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COMPARING STUDENT NURSE EXPERIENCES WITH DEVELOPING
PSYCHIATRIC MENTAL HEALTH NURSING COMPETENCIES
IN HOSPITAL AND NURSING HOMES:
A MIXED METHODS STUDY

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

Maria M. Tice

College of Natural and Health Sciences
School of Nursing
Nursing Education

August 2020

This Dissertation by: Maria M. Tice

Entitled: *Comparing Student Nurse Experiences with Developing Psychiatric Mental Health Nursing Competencies in Hospital and Nursing Homes: A Mixed Methods Study*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in the College of Natural and Health Sciences in the School of Nursing, Nursing Education Program.

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ABSTRACT

Tice, Maria M. *Comparing Student Nurse Experiences with Developing Psychiatric Mental Health Nursing Competencies in Hospital and Nursing Homes: A Mixed Methods Study*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2020.

Nurse educators today face many barriers to attracting and retaining an adequate workforce of nurses to serve two significantly underserved and growing populations: elders and persons with mental illnesses. The primary purpose of this study was to compare and contrast how baccalaureate student nurses' level of engagement and the perceived quality of the learning environments in inpatient mental health units and nursing homes were related to students' (a) perceived levels of psychiatric mental health (PMH) nursing care competency, and (b) attitudes toward working with the elderly and/or mentally ill.

This mixed methods case study design was guided by Bronfenbrenner and Morris' (2006) bioecological theory of human development. The sample included 37 junior-level nursing students and three senior-level nursing students from one baccalaureate nursing program at a medium-sized university in the Midwest who attended mental health clinical education at a nursing home for veterans or on inpatient acute mental health hospital units during 2018-2020. Linear regression, repeated measures analysis of variance (ANOVA), and independent samples *t*-tests were used to analyze the quantitative data collected from 37 students. A case study approach and thematic analyses were used to develop two in-depth cases using qualitative interview

data from 11 nursing students in the sample pool. Finally, the quantitative and qualitative data were integrated by analyzing and interpreting points where the data were in agreement and where they diverged.

There were no statistically significant differences between the groups in perceived attainment of PMH nursing competency. Across cases, all groups made gains from a minimum of 13 points to a maximum of 36 points pre and post clinical scores for PMH nursing competency over four weeks. Across cases after attending mental health clinical, a total of 9/37 (24%) nursing students expressed they agreed or strongly agreed they were interested in a future career in mental health nursing and 5/37 (13.5%) agreed they were interested in a future career in geriatric nursing. However, there was a significant statistical difference between groups in student engagement ($p = .047$) and satisfaction ($p = .018$) with students attending mental health clinical in a nursing home being less engaged in and satisfied with clinical education than those attending on inpatient mental health units. The data supported that stigma, personal characteristics of students, peer pressure, culture, and time were factors that affected student engagement in and satisfaction with mental health clinical education.

When researching and evaluating mental health clinical education in hospital and nursing home settings, the process-person-context-time model (Bronfenbrenner & Morris, 2006) provided a robust framework to systematically study variables contributing to student satisfaction and engagement. Previous research established stigma as a significant barrier in promoting student engagement, attraction, and recruitment to future careers working with the

mentally ill and elderly. There was less research about how nurse educators could counteract stigma through curriculum reform or how other factors such as time, personal characteristics of students, culture, peer pressure, and previous work experience as nursing assistants impacted engagement in and satisfaction with mental health clinical education and interest in a future career in psychiatric or geriatric nursing. More research is needed in these areas.

Keywords: mental health clinical education, baccalaureate nursing students, competencies, engagement, stigma, bioecological theory of human development

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Maria Tice, Ph.D., RN, PHN, CNE

May 24, 2020

Memorial Weekend

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CHAPTER I

INTRODUCTION TO THE STUDY

A mixed methods case study approach was used to compare and contrast how two groups of baccalaureate student nurses' engagement with people, objects, and ideas in clinical learning environments (CLE) shaped attainment of psychiatric mental health (PMH) nursing competencies and workplace attitudes. The two groups of interest were (a) students attending mental health clinical on inpatient mental health units, and (b) students attending mental health clinical in a nursing home. Research aimed at improving mental health clinical education for pre-licensure student nurses is needed because clinical education is the platform in which students learn to apply theory to practice and develop nursing competency, confidence, and skill sets that match the needs of healthcare consumers (Chan, 2002; Institute of Medicine [IOM], 2011). Many barriers prevent realization of the pressing need for nurse educators to attract, develop, recruit, and retain an adequate nursing workforce to care for the chronic, physical and psychosocial health needs of two large and growing demographics: the elderly and persons with mental illness (American Academy of Nursing [AAN], 2015; Konnert, Huang, & Pesut, 2019). A bioecological theoretical framework (Bronfenbrenner & Morris, 2006) guided identification and analysis of factors preventing an adequate nursing workforce to care for elders and person with mental illness from the perspective of baccalaureate student nurses.

Background

Changes in healthcare demographics, models of care delivery, and evidence-based practices require that nurses continually learn and update their knowledge and skill sets to meet evolving needs of healthcare systems and consumers (IOM, 2011). A concerning trend today is stakeholder and research reports that nurses are not well prepared to meet the psychosocial and mental health needs of patients (Benjenk, Buchongo, Amaize, Martinez, & Chen, 2019; McAllister, Happell, & Flynn, 2014). Student nurses and experienced medical-surgical nurses, emergency room, and intensive care nurses also reported feeling ill-prepared, anxious, and unsure about how to care for patients with co-morbid mental health needs despite having completed prerequisite nursing education programs (Rutledge et al., 2013; Zolnierek & Clingerman, 2012).

The erosion of what is known in nursing as psychiatric mental health (PMH) or psychosocial competencies from nursing curriculum, clinical education, and National Council Licensure Examination evaluation might have contributed to this gap (Gilje, Klose, & Birger, 2007; Kane, 2015; McKinney, Tavakoli, & Herman, 2016). There has been no consensus about exactly what mental health nursing knowledge and skills all entry level and practicing nurses need to deliver safe, effective, holistic care but there is growing acknowledgement that there is no true health without mental health (Chisholm, as cited in Kolappa, Henderson, & Kishore, 2013). Mental illnesses contribute to human suffering, morbidity and mortality in themselves and are also risk factors that affect the incidence and prognosis of chronic physiological diseases such as diabetes and heart disease (Kolappa et al., 2013). Leaders in nursing, medicine, and allied health have long sounded and responded to the call for more holistic, integrated models of healthcare

education and systems to address both physical and psychosocial health needs of individuals and populations by developing standards and competencies for PMH nursing, gero-psychiatric nursing, integrated behavioral health and primary care, and interprofessional care (AAN, 2015; International Society of Psychiatric Nurses [ISPN] and the American Psychiatric Nurses' Association [APNA]), 2008; Interprofessional Education Collaborative, 2019; Peek & the National Integration Academy Council, 2013).

However, in most baccalaureate nursing programs in the United States today, both classroom theory and clinical education remain “silo-ed” with students learning about acute health conditions, mental health, and public health/community nursing in separate courses and clinical settings. This fragmented approach has complicated students' ability to transfer content learned in skills labs and classrooms to the actual care of patients in a manner that facilitates holistic assessment of physiological, psychosocial, and population-based influences on health (McKinney et al., 2016; Newton, Billett, Jolly, & Ockerby, 2009). Additionally, a greater percentage of classroom and clinical time has been devoted to physiological integrity than psychosocial integrity. Studies found students and practicing nurses tended to prioritize patients' physical needs over psychological needs (Kane, 2015; Mersin, Demiralp, & Öksüz, 2019). For example, in one well-established, accredited, four-year Bachelor of Science in Nursing (BSN) program in the United States, the number of clinical practice hours allotted to mental health clinical was 35 hours (4 days/8 hours + 3 hours orientation) and for the community and public health clinical, the number of hours was the same. The number of acute care clinical practice hours students completed between the sophomore and senior year was approximately 275 hours. This

was more than 8.5 times the amount of community public health and mental health clinical practice hours despite shifts in health care requiring that nurses be educated to provide holistic, population-based care and case management across the continuum of care (IOM, 2011).

The reasons for the prioritization of physiological health over psychosocial health and population-based approaches in nursing curriculum were varied and some were unclear. Current emphasis on evidence-based practice from the perspective of a medical model might undermine value placed on the primacy of the therapeutic relationship—the bedrock of PMH nursing (Kane, 2015; Peplau, 1997). Within society and healthcare systems, mental illness is often stigmatized with less prestige, money, time, and other resources going toward mental health services and research (Sabella & Fay-Hiller, 2013). Shortages of nurse educators and preceptors with expertise in mental health and available clinical sites, including mental health sites, have been significant barriers affecting implementation of clinical education, which were well established in the current literature (National Council of State Boards of Nursing [NCSBN], 2019). McKinney et al. (2016) reported that simultaneous overcrowding of students from multiple nursing programs at mental health clinical created frustration for both staff and students, leading nurse educators to seek alternative experiences for mental health clinical education through use of simulation and/or alternative clinical sites in the community (Choi et al., 2016; McKinney et al., 2016).

Evidence showed that while up to 50% of nursing education could be replaced with simulation, clinical experience with patients in authentic health care settings could not be eliminated without negative effects on student nurse readiness for practice upon

graduation (NCSBN, 2019). Additionally, scant evidence supported how many hours of classroom theory and clinical practice were needed to develop particular nursing competencies (Bowling, Cooper, Kellish, Kubin, & Smith, 2018). In the United States, only 10 states outlined requirements about the number of clinical practice hours nursing programs were required to provide, resulting in a wide variation of clinical hours provided across nursing programs (Bowling et al., 2018; IOM, 2011).

The prioritization of physiological nursing care over psychosocial nursing care needs of health care consumers has been especially concerning because in the United States, two patient populations are widespread and growing: (a) the elderly—defined as persons aged 65 and older, and (b) persons of all ages with mental illnesses. The U.S. Census Bureau (Ortman, Velkoff, & Hogan, 2014) reported that by 2050, the number of U.S. residents age 65 and over was projected to be 83.7 million, almost double its estimated population of 43.1 million in 2012. With larger numbers of older adults, there will be an increased need for geriatric care including care for individuals with chronic diseases and co-morbidities (American Association of Colleges of Nurses [AACN], 2019, para. 5).

Likewise, the numbers of people with mental illness are prevalent in the United States and globally. Across the lifespan, one in five people experiences a significant mental illness within any given year (National Alliance on Mental Illness, 2019). Depression is currently the leading cause of disability in the world (World Health Organization, 2018). Among older adults living in the community, 40% are estimated to have a mental health problem, depression and anxiety being the most common (Li & Conwell, 2007; Wang, Kearney, Jia, & Shang, as cited in Konnert et al., 2019). Although

older Americans comprise 13% of the population, they account for 20% of people who commit suicide (American Psychological Association [APA], 2019). In fact, older Americans have the highest suicide rate of any age group.

