedule and method of contact  
  • Goals and objectives were formalized by signage by the mentoring pair and returned to the mentoring committee |
| Burr et al 2011 USA    | To evaluate experience of mentoring program | New graduate nurses and experienced nurses | Quasi-experimental Post-test, no control group | • Decreased turnover 20% to 7%  
  • After 6 years turnover still less than 10%  
  • Some mentees became mentors; mentors enthusiastic  
  • Mentoring tips provided, yet lack of program specifics regarding mentor matching etc. |
| Campbell and Jeffers 2008 USA | To evaluate diverse teaching-learning experiences for nursing students and recruit new graduate nurses to Long Term Care | Nursing students, new graduate nurses and experienced nurses | Cross-sectional: survey | • Qualitative Evaluation Survey  
  • The Sister Model used to increase communication, share resources, promote learning, and increase competence of experienced nurses in Long Term Care  
  • Project between a college of nursing and four nursing homes to provide diverse teaching  
  • Evaluation: positive and demonstrated collaboration |
| Carrion 2010 USA       | To examine the perceptions of medical surgical nurses regarding new graduate nurses knowledge and skills that could be considered for induction programs | New graduate nurses and experienced nurses n = 275 | Descriptive Action | • No significant difference between the level of education of medical surgical nurses’ and the perceptions of new graduate nurses’ knowledge and skills  
  • Provided an outline of a six-week mentorship program, which appeared to be clinically focused  
  • Moderate survey response rate of 37% (n= 102) |
| Ellisen 2011 USA       | To discuss and evaluate the journey of starting a mentoring program | New graduate nurses, newly hired nurses, and RN mentors | Mixed Methods | • A SWOT (strength weakness, opportunity and threat) analysis was conducted  
  • Mentor and mentee evaluation tools were developed and will be used at the end of first year of the program |
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| Fox 2010 USA          | To explore new graduate nurse turnover using a mentoring program to improve job satisfaction and decrease turnover | New graduate nurses n = 12 Experienced nurses n = 12 | Quasi-experimental Pre-post test, no control group | - There was a 0% turnover rate during the 1-year pilot and satisfaction improved  
- Mentor/mentee matched by manager, schedules reviewed. Pairs attended 1-day class and completed Myers Briggs assessment  
- Mentors were rewarded financially totaling 3.5% of their salary: 25% at beginning of mentoring and 75% at end of 1 year, yet noted that most did not know they would receive monetary incentive until initial meeting |
| Lathan et al 2011 USA | To evaluate a university-service partnership | New graduate nurses n = 109 Experienced nurses n = 89 | Quasi-experimental Pre-post test, no control group | - Evaluated mentoring and shared governance program  
- Mentors reported improved teamwork and the ability to deal with conflict  
- Mentoring class topics: communication and cultural sensitivity skills |
| Lennox & Foureur 2012 New Zealand | To evaluate a one-year midwifery transition to practice program. | Midwives and n = 4 New graduate midwives n = 4 | Naturalistic Mixed Methods | - Quantitative data analysis: descriptive statistics. Qualitative: thematic  
- Group mentoring improved confidence  
- Main theme: New graduate midwives valued the ability to discuss practice experiences with experienced midwives and learn from other group members  
- Study may serve as motivational research for the exploration of group mentoring with new graduate nurses |
| Ng et al 2010 Canada | To design, implement and evaluate a 12-week mental health residency program for nurses new to mental health. | New graduate nurses n = 12 Experienced nurses n = 8 | Mixed Methods Quasi-experimental Pre-post test, no control group; focus groups and interviews | - Program goals were to support nurses new to mental health clinical practice so that they could develop the required competencies for patient care and to dispel myths about mental health nursing and the stigma attached to working in this area  
- Authors used confidence and recovery attitude as outcomes for the residency program  
- Statistically significant improvement in clinical confidence  
- Improvement in 75% of recovery attitudes of nursing residents  
- Program provided nurse mentors with an opportunity to improve their own skills, while supporting the nurse residents |
| Steen et al 2011 USA | To evaluate a nurse intern program for student nurses on ease of transition from student nurse to registered nurse | New graduate nurses n = 50 | Cross-sectional: survey | - Quantitative survey: Measured peer camaraderie, confidence, education and career advancement and pressure to perform related to nursing tasks  
- Knowing personnel as a student on the unit eased their transition  
- Participants reported beliefs of increased confidence when conducting nursing tasks, patient care and interacting with patients and their families  
- Program created opportunities for career advancement and job placement |
| Woodworth 2012 USA | To evaluate orientation support by utilizing a faculty member to provide orientation support for new graduate nurses | Nurse Faculty n = 1 New graduate nurses n = 4 | Implicit Program Evaluation | - Qualitative: Summative verbal feedback quotations on the innovative orientation experience from new graduate nurses were provided  
- Researcher reported successful retention of all four new graduates at one-year employment mark |
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| Arizona nurse 2011 USA | To discuss new graduate nurse residency program | New graduate nurses | Residency Program | ● Arizona, USA does not mandate that new graduate nurses complete residency program before assuming RN role  
● Author reported that some hospitals have implemented shorter residency programs.  
● Author highlighted that residency programs are not standardized and are not consistently evaluated |
| Bates et al 2012 USA | To discuss a structured mentoring program for junior nursing students through to graduation | Student nurses and Experienced Nurses | Mentoring Program: Professional Guide program | ● Student nurses were randomly paired, by academic coordinator, with volunteer professional guide - an experienced nurse  
● Reported outcomes: Positive relationships, student empowerment, increased job satisfaction, reduced burnout and interest in becoming a mentor  
● Provided some details about program: At the end of program participants complete program evaluation for further refinement of program  
● Program uses Facebook and HIPPA information is reviewed with participants, i.e. no posting of patient pictures in clinical setting |
| Buffum, Brandon 2009 USA | To describe the benefits of mentoring program in the Neonatal ICU for nurses | New graduate nurses and experienced nurses | Mentoring Program | ● Encourages nursing leaders to implement mentoring programs  
● Proposed mentorship program benefits: job satisfaction and increased morale, enhanced recruitment and retention  
● Conclusion: “It takes a unit to raise a nurse” p. 362 |
| Carpenter 2012 USA | To develop a residency program for new graduate nurses to improve clinical professional competencies | New graduate nurses | Residency Program | ● Brief description of 12-month residency program  
● Clinical simulation used |
| Dowdle-Simmons 2013 USA | To advocate for a formal preceptor/mentor program for rural new graduate nurses | New graduate nurses | Formal Preceptor/Mentor Program | ● Discuss benefits of formal program  
● Highlight need for administrative support  
● Program appears to be clinically focused |
| Ellison 2010 USA | To discuss shared mentorship on nursing units | New graduate nurses, experienced nurses and Professional Development Educator | Mentorship Program | ● A shared mentoring process for unit and organization is proposed  
● Experienced and talented preceptors usually requested to preceptor new staff, however they are fatigued as staff leave preceptoring and mentoring to a few, hence providing limited coverage to new graduate nurses  
● Terms mentor and preceptor appear to be used interchangeably |
<p>| Frost 2013 USA | To discuss how mentorship affects retention rates of new nurses | New graduate nurses | Mentorship | ● Discussed importance of mentoring and education on lateral violence |</p>
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| Grossman 2009 USA      | To discuss peering (or collaborative mentoring) in Critical care | Students and experienced nurses | Mentoring Program | • Both new and experienced nurses reported mentoring should include peering – where both mentor and mentee can learn from each other  
• Resource online WIKI was discussed as an option for learning |
| Henderson and Eaton 2013 Australia | To provide direction for leaders to effectively support preceptor, buddy or mentor | Nursing leaders, new graduate nurses, experienced nurses | Importance of leadership valuing the role of preceptor, buddy or mentor | • Reports on barriers to learning: lack of preparation on how to foster learning, poor unit planning, lack of recognition or rewards and lack of understanding about student and new graduate needs  
• Suggest management need to focus on establishing a culture where teaching and learning in practiced is valued by all |
| Kooker and Kamikawa 2011 USA | To describe an assessment of retention initiative in response to nursing shortage in Hawaii | New graduate nurses and clinical training coaches | Retention Training Programme | • A training programme was initiated with clinical training coaches beyond basic orientation for new graduate nurses. Retention improved registered nurse vacancy rate decreased and patient satisfaction increased |
| LaSala 2009 USA        | To discuss the growth and development of professional nurses | Nursing students, new graduate nurses and experienced nurses | Mentorship | • 1:1 Mentoring: Dependent on the individual seeking direction and advice and the other's willingness to provide support  
• Mentoring may help prepare the nurse for clinical practice, leadership, career promotion and increase self-esteem and job satisfaction  
• Importance of professional behaviour and appearance as nursing student discussed |
| Lindner 2013 USA       | To discuss approaches to challenges that organizations and newly graduated nurses experience | New graduate nurses | Transitional Support Program | • Discussed importance of professional development for new graduate nurses, transition skill classes and residency programs |
| Malott 2012 Canada     | To discuss pilot project to develop new clinical skills and knowledge | New graduate nurses and experienced nurses | Mentoring Program | • Discussed mentorship program: mentors volunteered  
• Recommended need to hire a coordinator for orientation of new nurses and new graduate nurses |
| McMurry 2012 USA       | To invite nurses to join Facebook page as a community forum | New graduate nurses and experienced nurses | Community Facebook Forum | • Facebook website allows mentors and mentees to connect, share, and get involved in nursing matters  
• Outcome: New Graduate Connection Community, no formal training required just a “heart for nursing” (p.5) |
<p>| O’Rourke 2012 Canada   | To discuss enhanced orientation for nurses new to Long-Term Care (LTC) | Nurses | Mentorship Program | • Mentorship program: n = 23. Six clinical workshops developed and held for a total of 390 participants. Protégés reported a positive effect on their transition to the workplace and confidence levels; mentors reported building their mentorship skills |</p>
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| Patterson 2008 USA    | To discuss the importance of nurse residency programs | New graduate nurses | Residency Program | • Provides definition of nursing residency programs: “year-long programs that transcend specialties to focus on areas such as critical thinking, communication, patient advocacy, and evidence-based practice”(p. 18)  
• Author reported almost 30% of new graduate nurses in hospitals leave in their first year |
| Pattillo 2012 USA     | To discuss the facilitation of bridging the school-to-practice gap | New graduate nurses | Strategies to help retain new graduate nurses | • Reported nurse residency programs save hospitals $200,000 to $400,000 per year  
• Reported formal and informal mentoring may assist with developing professional and personal coping strategies needed for career growth  
• Recommended hospitals provide nurse manager with coaching skill training  
• Recommended hospitals should support nurses educational interests, and support evidenced based projects  
• Referenced Hendren (2011) 5 ways to retain new graduate nurses: provide competency based orientation, offer residency program, encourage mentoring relationships, encourage good nurse managers recognize accomplishments and provide career supports |
| Phoenix 2013 USA      | To discuss the development of a mentoring culture in psychiatric mental health nursing | New graduate nurses and experienced nurses | Mentor Match: Online Program | • Program appears to be specifically for American Psychiatric Nurses Association (APNA) members  
• Mentors and mentees matched based on shared interests and preferred modality of communication  
• Mentoring relationship can be brief or long term |
| Rae 2011 Scotland     | To discuss a nursing career initiative program for new graduate nurses and midwives | New graduate nurses and midwives | Nursing Career Initiative Program | • Nursing Careers initiative requires candidates to study for a clinically relevant master's degree  
• Recommends investing in nurses and midwives in beginning of their career to foster clinical leaders |
| Rose 2008 USA         | To discuss the transition experience from student to new graduate nurses and needed support from experienced nurse mentors | New graduate nurses and experienced nurses | President’s Message | • Transition identified as chaotic, unsupported and painful for many new graduate nurses  
• Encourages experienced nurses to be positive mentors |
| Salera-Vieira 2009 USA| To discuss orientation strategy for new graduate nurses | New graduate nurses and nurses educators | Collegial Clinical Orientation Model | • Reported on the Collegial Clinical Model: Nurse Educator functions as a clinical instructor for 3 days of new graduate nurses' clinical orientation to assist with transition to working unit |
| Scott and Smith 2008 USA | To discuss the Transition and Retention (STAR) Program | New graduate nurses | Group Mentoring | • Contended that group mentoring is a cost-effective strategy to assist new nurses to gain confidence and competence  
• Group mentoring team consisted of 3 nurse education specialists who liaised with new graduates during their initial orientation  
• Quarterly team meetings held with new graduate nurses in their first year |
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| Smith 2008 USA        | To discuss a formal mentoring program in acute care setting | New graduate nurses | Formal Mentoring Program | - Program used as a transitional strategy to address clinical and professional socialization issues and to increase new graduate nurse confidence and comfort. Described new graduate nurse experience as stressful  
- Outcome: Confidence and comfort  
- Mentor paired with mentee following mentor training  
- Mentor/mentee pairs: n = 30  
- Mentoring relationship for one year or longer if desired  
- Satisfaction expressed by new graduate nurses through anecdotal reports to experience nurses  
- Additional support of a mentor was provided for the year  
- Mentors in the organization recruited by nurse managers, clinical leaders and educators  
- Mentors attended a 2.5-hour mentoring course on learning, communication, personality styles, feedback skills and generational diversity |
| Snow 2013 UK          | To discuss the need for mandatory preceptorship programs | New graduate nurses | Preceptorship Program | - Highlighted that preceptor programs are inconsistent, suggested 6 - 12 month preceptor program  
- Described preceptor program, that included clinical workbook, medication calculation test and one on-line module on diabetes  
- New graduate nurses (n = 27) participated in program |
| Stewart and Barber 2011 Scotland | To discuss on-line preceptor program | New graduate nurses | On-line Preceptor Program | - Flying Start Program consists of 6 facilitated study days/protected learning time  
- Program includes 10 learning units: clinical skills, team work, communication, safe practice, research for practice, equality and diversity, policy, reflective practice, CPD, and careers  
- Program consists of sessions that enable peer discussions in a supported environment throughout year with mentor support meetings  
- Initially new graduate nurses were encouraged to work through on-line sessions independently with support from their educator, yet based on nursing feedback a structured learning day was implemented with 4 staggered one-hour on-line sessions interspersed with group sessions  
- New graduate nurses graduate from Flying Start Program when they complete 10 units and demonstrate increased capabilities and confidence in program areas |
| Thorpe et al 2009 Canada | To discuss clinical coaching in forensic psychiatry | Late career nurses and new graduate nurses | Clinical Coach Program | - The Royal Ottawa Health Care Group developed a clinical coach program in forensics that matches veteran nurses with new graduates or nurses new to forensic psychiatric nursing  
- Program has resulted in retention rates of more than 91% after 1 year |
| Ulrich et al 2009 USA  | To discuss RN Residencies for new graduate nurses | Student nurses and new graduate nurses | Residency Program | - Identified importance of structure in the program  
- Resident responsibilities identified: “Be there, be honest, ask for help, take feedback constructively, provide feedback, pay it back, pay it forward” (p. 28) |
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<td>Vance 2011 USA</td>
<td>To discuss the “C” of Mentoring: Cultivating potential for success</td>
<td>New graduate nurses and experienced nurses</td>
<td>Discussion</td>
<td>● Identified practical tips for mentees such as being ambitious and willing &lt;br&gt; ● Discussed mentoring versus tormenting: eating our young, incivility and lateral violence</td>
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<tr>
<td>Vassel 2013 USA</td>
<td>To discuss Patient Care Intern training program</td>
<td>New nurses to the Operating Room</td>
<td>Patient Care Intern (PCI) Preceptor Program</td>
<td>● PCI Preceptor Program for the Operating Room included: preceptor workshops and pairing new Operating Room staff with volunteer expert staff &lt;br&gt; ● Turnover decreased to 4% versus the reported national average of 10%</td>
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<tr>
<td>Whetzel 2008 USA</td>
<td>To discuss transitioning paramedics into emergency nurses</td>
<td>Paramedics and nurses</td>
<td>Mentoring</td>
<td>● Discussed professional socialization as a concern &lt;br&gt; ● Recommended joining professional organization &lt;br&gt; ● Mentoring may assist with reality shock</td>
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<tr>
<td>Woodfine 2011 USA</td>
<td>To discuss how to take a novice nurse “under your wing”</td>
<td>Nurses and new graduate nurses</td>
<td>Mentoring</td>
<td>● Discussed personal experience as a mentor, yet mentor role appeared to be more of preceptor role with an evaluative measure: learning contract and performance appraisal &lt;br&gt; ● Also discussed in conclusion that the mentor should be collaborative and non-judgmental as the mentor should act as a change agent &lt;br&gt; ● Discussed reality shock due to lack of clinical instructor support, and new graduate nurses at times navigating on their own which is stressful and emotional. &lt;br&gt; ● Author speaks of veteran and young new graduate nurse relationship as a partnership - and example of beautiful swan taking a young duckling under the sheltering wing of mentor</td>
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<tr>
<td>Zauszniewski 2009 USA</td>
<td>To discuss mentoring the next generation for mental health nurses as a critical strategy for recruitment and retention</td>
<td>Mental health nurses</td>
<td>Mentoring Editorial</td>
<td>● Highlighted mentoring as a strategy for professional transition &lt;br&gt; ● Mentoring Requires Commitment – the “dance of mentorship” (p. 113) &lt;br&gt; ● Reported mentoring dance progresses through the mentoring relationship using Kram’s (1985) four mentoring phases as follows: 1) Initiation, first 6 - 12 months of the relationship, where role modeling is present and the mentor is ready to dance; the mentee may be more reluctant to rely on his/her own knowledge and rely mainly on the mentor’s knowledge and experience to lead the dance; 2) Cultivation/ Functioning, where mentee learns to dance and is promoted and protected by the mentor; 3) Separation / Termination, 6 - 24 months, which is informal as changes are negotiated in partnership and the mentee may dance with others; although mentor may feel the loss of the 1:1 mentor relationship; and lastly, 4) Redefinition, where the dance may never end and the mentor and mentee dance collaboratively as peers with varying turns to lead</td>
</tr>
</tbody>
</table>
### Table 9: Other Articles with Limited References such as Editorials, Opinion Pieces, Announcements and News Bulletins