Mental illnesses are especially prevalent in nursing homes. Up to two-thirds of nursing home residents have a diagnosable mental illness such as anxiety or depression (APA, 2019). As many as 50% of residents living in nursing homes have some form of dementia and about 67% of people with dementia die in nursing homes (Alzheimer's Association, 2007). The number of people with Alzheimer's is projected to sharply increase from more than 5 million today to as many as 16 million by 2050 as 78 million Baby Boomers mature and reach the age of highest risk (Alzheimer's Association, 2020).

Health and long-term care organizations rely heavily on the services of registered nurses to care for these populations. Given the incidence of mental and behavioral health conditions present in nursing homes, students might be able to develop PMH competencies in long-term care (LTC) settings, alleviating overcrowding at inpatient mental health sites as well as providing valuable opportunities for students to gain experience working with elders. Nursing homes, prevalent in almost every community including rural areas, might provide accessible and appropriate CLEs for mental health clinicals. A few studies evaluated healthcare students' abilities to develop interprofessional competencies, physical assessment, therapeutic communication, and fundamental nursing skills but not comprehensive PMH competencies as the focus of the practicum and site for the mental health clinical (Mezey, Mitty, & Burger, 2009; Muralidharan, Mills, Evans, Fujii, & Molinari, 2019).

Statement of the Problem

A reality facing healthcare systems in the United States is the growing demand for registered nurses who have skill sets to provide safe and effective nursing care to older adults with chronic physical and mental health needs (Delaney, 2016; Husebø, Storm, Våga, Rosenberg, & Akerjordet, 2018; Skaalvik, 2011). Workforce shortages of qualified staff to meet the psychosocial and mental health care needs of healthcare consumers has been especially noticeable in nursing homes where direct patient care is most often provided by certified nursing assistants (CNAs) who might not have received additional training in recognition and management of signs and symptoms of mental illnesses or how to manage aggressive behaviors, paranoia, and hallucinations that often accompany dementia or delirium (Konnert et al., 2019). Lack of education and training in mental health management has been identified as a primary factor impacting job satisfaction and retention of direct care workers including both paraprofessionals and registered nurses (Konnert et al., 2019). According to Castle and Engberg (2005), one-year turnover rates in LTC were as high as (a) 60-75% among direct care workers such as home health aides and certified nursing assistants (CNAs), (b) 85.5% for licensed practical nurses (LPNs), and (c) 55.4% for registered nurses (RNs) in the United States.

The demand for nurses with expertise in geriatric nursing and/or gero-psychiatric nursing far has exceeded the supply (AAN, 2015). Ongoing workforce shortages and stigmatized societal attitudes that devalue work with these populations perpetuate cycles of rapid staff turnover and high vacancy rates due to stress and burnout (AACN, 2019; Konnert et al., 2019). Stress and burnout could lead workers to become detached and

disengaged from patients, which significantly impacts the quality of health care and patient outcomes (AACN, 2019).

Purpose of the Study

The primary purpose of this study was to compare and contrast how baccalaureate student nurses' level of engagement and the perceived quality of the learning environments in inpatient mental health units and nursing homes were related to their (a) perceived levels of PMH nursing care competency and (b) attitudes toward working with the elderly and/or mentally ill.

Significance of the Study

This study addressed a gap in understanding about whether or not students could develop knowledge and skills commonly categorized as PMH nursing competencies in nursing homes at the same level as in inpatient acute mental health units, which are generally thought to be the gold standard CLE for development of PMH competencies. This gap in understanding has been further clouded by the lack of a standardized definition and consensus within the nursing profession of what essential PMH competencies for baccalaureate nurses are or should be, how to measure them, and how much of the nursing curriculum and clinical experience should be allotted to developing them. Even though professional organizations have developed guidelines and some measurement tools exist to identify essential PMH, geriatric and geropsychiatric nursing, and interprofessional behavioral health care competencies for entry level nurses, these have not been widely discussed or researched, resulting in wide variation in the classroom and clinical experiences devoted to developing geriatric and PMH competencies in baccalaureate education (American Psychiatric Nurses Association,

International Society of Psychiatric Mental Health Nurses, & American Nurses Association, 2014; Gilje et al., 2007).

Studying ways in which nursing homes might be used as PMH clinical learning sites for baccalaureate nursing students could potentially bring mutual benefits to nursing homes and nursing education programs, which would improve the psychosocial competencies and confidence of both nursing home staff and student nurses. The use of nursing homes as a site for PMH clinical education could also ease overcrowding of students in acute inpatient mental health clinical sites. There are approximately 15,600 nursing homes in the United States with 1.7 million licensed beds occupied by 1.4 million patients as compared to approximately 170,200 psychiatric specialty beds in state, county, private, and public hospitals; Veterans Affairs Centers; and residential treatment centers in the United States (Centers for Disease Control and Prevention, 2016; National Association of State Mental Health Program Directors, 2017). If nursing homes provide a favorable clinical learning environment in which students could learn PMH nursing competences and gain experience working with elders, more students might be attracted to consider future careers working with elders or in mental health, thereby building the workforce in these critically underserved areas.

Research Questions and Hypotheses

The following research questions and hypotheses guided this study:

- Q1 Is there a relationship between baccalaureate student nurses' level of engagement in mental health clinical education and the perceived quality of the CLE with changes in their PMH nursing competencies?
- H01 Level of student engagement in mental health clinical and the quality of the CLE are not associated with attainment of PMH nursing competencies.

- H1 Level of student engagement in mental health clinical and the quality of the CLE are associated with attainment of PMH nursing competencies.
- Q2 Does mental health clinical education in a nursing home or on inpatient mental health unit have a significant effect on nursing students' attainment of PMH nursing competency and interest in a future career in mental health or gerontological nursing?
- H02 There are no significant differences between the two groups in PMH nursing competency attainment or interest in a future career in mental health or gerontological nursing.
- H2 There are significant differences between the two groups in in PMH nursing competency attainment or interest in a future career in mental health or gerontological nursing.
- Q3 What is the student nurse experience of attending PMH clinical education in nursing homes versus inpatient mental health units?
- Q4 To what extent do the similarities and differences between the groups identified by the quantitative data support or contradict the qualitative data?

Overview of Methodology

This mixed methods, collective case study design was guided by the process-person-context-time (PPCT) model in Bronfenbrenner and Morris' (2006) bioecological theory of human development (BTHD). A collective case study design is one where qualitative and quantitative data are collected and analyzed to generate two or more cases. In this study, two cases were comprised of baccalaureate nursing students attending a mental health clinical one day a week for eight hours over four weeks in two different clinical settings during 2018-2020. One setting was on adult inpatient mental health units in a Level I acute care hospital (Case 1) and the other setting was a long-term care facility for veterans in an urban area (Case 2).

The purpose of the clinical experience was for students to be able to connect concepts learned in mental health theory classes to the actual care of persons with mental

illnesses and move toward entry level competency in PMH nursing by graduation in May 2021. A mixed methods case study design fit the purpose of this study to compare and contrast similarities and differences between student development of PMH nursing and changed attitudes within and across the two cases. A case study approach allowed for an in-depth, multi-faceted exploration of a complex phenomenon in real-life settings, which was the context for this study (Crowe, Creswell, & Robertson, 2011). Case studies are useful when phenomena being studied are complex and cannot be easily controlled by the researcher (Crowe et al., 2011). Case studies can be used to build new or refine existing theories (Crowe et al., 2011).

After Institutional Review Board (IRB) approval (see Appendix A) and student consent (see Appendix B) were obtained, quantitative data obtained from surveys conducted throughout Fall 2019 and Spring 2020. Students completed the following surveys online within the course electronic platform at the start and end of each semester: the modified Behavioral Health Care Competency (BHCC; Rutledge, Wickman, Drake, Winokur, & Loucks, 2012; Tice, 2018) and the Adapted Clinical Learning Environment Inventory--Actual (CLEI-A; Chan, 2002) with four researcher-developed items to measure engagement (based on the work of Reeve & Tseng, 2011). Data for each individual in the clinical groups were not accessed or analyzed by the researcher until after participants had completed mental health clinical and received their clinical grade. Appendix C provides the BHCC (Rutledge et al., 2012) and Appendix D provides the CLEI-A (Chan, 2002).

Two standardized competency measurement tools—the BHCC tool and a tool for public health nursing competencies—were used by faculty teaching mental health and

community public health nursing theory as a means of aligning clinical professional competencies with classroom concepts. All students at the junior-level in the BSN program in the College for Women were asked to complete the BHCC (Rutledge et al., 2012) accessed online through the course learning platform. Students received one course participation point in the non-exam category when they completed these surveys. This small incentive motivated most students to complete the BHCC but completion was voluntary. The classroom instructors did not view individual results unless the student asked to discuss these. However, faculty viewed BHCC aggregated statistics to determine areas of competency development in which students felt more and less confident. This information was utilized to guide classroom teaching to address identified areas of student learning needs.

In 2019-2020, post mental health clinical, junior-level nursing students were asked to complete the CLEI-A (Chan, 2002) and four researcher developed Likert items in an online survey accessed in the course electronic learning platform for purposes of program evaluation. Collecting data to evaluate learning outcomes for students in the two mental health clinical sites was important because a nursing home is not the standard setting for mental health clinical education; therefore, evidence was needed to evaluate the appropriateness of this instructional strategy. Demographic data related to student age, first language, prior health care, or mental health work experience were collected from students who consented to have their existing quantitative data included in the study at the time they signed the research consent in spring semester 2020 (see Appendix E for demographic data form).

Quantitative data from the modified BHCC (Rutledge et al., 2012) and CLEI-A (Chan, 2002) were examined, cleaned, assigned a numeric code, and entered into SPSS Version 23 (IBM Corporation, Armonk, NY). Descriptive statistics were calculated to check for normal distribution. Cronbach's alpha was done to check validity of the inventories for this population. The data were analyzed with appropriate inferential statistics for the research questions. Results of the quantitative analysis were interpreted, summarized, and discussed.

Students who agreed to be interviewed were contacted for qualitative interviews in Spring 2020. One-on-one interviews using a semi-structured protocol (see Appendix F) based on the PPCT model were used (Bronfenbrenner & Morris, 2006). Students could request a one-on-one interview with the researcher or research assistant, whichever they chose. Prior to March 13, 2020, interviews were held with the participant and the interviewer in a private distraction-free room in the nursing department and were audio-recorded to aid in accurate transcription. After March 13, an IRB amendment was obtained so all interviews could be done online using Google Hangouts (see Appendix A). This was necessary due to the coronavirus pandemic.

Qualitative interviews proceeded until saturation was reached. Eleven interviews were transcribed using Trint transcription software. Transcripts were edited with personally and contextually identifiable information removed before being uploaded in NVIVO Version 12. The research assistant de-identified the transcripts and assigned numeric data to link qualitative, quantitative, and demographic data.

Thematic analysis was used to identify themes that aligned with the PPCT model guiding the study (Bronfenbrenner & Morris, 2006; Creswell & Poth, 2018). To promote

reliability, two readers (the researcher and research assistant) separately identified and discussed themes. The researcher created in-depth portraits both within and across cases. Then, quantitative and qualitative data were merged by comparing and contrasting similarities and differences. Results were related to previous study findings and then discussed with conclusions and recommendations drawn. Member checking was used to confirm the accuracy of the conclusions or any quotes from the participants.

Theoretical Framework

This study was concerned with examining and understanding how student engagement in proximal processes—defined as interactions with persons, objects, and ideas in CLEs over time—affected development of PMH nursing competencies and attitudes. Bronfenbrenner and Morris' (2006) PPCT model was the lens chosen to focus the study. This theory was chosen to guide the study because it was concerned with human development whereby the developing person is influenced by and influences the environment (Rosa & Tudge, 2013). The PPCT model operationalizes contributors to human development with four constructs: person, processes, context, and time (Bronfenbrenner & Morris, 2006). The PPCT model (Bronfenbrenner & Morris, 2006) is discussed in detail in Chapter II. In this study, proximal processes were thought to be closely related to the concept of student engagement (Bernard, 2015).

Definition of Terms

In this section, the major concepts of engagement, clinical learning environments, competency, and PMH competency are defined.

Behavioral health care competencies and psychiatric mental health nursing

competencies. Behavioral health care (BHC) is an umbrella type of care used for

any problems that impact overall health including mental illness and substance abuse, stress-linked physical symptoms, aggression, and ineffective health management behaviors (Peek & the National Integration Academy Council, 2013). Behavioral health care is broader than mental health care as it encompasses understanding the bio-psycho-social variables that influence mental health conditions, stress-related disorders, addictive disorders as well as an understanding of theories and strategies to help people engage in successful behavioral change such as motivational interviewing. In this study, this researcher used the terms psychiatric mental health nursing (PMH) competencies and behavioral health care competencies (BHCC) synonymously. Psychiatric mental health nursing competency was chosen because this term is most often used in nursing education today—not behavioral health care nursing. This might change in the future as healthcare education becomes more interprofessional.

Clinical learning environment. Learning environment refers to “the social interactions, organizational cultures and structures, and physical and virtual spaces that surround and shape participants’ experiences, perceptions, and learning” (Josiah Macy Foundation, 2018, p. 35). The CLE is “an interactive network of forces within the clinical setting that influence students’ learning outcomes” (Chan, 2002, p. 70). In this study, measurement of the CLE in the quantitative strand was operationalized through use of the CLEI-A subscales of personalization (seven items), task orientation (five items), innovation (six items), and individualization (four items; Chan, 2002).

Competency. Defined as “a complex know-act that is based on combining and mobilizing knowledge, skills, attitudes, and external resources and then applying them appropriately to specific types of situations” (Tardif, in CASN, 2015, p. 8).

Engagement. Based on Bronfenbrenner and Morris’ (2006) PPCT model, engagement is defined as the quantity and quality of experiential interactions by student nurses with the persons, objects, ideas, and contextual factors in CLEs over time.

Bernard (2015) defined student engagement as a dynamic reiterative process marked by positive behavioral, cognitive, and affective elements exhibited in pursuits of deep learning. This process is influenced by broader contextual preconditions of self-investment, motivation, and a valuing of learning. Outcomes of student engagement include satisfaction, sense of well-being, and personal development. (p. 1)

In this study, measurement of student engagement in the quantitative strand was operationalized through use of the Adapted Clinical Learning Environment Inventory subscales of student involvement, satisfaction, and four researcher-created items (Chan, 2002).

Delimitations and Limitations

Delimitations

Delimitations are factors that restrict the questions one can answer or the inferences drawn from research findings based on intentional choices made *a priori* about the boundaries of the study design (“Diving deeper,” 2019). This study was limited to a convenience sample of 88 second and third semester and 63 fourth semester pre-licensure nursing students in one BSN program in the Midwestern United States who either were

currently or had previously attended mental health clinical in two different CLEs. This study focused on PMH nursing competency development and student nurse attitudes toward two populations: the mentally ill and elders in nursing homes. Findings might not be generalizable to other groups of student nurses, care settings, or development of particular nursing knowledge, skills, or attitudes (competencies) overall. The literature review for this study was primarily limited to research studies conducted from 2009 to 2019.

Another choice that affected the study was to refer to behavioral health care competency and mental health nursing care competency synonymously. Whether or not the two terms were synonymous brought up linguistic and philosophical arguments beyond the scope of this study. However, the difficulty this researcher had identifying a standardized definition for PMH nursing care competency in the literature as well as the lack of an existing standardized set of core PMH nursing concepts and taught in all baccalaureate level nursing curricula in the United States suggested that lack of a core definition and standardization impacts nursing education and warrants more research.

The setting for the nursing home research group was a Veterans long-term care center with many resources other nursing homes might not have. Access to onsite psychologists, a psychiatrist, behavioral health analysts, a domiciliary room and board that served a high percentage of veterans with mental illness or substance use disorders, and day respite program provided many rich opportunities to learn from an interdisciplinary team. Additionally, more mental health conditions such as posttraumatic stress disorder and traumatic brain injuries were more likely present in

Veterans homes due to traumatic events experienced in war. Therefore, the experiences of students in a Veterans home might not be generalizable to other LTC settings.

Limitations

Limitations of the study included a small sample size for the quantitative strand. The use of a convenience sample limited generalizability of the study; however, this was offset somewhat because the students were randomly assigned to one of two clinical settings by the course coordinator. The study was conducted within one nursing program in a College for Women so all the participants were women, most of them were in their early to mid-20s, and 35% were students of color. Survey tools used to measure student mental health competency levels and student satisfaction with the CLE relied on student self-evaluation and, therefore, could have been inaccurate or biased. The dual roles as researcher and classroom/clinical instructor could also have affected the study as remaining objective and bracketing interpretation of the data was challenging. The assistance of the research assistant, who was not involved in teaching and did not know the students, was invaluable for maintaining objectivity in the study. At the same time, this researcher's position as a participant observer of the students in the clinical settings also provided opportunities to make valuable observations in a naturalistic setting, which could not be captured by survey data alone.

Clinical learning environments are complex, dynamic psychosocial arenas (Chan, 2002). Likewise, organizations are influenced by sociocultural influences and differences that might make it difficult to generalize findings from one type of setting in one location to a similar type of study in another location. Chapter III further describes the research design elements chosen to strengthen the study.

Summary

This chapter introduced the study including the background, purpose, statement of the problem, significance, research questions and hypotheses, overview of the methodology and theoretical framework, definition of terms, as well as delimitations and limitations. Chapter II presents the theoretical framework chosen to guide the study, a review of relevant literature, and gaps in the research literature that supported the need for the study.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter reviews literature related to the concepts of (a) student engagement in clinical learning, (b) student perceptions of learning and competency development in nursing homes, and (c) student perceptions of learning and competency development in inpatient mental health units. Theoretical frameworks used to guide previous studies of these concepts are discussed. Bronfenbrenner and Morris' (2006) bioecological theory of human development, specifically the PPCT model that guided this study, is critiqued to provide readers with a foundational understanding of the theory's purpose, major constructs, and assumptions (Chinn & Kramer, 2015). The rationale for selecting the PPCT model is explained. Finally, the results of the literature review are summarized including gaps in research that guided considerations for research design and supported the need for the study.

Theoretical Research Frameworks

Past research on student nurse learning in clinical education initially focused on nursing students' perception of the CLE in acute care hospital settings (Chan, 2003) but that changed in the wake of the IOM's (2011) recommendations that nursing students be prepared to practice across settings and in the community. Currently, more studies about the student clinical learning experience in non-traditional clinical settings including nursing homes and inpatient and community mental health care settings are being conducted (Bisholt, Ohlsson, Engstrom, Johansson, & Gustafsson, 2014; Bjørk, Bernsten,

Byrnildson, & Hestetun, 2014; Choi et al., 2016; Grav, Juul, & Hellzén, 2010; Husebø et al., 2018; Karimollahi, 2012).

Nurse researchers have contributed substantively to building an evidence base to better understand CLEs through concept analysis (Flott & Linden, 2016), the development and validation of eight tools to measure CLEs (Mansutti, Saini, Grasseti, & Palese, 2017), and empirical research. Theoretical models used in these studies were largely borrowed from educational and psychosocial disciplines (Bloom, 1964; Dewey, 1933; Knowles, 1990; Kolb, 1984; Moos, 1974). Nursing studies of the CLE influenced by sociocultural, constructivist, and critical action frameworks viewed student learning and competency development in CLEs as being socially constructed through interactions and perceptions of individuals, groups, communities of practice, and cross-organizational networks (Lave & Wenger, 1991; Vygotsky, 1978).

Theoretical frameworks to study student learning outcomes in clinical education from the perspective of student engagement in clinical education have used a variety of middle range theories including (a) Schaufeli and Ezzmann's integrative model of burnout (Bruce, Omne-Ponten, & Gustavvson, 2010), (b) Pintrich's achievement goal theory (Chen et al., 2016), (c) Billett's concept of workplace participatory practices (Liljedahl, Bjorck, Kalen, Ponzer, & Laksov, 2016), and (d) Astin's model of involvement (Prokess & McDaniel, 2011).

Bioecological Theory of Human Development

The theoretical framework chosen to guide this study was the PPCT model described in Bronfenbrenner and Morris' (2006) bioecological theory of human development (BTHD). First, the rationale for selection of this theoretical model is

described. Chinn and Kramer's (2015) process for the description and evaluation of a theory was used to identify and explain the theoretical purpose, key definitions, constructs, relationships, structures, and assumptions of the BTHD theory (Bronfenbrenner & Morris, 2006). A diagram illustrating the theoretical model based on the researcher's understanding of the theory was developed (see Figure 1).