<table>
<thead>
<tr>
<th>Author/ Year/ Country</th>
<th>Article Aims</th>
<th>Sample</th>
<th>Intervention type</th>
<th>Findings and Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Nurse 2009 USA</td>
<td>Mentoring Program for New Nurse Faculty administered by Sigma Theta Tau International, Honor Society of Nursing</td>
<td>New nursing faculty</td>
<td>Mentoring Program</td>
<td>18 month program, Mentoring pairs from different institutions, Mentee outcomes reported: higher job satisfaction, increased promotions and mobility and more productivity when obtaining grants and publishing</td>
</tr>
<tr>
<td>American Nurses Association 2010 USA</td>
<td>Resolution for Mentoring Programs for novice nurses</td>
<td>New graduate nurses</td>
<td>Resolution</td>
<td>Resolution submitted to the American Nurses Association House of Delegates in support of initiatives to support the successful integration of novice nurses into the work setting</td>
</tr>
<tr>
<td>Arizona Nurse 2009 USA</td>
<td>Resolution to support Nurse Residency Programs</td>
<td>New graduate nurses</td>
<td>Resolution</td>
<td>Resolution submitted to the Arizona Nurses Association to support nurse residency programs</td>
</tr>
<tr>
<td>Biali 2013 USA</td>
<td>To discuss anxiety in relation to graduation approaching</td>
<td>Nursing students</td>
<td>Mentorship Program</td>
<td>Discussed the challenges to job hunting and finding preceptorship, Recommended mentorship program and formal residency to improve skills and confidence</td>
</tr>
<tr>
<td>Bird 2013 USA</td>
<td>To discuss how mentoring can ease transition to qualified nurse</td>
<td>New graduate nurses and experienced nurses</td>
<td>Mentoring</td>
<td>Editorial supporting mentorship, however requests exploration on stopping the large jump between being a student and being a qualified nurse, Recommends a phased introduction of responsibility and accountability, increased through nurse training</td>
</tr>
<tr>
<td>Campbell 2010 USA</td>
<td>To provide a brief review of second-career nurses’ needs</td>
<td>New 2nd career nurses</td>
<td>Preceptorship and Orientation Programs</td>
<td>Author posits that second-career nurses are more mature and confident with life and work experiences and may not respond as well to traditional approaches such as preceptorship and orientation, Second-career nurses may require more individualized assessment and specific teaching scheme prior to the standard orientation, Second-career nurses previous work experience may not compare to the professional demands of nursing employment, which may result in culture and reality shock</td>
</tr>
<tr>
<td>Carrion and Shalaway 2009 USA</td>
<td>To discuss Internship Program developed for Post Anesthetic Care Unit nurses</td>
<td>New graduate nurses and experienced nurses</td>
<td>Internship Program</td>
<td>Conference Abstract: Program for Post Anesthetic Care Unit was revised based on a critical care course</td>
</tr>
<tr>
<td>Author/ Year/ Country</td>
<td>Article Aims</td>
<td>Sample</td>
<td>Intervention type</td>
<td>Findings and Observations</td>
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</table>
| Colorado Nurse 2012 USA | To discuss the Novice to Expert Committee report | New graduate nurses and experienced nurses | Mentoring Facebook Group and Professional Development Seminar on Professionalism | - Novice to Expert Committee developed to assist with new graduate nurse transition to practice  
- Developed mentor network based on mentorship workshop  
- Mentors paired with new graduate Facebook Group: Colorado New Nursing Grads for safe new graduate nurses community - membership n = 289  
- Professional development seminar on professionalism provided for 18 new graduate nurses |
| Desjardins 2008 USA | To discuss how a mentor made a difference in nurses’ career | Male nurses and leadership mentors | Mentor Role Modeling Discussed influential leaders that were mentors | - Discussed influential leaders that were supportive mentor role models  
- Mentor facilitated problem solving as a sounding board |
| Dillon et al 2009 USA | Abstract on critical care training for Pediatric Cardiac ICU program for new graduate nurses | Experienced Pediatric Cardiac ICU nurses and new Pediatric Cardiac ICU nurses | 1 year beyond initial training | - Provided overview of program  
- Mentors were pediatric ICU charge nurses  
- New nurses reported mentors to be knowledgeable, available and professional |
| Dorion 2011 Canada | To discuss Saskatchewan Provincial Nursing Mentorship Initiative (PNMI) Program for new nursing graduates | New graduate nurses | Nursing Mentorship Program | - Program in place from 2008 – 2010, for new graduate nurse four month full time employment in supernumerary position, however Ministry of Health funding was discontinued  
- Provincial Mentorship Program Outcomes: Increased retention, confidence and competence |
| Doyle 2011 USA | Director of an education center in small rural hospital describes mentor matching | New graduate nurses and experienced nurses | Mentor Program | - Participants matched by unit location, same shift and generation. Mentoring pairs reported same generation increased their comfort level  
- Program appears to be clinically focused to maintain safe quality patient care |
| Fights 2012 USA | Academy of Medical- Surgical Nursing President’s message to be a mentor to new graduate nurses | New graduate nurses and experienced nurses | Mentoring | - President encouraged nurses to become a mentor to a new graduate nurse  
- President encouraged mentors to engage the mentee on a social level and then develop the professional mentor/mentee relationship to stop the cycle of “eating our young” |
| Fontaine 2009 USA | To provide an overview of community nurse mentoring program for nursing students | Students, new graduate nurses and experienced nurses | Community Nurse Mentoring Program | - Experienced nurses recruited to mentor nursing students and welcome them into the profession  
- Mentors completed self study continuing education module to facilitate mentoring nursing students  
- Mentoring pairs matched by program coordinator based on similar interests and professional goals |
<p>| Giles 2010 USA | To provide an overview on notes for the new nurse | New graduate nurses and experience nurse | Mentoring | - Editorial reflection: Author made 5 suggestions for new graduate nurses: 1. Keep a professional mentor, 2. keep smiling, as humour is the antidote for burnout, 3. keep resume building, join committees and professional organizations, 4. keep your lunch, with self-care and 5. keep “full” in your role, with professional involvement |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Hendren 2011 USA</td>
<td>To review 5 ways to retain new graduate nurses</td>
<td>New graduate nurses</td>
<td>Competency Based Orientation, Residency Program</td>
<td>• Author recommended five strategies to assist with new graduate nurse role transition and retention: 1. Provide competency based Orientation, 2. Offer a Nurse Residency Program, 3. Encourage mentoring, 4. Ensure good managers, 4. Recognize and support</td>
</tr>
<tr>
<td>Kai Tiaki Nursing 2008 New Zealand</td>
<td>To provide brief news bulletin from Kai Tiaki Nursing New Zealand Journal on mentoring system</td>
<td>Nurse practitioner candidates</td>
<td>Mentor Program</td>
<td>• Mentoring system available for nurse practitioners to assist with nursing application and preparation for a panel interview</td>
</tr>
<tr>
<td>Keller-Unger 2012 USA</td>
<td>To provide overview of what to look for in a first job/career</td>
<td>New graduate nurses</td>
<td>Transition Program</td>
<td>• Recommend new graduate nurses ask potential employers if they have a transition program for new graduate nurses • Preceptoring and mentoring appear to be used interchangeably</td>
</tr>
<tr>
<td>Kendall-Raynor 2008 Scotland</td>
<td>To discuss an education review on newly qualified nurses and midwives</td>
<td>Newly qualified nurses and midwives</td>
<td>Preceptor and Mentoring Programs</td>
<td>• Highlighted importance of mentor and preceptor programs • Preceptor Program: Flying Start was acknowledged</td>
</tr>
<tr>
<td>Koenig 2011 USA</td>
<td>To describe the mentor role and remind and inspire nurses to be amazing mentors</td>
<td>New graduate nurses and experienced nurses</td>
<td>Mentoring</td>
<td>• Mentor roles identified: teacher, guide, motivator, counselor, sponsor /referrer/door opener and role model</td>
</tr>
<tr>
<td>Nursing Standard 2011 England</td>
<td>To announce that the Flying Start program gained accreditation</td>
<td>New graduate nurses</td>
<td>Preceptor Program</td>
<td>• The Flying Start Program is an online preceptorship program</td>
</tr>
<tr>
<td>O'Connor and Adams 2009 USA</td>
<td>To discuss team mentoring program for new nurses</td>
<td>New nurses</td>
<td>Orientation Program</td>
<td>• Two groups of three new nurses assigned to one preceptor • Outcome: All six nurses retained at 1 year • Mentoring and preceptoring terms appear to be used interchangeably</td>
</tr>
<tr>
<td>Parish 2011 UK</td>
<td>To invite experienced nurses to be an outstanding mentor</td>
<td>Experienced nurses</td>
<td>Mentoring</td>
<td>• Author encouraged nurses to be mentors and not &quot;eat their young&quot; or be hostile to students and newly qualified colleagues</td>
</tr>
<tr>
<td>Punnara and Barta 2009 USA</td>
<td>To report on the design of a 12-week vascular surgery unit orientation program and recommend mentoring program</td>
<td>New graduate nurses, experienced nurses and nurse educator</td>
<td>Orientation and Mentoring Programs</td>
<td>• Orientation Program lead by unit education. Program components include a preceptor and weekly clinical evaluations • Author recommended the implementation of a mentorship program for new graduate nurses in Vascular Surgery</td>
</tr>
<tr>
<td>Quell 2010 USA</td>
<td>President's Message from Connecticut Nurses Association encouraging experienced nurses to be mentors;</td>
<td>New graduate nurses and experienced nurses</td>
<td>Mentoring</td>
<td>• Recommended experienced nurses model quality to students and new graduates to create a culture that inspires confidence • Thanked experienced nurses that were mentors</td>
</tr>
<tr>
<td>Roberts 2010 USA</td>
<td>Special projects coordinator for the Colorado Nurse Association reports on Novice to Expert Steering Committee</td>
<td>New graduate nurses and experienced nurses</td>
<td>Mentoring Program</td>
<td>• Committee developing a mentoring network program • Goal is to provide mentorship, guidance and support • Hosted new graduate nurses job fair</td>
</tr>
<tr>
<td>Author/ Year/ Country</td>
<td>Article Aims</td>
<td>Sample</td>
<td>Intervention type</td>
<td>Findings and Observations</td>
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</table>
| Romaguera 2010 USA    | To report on poster presentation: Mentoring - Sharing Your Values, Beliefs, Experiences and Expertise | New graduate nurses and experienced nurses | Mentoring Program | Mentor program: Mentor signed contract commitment  
Mentee provided with opportunity to select mentor  
Implementation of program begins following mentor training |
| Sartorius- Mergenthaler et al 2008 USA | To discuss SPRING New Graduate Nurse Intern Program | New graduate nurses and nurse educator | Internship Program | Conference Poster Abstract: Social and Professional Reality Integration for Nurse Graduates (SPRING) Program: The program augments the unit orientation program by providing ten classes throughout the first year on communication, psychomotor and critical thinking skills  
Unit educator makes regular clinical rounds to support new graduate nurses transition and provides consultation to nurse managers and preceptors  
Reported 81% retention rate |
| Sharman 2008 UK | To make an appeal to nurses who are recruiting to consider fresh thinking new graduate nurses | New graduate nurses | Specialty Area Preceptor Programs | Appeal made to nurses in recruitment positions to hire new graduate nurses who with support may be able to fulfill roles that previously required experienced nurses  
Recommends preceptor programs be revised to ensure all levels of staff can join specialty areas |
| Smith 2008a USA | Interview with L. Smith director of nursing education and research about mentorship program at Danbury Hospital | Director of Nursing Education and new graduate nurses | 1 year Mentoring Program following preceptorship experience | Program pairs volunteer mentor and mentee  
Mentors recommended by nurse manager, nurse educator clinical leader  
Prior to matching: mentors trained in personality styles, generational gaps, and communication  
Plans to expand mentoring to new staff and specialty areas |
| Smith et al 2011 USA | To discuss Pediatric Nurse Residency Program development | New graduate nurses | Pediatric Nurse Residency Program | Program length: 12 months  
Feedback from nurse residents assisted with professional development  
	 |
| Spader 2008 USA | To discuss new graduate nurses being part of the team, coach’s circle and mentoring program | New graduate nurses | Coach’s Circle and Mentoring Program | Nurse educator facilitates coach’s circle every two weeks with new graduate nurses during their 3 month orientation  
Mentoring: Each new nurse is matched up with a mentor for clinical and social. The mentor attends one-hour training session and mentoring pair meet minimally once a month by email, phone and social outings  
	 |
Appendix C: Letter to New Graduate Nurse to Request Interview Participation in Study

Date:

Dear New Nursing Graduate,

My name is Ruth Robbio and I am a PhD candidate under the supervision of Dr. Diane Doran at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. My research explores new graduate registered nurse workplace adjustment within the first year of employment and explores e-mentoring as a potential intervention to support the new graduate registered nurse during her/his first year of employment.

You are invited to participate in this study, which will contribute toward the design of an e-mentoring intervention for new graduate nurses. If you are a registered nurse with less than one year of work experience, you are invited to participate in a one-hour interview. During the interview you will be asked about your role transition experience from student nurse to new graduate nurse and to identify facilitators and barriers to your workplace adjustment. You will also be asked to provide input into how e-mentoring may assist with workplace adjustment. You will be asked to complete a study enrolment form. While there are no posed risks to participating in the study, you may withdraw from the study at anytime. As a token of appreciation for your time, you will receive a $20 gift card.
Assisting new graduate nurses to adjust to the workplace is vital to the sustainability of the nursing profession. If you are interested in participating in this study please contact Ruth Robbio RN BScN MScN (PhD Student) at ruth.robbio@utoronto.ca to obtain further study details. Please complete Consent Form enclosed and Fax back to (416) 946-5646.

Thank you,

Ruth Robbio RN BScN MScN (PhD candidate)
Phone 416-978-1578

**Doctoral Supervisor**
Diane Doran, RN, PhD, FCAHS
Phone 416- 978-2866
Appendix D: New Graduate Nurse Interview Information and Consent Form

Title: New Graduate Nurse E-Mentoring Study (NGNES)

Principal Investigator: Ruth Robbio RN BScN MScN (PhD Candidate)
Diane Doran, RN, PhD, FCAHS (Thesis Supervisor)
Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
Phone: 416-978-1578
E-mail: ruth.robbio@utoronto.ca

Thesis Committee Members:
Dr. Doris Howell, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
Dr. Adam Dubrowski, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

You have been asked to take part in a research study. Prior to agreeing to participate in this study, it is important that you read and understand the following explanation of the proposed study procedures. The following information describes the purpose, procedures, benefits, discomforts, risks and precautions associated with this study. It also describes your right to refuse to participate or withdraw from the study at any time. In order to decide whether you wish to refuse to participate in this research study, you should understand enough about its risks and benefits to be able to make an informed decision. This is known as the informed consent process. Please contact the research team if you have any question regarding the study before signing this consent form.

Make sure all your questions have been answered to your satisfaction before signing this document.

Purpose
The purpose of this study is to explore new graduate nurse workplace adjustment and identify how e-mentoring can assist new graduates in the first year of their employment. The ultimate aim of the study is to develop e-mentoring intervention recommendations for an e-mentoring intervention for a future study.

Participation
Your participation in this study is voluntary. You will be free to withdraw from the study at any time. You have been invited to participate because you are a new graduate Registered Nurse (RN) with less than 1-year work experience working in an acute care setting. You can choose not to participate or you may withdraw at any time without any effect on you or your employment.