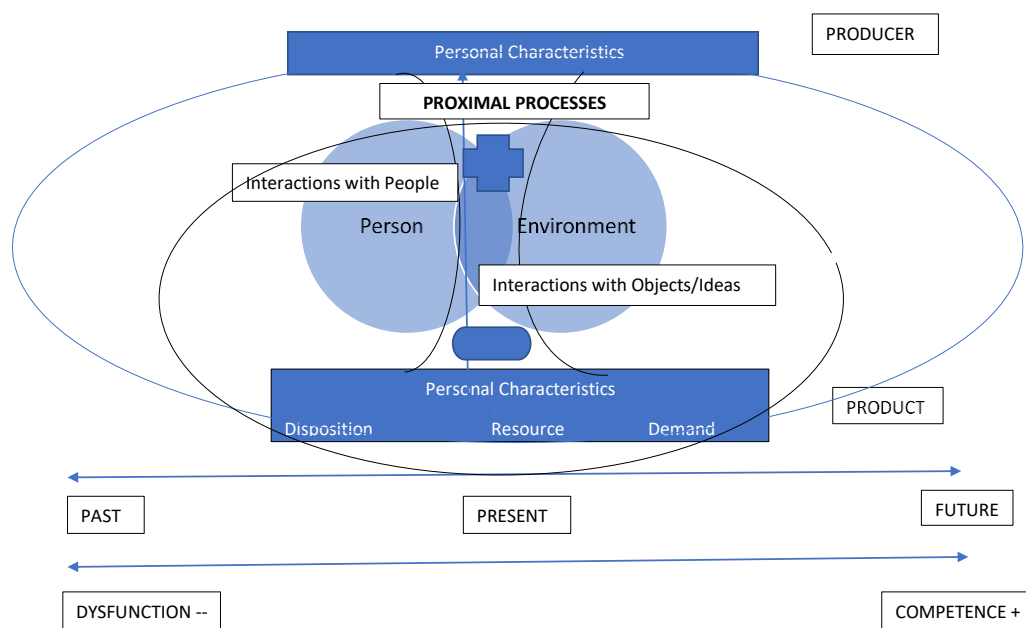


Figure 1. Bioecological theory of human development (Bronfenbrenner & Morris, 2006).

Rationale for Theory Selection

Following an extensive review of the literature related to student engagement in PMH and nursing home CLEs and learning or competency development, the PPCT model was chosen because its grand theory offered a parsimonious, deceptively simple framework to organize findings from the studies in the literature review due to the dynamic, interactional connections and mechanisms within the model. A complex,

interactional model was essential due to the levels of complexity inherent within the concepts of (a) CLEs, (b) competency development, and (c) student engagement in learning. Therefore, a grand theory was needed that could provide a broad framework to allow for explanation and prediction of how multiple concepts were expected to interact.

For example, the CLE has been defined as “the social interactions, organizational cultures and structures, and physical and virtual spaces that surround and shape participants’ experiences, perceptions, and learning” (Josiah Macy Foundation, 2018, p. 35). The CLE is an interactive network of forces within the clinical setting that influences students' learning outcomes (Chan, 2002, p. 70). Competencies are defined as “a complex know-act that is based on combining and mobilizing knowledge, skills, attitudes, and external resources and then applying them appropriately to specific types of situations” (Canadian Association of Schools of Nursing, 2015, p. 8). Student engagement has been defined as

a dynamic reiterative process marked by positive behavioral, cognitive, and affective elements exhibited in pursuits of deep learning. This process is influenced by broader contextual preconditions of self-investment, motivation, and a valuing of learning. Outcomes of student engagement include satisfaction, sense of well-being, and personal development. (Bernard, 2015, p. 1)

In addition, the bioecological theory of human development was well suited to guide nursing leadership efforts aimed at creating desired health and nursing education outcomes through identification of contextual factors from micro- to macro-levels to guide research, policy, and practice (Chinn & Kramer, 2015; Onwuegbuzie, Collins, & Frels, 2013). These characteristics aligned well with this study’s’ goal of creating

preferred clinical educational experiences through change. The ability to systematically identify and analyze contributing factors to explain why student experiences in inpatient mental hospitals and in nursing homes were not valued as highly as clinical learning in acute care hospitals was a necessary first step before alternate clinical designs, policies, and practices could be envisioned. The philosophical view of this theory called for mixed methods designs where empirical and naturalistic observations, interviews, focus groups, and field diaries were compatible methodologies. This philosophical stance was also compatible with the nature of the discipline of nursing (Chinn & Kramer, 2015).

Purpose and Definitions

Bronfenbrenner was a developmental psychologist. The bioecological theory of human development (Bronfenbrenner & Morris, 2006) represents the most current form of Bronfenbrenner's evolving theoretical system that aims to provide a framework for the scientific study of human development over time. The phenomenon of human development was defined by Bronfenbrenner and Morris (2006) as "stability and change in the biopsychological characteristics of human beings over the life course and across generations" (p. 766).

The word *bioecological* was chosen to show how human organisms both affected and were affected by their biology and environments. *Bio-* refers to the biological and evolutionary processes that set limits and imperatives for realization of human potential. To the extent that conditions and experiences for development are not provided, human potential remains unactualized (Bronfenbrenner & Morris, 2006). *Ecological* refers to the importance of studying human development in the ecological contexts in which it

occurs (Bronfenbrenner & Morris, 2006). The overarching purpose of the BTHD was to fulfill two broader but interrelated objectives:

1. Devise new alternative hypotheses and corresponding research designs that not only question existing results but yield new, more differentiated, more precise, replicable research findings, and thereby produce more valid scientific knowledge.
2. Provide scientific bases for the design of effective social policies and programs that counteract newly emerging developmentally disruptive influences. (Bronfenbrenner & Morris, 2006, p. 795)

It is important to realize that this theory has evolved over time in three phases of development from 1973 to present day. According to Rosa and Tudge (2013), in the first phase (1973-1979), conceptualizations were focused on different contextual levels that exerted influence on the development of a person. In the second phase (1980-1993), focus was on how the environment impacted human development by analyzing how existing person-environment theories applied to Bronfenbrenner's model. In the third phase (1994-2006), the theory received its current name of the BTHD and was characterized by the formulation of the PPCT model.

Major Constructs in the Theory

The four major constructs in the PPCT model are *process*, *person*, *context*, and *time*.

Process. The central construct is process, which Bronfenbrenner and Morris (2006) called proximal processes. Proximal processes are defined as interactions between the human organism and environment over time. Proximal processes are posited

to be the primary mechanism producing human development (Bronfenbrenner & Morris, 2006). As seen in Figure 1, proximal processes are central to the model; persons and environment are discrete, yet overlapping constructs that contribute to human development.

Important assumptions concerning the proximal processes are that for development to occur, people must engage in activities. These activities must occur on a fairly consistent basis over time and cannot be interrupted frequently. The activities should become increasingly more complex in nature. Activities with other persons, objects, and ideas or symbols are key drivers of human development. In this model, both relational interactions through interpersonal activities and solo activities involving interactions with objects and ideas (tasks) are important in human development. The interactional quantity and quality of the proximal processes contribute to whether good or poor developmental outcomes occur; therefore, outcomes associated with the proximal processes are whether they are generative (positive) or disruptive (negative). Generative processes result in competency and disruptive processes result in delayed development or disability. Application of this construct to studying student nurse development of PMH competencies in a CLE would hypothesize that student nurses develop higher levels of PMH competency in CLEs where there is adequate time to be exposed to good quality opportunities to experience positive interactions with appropriate persons, ideas, and objects related to PMH nursing.

While the proximal processes are central to the BTMD (Bronfenbrenner & Morris, 2006), the power of the proximal processes to influence human development varies substantially as a function of the characteristics of the developing person, the immediate

and more remote environmental contexts, and the time periods in which the proximal processes take place (p. 795). Each of these remaining constructs is now discussed in order.

Person. The construct of person is conceptualized as being both a producer and product of human development that operates in an input-output type of structure with inter-relationships to and from the proximal processes. This relationship means the characteristics of a person could determine the form, power, content, and direction of the proximal processes.

The construct of person has three characteristics that impact the person's ability to engage in the proximal processes, thereby influencing later development: dispositions, resources, and demands. In the bioecological model, the characteristics of the person "most likely to influence future development are active behavioral dispositions that can set the proximal processes in motion or – conversely – actively interfere with, retard, or even prevent their occurrence" (Bronfenbrenner & Morris, 2006, p. 810). The BTHD model characterizes the propensities of the dispositions as being either *developmentally generative* or *developmentally disruptive*. Examples of developmentally disruptive dispositions are characteristics such as "impulsiveness, explosiveness, distractibility, inability to delay gratification at one pole to personal attributes of apathy, inattentiveness, unresponsiveness, lack of interest, insecurity, shyness, or the tendency to withdraw from activities at the other pole" (Bronfenbrenner & Morris, 2006, p. 810). Resources are defined as abilities, experiences, knowledge, and skills required for the effective functioning of the proximal processes (Bronfenbrenner & Morris, 2006). Demand characteristics "invite or discourage reactions from the social environment that can foster

or disrupt the operation of proximal processes” (Bronfenbrenner & Morris, 2006, p. 796). This means a student’s behavior could elicit positive or negative responses from others, thereby influencing whether their future course of development is generative or disruptive.

Application of the person construct to clinical nursing education is readily apparent when considering how often nurse educators observe that non-academic personal characteristics besides grade point average and performance on standardized tests might be more influential in determining whether or not a student would make a good nurse and whether or not they would be successful in completing the nursing education program. However, very little research established what those personal characteristics were (Pugachov, Maxwell, Youmans, & Wahnschaff, 2015).

Context. The construct of context was the central construct in the original ecological systems theory (Bronfenbrenner, 1979). The purpose of the theory at that time was to explain how everything in a child’s environment affected how a child grew and developed. The theory was found to have applications to human development across the lifespan and was widely used in research involving the study of children as well as adults. Five levels of the environment that influence development are the *microsystem*, *mesosystem*, *exosystem*, *macrosystem*, and the *chronosystem*. Bronfenbrenner (Bronfenbrenner & Morris, 2006) described the structure and inter-relationships of the five levels as a nested model, similar to a set of Russian nesting dolls. The microsystem is the one closest to a person and the one with which a person would have direct contact (“Bronfenbrenner’s ecological systems theory,” 2018). For a child, the people and organizations they interact with on a frequent basis such as parents, siblings, day care,

school, and sports teams compose the microsystem. Interactions in the microsystem are bi-directional, i.e., the way people treat the child affects the child's development and likewise the nature of child's interactions with these people affects how they treat the child (Bronfenbrenner & Morris, 2006). For a baccalaureate nursing student, the microsystem might include their parents, siblings, peers, home, dorm, the nursing classroom, CLE, nursing faculty, and clinical nurses.

The mesosystem was defined by Bronfenbrenner (1979) as “the interrelations among two or more settings in which the developing person actively participates such as, for a child, the relations among home, school, and neighborhood peer group: For an adult, among family, work, and social life” (p. 25). In other words, the mesosystem refers to relations among microsystems or connections among contexts such as the relationship between family experiences and school experiences, between school experiences and neighborhood experiences, and between family experiences and peer experiences (Onwuegbuzie et al., 2013). In clinical education, examples of mesosystem influences might include interactions between how classroom theory and clinical education are or are not adequate to promote PMH competency development or how the quality and level of collaboration between clinical instructors from practice and academia could impact student development either negatively or positively. Indeed, these factors were reported in the literature reviewed as contributing factors to learning and competency development outcomes for student nurses.