Procedures
You have been asked to participate in an interview to solicit front-line nurse perceptions of 1) the role transition process, as well as 2) e-mentoring.
Interview: You will be asked to participate in a semi-structured interview for up to 1 hour to elicit your feedback on new graduate nurse role transition and explore the acceptability of an e-mentoring intervention. The interview will be held at a mutually agreeable location. The session will be audio taped to ensure accuracy of feedback and to assist with thematic data analysis.

**Risks**
The Principal investigator and Committee Members are not aware of any risk to nurses who choose to participate in this study. *In no way does signing this consent form waive your legal rights nor does it relieve the investigators or involved institutions from their legal and professional responsibilities.*

**Benefits**
Benefits include the opportunity to:
- share role transition experiences
- explore e-mentoring for new nursing graduates

**Confidentiality**
All information obtained during the study will be held in strict confidence. You will be identified by study number only. Your name and research data will be kept separately. All data will be held on an encrypted USB drive that will be kept in a secure location that only the doctoral student and her supervisor have access to. Your name will not appear on any research data for this study.

Only the Principal Investigator, committee members, research assistant and transcriptionist will have access to your responses to the semi-structured interview questions. You may choose not to respond to some of the questions if you so desire. All information collected will be kept confidential. The data collected during this study will be reported only in summary form in a way that does not identify any individual. Information will not be shared with any other parties except in summary form.

The interviews and researcher’s field notes will not identify individual participants. Data will be analyzed through content analysis and category coding to generate themes. The interview session will be audio-recorded for the purpose of data analysis, but no one outside of the research team will have access to the recordings. The recordings will be erased after being transcribed. The identity of participants will not appear in any transcripts or any report of the study’s findings. All research data will be stored in a secure archive location at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, for 5 years following publication of the study results and then will be destroyed.

**Compensation**
At the completion of the interview, you will receive a $20 gift card as a token of appreciation, as well as reimbursement for public transit as needed.

**Questions**
If you would like to discuss any aspects of the study, please feel free to contact the Principal Investigator or University of Toronto Research Ethics listed below:
Principal Investigator
Ruth Robbio RN, BScN MScN (PhD candidate)
Phone 416-978-1578
E-mail ruth.robbio@utoronto.ca
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
155 College Street, Toronto, ON    M5T 1P8

University of Toronto Research Ethics
phone number:  416-946-3273
email ethics.review@utoronto.ca
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
155 College Street, Toronto, ON    M5T 1P8

Doctoral Supervisor
Diane Doran, RN, PhD, FCAHS
Phone 416- 978-2866
E-mail diane.doran@utoronto.ca
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
155 College Street, Toronto, ON    M5T 1P8

Consent
If you would like to volunteer to participate in an interview, please provide your contact information, sign the consent below and fax it to the confidential fax housed in the doctoral student’s supervisor’s office at the University of Toronto (416) 946-5646 or mail it in the self-addressed stamped envelope.

I have had an opportunity to discuss this study and my questions have been answered to my satisfaction. I consent to take part in the study interview with the understanding that I may withdraw at any time. I voluntarily consent to participate in the study.

Name (Please Print)  _______________________________________
Signature  ______________________________________
Date  ______________________________________

How would you like the research team to contact you?
E-Mail __________________________

Home Phone # ____________________

Work Phone # ____________________
Appendix E: New Graduate Nurse Interview Schedule Script

1. The interview will commence with me introducing myself as a University of Toronto nursing PhD candidate and provide brief summary of past experience working with the Ontario Nursing Connection e-mentoring program.

2. The purpose of the study will be described, specifically I will explain the purpose of the study is to explore new graduate nurse role transition from student nurse to newly graduated nurse and to explore e-mentoring as a possible socialization strategy for workplace adjustment.

3. The researcher will elicit their role transition experience and to what extent it involved preceptorship or mentorship. Preceptorship systems have focused on clinical issues and do not have as their main goals the sharing of issues related to interpersonal communication among staff and approaches for formation of new peer groups (Valdez, 2008; Yonge et al., 2007). Unlike preceptorship, which focuses on clinical competence over a predetermined period of time with a specified end date (Valdez, 2008; Yonge et al., 2007), mentoring is focused on socialization (Kram, 1985; Ragins & Kram, 2007) through supporting, nurturing and inspiring (Yonge et al., 2007).

4. Icebreaker Question: Please introduce yourself and tell me a bit about your nursing background.
Interview Questions:

1. What are some of the issues you face as a new graduate nurse transitioning to the role of RN? Probes: Relationships with Coworkers, Supervisors, Work-life Balance, Information access needs.

2. An e-mentoring program has been proposed by some as an alternative to traditional mentoring programs. Based on the preliminary literature review, e-mentoring programs involve one-on-one email contact with an experienced nurse who is available to provide role transition support, career advice, and problem solving on workplace relationship issues. How might an e-mentoring intervention have supported you during your first year of employment? I will probe for information about how an e-mentor could support problem solving, conflict resolution, professional development, stress reduction, and role modeling.

3. What features of an e-mentoring program would you find helpful? I will probe for recommendations about the design of an e-mentoring program i.e. Who would make a good e-mentor? When in your role transition process would an e-mentor be able to support you? How often would you like to connect with your e-mentor?

4. What features of orientation programs did you find helpful? I will probe for features such as engagement in organizational strategies such as Hospital Orientation, Unit Orientation, and Length of Program.

5. To what extent were these organizational strategies helpful in facilitating your transition to an RN role, and how?
6. What features of orientation programs did you find unhelpful? Probes:

What features of orientation programs did you feel were missing? Please expand on your experience to what extent were these strategies helpful in facilitating your transition to an RN role, and how?

7. What features of preceptor programs did you find helpful in facilitating your transition to an RN role and how? I will probe for information about features such as length of program, time with preceptor, and new graduate nurse schedule alignment with preceptor schedule. What parts of the preceptor program did you find unhelpful or were missing?

8. What types of supports do you have to address role transition needs?

The research will explore from whom does the new graduate obtain role transition support such as former teacher, peers, preceptor, mentor, supervisor, coworkers, and employee assistance program.

9. In what ways was your support person/mentor helpful? I will probe the participant for his/her experience with role modeling and/or whether the support person/mentor provided counseling.

10. Please describe the nature of your relationship with your support person/mentor? I will probe for whether it was predominately professional or characterized by friendship.
Acceptability Questions:

1. Do you think an e-mentoring program would be helpful to you as a new graduate nurse? If the respondent indicates no, researcher will probe for reasons why not; for example, please tell me more about why you would not have found an e-mentoring program helpful.

2. Some e-mentoring programs have e-mentor and e-mentee share one email per week for up to 20 minutes on-line. Would you find this amount of contact with an e-mentor helpful to you? If not, please tell me more about this.

3. Is there anything else you would like to share about how an e-mentoring program should be designed to meet your needs/preferences?

Thank you

Your information will truly be of value in the development of an e-mentoring intervention for new nursing graduates to assist them in their role transition from student to new nursing graduate employee. Thank you very much for participating in this interview and for your time today.
Appendix F: Letter to New Graduate Expert Panel Member to Request Participation in Study

Dear New Nursing Graduate,

My name is Ruth Robbio and I am a PhD candidate working under the supervision of Dr. Diane Doran at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. My research study explores new graduate Registered Nurse (RN) workplace adjustment within the first year of employment and explores e-mentoring as a potential intervention to support the new graduate RN during her/his first year of employment.

If you are an RN with approximately 1 year of work experience in the acute care setting, you are invited to participate in a one-hour small group discussion as a stakeholder of the proposed e-mentoring intervention recommendations to explore acceptability of the intervention recommendations. You will be asked to provide feedback on the e-mentoring intervention guidelines, which will contribute toward the design of a future e-mentoring intervention. The small group discussion will be held on Thursday April 14, 2016 at 4pm or 8pm at the University of Toronto, 155 College Street, Toronto, Ontario. Refreshments will be served.

A brief report of the proposed e-mentoring intervention recommendations will be sent to you for your review prior to the small group discussion. During the discussion you will have the opportunity to offer your opinions regarding the intervention recommendations with other new nursing graduates and experienced RNs who have preceptored new nursing graduates. Following the small group discussion you will be asked to rate the overall acceptability of each e-mentoring intervention recommendation. You will also be asked to complete a study enrolment form. While there are no posed risks to participating in the study, you may withdraw from the study at any time. As a token of appreciation for your time, you will receive $50.

Assisting new graduate RNs to adjust to the workplace is vital to the sustainability of the nursing profession. If you are interested in participating in this small group discussion, please contact Ruth Robbio RN BScN MScN (PhD candidate) at ruth.robbio@utoronto.ca to obtain further details. Please complete Consent Form enclosed and Fax back to (416) 946-5646 or mail it in the self-addressed stamped envelope.
Thank you,

Ruth Robbio RN BScN MScN PhD candidate
Phone 416-946-3914 or 1-866-230-2326

Doctoral Supervisor
Diane Doran, RN, PhD, FCAHS
Phone 416-978-2866
Appendix G: Letter to Experienced Registered Nurse Expert Panel

Member to Request Participation in Study

Dear Registered Nurse,

My name is Ruth Robbio and I am a PhD candidate working under the supervision of Dr. Diane Doran at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. My research study explores new graduate Registered Nurse (RN) workplace adjustment within the first year of employment and explores e-mentoring as a potential intervention to support the new graduate RN during her/his first year of employment.

If you are an RN with 5 or more years of current Ontario work experience and have preceptored one or more new graduate RNs in the acute care setting, you are invited to participate in a one-hour small group discussion. You will be asked to provide feedback on the e-mentoring intervention recommendations, which will contribute toward the design of an e-mentoring intervention in the future. The small group discussion will be held on Thursday April 14, 2016 at 4pm or 8pm at the University of Toronto, 155 College Street, Toronto, Ontario. Refreshments will be served.

A brief report of the proposed e-mentoring intervention guidelines will be sent to you for your review prior to the small group discussion. During the small group discussion you will have the opportunity to offer your opinions regarding the intervention recommendations with new nursing RN graduates and other experienced RNs who have preceptored new RN graduates. Following the small group discussion you will be asked to rate the overall acceptability of each e-mentoring intervention recommendation. You will also be asked to complete a study enrollment form. While there are no posed risks to participating in the study, you may withdraw from the study at any time. As a token of appreciation for your time, you will receive $50.

Assisting new graduate RNs to adjust to the workplace is vital to the sustainability of the nursing profession. If you are interested in participating in this important small group discussion, please contact Ruth Robbio RN BScN MScN (PhD candidate) at ruth.robbio@utoronto.ca to obtain further study details. Please complete Consent Form enclosed and Fax back to (416) 946-5646 or mail it in the self-addressed stamped envelope.

Thank you,
Ruth Robbio RN BScN MScN PhD candidate
Phone 416-946-3914 or 1-866-230-2326

Doctoral Supervisor
Diane Doran, RN, PhD, FCAHS
Phone 416-978-2866
Appendix H: New Graduate Expert Panel Member Information and Consent Form

New Graduate Nurse Information and Consent

TITLE: New Graduate Nurse E-Mentoring Study (NGNES)

Principal Investigator: Ruth Robbio RN BScN MScN (PhD candidate)
Diane Doran, RN, PhD, FCAHS (Thesis Supervisor)
Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
Phone: 946-3914 or 1-866-230-2326
E-mail: ruth.robbio@utoronto.ca

Thesis Committee Members:
Dr. Doris Howell, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
Dr. Adam Dubrowski, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

You have been asked to take part in a research study. Prior to agreeing to participate in this study, it is important that you read and understand the following explanation of the proposed study procedures. The following information describes the purpose, procedures, benefits, discomforts, risks and precautions associated with this study. It also describes your right to refuse to participate or withdraw from the study at any time. In order to decide whether you wish to participate in this research study, you should understand enough about its risks and benefits to be able to make an informed decision. This is known as the informed consent process. Please contact the research team if you have any question regarding the study before signing this consent form. Make sure all your questions have been answered to your satisfaction before signing this document.

Purpose
The purpose of this study is to explore new graduate nurse workplace adjustment and identify how e-mentoring can assist new graduates in the first year of their employment. The ultimate aim of the study is to develop e-mentoring intervention recommendations for a future e-mentoring intervention.

Participation
Your participation in this study is voluntary. You will be free to withdraw from the study at any time. You have been invited to participate because you are a new graduate Registered Nurse (RN) with approximately 1-year work experience working in an acute care setting. You can choose not to participate or you may withdraw at any time without any effect on you or your employment.
Procedures
This research project involves 2 groups of study participants: New Graduate RNs and RNs with 5 or more years of current Ontario work experience.

You have been asked to participate in a 1-hour small group discussion to provide structured feedback on proposed e-mentoring intervention recommendations that will be used for a future e-mentoring intervention. During the small group discussion you will have the opportunity to discuss intervention recommendations with 2 - 3 other new RN graduates and 2 - 3 experienced RNs who have preceptored new nursing graduates in the acute care setting. The session will be audio taped to ensure accuracy of feedback and to assist with thematic data analysis.

Risks
The principal investigator and committee members are not aware of any risk to nurses who choose to participate in this study. In no way does signing this consent form waive your legal rights nor does it relieve the investigators or involved institutions from their legal and professional responsibilities.

Benefits
Benefits include the opportunity to:
- Participate in the development of e-mentoring intervention recommendation for new RN graduates
- Provide structured feedback on proposed e-mentoring intervention recommendations for an e-mentoring intervention for a future study.
- Share role transition experiences with other nursing colleagues

Confidentiality
All information obtained during the study will be held in strict confidence. You will be identified by study number only. Your name and research data will be kept separately. All data will be held on an encrypted USB drive that will be kept in a secure location that only the doctoral student and her supervisor have access to. Your name will not appear on any research data for this study.

Only the principal Investigator, committee members, research assistant, transcriptionist and small group discussion participants will have access to your responses to the structured small group discussion. You may choose not to respond to some of the discussion if you so desire. All information collected will be kept confidential by the research team. Small group discussion participants will be requested to keep what is discussed confidential. The data collected during this study will be reported only in summary form in a way that does not identify any individual. Information will not be shared with any other parties except in summary form.

The small group discussion and researcher’s field notes will not identify individual participants. Data will be analyzed through content analysis and category coding to generate themes. The small group discussion session will be audio-recorded for the purpose of data analysis, but no one outside of the research team will have access to the recordings. The recordings will be erased after being transcribed. The identity of participants will not appear in any transcripts or any report of the study’s findings. All research data will be stored in a secure archive location at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, for 5 years following publication of the study results and then will be destroyed.
**Compensation**

At the completion of the study, you will receive $50 as a token of appreciation.

**Questions**

If you would like to discuss any aspects of the study, please feel free to contact the Principal Investigator or University of Toronto Research Ethics listed below:

Principal Investigator  
Ruth Robbio RN, BScN MScN (PhD candidate)  
Phone 416-946-3914 or 1-866-230-2326  
E-mail ruth.robbio@utoronto.ca  
Lawrence S. Bloomberg Faculty of Nursing  
University of Toronto  
155 College Street, Toronto, ON  M5T 1P8

Doctoral Supervisor  
Diane Doran, RN, PhD, FCAHS  
Phone 416-978-2866  
E-mail diane.doran@utoronto.ca  
Lawrence S. Bloomberg Faculty of Nursing  
University of Toronto  
155 College Street, Toronto, ON  M5T 1P8

University of Toronto Research Ethics  
phone number: 416-946-3273  
email ethics.review@utoronto.ca  
Lawrence S. Bloomberg Faculty of Nursing  
University of Toronto  
155 College Street, Toronto, ON  M5T 1P8

**Consent**

If you would like to volunteer to participate in on the small group discussion, please provide your contact information, sign the consent below and fax it to the confidential fax housed in the doctoral student’s supervisor’s office at the University of Toronto (416) 946-5646 or mail it in the self-addressed stamped envelope.

I have had an opportunity to discuss this study and my questions have been answered to my satisfaction. I consent to take part in the small group discussion with the understanding that I may withdraw at any time. I voluntarily consent to participate in the study.

Name (Please Print) ___________________________ (New Graduate RN)  
Signature ____________________________________

Date ________________________________________  

Preferred Small Group Discussion Time: 4 pm______or 8 pm_______
How would you like the research team to contact you?

E-Mail ______________________

Home Phone # _________________

Work Phone # _________________
Appendix I: Experienced Registered Nurse Expert Panel Member

Information and Consent Form

Experienced Registered Nurse Information and Consent

TITLE: New Graduate Nurse E-Mentoring Study (NGNES)

Principal Investigator: Ruth Robbio RN BScN MScN (PhD candidate)
Diane Doran, RN, PhD, FCAHS (Thesis Supervisor)
Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
Phone: 416-946-3914 or 1-866-230-2326
E-mail: ruth.robbio@utoronto.ca

Thesis Committee Members:
Dr. Doris Howell, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto
Dr. Adam Dubrowski, Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

You have been asked to take part in a research study. Prior to agreeing to participate in this study, it is important that you read and understand the following explanation of the proposed study procedures. The following information describes the purpose, procedures, benefits, discomforts, risks and precautions associated with this study. It also describes your right to refuse to participate or withdraw from the study at any time. In order to decide whether you wish to participate in this research study, you should understand enough about its risks and benefits to be able to make an informed decision. This is known as the informed consent process. Please contact the research team if you have any question regarding the study before signing this consent form. Make sure all your questions have been answered to your satisfaction before signing this document.

Purpose
The purpose of this study is to explore new graduate Registered Nurse (RN) workplace adjustment and identify how e-mentoring can assist new RN graduates in the first year of their employment. The ultimate aim of the study is to develop e-mentoring intervention recommendations for an e-mentoring intervention for a future study.

Participation
Your participation in this study is voluntary. You will be free to withdraw from the study at any time. You have been invited to participate because you are an RN with 5 or more years of current Ontario work experience in the acute care setting and have preceptored one or more new graduate RNs in the
acute care setting. You can choose not to participate or you may withdraw at any time without any effect on you or your employment.

**Procedures**
This research project involves 2 groups of study participants: New Graduate RNs and RNs with 5 or more years of current Ontario work experience.

You have been asked to participate in a 1-hour small group discussion to provide structured feedback on proposed e-mentoring intervention recommendations that will be used for an e-mentoring intervention for a future study. During the small group discussion you will have the opportunity to discuss intervention recommendations with 2 - 3 other experienced RNs who have preceptored new RN graduates in the acute care setting and 2 - 3 new RN graduates. The session will be audio taped to ensure accuracy of feedback and to assist with thematic data analysis.

**Risks**
The principal investigator and committee members are not aware of any risk to nurses who choose to participate in this study. *In no way does signing this consent form waive your legal rights nor does it relieve the investigators or involved institutions from their legal and professional responsibilities.*

**Benefits**
Benefits include the opportunity to:
- Participate in the development of e-mentoring intervention recommendations for new RN graduates
- Provide structured feedback on proposed e-mentoring intervention recommendations for an e-mentoring intervention for a future study.
- Share role transition experiences with other nursing colleagues

**Confidentiality**
All information obtained during the study will be held in strict confidence. You will be identified by study number only. Your name and research data will be kept separately. All data will be held on an encrypted USB drive that will be kept in a secure location that only the doctoral student and her supervisor have access to. Your name will not appear on any research data for this study.

Only the principal investigator, committee members, research assistant, transcriptionist and small group discussion participants will have access to your responses to the structured small group discussion. You may choose not to respond to some of the discussion if you so desire. All information collected will be kept confidential by collected will be kept confidential by the research team. Small group discussion participants will be requested to keep what is discussed confidential. The data collected during this study will be reported only in summary form in a way that does not identify any individual. Information will not be shared with any other parties except in summary form.

The small group discussion and researcher’s field notes will not identify individual participants. Data will be analyzed through content analysis and category coding to generate themes. The small group session will be audio-recorded for the purpose of data analysis, but no one outside of the research team will have
access to the recordings. The recordings will be erased after being transcribed. The identity of participants will not appear in any transcripts or any report of the study’s findings. All research data will be stored in a secure archive location at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, for 5 years following publication of the study results and then will be destroyed.

Compensation

At the completion of the study, you will receive $50 as a token of appreciation.

Questions

If you would like to discuss any aspects of the study, please feel free to contact the Principal Investigator or University of Toronto Research Ethics listed below:

Principal Investigator
Ruth Robbio RN, BScN MScN (PhD candidate)
Phone 416-946-3914 or 1-866-230-2326
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Diane Doran, RN, PhD, FCAHS
Phone 416-978-2866
E-mail diane.doran@utoronto.ca
Lawrence S. Bloomberg Faculty of Nursing
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Consent

If you would like to volunteer to participate in on the small group discussion, please provide your contact information, sign the consent below and fax it to the confidential fax housed in the doctoral student’s supervisor’s office at the of Toronto (416) 946-5646 or mail it in the self-addressed stamped envelope.

I have had an opportunity to discuss this study and my questions have been answered to my satisfaction. I consent to take part in the study small group discussion with the understanding that I may withdraw at any time. I voluntarily consent to participate in the study.

Name (Please Print) ____________________________________________ (RN)
Signature ____________________________________________________
Date _________________________________________________________

Preferred Small Group Discussion Time: 4 pm____ or 8 pm_______
How would you like the research team to contact you?

E-Mail __________________________

Home Phone # _________________________

Work Phone # _________________________
Appendix J: Expert Panel Schedule

Script

1. I will introduce myself as a doctoral student at the Lawrence S. Bloomberg Faculty of Nursing, University of Toronto. I will provide a brief summary of past experience with working with the Ontario Nursing Connection e-mentoring program.

2. I will review purpose of Expert Panel:
   To participate on the expert panel as a stakeholder (either as a new graduate – target population for e-mentoring intervention or experienced registered nurse - a potential e-mentor) of the proposed e-mentoring intervention recommendations and to establish acceptability of e-mentoring intervention recommendations. Participants will be asked to provide structured feedback on the e-mentoring intervention recommendations, which will contribute toward the design of a future e-mentoring intervention.

3. I will review preceptorship versus mentorship: Preceptorship systems have focused on clinical issues and do not have as their main goals the sharing of issues related to interpersonal communication among staff and approaches for formation of new peer groups (Valdez, 2008; Yonge et al., 2007). Unlike preceptorship, which focuses on clinical competence over a predetermined period of time with a specified end date (Valdez, 2008; Yonge et al., 2007), mentoring is focused on
socialization (Kram, 1985; Ragins & Kram, 2007) through supporting, nurturing and inspiring (Yonge et al., 2007).