The exosystem refers to “linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes within the immediate setting in which the

developing person lives” (Bronfenbrenner, 1993, p. 24). For example, in clinical education, rules imposed by the hosting clinical organization require that students complete mandatory online onboarding processes before attending clinical education. This is an example of an exosystem—the nursing student is not in direct contact with but yet the influences of this system could have a complex effect on the student’s daily life and emotions. Onboarding processes can often be extensive, requiring students to complete multiple learning modules, pass online quizzes, and submit immunization records with firm deadlines. If nursing students are disciplined by their academic instructor for not completing required clinical onboarding activities by the deadline, they might experience negative emotions toward the clinical experience and might cause them to be disengaged from participating in clinical activities, which would result in not doing well in the course and reinforcing a dislike for the particular clinical experience.

The macrosystem, the most distant level from the developing person, involves a larger cultural context (e.g., society, community) surrounding the person that includes societal belief systems, cultural norms, ideologies, policies, or laws that indirectly influence the person. Macrosystems evolve over time, are representative of institutional systems of a culture, and are related to economic, social, educational, legal, and political aspects (Bronfenbrenner, 1979). In a study of nursing student experiences in inpatient mental health hospitals and nursing homes, application of the BTHD (Bronfenbrenner & Morris, 2006) might lead to hypotheses that part of the reason why students perceived they would not like working in a nursing home or mental hospital was due to macrosystem influences such as negative media reports, movie images, and the stigma surrounding mental illness and ageism.

Time. Later, Bronfenbrenner (1979) added another concept (the chronosystem) that represented the effect of time on human development. The chronosystem is composed of environmental and sociohistorical events that occur in a persons' lifetime ("Bronfenbrenner's ecological systems theory," 2018). The construct of time in the PPCT model explains how systemic interactions in an individual's life time over time and across generations shape development. An example of time in the chronosystem in this study was seen by considering that attitudes of nursing students today toward the elderly and mentally ill were influenced by, yet different from past generations. Individuals and generations have perspectives on issues that are similar and different based on shared and differing experiences of environmental and sociohistorical events. Another example to illustrate these concepts would be to reflect on how nursing values that persist today might have roots in events in the distant past. Yet, these experienced events continue to shape the development of nursing in present time.

In the next sections, literature from 2009 to 2019 related to student engagement in CLE, and learning experiences in nursing homes, and inpatient mental health hospitals is discussed.

Student Engagement in Clinical Learning Environments

Learners' levels of engagement with the curriculum and the extent to which they chose to interact with learning activities were well supported in the educational literature as being a necessary prerequisite for learning and competency development to occur (Dewey, 1933; Kolb, as cited in Newton et al., 2009; Rogers, 1967; Schon, as cited in Wang, Qiao, & Chui, 2018). Nursing students' ability to transfer what they learned in university classrooms and skills labs to clinical practice was dependent on personal,

social, and environmental factors with student engagement being a key factor that expedited classroom and skills laboratory learning to CLEs and thus promoted better transition to practice, leading to decreased nursing attrition and better patient care outcomes (Hudson, He, & Carrasco, 2019; Newton et al., 2009). Rather than viewing the theory-practice gap as a gap between the inter-related socio-cultural contexts of practice and academia, Newton et al. (2009) stated the contexts were parallel, not inter-related, which required students to translate the values and beliefs inherent in dissimilar contexts, resulting in learning that was ‘lost in translation.’

Wang et al. (2018) reported four interrelated aspects of student engagement were significantly related statistically with academic achievement in higher education: (a) behavioral engagement characterized by students being actively involved in their learning, (b) emotional engagement characterized by student possession of emotions that facilitated learning tasks, (c) cognitive engagement where students used sophisticated learning strategies, and (d) agentic engagement where students actively sought learning opportunities rather than passively receiving them (Wang et al., 2018). This focus on learner dispositions, resources, and demands was a key construct in the PPCT model as well (Bronfenbrenner & Morris, 2006). Most studies of student learning in clinical education focused on social and environmental factors that either promoted or impeded learning and competency development. The findings of Newton et al. (2009) and Wang et al. (2018) demonstrated the need for more research into how personal characteristics related to student engagement impacted learning during clinical education.

According to Irby (2018), a pressing interest to improve CLEs for health care professionals exists today due to alarming increases in clinician burnout. Student

engagement was also posited to be protective against stress and burnout (Bernard, 2015; Bruce et al., 2010). In a longitudinal, cross sectional survey of 1,702 Swedish nursing students, Rudman and Gustavsson (2012) found student levels of burnout increased significantly (from 30% to 41%) across three years of nursing education with significant increases in exhaustion and disengagement ($p < .001$). Follow-up at one year post-graduation, earlier development of study burnout was associated with lower mastery of occupational tasks and higher turnover intentions (Rudman & Gustavsson, 2012).

Far less research has been conducted to understand the relationships between learning and student engagement in CLEs than has been conducted for classroom environments in higher education. A search of CINAHL and Medline conducted on November 3, 2019 using the key words student engagement in learning AND clinical education OR clinical learning environments located 37 studies. Inclusion criteria were research, English, and peer-reviewed articles from 2009 to 2019. When exclusion criteria of clinical learning through simulation studies that did not include undergraduate students were applied, 13 studies were identified.

Baccalaureate Student Nurse Experience in Nursing Homes

Factors influencing student learning in nursing homes were grouped under the categories of the PPCT model that guided this study (Bronfenbrenner & Morris, 2006).

Person

Evidence showed nursing students held negative attitudes toward clinical placement in nursing homes, viewed staff working in LTC as inferior, and assumed they would learn less in nursing homes than in acute care hospitals (Annear, Lea, & Robinson, 2014; Banning, Hill, & Rawlings, 2006). Many studies were conducted to understand

how student attitudes toward older adults contributed to their interest in a future career in gerontology nursing (King, Roberts, & Bowers, 2013). Studies focused on evaluating student nurse trends in (a) attitudes alone, (b) preferences alone, or (c) both attitudes and preferences toward working with older adults (King et al., 2013). King et al. (2013) reported that research regarding students' preferences and attitudes were inconclusive. Some studies reported improved student attitudes and preferences to work in nursing homes after exposure to working with elders gained through classroom theory and clinical experience, other studies found students had more negative views after clinical experience in nursing homes, and others found no change at all (King et al., 2013). Husebø et al. (2018) found students who viewed nursing homes negatively tended to view the CLE negatively (Abbey et al., 2006; Banning et al., 2006; Brynildsen, Bjørk, Berntsen, & Hestetun, 2014; Xiao, Kelton, & Paterson, 2012), whereas students possessing prior interest in working with elders rated the clinical experience more highly (Carlson & Idvall, 2015). A body of evidence indicated student placement in nursing homes positively affected students' attitudes toward nursing home care with the discovery that caring for elders could be enjoyable (Abbey et al., 2006; Annear et al., 2014; Banning et al., 2006; Carlson & Idvall, 2015; Grealish, Lucas, McQuellin, Bacon, & Trede, 2013). Salamonson et al. (2015) found English language learners and students with prior work experience in nursing homes were less satisfied with their clinical learning in nursing homes. Bjørk et al. (2014) found older students had significantly more positive views of the CLE.

Process

Interactions with clinical instructors, preceptors, and other staff. Many studies supported that high-quality preceptorship relationships, an arrangement in which staff nurses worked with and taught student nurses in the clinical setting, were essential to creating a satisfying clinical learning experience for students (Berntsen & Bjørk, 2010; Carlson & Idvall, 2014; Husebø et al., 2018). Good preceptors were welcoming, experienced, and knowledgeable, enjoyed their work, wanted to work with students, found workplace learning opportunities for students to engage in, and role-modeled excellent patient care (Husebø et al., 2018). Professional dialogue and reflection with a preceptor or clinical instructor in post-clinical debriefing were additional interactive strategies students reported improved their learning (Skaalvik, Normann, & Henriksen, 2012). In contrast, poor quality preceptors were not welcoming, ignored students, or gave poor quality care. In nursing homes, witnessing poor quality care could cause nursing students to experience moral distress and distance themselves from the clinical experience (Clarke, 2015). Frequent changes in staff nurses who served as clinical preceptors was another barrier to learning, probably because it disrupted the opportunity to build a trusting relationship (Clarke, 2015).

Adequate supervision was identified as a primary influencer on learning in most of the studies reviewed. Ensuring adequate supervision for BSN students is a problem in nursing homes in the United States because typically, nursing assistants and licensed practical nurses or two-year program associate degree nurses provide direct patient care while baccalaureate and advanced practice nurses are in managerial or nurse practitioner roles. Clarke (2015) found students viewed the roles between nurses and nursing

assistants in nursing homes to be rigid, clearly identified, and silo-ed. Brynildsen et al. (2014) concluded academic-practice collaboration was needed to develop appropriate supervision models and build on existing potentials to overcome barriers that appeared to be more unique to nursing homes than other healthcare settings.

A strength present in many nursing homes in the United States has been the use of interdisciplinary team models of care that provided good opportunities for students to learn interprofessional team work and greater understanding about the scope of practice, roles, and responsibilities of various healthcare team members (Huls, Rooij, Diepstraten, Koopmans, & Helmich, 2015; Mezey et al., 2009). The role of the academic clinical instructor was discussed by Struksnes et al. (2012). In this qualitative study, group supervision of the staff nurses in nursing homes by an academic clinical instructor along with written information from the university college provided staff nurses with increased assessment and teaching skills to supervise clinical nursing students. This relationship strengthened the collaborative partnership between practice and academia (Struksnes et al., 2012).

Interactions with peers. Students attending clinical in nursing homes where peer partnerships existed between first- and third-year nursing students expressed high satisfaction with the use of cooperative peer learning as an instructional strategy that increased student learning in clinical settings (Brynildsen et al., 2014). Lea (2014) also found students highly valued peer relationships in nursing home settings. More research is needed about how peers could be used to improve clinical learning in nursing homes.

Interactions with patients. Studies reported that novice students were often unprepared and unsure about how to interact and care for elders in nursing homes,

especially when they had challenging behaviors due to dementia (Xiao et al., 2012).

More research is needed about how patients affected students' learning in nursing homes.

Interactions with objects and ideas (tasks). Students reported that access to information and preparation attained through adequate classroom theory, effective pedagogical approaches, and a well-planned orientation prior to clinical placements contributed to more positive CLEs (Bisholt et al., 2014; Chan, 2002). Cross-sectional studies using the CLEI-A for student survey of the CLE found nursing students consistently rated innovative clinical teaching the lowest of all the subscales measured (Chan, 2002). Many high quality and innovative educational materials, competency standards, and lesson plans are provided online that clinical instructors and nurse educators could use to implement student nurse and staff development but it was not clear how many programs utilized these readily available resources. Inserting more geriatric education and clinical experiences with elders into the nursing curriculum and more training, especially in mental health care, for students and nursing home staff would likely improve the quality of care in nursing homes and the CLE as well (Beck, Buckwalter, Dudzik, & Evans, 2011).

Opportunities to perform varied and meaningful tasks are important to learning and student satisfaction (Bisholt et al., 2014). Students rated acute care hospitals as having more meaningful learning opportunities than nursing homes or mental health units (Bisholt et al., 2014). However, other studies reported creative ways to improve student engagement in learning in LTC. Skaalvik et al. (2012) found that having students give handoff reports between shifts was viewed as a meaningful learning experience. Being included as part of the interprofessional team along with access to staff, faculty members,

and peers to discuss and reflect on the care of older people were valuable learning experiences reported across several studies (Huls et al., 2015; Mezey et al., 2009; Skaalvik et al., 2012).

Context

Husebø et al. (2018) identified the nursing home ward environment as a significant theme in the literature from 2005-2015. Studies suggested nursing homes were ideal CLEs for nursing students due to the warm and welcoming environment, friendly staff, and slower pace of care as compared with acute care settings (Chen, Brown, Groves, & Spezia, 2007; Lea, 2014). A variety of patients and medical conditions facilitate learning (Brynildsen et al., 2014). The presence of patients with mental health conditions was not identified as being a learning opportunity in any of the studies even though statistics supported that as many as two-thirds of residents in nursing homes had diagnosable mental health conditions (APA, 2019). Factors that negatively influenced student learning included short staffing, leaders who were unsupportive of staff, nursing students' reluctance to work with nursing assistants, and a lack of resources as compared to hospital settings (Abbey et al., 2006; Robinson, Andrews-Hall, & Fassett, 2007; Skaalvik et al., as cited in Husebø et al., 2018). A lack of human resources in nursing homes was mentioned in several studies but more information is needed about how material resources such as space for post-conferences, access to computers, and use of technology contribute to the CLE.

Time

The timing of student participation in nursing homes for clinical practice is generally early in a nursing student's educational program, often in the first or second

semester in the program, and most often to practice basic communication and fundamental nursing skills (Berntsen & Bjørk, 2010; Melillo et al., 2014). However, nursing care in the LTC setting is complex due to the complicated blend of physical and emotional care needed to manage chronic health care conditions and psychosocial aspects of aging such as loss of previous levels of physical and cognitive function, challenging behaviors, and relocation to institutional systems of care (Berntsen & Bjørk, 2010; Carlson & Idvall, 2014). This mismatch between the complexity of the CLE and the inexperience of the nursing students might be a factor that has contributed to student anxiety and dislike of LTC as a clinical setting (Carlson & Idvall, 2015). Bisholt et al. (2014) said educators must evaluate whether the setting offers students a meaningful learning environment where the desired learning outcomes might be achieved. This would require timing the scaffolding of clinical learning experiences. Another negative influencer reported by students was not enough time with preceptors or mentors (Clarke, 2015).

Competency Development in Nursing Homes

Chen et al. (2007) found 83% of nursing education programs surveyed ($n = 53$) used nursing homes as clinical settings to teach fundamentals of nursing, physical assessment, and communication skills. Mezey et al. (2009) conducted a quality improvement study to describe and identify terminal learning competencies developed by students in five geriatric clinical health care specialties (dentistry, medicine, nursing, social work, and pharmacy). The goal of their study was to understand more about the strengths and limitations of the nursing home CLE as supporting professional competency development for both BSN and advanced level healthcare training. The

study found all five professions used nursing homes as clinical sites for advanced level training. Core geriatric nursing skills for baccalaureate nurses included interprofessional team skills, practice across the continuum of care, and all levels of wellness. Other competencies identified were nursing process (opportunities for assessment, diagnosis, care planning, implementation and evaluation), professional role, advocacy, health teaching, bereavement support, cultural competence, and better understanding of how to facilitate transitions between levels of care (Mezey et al., 2009).

Huls et al. (2015) conducted a qualitative study that included open-ended survey questions followed by focus groups to explore medical student perceptions of their learning outcomes in nursing homes. Participants reported learning in nursing homes differed from learning in the hospital in three primary ways: (a) interprofessional collaboration was more prominent, (b) less resources in nursing homes stimulated creativity, and (c) students had more autonomy and less educational guidance (Huls et al., 2015). No studies were located that studied the development of PMH competencies in nursing homes even though development of communication, therapeutic relationship skills, and interprofessional collaboration are important components of PMH competency. Husebø et al. (2018) summarized that competencies achieved in nursing homes included increased basic nursing skills, greater knowledge of ageing and gerontology, and a change in attitude in caring for older people.

Baccalaureate Student Nurse Experience in Inpatient Mental Hospitals

Factors influencing student learning in inpatient mental health hospitals were grouped under the categories of the PPCT model that guided this study (Bronfenbrenner & Morris, 2006). There was a scarcity of evidence about the student nurse experience in

PMH inpatient mental health units from the perspective of the quality of the CLE and factors such as how time, teaching strategies, and models of supervision impacted PMH competency development (Happell, 2008b). Additionally, studies had not controlled for the type of experience (Happell, 2008b). Many studies addressed student anxiety about attending mental health clinical, a factor that might promote more positive attitudes toward PMH nursing and mental illness (Choi et al., 2016; Demir & Ercan, 2018).

Person

Personal characteristics of student nurses that impacted learning in inpatient mental health settings were anxiety (Boardman, Lawrence, & Polaschek, 2019; Demir & Ercan, 2018), having a mental health condition or a family member with a mental health condition (Demir & Ercan, 2018), age, gender, and previous work experience in mental health (Happell, 2008b).

Process

Interactions with clinical instructors, preceptors and other staff. Some studies reported students generally were happy with their mental health placements and felt welcomed and supported by preceptors (Happell, 2008b). Other studies reported student experiences in mental health clinical in a more negative light, citing factors such as being ignored by registered nurse (RN) preceptors (McKinney et al., 2016) and witnessing standards of care not compatible with what was being taught in university classrooms and skills labs, resulting in moral distress for nursing students (Slemon, Bungay, Jenkins, & Brown, 2018).

Similar to findings in nursing homes, the role of the clinical practice nurse as preceptor is essential to student learning. Some of the barriers to effective interactions

between the students, preceptors, and teachers included a lack of structure and information provided in preceptor meetings, few lectures provided by teachers requiring students to learn information on their own, and poor communication between academia and practice that resulted in conflicts and rumors between these two groups (Grav et al., 2010). Other negative processes that were disruptive to learning and competency development were reported to occur when students were partnered with many different staff RN preceptors instead of one or two main teachers and when nurse preceptors had little to no training in how to teach or supervise the students (Carrigan, 2012).

Interactions with peers. No studies in the review addressed the role of peers in the inpatient PMH CLE.

Interactions with patients. Direct interactions with patients on PMH units were influential in replacing students' fear and anxiety about PMH clinical with feelings of empathy, decreased stigma, and increased confidence to work with PMH patients (Demir & Ercan, 2018). Conversely, anxiety could prevent students from interacting with PMH patients, causing them to distance themselves from the patients and not interact with them, preferring to use the electronic health record for patient information (Karimollahi, 2012).

Interactions with objects and ideas (tasks). Theory is reported to be a necessary but not sufficient means for students to develop PMH competency or decreased stigma (Demir & Ercan, 2018; Happell, 2009). Clinical experience in mental health sectors provides opportunities with students to observe experts in PMH engaged in meaningful tasks and participate in those tasks (Barrett & Jackson, 2013; Happell & Platania-Phung, 2012).

Context

A goal of this study was to better understand the evidence for best practices in selecting a favorable clinical setting in which nursing students could develop PMH nursing competencies. Due to the widespread incidence of mental illness across populations, one hypothesis was PMH competencies could be learned in any setting where interaction with people with mental illnesses was possible. Happell and Platania-Phung (2012) reported clinical placements in non-mental health settings did not appear to favorably influence students' attitudes toward mental health nursing despite mental illnesses being common in these settings. The researchers concluded clinical placements in mental health settings were essential for undergraduate nursing students to develop more positive attitudes toward persons with mental illness and toward mental health nursing, a necessary requisite to achieving nursing competency.

Barrett and Jackson (2013) discussed Jackson's experiences as a nursing student attending a 150-hour placement in a mental health charity providing community support to persons with schizophrenia. Jackson's perception of this experience was it was like "learning to swim without the water" and concluded that when clinical experiences were separated from the context of practice, improved appreciation for mental health and persons with mental illness could be gained but it was difficult to apply theoretical knowledge and gain new skills in settings where one's role was not clear and professional role models were unavailable (Barrett & Jackson, 2013). Fiedler, Breitenstein, and Delaney (2012) found that students in community mental health placement sites were less confident in medication administration and de-escalation following a PMH clinical practicum.

Time

Timing is another important factor in mental health clinical learning, requiring further exploration to build best practice for positive student learning outcomes and competency development (Happell, 2008b). Fiedler et al. (2012) found students in an accelerated program who spent one-third less time in the PMH clinical practicum than traditional program students had no significant difference between groups in students' confidence ratings. This finding was consistent with previous research (Happell, Robins, & Gough, 2008) that reported time spent in clinical did not significantly influence acquisition of clinical competencies or perceived preparedness. Boardman et al. (2019) explored whether students would perceive better learning by attending clinical once a week for eight hours for 16 weeks while concurrently having classroom theory on PMH or by attending clinical five days a week over one month. The study found that moving between the classroom and clinical over an extended time period allowed better application of theory to practice, more time to learn new tasks, and reflection on practice (Boardman et al., 2019).

Competency Development in Inpatient Mental Health Units

For students, links between attending clinical education in a mental health practice setting and subsequent improvements in PMH nursing competencies were well supported by the literature (Fiedler et al., 2012; Happell, Gaskin, Byrne, Welch, & Gellion, 2015). Situated learning with opportunities for students to practice PMH skills, receive feedback, and observe role modeling by experienced PMH nurses and interprofessional team members contributed to student nurse competency development (Callaghan, Cooper, & Gray, 2007; Happell et al., 2015; Ross, Mahal, Chinnapen, &

Rana, 2013). There were rich opportunities to observe and practice specific PMH nursing skills such as psychosocial and mental status assessment, knowledge of psychotropic medications, de-escalation, management of psychosis and hallucinations, as well as knowledge and skills generalizable to all nursing care, especially therapeutic communication and relationship-building (Fiedler et al., 2012; Happell et al., 2015; Henderson, Happell, & Martin, 2007).

Clinical education in inpatient mental health units was also associated with more positive changes in student attitudes, anxiety levels, and confidence to work with patients experiencing mental illness (Feeney, Jordan, & McCarron, 2013; Fiedler et al., 2012; Happell, 2008a; Thomas & Bhattacharya, 2012). Numerous studies concluded that student nurses experienced high levels of stress and anxiety prior to attending clinical on inpatient mental health units due to factors such as stigma and perceptions of persons with mental illness as being aggressive and unpredictable (Thomas & Bhattacharya, 2012). Direct contact with patients on mental health units allowed student nurses to develop more realistic and positive views of people with mental illness as being “just people” who were sick and required skilled and compassionate nursing care (Demir & Ercan, 2018). Students also reported personal growth after attending mental health clinical on inpatient units including more tolerant views about human diversity and greater acceptance of the limitations of self and others (Demir & Ercan, 2018).