4. Icebreaker Question: Please introduce yourself and tell me about your nursing background.

5. I will read out each intervention guideline and time will be provided for discussion about the guideline.

6. Following the discussion for each intervention guideline, participates will be asked to provide a rating of the acceptability of the intervention recommendation on a scale of 1 to 7. Space will also be provided for open-ended comments.

7. Forms will be collected at the conclusion of the panel discussion.

8. Conclusion of Panel Discussion: I will thank the participants for their time in attending the session and let them know that their information will be of value in the development of an e-mentoring intervention for new nursing graduates to assist them in their role transition from student to new nursing graduate employee.

9. A $20 Gift card will be provided to participants as a token of appreciation.
Appendix K: Email to Study Participant

Dear Study Participant,

Thank you for agreeing to participate in the small group discussion. The purpose of the discussion is to obtain structured feedback on an e-mentoring intervention designed to assist with new graduate nurse transition from student to Registered Nurse. You are invited to act as a key informant in the development of an e-mentoring intervention.

Please find the attached proposed e-mentoring program recommendations for your review. You are invited to rate the extent to which you agree with each recommendation using a Likert scale from 1 - 7, with 1 being strongly disagree score and 7 being strongly agree score. Please rate each recommendation and e-mail your scores/responses back to me by April 12, 2016. Your individual responses will be kept confidential and will be summarized as a group along with all other responses and will be shared at the beginning of the small group discussion session on April 14, 2016 at 4 pm or 8 pm.

At the small group discussion, you will be asked to re-rate each recommendation independently. Ratings will be summarized using a numerical summary of the final rating generated during the small group discussion and participant comments will also be summarized.

Thank you again for your willingness to participate in this important study to assist new graduate nurses with transition into the profession and workplace adjustment. Please let me know if you have any questions.

Ruth

Ruth Robbio RN BScN MScN PhD candidate
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
Suite 130 - 155 College Street
Toronto, Ontario
E-mentoring Intervention Acceptability Assessment Survey

Please rate the extent to which you agree with each e-mentoring program recommendation using the 7-point rating system below.

Please rate the following e-mentor qualifications:

1. E-mentor qualifications

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN should volunteer</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN with at least 5 years of Experience</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>RN with strong evidence-based practice</td>
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<tr>
<td>RN who has engaged in ongoing professional development</td>
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</tr>
</tbody>
</table>
Please share any other comments or suggestions you have about e-mentor qualifications in the space below.

Please rate the following e-mentee qualifications:

### 2. E-mentee qualifications

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td></td>
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</tr>
<tr>
<td>New grad RN volunteer</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Willing to actively participate in e-mentoring relationship by maintaining regular contact with e-mentor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Please share any comments you have about e-mentees in the space below.

Please rate how often the e-mentor and e-mentee should communicate:

### 3. Frequency of communication between e-mentor and e-mentee

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>Strongly disagree</td>
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</tr>
<tr>
<td>Weekly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Every two weeks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Monthly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Use the space below to share any comments you have about the frequency of e-mentor and e-mentee communication.
Please rate the method that the e-mentor and e-mentee would use to communicate:

4. Modality of contact

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
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</table>

<table>
<thead>
<tr>
<th>Mode</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Skype</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Text</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>7</td>
</tr>
</tbody>
</table>

Use the space below to share any comments you have about the modality/method of contact for e-mentors and e-mentees.

---

The next recommendations refer to the optimum length of time for an e-mentoring program. Please rate the following program time frames:

5. Length of E-mentoring Program

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three months</td>
<td></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Six months  | 1 | 2 | 3 | 4 | 5 | 6 | 7
One Year   | 1 | 2 | 3 | 4 | 5 | 6 | 7

Use the space below for comments about the optimum length of time for an e-mentoring program.

An e-mentor may be an RN who is internal to the organization where you work or external to the organization where you work. An e-mentor may also be an RN who is anonymous or identifies themself. The next recommendations request your feedback on how an e-mentor would be selected:

6. E-mentee - e-mentor selection:

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-mentor should be internal to organization</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
E-mentor should be external to organization

E-mentor is anonymous (i.e. identification of first name only)

Use the space below for comments about the e-mentor - e-mentee selection process.

The next set of recommendations requests your opinion about the method by which e-mentor and e-mentees are matched.

**7. E-mentee - e-mentor matching process**

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tr>
<td>Strongly disagree</td>
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<tr>
<td>Strongly agree</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>E-mentor selects e-mentee based</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
It has been recommended that mentors be provided with training on e-mentoring. The next recommendations invite your feedback concerning the appropriate length of time for an e-mentoring training/orientation program. Please rate the following training/orientation time frames:
8. E-Mentor Training

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One day of training</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Two days of training</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Use the space below for comments about e-mentor training.

The final recommendations explore types of topics that should be included in an e-mentor training program. Please rate the following program topics:
9. E-mentor Program Orientation/Training Topics

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive role modeling</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Debrief with e-mentee about a concern and/or experience that occurred</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Conflict Resolution</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Maintain patient/client confidentiality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Maintain workplace confidentiality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Education on how to respond to uncivil behaviours from co-workers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

Use the space below for comments about e-mentor training topics.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

Please provide any additional comments on e-mentoring program recommendations:

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

Thank you very much.
Ruth
Ruth Robbio RN BScN MScN PhD candidate
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
Suite 130 - 155 College Street
Toronto, Ontario
Appendix L: Interview: New Graduate Nurse Demographic Form

New Graduate Baseline Demographics

Please select the most applicable response.

1. How long have you been employed as a registered nurse?
   Months

2. Sex: 1. O Female  2. O Male

3. What type of unit do you work on? Please choose the unit you mostly work on if you work on more than one unit.
   1. O Medicine
   2. O Surgical
   3. O Emergency
   4. O ICU/CCU
   5. O Maternity
   6. O Pediatrics
   7. O Mental Health
   8. O Neonatal
   9. O Other _____________________

4. Level of Education
   1. O Undergraduate University Degree
   2. O Graduate Degree

5. Do you work:
   1. O Full-time
   2. O Part-time
   3. O Casual
6. How many employers in nursing do you have?
   1. O One
   2. O More than 1

7. Have you ever had a mentor?
   0. O NO
   1. O YES

8. Have you ever had an e-mentor?
   0. O NO
   1. O YES

9. Do you have internet access?
   0. O NO
   1. O YES

10. How often do you access the internet?
    1. O Daily
    2. O Weekly
    3. O Monthly
Appendix M: Expert Panel: New Graduate Nurse Demographic Form

Participant’s Date of Birth

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Day</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Study Code</th>
</tr>
</thead>
</table>

New Graduate Baseline Demographics

Please select the most applicable response.

1. How long have you been employed as a registered nurse?

   Months

2. Sex:  1. O Female   2. O Male

3. What type of unit do you work on? Please choose the unit you mostly work on if you work on more than one unit.

   1. O Medicine
   2. O Surgical
   3. O Emergency
   4. O ICU/CCU
   5. O Maternity
   6. O Pediatrics
   7. O Mental Health
   8. O Neonatal
   9. O Other _____________________

4. Level of Education

   1. O Undergraduate University Degree
   2. O Graduate Degree
5. Do you work:
   1. O Full-time
   2. O Part-time
   3. O Casual

6. How many employers in nursing do you have?
   1. O One
   2. O More than 1

7. Have you ever had a mentor?
   0. O NO
   1. O YES

8. Have you ever had an e-mentor?
   0. O NO
   1. O YES

9. Do you have internet access?
   0. O NO
   1. O YES

10. How often do you access the internet?
    1. O Daily
    2. O Weekly
    3. O Monthly
Appendix N: Expert Panel: Experienced Registered Nurse

Demographic Form

<table>
<thead>
<tr>
<th>Participant's Date of Birth</th>
<th>Study Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>Month</td>
</tr>
</tbody>
</table>

Experienced Nurse Baseline Demographics

Please select the most applicable response.

1. How long have you been employed as a registered nurse?
   
   Years

2. Sex:  
   1. O  Female  
   2. O  Male

3. What type of unit do you work on? Please choose the unit you mostly work on if you work on more than one unit?
   
   1. O  Medicine  
   2. O  Surgical  
   3. O  Emergency  
   4. O  ICU/CCU  
   5. O  Maternity  
   6. O  Pediatrics  
   7. O  Mental Health  
   8. O  Neonatal  
   9. O  Other _____________________

360
4. Level of Education:
   1. O Diploma
   2. O College
   3. O University
   4. O Masters
   5. O PhD

5. Do you work:
   1. O Full-time
   2. O Part-time
   3. O Casual

6. Do you have multiple employers?
   0. O NO
   1. O YES

7. Have you ever had a mentor?
   0. O NO
   1. O YES

8. Have you ever had an e-mentor?
   0. O NO
   1. O YES

9. Do you have internet access?
   0. O NO
   1. O YES

10. How often do you access the internet?
    1. O Daily
    2. O Weekly
    3. O Monthly
Appendix O: Data Extraction Worksheets

New Graduate Nurse E-Mentoring Study (NGNES)

Scoping Review: Randomized Control Trial (RCT) Evaluation Criteria Data Extraction Sheet

Study/Article ID #: __________________________

Author________________________Year __________________________Country_____________________

Setting: ☐Acute care  ☐Long term care  ☐Community

☐Nursing Education___________ ☐Other Education_____________ ☐Other ____________

Population: ☐New Graduate Nurses  ☐Experienced Nurses  ☐Physicians  ☐Allied Health_____ ☐Nursing Students__________ ☐Other Students _______  ☐Other ________

Study Aim: _____

Sample: n = ____________

Eligibility Criteria: ☐ Yes ☐ No

Intervention Type: __________________________

Outcome Measured: __________________________

Objective Outcome Criteria: ________________Reliability ☐Yes ☐ No Validity ☐Yes ☐ No

Sample size rationale? ☐No ☐Power analysis  ☐Pilot study  ☐Other_________

Randomisation: ☐Method ID’s ☐Type ID’d ☐Mechanism ID’s ☐Concealment ID’d, ☐Other _______

Blinding: ☐Yes ☐ No  ☐ If done, Specifics Identified ☐Yes ☐ No

Statistical Methods/Used to compare groups for outcomes: ☐Yes ☐ No

Results/ Diagram Recommended for Participant Flow: ☐Yes ☐ No

Baseline Demographics for Both Groups ID/ Table Recommended: ☐Yes ☐ No

Findings: Effect size ☐Yes ☐ No & Precision (CI) ☐Yes ☐ No

Discussion: Limitations ☐Yes ☐No Interpretation ☐Yes ☐No External Validity: ☐Yes ☐ No

STRENGTHS & LIMITATIONS

IMPORTANT RESULTS

Met Inclusion Criteria: ☐ Yes ☐ No

New Graduate Nurse E-Mentoring Study (NGNES)

Scoping Review: Quasi Experimental Evaluation Criteria Data Extraction Sheet

Study/Article ID #: ________________________________

Author________________________ Year __________________________ Country_____________________

Study Aim:_____

Setting:  ☐ Acute care  ☐ Long term care  ☐ Community
☐ Nursing Education_________  ☐ Other Education_______________  ☐ Other___________________