Fiedler et al. (2012) developed a student nurse PMH competency scale by using *The Essentials Document* developed by nursing educators and PMH experts that outlined 16 PMH skills considered to be essential for entry-level nursing practice (American Psychiatric Nurses Association, International Society of Psychiatric Mental Health

Nurses, & American Nurses Association, 2014). The 16 competencies were matched with Likert-type response options that asked students to rate their confidence in performing each of the 16 skills from 1 (*Not at all confident*) to 5 (*Totally confident*).

The following open-ended questions were added to the survey:

1. Are there any additional skills you wished you had more experience with?
2. Other than your instructor, were there nursing role models in your area that helped clarify your role?
3. Do you feel you understand the psychiatric-mental health role?

Responses to these questions were reviewed to support the quantitative findings.

Fiedler et al. (2012) concluded that measuring competencies could be used to track which learning climates helped develop desired knowledge, skills, and attitudes. Competency-based education could free faculty from “the traditional model of clinical education where skill development depended on random access to learning opportunities” (Gudrun, Howe, & Schoessler, as cited in Fiedler et al., 2012, p. 248) and resulted in movement to a more planned approach to providing experiences necessary to reach specific outcomes and competencies (Fiedler et al., 2012).

Conclusion

Studies related to CLEs in inpatient mental health units and in nursing homes showed similarities and differences between the two settings existed. Students were generally satisfied with their placements in inpatient mental health and nursing homes but there was room for improvement (Carlson & Idvall, 2014, 2015; Happell et al., 2015). Stigma and ageism are discriminatory attitudes that might be present in both settings. In both settings, witnessing poor standards of care delivery by nursing staff resulted in

moral distress for nursing students. This finding highlighted the requisite for students to observe high quality care and to work with nursing staff that was enthusiastic and expert in care delivery. Due to negative perceptions, students reported initial anxiety or dissatisfaction that tended to be replaced by more positive attitudes toward the patient population by the end of the clinical experience (Grav et al., 2010; Karimollahi, 2012). Both mental health units and nursing homes prioritized use of the interprofessional health team for care provision, thereby optimizing opportunities for students to observe and participate in interprofessional activities.

Factors that appeared to optimize student learning and competency development across settings were (a) adequate student preparation for the clinical experience through a well-planned orientation to the clinical site, sufficient theory, and skills practice to be able to safely apply knowledge and skills to patient care; (b) a supportive clinical environment characterized by mutual recognition, respect, and welcoming attitudes between students, clinical nursing staff, and academic clinical instructors; (c) good communication and supportive relationships between clinical preceptors and academia and use of clinical instructors as consultants to ensure clinical learning experiences are underpinned by sound teaching-learning strategies; (d) adequate supervision of students by qualified, experienced, and enthusiastic staff nurse preceptors and clinical instructors; (e) access to meaningful, active learning opportunities with sufficient, appropriately sequenced levels of challenge as students need to be able to perform and not just observe skills; and (f) student awareness of their own personal characteristics that could promote or impede their learning and competency development in clinical practicum, especially their level of engagement in learning activities.

A main difference for students attending clinical in nursing homes and inpatient mental health settings was access to resources. Similar to acute care hospital units, inpatient mental health units most often have larger numbers of registered nurses providing direct patient care on the units. This valuable asset enabled nursing students access to preceptorships and role modeling by experienced PMH nurses that might not be available in nursing homes. Likewise, greater access to material resources such as conference rooms, computers, and meaningful learning opportunities related to PMH nursing might be more present in inpatient mental health units than in nursing homes.

Gaps in the Literature

Prior studies of CLEs focused on learner perceptions of CLEs. Future studies should elucidate elements that contribute to positive and negative learning environments and include the voices of participants (Josiah Macy Foundation, 2018). Analysis of the literature related to student engagement in interactions with persons showed many studies had been conducted about the essential role of staff nurse preceptors and academic-practice practice that correlated those factors with more positive CLEs. However, noticeable gaps existed about what role interactions with the academic clinical nurse instructor, peers, patients, interprofessional team members, and tasks in CLEs were associated with more student engagement, better learning outcomes, and PMH competence.

Interactions with persons, objects, and ideas were linked with more positive developmental learning outcomes as were the use of active learning strategies (Bronfenbrenner & Morris, 2006; Weimer, 2002). Clinical learning environments provide students with an authentic milieu for active learning that should be engaging.

However, little research supported whether or not students were engaged in clinical learning and how to measure that learning (Loch, 2013). Empirical studies and expert experience supported the need to know more about how the person-process-context-time variables that promoted and disrupted student nurse competency development and more positive attitudes in PMH inpatient units and nursing homes. Results of this study could add to the evidence base to inform new designs for clinical education models in PMH and nursing homes that engage students' interest in future careers to ease workforce shortages of RNs to meet the physical and mental health needs of people with mental illness and elders.

Summary

This chapter reviewed literature related to the concepts of (a) student engagement in clinical learning, (b) student perceptions of learning and competency development in nursing homes, and (c) student perceptions of learning and competency development in inpatient mental health units. Theoretical frameworks underpinning previous studies as well as the theoretical framework for this study were discussed. Results of the literature review were summarized including gaps in research that guided considerations for research design and supported the need for the study. In Chapter III, the methodology for the study is explained including the research design, participants, data collection and analysis for the quantitative and qualitative strands, and ethical considerations.

CHAPTER III

METHODOLOGY

Introduction

This chapter presents the methodology for the study. The research design, participants, setting and sample, data collection and analysis plans for the quantitative and qualitative strands, ethical considerations, and summary are discussed.

Research Design

This dissertation's mixed methods, collective case study design was guided by the PPCT model in Bronfenbrenner and Morris' (2006) bioecological theory of human development (BTHD). Case studies are useful when there is a need to explain, describe, and explore events or phenomena in the everyday contexts in which they occur (Crowe et al., 2011). Thus, this design was well-suited to the goals and context of this study. The use of detailed case studies has a long tradition in medical and nursing clinical education to teach students so this approach seemed familiar and relevant for research conducted on clinical education in nursing. As a nurse educator and clinical instructor, this researcher has been a participant observer of students in clinical settings as they worked to develop their understanding of and competency in PMH nursing care. This researcher has been very close to the everyday experiences of students in naturalistic clinical settings.

A collective case study design is one in which qualitative and quantitative data are collected and analyzed concurrently or sequentially to generate multiple cases (Creswell & Plano Clark, 2018). In this study, two cases were generated: Case 1—students

attending PMH clinical in inpatient mental health units, and Case 2—students attending PMH clinical in a nursing home. A mixed methods, collective case study design fit the purpose of the study to compare and contrast the similarities and differences that occurred between the two groups.

The boundaries of the cases were baccalaureate student nurses attending mental health clinical in one nursing program in the Midwest during 2018-2020. All the participants were concurrently studying mental health theory over one or two semesters, had simulation activities related to mental health nursing care, and attended a four-week, 16-hour total mental health clinical in a nursing home or inpatient mental health setting at various times during the 2018 to 2020 time frame. The students in both settings were accompanied to mental health clinical by an academic nurse educator with expertise in PMH nursing. The ratio was one clinical instructor for six to eight students.

Context

The students attending PMH clinical in the nursing home could also be viewed as an intrinsic case study that is undertaken to learn about a unique phenomenon (Crowe et al., 2011). Because students do not typically attend mental health clinical in nursing homes, an opportunity to explore and describe their experiences is warranted when they do. The 2019-2020 students in the nursing home setting spent one to two days on a dementia unit and at least two days on a unit with residents who did not have dementia but rather had chronic physical and mental illnesses such as hypertension, type 2 diabetes, heart disease, arthritis, depression, anxiety, bipolar disorder, schizophrenia, posttraumatic stress disorder, or traumatic brain injuries. The clinical staff and instructor purposefully selected residents for the students to interact with who had a significant

mental health condition. Students also attended an interdisciplinary care conference, conducted psychosocial interviews and mental status exams, and developed clinical nursing care plans for several residents.

Students at the nursing home were included in other meaningful learning opportunities that arose. For example, they gave flu shots, attended a trauma-informed care seminar developed for staff, and worked with behavioral analysts to learn more about responding to challenging behaviors. Students worked with the paraprofessional certified nursing assistants (CNAs) when they initially met their resident. In the first semester of the clinical, they assisted the CNA in giving care. Students were assigned one resident and completed their assessments and care plan with that one resident.

In the second semester, students worked in pairs and were assigned four residents. They were assigned to complete vitals, a head to toe assessment, a mental status exam, and screening tools for each of the four residents. In dementia care, they completed the Edinburgh Feeding Evaluation in Dementia Care (Stockdell & Amella, 2008) while assisting the staff in feeding the residents. They also completed the Mini-Cog© (n.d.), a three-minute screening tool to detect changes in cognition in older adults. For residents who were more independent and communicative, the students completed the Geriatric Depression Scale (Yesavage et al., 1983) and the Saint Louis University Mental Status (SLUMS, 2019) Examination for dementia. The students were expected to document a nursing note (data-action-response) for each resident and report from them to the nurse manager before leaving the unit.

Even though student nurses did not work directly with the BSN or advanced practice nurse preceptor, often they had brief opportunities to shadow the BSN nurse

manager and observe the baccalaureate nurse role. On three of the units, the male senior RNs (similar to nurse managers) took an active role in teaching the students and sought meaningful learning opportunities for them each week.

As the academic clinical instructor in the nursing home, this researcher rotated between three units where groups of two to three students were placed. Because students were placed on the dementia units first where many residents had impaired communication, this researcher included a role play. In the role play, students interviewed this researcher in small groups to conduct their psychosocial interview and mental status exam. This researcher was able to give students feedback on their communication and assessment immediately. A one-hour post-clinical debriefing was an established part of the experience each week.

This researcher has also taught as an academic clinical instructor and worked as a staff nurse in the inpatient mental health unit attended by students in the other group. Thus, she was very familiar with that context. Each student assigned to the inpatient mental health units shadowed a staff RN preceptor. Some preceptors were two-year (associate degree in nursing-prepared) RNs but most were BSN level. Students might have had several different nurses as preceptors over the four weeks of clinical or could have had a different nurse each week. Students completed the same clinical assignments (psychosocial interview, mental status exams, and nursing care plans) as the students in nursing homes. They rotated to a different adult unit to care for acutely mentally ill patients each week. Students also observed therapeutic groups conducted by the psychologist, social workers, nurses, and occupational therapists. As in the nursing home

setting, the clinical instructor was an experienced nurse educator and had previous experience as a PMH nurse.