Population: ☐ New Graduate Nurses  ☐ Experienced Nurses  ☐ Physicians  ☐ Allied Health______
☐ Nursing Students_________ ☐ Other Students ___________  ☐ Other _________

Sample: n = _________________

Intervention Type: ___________________________ Outcome(s) Measured: ___________________________

Objective Outcome Criteria __________ Reliability ☐ Yes ☐ No/Validity ☐ Yes ☐ No

Selection Bias: ☐ Yes/Type________________________ ☐ No

Confounders Identified: ☐ Yes ☐ No

Blinding: ☐ Yes ☐ No  If done, Specifics Identified ☐ Yes ☐ No

Withdrawals and Drop-outs Identified: ☐ Yes ☐ No

Intervention Integrity Identified: ☐ Yes ☐ No

Findings: Effect size ☐ Yes ☐ No & Precision (CI) ☐ Yes ☐ No

STRENGTHS & LIMITATIONS

IMPORTANT RESULTS

Met Inclusion Criteria: ☐ Yes ☐ No

NGNES Scoping Review: Observational and Correlational Evaluation Criteria Data Extraction Sheet

Study/Article ID #: ________________________________________

Author________________________ Year ____________________ Country________________

Study Aim: __________________

Setting: ☐ Acute care ☐ Long term care ☐ Community ☐ Nursing Education ☐ Other Education__________ ☐ Other __________

Population: ☐ New Graduate Nurses ☐ Experienced Nurses ☐ Physicians ☐ Allied Health_____ ☐ Nursing Students ☐ Other Students ________ ☐ Other ________

Sample: n = __________

Participants: Prospective Cohort ☐ Case-control ☐ Cross-sectional ☐ Cross-sectional Correlational ☐

Outcome(s) Measured: __________________

Objective Outcome Criteria ____________ Reliability ☐ Yes ☐ No Validity ☐ Yes ☐ No

Confounders Identified: ☐ Yes ☐ No Sample size rationale? ☐ Yes ☐ No

Type of Data Collection: personally administered questionnaire (PA), mailed questionnaire (MQ), delivered [but not administered]) questionnaire (DQ), & personal interviews (PI)

Response rate Identified ☐ Yes ☐ No Respondents Versus Non-respondents: ☐ Yes ☐ No

Subjects Lost to Follow-up Identified ☐ Yes ☐ No Method Variance Addressed: ☐ Yes ☐ No

Statistical Methods Identified: ☐ Yes ☐ No Missing Data Identified: ☐ Yes ☐ No

Characteristics of Study Participants Identified: ☐ Yes ☐ No

Results: Unadjusted Estimates ☐ Yes ☐ No and if applicable - Precision (CI) ☐ Yes ☐ No

For Cross-sectional Correlational Studies - Correlations Reported: ☐ Yes ☐ No

Discussion: Limitations ☐ Yes ☐ No Interpretation ☐ Yes ☐ No & External Validity ☐ Yes ☐ No

STRENGTHS & LIMITATIONS

IMPORTANT RESULTS

Met Inclusion Criteria: ☐ Yes ☐ No

NGNES Scoping Review: Qualitative Evaluation Criteria Data Extraction Sheet

Study/Article ID #: ________________________________

Author________________________ Year ________________ Country_________________

Study Aims (Research Goal, Relevance): ☐ Yes ☐ No

**Setting:** ☐ Acute care ☐ Long term care ☐ Community ☐ Nursing Education ☐ Other Education____________ ☐ Other____________

**Population:** ☐ New Graduate Nurses ☐ Experienced Nurses ☐ Physicians ☐ Allied Health______ ☐ Nursing Students ☐ Other Students ________ ☐ Other ________

**Sample:** n = __________________

**Study Design:** P: Phenomenology; E: Ethnography; G: Grounded theory; C: Case study; D: Descriptive

**Data Collection:** F: Focus Groups, I: Interviews

**Appropriateness of Qualitative Research (To seek to interpret/illuminate actions/experiences of research participants):** ☐ Yes ☐ No

**Appropriate Recruitment (Explained how participants were selected and why?):** ☐ Yes ☐ No

**Data Collected Reflects Research Issue (Setting for data collection justified, info on how interviews were conducted, data saturation identified):** ☐ Yes ☐ No

**Relationship between researcher and participant(s) considered (Researcher potential bias/influence):** ☐ Yes ☐ No

**Ethical Issues Addressed (Ethics approval, consent, confidentiality):** ☐ Yes ☐ No

**Rigorous Data Analysis (Description of analysis process, sufficient data to support findings, extent that contradictory data taken into account):** ☐ Yes ☐ No

**Clear Statement of Findings (Explicit, discussed in relation to research question(s)):** ☐ Yes ☐ No

**Value of Research Identified (Contribution to existing knowledge or understanding, if or how findings can be transferred/used):** ☐ Yes ☐ No

**STRENGTHS & LIMITATIONS** ________

**IMPORTANT RESULTS** ____________ Met Inclusion Criteria: ☐ Yes ☐ No

NGNES Scoping Review: Program Evaluation Criteria Data Extraction Sheet

Study/Article ID #: ______________________________________

Author________________________ Year________________________ Country________________________

Study Aim: ____________________________________________

Setting: ☐Acute care ☐Long term care ☐Community ☐Nursing Education ☐Other Education________________

☐Other________________________

Population: ☐New Graduate Nurses ☐Experienced Nurses ☐Physicians ☐Allied Health________ ☐Nursing Students

☐Other Students ___________ ☐Other ___________

Design: Prospective Cohort

- Type of Data Collection: personally administered questionnaire (PA), mailed questionnaire (MQ), delivered [but not administered]) questionnaire (DQ), & personal interviews (PI)
- Response rate Identified ☐Yes ☐No Respondents Versus Non-respondents: ☐Yes ☐No
- Method Variance Addressed: ☐Yes ☐No

OR Quasi Experimental: Intervention Type: __________________________

Sample: n = __________________

Outcome(s) Measured: __________________________ Reliability ☐Yes ☐No Validity ☐Yes ☐No

Selection Bias: ☐Yes/Type__________________________ ☐No  Confounders Identified: ☐Yes ☐No

Subjects Lost to Follow-up Identified: ☐Yes ☐No

Statistical Methods Identified: ☐Yes ☐No Missing Data Identified: ☐Yes ☐No

Characteristics of Study Participants Identified: ☐Yes ☐No

Results: Unadjusted Estimates ☐Yes ☐No and if applicable - Precision (CI) ☐Yes ☐No


Findings:________

DISCUSSION: _______________________________

STRENGTHS & LIMITATIONS __________________________

IMPORTANT RESULTS __________________________ Met Inclusion Criteria: ☐Yes ☐No

# Appendix P: Summary of Main Interview Themes

<table>
<thead>
<tr>
<th>Main Themes</th>
<th>Sub-themes</th>
<th>Codes</th>
<th>Evidentiary Statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gaining Independence</td>
<td>Wonderful Accomplishment</td>
<td>Wonderful Accomplishment</td>
<td>“Just being able to introduce myself as a registered nurse to my patients, and having that autonomy to make decisions on my own”</td>
</tr>
<tr>
<td></td>
<td>Autonomy, Exciting and Liberating Time</td>
<td>Autonomy, Exciting and Liberating</td>
<td>“Exciting as I finally felt like you’re not kind of being watched like a hawk anymore” and “Just being able to introduce myself as a registered nurse to my patients, and having that autonomy to make decisions on my own”</td>
</tr>
<tr>
<td>2. Gaining Equal Status</td>
<td>Status Change</td>
<td>Student Brain to Equal RN</td>
<td>“I kind of had a student brain, if you will, a student nurse brain. At school I always had a preceptor or someone to follow. I was always working under the wing of somebody else, under their guidance. …[but now] I was slowly being given more responsibility while they were still kind of watching me. I found it hard to grasp the fact that the person I was following I was an equal to them”</td>
</tr>
<tr>
<td></td>
<td>Status Change: Now Equal RN</td>
<td>Awareness of still being treated like a student</td>
<td>“they would treat me like a student…they would tell me to do things that people didn’t necessarily want to do themselves…say you were receiving a new patient and you have to do admission orders – they wouldn’t want me to do admission orders because they’d want me to go clean up a patient that needed washing…I knew how to do bedside care, I needed to learn how the hospital works and how admissions would come up to the floor or instead of staring an IV they would be like go clean up this patient…I did speak to my preceptor about that…and then it changed – It was kind of really difficult for me to say anything as I was new”</td>
</tr>
<tr>
<td></td>
<td>Need to build confidence to bridge status gap</td>
<td>Bridge idea from student to an independent RN</td>
<td>“it’s tough because when you start somewhere you want to be confident … my problem was, because I was hired as a student, to bridge the idea of me being a student and then me actually being able to do things by myself and being able to tell someone that I can do it on my own. So that was my personal difficulty…so it was kind of the building my confidence and having”</td>
</tr>
<tr>
<td>Main Themes</td>
<td>Sub-themes</td>
<td>Codes</td>
<td>Evidentiary Statement(s)</td>
</tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td>“I think the first few times making those decisions myself I found, you know, very stressful and the self-doubt and not having the confidence that I did before…it could have been part of my nervousness and lack of confidence transitioning”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“I think kind of that she quote-on-quote grew respect for me as a colleague so that so she could kind of be like now you’re on your own and I feel confident saying that I was your preceptor and that way we can be friends”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“my manager is phenomenal. She makes everyone kind of fell like she’s on top of the goings on…but not in a watching over you sense it’s just that she’s interested”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“I felt very confident coming out of the six months that it was great just having that preceptorship. And it was nice because you weren’t under the microscope anymore so you could relax a little bit and I still felt confident at the same time I think kind of that she quote-on-quote grew respect for me as a colleague so that so she could kind of be like now you’re on your own and I feel confident saying that I was your preceptor and that way we can be friends”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>“for my new grad initiative portion – I was assigned one nurse to be my preceptor but she ended up taking a lot of vacation during the summer and so I was put with various other nurses and in one way that was really awesome because I obviously saw how other people do things… But at the same time, it was a little bit frustrating because I would be comfortable with one task with one of my preceptors and then I would switch, and the other preceptor might not know where my skill level is at with something or where my knowledge is, so I was almost taking a few steps back some of the time just because some of the unfamiliarity between the preceptor and me and my skill level. So it definitely had it’s pros and cons”</td>
</tr>
<tr>
<td>Main Themes</td>
<td>Sub-themes</td>
<td>Codes</td>
<td>Evidentiary Statement(s)</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------------</td>
<td>----------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Barriers to</td>
<td>Lack of consistent preceptor availability</td>
<td></td>
<td>“My preceptor was on a day-day-night schedule….she would take some of her nights as vacation so I would be with somebody else…In the beginning…I wasn’t really comfortable with that because I was just getting comfortable with her as a preceptor and because I didn’t really know anybody else that well so I was really nervous to try and work with somebody else…maybe my manager could’ve set me up with somebody who maybe had a more consistent schedule or who wasn’t taking a vacation until later in the summer”</td>
</tr>
<tr>
<td>Support Status</td>
<td>Consistent preceptor may limit own style</td>
<td></td>
<td>“Consistent preceptor felt like you’re kind of a slave to the way they do things”… “don’t really get to develop your own style”</td>
</tr>
<tr>
<td>Change</td>
<td>development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Social Shock</td>
<td>Feeling alone/ Nerve Racking and lack social</td>
<td>Feeling alone/ Nerve Racking and lack social</td>
<td>“Nerve-racking” as now lack resource to bounce ideas off of and feel kind of “left, alone which is nice but also scary… alone and a lot is expected of you”</td>
</tr>
<tr>
<td></td>
<td>resources/ supports</td>
<td>resources/ supports</td>
<td></td>
</tr>
<tr>
<td>Avoid Conflicts</td>
<td>Avoid conflict at All costs</td>
<td></td>
<td>“Try not to “butt heads” with the preceptor by asking other people how to access information. “Don’t feel as comfortable asking how someone else might do something”</td>
</tr>
<tr>
<td>at all Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trying to fit into</td>
<td>Struggled Left in the Dark</td>
<td></td>
<td>“It is complicated when you’ve never seen it before …I struggled…I think XXX, our assistant manager, could have sat down with me and gone through these things, but it never happened… Or maybe I came to XXX with a question and he tried, but I didn’t get a straight thorough answer and so, you’re just kind of left in the dark and every time you try and get a day off, you have to go and ask someone, “Hey, am I doing this right? I don’t really know.”</td>
</tr>
<tr>
<td>a new hierarchical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>work culture</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Scared Bullied</td>
<td>Scared Bullied</td>
<td></td>
<td>“She was screaming, “You’re not supposed to do this! In our work culture…this surgeon has been working there for like 30 years already… We have one preceptor and then we share her… my friend was a little bit scared to cross the nurse”</td>
</tr>
<tr>
<td>Being reprimanded</td>
<td>Being reprimanded for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Themes</td>
<td>Sub-themes</td>
<td>Codes</td>
<td>Evidentiary Statement(s)</td>
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<tr>
<td>-------------</td>
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</tr>
</tbody>
</table>
| 4. Stress   | Multiplicity of emotions | Multiplicity of emotions: difficult, overwhelming, scary, frustrating, bullying | “I had a really bad first experience with my preceptor because [on] our first day... she was late to work and so I just went up to her and introduced myself and I said, “I think I’m supposed to be with you today.” And she actually didn’t even say anything to me, she just walked away. So like I kind of followed her, and it was like, it was awful, like by lunch I was in the bathroom crying, thinking: “There’s no way I can do this!” She was just really, really, really, really rude to me.”  

and  

“my preceptor and I didn’t build the proper rapport between the two of us, so, you know, then, like things just fall through the cracks from there. Trust becomes an issue. Patience potentially becomes an issue. Either one might get frustrated. Potentially, if I didn’t have the willingness to learn, my preceptor would have things to say to me, like, “Well, why is she here if she’s not willing to learn?” And then it just kind of goes downhill from there... I was more withdrawn and intimidated by the nurses that could have been negative.  

and  

“I do have a friend who, really, struggled [with her preceptor] with every single thing that she would do differently in terms of, you know, whether you go in and do vitals first on everybody and then pull meds versus do vitals, meds, assessment all on one person, then do vitals, meds, assessments on another person. Like she would pick every small thing that she did differently and would argue her way versus any other way. I know she really struggled with that...like, a lot of gossiping...overhearing talking about her” |

<p>| Uncomfortable | Stress a Result of | “Yeah, and I was just overwhelmed... it was towards the middle of my...” |</p>
<table>
<thead>
<tr>
<th>Main Themes</th>
<th>Sub-themes</th>
<th>Codes</th>
<th>Evidentiary Statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>demeaning and “Social” Shock and Sink or Swim Culture</td>
<td></td>
<td></td>
<td>preceptorship…so I was in complete control of taking care of the patient and everything, but in this particular situation it was very complicated and I just needed the extra support and she kind of just sat back and watched me instead of coming in – she did come in eventually and helped but it was very overwhelming at the beginning. So that would have been nice to have the support from the beginning 'cause she obviously knew how complicated the patient was. And then after, I don’t know, it was frustrating because you’re trying to do things and I maybe didn’t do them in the order that she would have and I felt like I disappointed her and I was a bad nurse after all this stuff. It was just a very stressful situation. So again, being under that microscope…the pressure… I knew she was watching me. It’s a tough situation. I wasn’t just focusing on the patient; I was also trying to focus on what she was thinking of me. She apologized for making me feel that way. But she said, “You know, you are under a microscope so.” Yeah. It was stressful that part”</td>
</tr>
</tbody>
</table>
## Appendix Q: Summary of Main Expert Panel Themes

<table>
<thead>
<tr>
<th>Main Themes</th>
<th>Sub-themes</th>
<th>Codes</th>
<th>Evidentiary Statement(s)</th>
</tr>
</thead>
</table>
| 1. Voluntary versus mandatory e-mentoring | “Uncomfortable”, “resentment”; resulting in negative outcomes | “I see it in practice where a manager kind of forces nurses to be in a team leader role when maybe they don’t want to be; it makes them uncomfortable. I don’t think that’s a positive for anybody. And I think that that might affect the mentee if their mentor wasn’t doing it on a voluntary accord” and “I think it should be volunteer but as you know sometimes it’s not volunteer… they might be a mentor…but the whole thing sometimes it’s kind of forced on you. And so some people have a bit of resentment with it. And I guess sometimes it’s hard ‘cause there’s no remuneration for it, like there’s a lot of time put into it. I think now there’s a bit of remuneration but you put in a lot of time. and “Just from personal experience as well, I could tell the difference between nurses who volunteered to help students and nurses who are forced to or are asked to but they don’t really have an option to say yes or no, and that does affect the mentee. and “So based on experience…preceptors that…had volunteered compared to people who hadn’t. You do see a difference in terms of their attitude. So people who have volunteered, they’re willing to help out. They know that you’re new. They’re willing to transfer their knowledge to the new ones, whereas the older nurses – not to stereotype them, but the older nurses who aren’t really – they’re forced into this role, they kind of sit back. They kind of let the new nurses do their own thing. They’re not as, I guess, participant or
<table>
<thead>
<tr>
<th>Main Themes</th>
<th>Sub-themes</th>
<th>Codes</th>
<th>Evidentiary Statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>participatory as others who have volunteered. So I think that the RN should volunteer.&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| "Hard" work and "no remuneration" | Yeah. So they’re not being forced to do it; they want to do it. And maybe that is like they’ve precepted a bunch of people, but you know if you’re getting years into your career and you just want to go to the job and leave and not worry about that, but if … you want to be a part of this, it would be a great option for people to have."
<p>| and | &quot;I think it should be volunteer but as you know sometimes it’s not volunteer… they might be a mentor…but the whole thing sometimes it’s kind of forced on you. And so some people have a bit of resentment with it. And I guess sometimes it’s hard ‘cause there’s no remuneration for it, like there’s a lot of time put into it. I think now there’s a bit of remuneration but you put in a lot of time. |
| 2. Relatability and availability of experienced mentors | Lack of experienced nurses, experienced nurses leaving urban areas | Lack of experienced nurses, experienced nurses leaving urban areas | &quot;some places don’t have 5 years experience…my unit…is notorious where there’s only a handful of nurses on each unit that have probably been there more than like 3 years ‘cause generally 2-3 years people start having kids or they start moving out of the city, especially downtown hospitals. It’s not very affordable for people to live down here… So if you’re trying to match new grads to an actual facility it might be difficult if you have an actual cap of 5 years. Plus the preceptors are only maybe 2 years fresh.&quot; |
| Experienced nurses need to be relational | Experienced nurses need to be relational | “Yes, so I do agree with the experience having to be 5 years, however it just occurred to me that sometimes there’s this kind of relational aspect, you know, so if you’ve gone through the transition from school into nursing pretty recent to the mentee, it might be beneficial as well. Do you know what I mean?” | and |
| “So people who are working more than 5 years, policies of hospitals and | 373 |</p>
<table>
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<tr>
<th>Main Themes</th>
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<th>Codes</th>
<th>Evidentiary Statement(s)</th>
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<td>protocols, they keep changing. So someone who’s been working for a lot longer, they’re not aware of the new changes compared to new nurses who are looking up the new policies and they’re up-to-date with all the new protocols compared to the nurses who aren’t willing to change and they go back to their old routines. So it’s hard with people, for nurses who are working for longer and aren’t going to change policies and change their routine. That’s hard too.”</td>
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<td>3.E-mentoring may support new graduate nurse “social” shock</td>
<td>“A lot of conflict”, “that way or the highway”, “getting them to see there is another side of this”</td>
<td>“A lot of conflict”, “that way or the highway”, “getting them to see there is another side of this”</td>
<td>“One of the things I think conflict resolution is a high thing ‘cause there’s always a lot of conflict. People don’t always agree and some people don’t actually – if you don’t agree with them they don’t exactly take it the right way ‘cause they’re always right or it should be that way or the highway. So I think there has to be some sort of way to tell people. Not everyone’s going to agree with you but maybe there’s another way of going around or maybe getting them to see that there’s another side of this” and</td>
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<td>“Exclusion”, “cliques’ and “not being considered for some things because they’re trying to bridge into being part of the team”</td>
<td>“Exclusion”, “cliques’ and “not being considered for some things because they’re trying to bridge into being part of the team”</td>
<td>“Just one thing I wanted to add to uncivil behaviour. I think things like exclusion are – I think it’s a big part of that. When people are speaking in other languages or you know when you’re not talking to – you’re talking about something really specific to one person in the lunchroom and not to somebody else, it’s automatic exclusion, especially with the language. Just something I had to say.” and</td>
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<td>“It just makes me think when we talk about the socializing in bridging the new grad into an environment like that, I know definitely in my workplace setting I</td>
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<td>4.E-Mentoring may result in reciprocal e-mentoring</td>
<td>“Mentoring is a Two-way Street”, “Learning Goes Both Ways” and “We’re Meant to be Mentoring each other”</td>
<td>“Mentoring is a Two-way Street”, “Learning Goes Both Ways” and “We’re Meant to be Mentoring each other”</td>
<td>“I think mentoring can also be a two-way street. Say I have 5 years experience and someone’s new and they’re just new off the street, I’m going to teach you things and you’re going to teach me things. So I may not be tech savvy. New people are tech savvy. I’m not tech savvy. So you can teach me to be. We’re meant to be mentoring each other.”</td>
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see it all the time. There’s definitely really cliques. And it’s actually, when I can step aside and do a bird’s eye view it’s pretty sad to see the kind of behaviours that go on and the exclusion that happens. So with the new grads are, you know, they’re not even considered for some things because they’re still trying to bridge into being part of the team, right?”

“I think mentoring can also be a two-way street. Say I have 5 years experience and someone’s new and they’re just new off the street, I’m going to teach you things and you’re going to teach me things. So I may not be tech savvy. New people are tech savvy. I’m not tech savvy. So you can teach me to be. We’re meant to be mentoring each other.”

“Learning, it never ends. And when you’re teaching students you learn a lot from them as well. And there are a lot of nurses who are old fashioned and do things the old way, but there are a lot of new ways that are more efficient or more effective and nursing students, they can help a lot with that. There’s a learning that goes both ways.”

“I think mentoring can also be a two-way street. Say I have 5 years experience and someone’s new and they’re just new off the street, I’m going to teach you things and you’re going to teach me things. So I may not be tech savvy. New people are tech savvy. I’m not tech savvy. So you can teach me to be. We’re meant to be mentoring each other.”