Both groups of students participated in approximately 30 hours of classroom theory related to PMH nursing in weeks 2, 4, 8, 10, 11, and 12 of the fall semester and weeks 5, 6, 10, and 11 of spring semester. Students also participated in seven hours of simulation related to application of PMH content in their junior year. The mental health clinical experience was 35 hours over four weeks including a three-hour orientation. This was the only mental health clinical experience students received during their BSN program. Table 1 presents the concepts in the curriculum.

Table 1

Psychiatric Mental Health Nursing Concepts

Concept	Content
Stress & Coping	Anxiety Defense mechanisms Crisis Post-traumatic Stress Disorder
Mood & Affect	Major Depression Bipolar Disorder
Cognition	Schizophrenia Dementia Delirium
Self-concept	Identity, self-esteem, and body image Addiction and substance use disorders Personality disorders Eating disorders
Therapeutic Communication	Intention & Presence, Grounding Motivational Interviewing De-escalation techniques & limit-setting Trauma-informed Care Recovery focus

Research Participants

Quantitative Data Setting and Sample

This was a convenience sample from a potential pool of 151 baccalaureate nursing students (junior level, $n = 88$; senior level, $n = 63$) enrolled in a medium-sized, faith-based university in a metropolitan area in the Midwest in 2019-2020. In this nursing program, junior year is when students attend mental health clinical and learn PMH theory. Half of the junior-level students ($n = 44$) attended mental health clinical in an urban LTC facility for veterans and the other half ($n = 44$) attended clinical on inpatient mental health units in a large urban hospital in fall 2019 or spring 2020 semesters. These undergraduate students were randomly assigned to one of two sites by the clinical coordinator. They were 18 years of age or older with above average cognitive skills. All of the participants were women, most were 21 to 26 years old, and approximately 35% were women of color.

The junior-level students were recruited to participate in the quantitative and qualitative phases of the study. For the qualitative one-on-one semi-structured interviews, senior-level students were also recruited to participate ($N = 63$). These students attended mental health clinical at the same inpatient mental health or nursing home site during the 2018-2019 academic year and their perspectives were thought to provide a richer reflection of their experiences over the year after their PMH clinicals had been completed.

For the quantitative research questions, an a priori power analysis was conducted using G*Power software to determine the appropriate sample size. For linear multiple regression (Question 1) with two predictors with an effect size of 0.25, alpha of 0.05, and

a power of 0.8, a total sample size of 42 was needed. For repeated measure analysis of variance (ANOVA), 34 participants were needed to detect a moderate effect of .25, with an alpha of 0.05, and power of 0.8. The actual sample size was 37 participants due to a shortened face-to-face experience secondary to the coronavirus lock-down. Table 2 presents the demographic variables for the quantitative sample.

Table 2

Demographic Variables for the Quantitative Sample

Demographics		Groups	
		Mental Health <i>n</i> = 16 (%)	Nursing Home <i>n</i> = 21 (%)
Age	21-26 years old	15 (94)	20 (95)
	27-40 years old	1 (6)	1 (5)
Prior work in healthcare	None	1 (6)	3 (14.2)
	In LTC	6 (37.5)	10 (47.6)
	In MH	4 (25)	2 (9.5)
	In other healthcare	4 (25)	1(4.7)
	Missing	1 (6)	5 (24)
First language	English	11 (68.75)	13 (62)
	Other	5 (31.25)	8 (38)

N = 37

Qualitative Data Sources and Participants

Eleven baccalaureate level nursing students were interviewed using a semi-structured research protocol based on Bronfenbrenner and Morris' (2006) PPCT model (see Appendix F). Participants included eight junior-level students attending mental health clinical during 2019-2020 on inpatient mental health units (*n* = 4) or a nursing

home for veterans ($n = 4$). Three participants were senior-level nursing students who had attended mental health clinical in 2018-19 in the same agencies as the junior-level students (inpatient mental health, $n = 1$; LTC, $n = 2$).

The purposeful sample was planned to include students who could best help explain the quantitative data but the sample ended up consisting of student volunteers who were able to be scheduled within the time frame for data collection. Six of the students were interviewed face-to-face by the researcher or research assistant in a private office on campus prior to March 13, 2020. Due to the COVID 19 pandemic and the closing of the campus, an IRB amendment to conduct interviews using recorded Google Hangouts was granted for interviews of the remaining participants. Two of the senior-level students responded to an email recruiting participants for the study and volunteered. One participant was purposefully recruited by the researcher and agreed to participate.

Data Collection and Handling

Quantitative Data Collection and Handling

Institutional Review Board approval was granted from the University of Northern Colorado for the exempt study (see Appendix A). Junior-level student nurse participants were recruited during the second week of spring semester 2020 when all students were present at their nursing interventions class on campus. The graduate research assistant, whom the students had never met, provided the students with written instructions about the study and the informed consent (see Appendix B). Students had the opportunity to ask questions before signing or returning a blank consent form to the research assistant. The informed consent form had two separate lines for participation or declining participation. Students consented to:

1. Allow their previously completed de-identified quantitative data (pre-and -post BHCC and -post only CLEI-A) results to be included in the study after they completed mental health clinical and received their mental health clinical grade.
2. Participate or decline inclusion in a one-on-one semi-structured interview to be conducted in spring semester 2020 with the researcher or research assistant, whomever the student chose, at a convenient time and agreed they were willing to be re-contacted by the researcher for member checking. Students who signed an informed consent to participate completed a paper demographic data form at that time which was de-identified and linked to the qualitative and quantitative data by the research assistant (see Appendix E).

The research assistant (RA) was a graduate level nursing student in the Master of Nursing entry level (MSN-EL) program. Her participation was sponsored through a university grant that provided students with the opportunity to gain experience in research. The RA had an undergraduate degree in exercise science, completed training to conduct research ethically (CITI), and had prior experience conducting research with professors at a state university in the Midwest. The RA was familiarized with the purpose of the study and was trained by the researcher in appropriate techniques for conducting qualitative research interviews using a semi-structured interview protocol. Specific resources used to train the RA included (a) 12 tips for conducting a qualitative research interview (McGrath, Palmgren, & Liljedahl, 2019) and (b) semi-structured interview guidance for novice researchers (Whiting, 2008). The research assistant role-

played an interview with the researcher. The researcher provided feedback to ensure the RA was well prepared to conduct qualitative interviews according to best practices. The researcher also reviewed all transcripts of interviews conducted by the RA and provided ongoing supervision as needed.

Completed electronic copies of the final BHCC and CLEI-A surveys were kept in the university mental health theory course educational platform on the researcher's password protected work computer. The informed consents and demographic forms were kept in a locked file cabinet in the researcher's office for three years, then shredded.

Qualitative Data Collection and Handling

Eleven interviews were recorded using Microsoft recording technology and the voice recorder on the researcher's and research assistant's work computers or in Google Hangouts. Student interviews ranged in length from 11 to 72 minutes. The average interview lasted about 30 minutes. Six hours of interview data were collected.

The MP4 recordings were uploaded to Trint transcription software for transcription. The researcher and RA de-identified and edited the transcripts, removing all personal and contextual identifiers. The finished transcripts were uploaded to NVivo 12 software for qualitative analysis. The researcher created a code book based on the PPCT model (Bronfenbrenner & Morris, 2006), which was shared with the RA. The MP4 recordings were stored in a folder in Box, the university secure cloud-based files, on the researcher's password protected work computer. They will be retained for three years and then deleted.

Data Collection Tools

Behavioral Health Care Competency Measurement Tool

The BHCC is a 23-item Likert scale instrument developed by nurses from three community hospitals in Southern California to evaluate hospital nurses' perceptions of their mental health nursing skills (Rutledge et al., 2012). The steps of the nursing process and the situation-background-assessment-recommendation (SBAR) framework for healthcare team communication (Institute for Healthcare Improvement, 2011) guided the survey construction. Based on professional standards from the APNA (2012) and the Emergency Nurses' Association (2011; Rutledge et al., 2012), a literature review, and expert opinion from nurses and nurse researchers, four subscales were formed: (a) Resource Adequacy (four items), (b) Patient Assessment (4 items), (c) Practice/Intervention Competency (seven items), and (d) Psychotropic Recommendation (two items). Responses to each item were scored on a 5-point Likert-type scale requiring responses from 1—*strongly disagree* to 5—*strongly agree*. The higher the BHCC score, the higher a respondent's perceived behavioral health care competency (Rutledge et al., 2012, p. 2759). The maximum score that could be attained was 110.

From the original 31-item scale, a 23-item scale was developed. Cronbach's alpha coefficients for the subscales were Assessment = 0.91, Practice/Intervention Competency = 0.90, Resource Adequacy = 0.78, and Psychotropic Recommendation = 0.78. Given that two subscales had four or fewer items, these alpha coefficient estimates showed adequate internal consistency for a newly developed instrument (Polit & Beck, 2008; Rutledge et al., 2012, p. 2762).

Modified Behavioral Health Care Competency

The BHCC did not include items related to conducting mental status examinations or knowledge of psychotropic medications. Rutledge et al. (2012) recommended items in these areas might be added to a future version of the BHCC. Learning to conduct a mental status exam and understanding common and serious side effects of the major classes of psychotropic medications have been major foci of the mental health curricula and clinical practica in nursing education. Therefore, minor item modifications were made to the BHCC for this study to adapt it for the research population of nursing students. A comparison of the 23-item scale with the adapted version appears in Appendix G.

The modified survey (Tice, 2018) is a 22-item scale with three subscales: Assessment (10 items), Practice/Intervention Competency (nine items), and Resource Adequacy (four items; see Appendix G). To include mental status exams in the survey, item one on the original scale was reworded from “I can assess patients for potential mental health conditions” to “I can assess patients for potential mental health conditions using a mental status exam.” The original subscale of Recommendation of Psychotropics, which consisted of two items, was removed because the recommendation of psychotropic medications to physicians was deemed to be beyond the scope of nursing practice and would not be a valid item for student nurses. The items from that subscale were condensed and re-worded as “I know appropriate psychotropic drugs to request physicians to order for increasingly anxious or agitated patients.” The item was placed within the subscale of Practice/Intervention Competency.

The modified BHCC was used with a similar sample of baccalaureate nursing students in a pilot study in spring of 2018 (Tice, 2018). To evaluate the reliability and validity of the modified BHCC when used with a sample of student nurses versus experienced hospital nurses, Cronbach's alpha was analyzed for each subscale and the total scale score. To analyze if there were significant differences in the BHCC scores as a result of prior mental health experience or English as a learned language, one-way ANOVAs were conducted using these variables as factors and the BHCC total score as the dependent variable. There were no significant differences.

Use of the BHCC survey in the 2018 pilot study resulted in a lower Cronbach's alpha for the subscale Assessment (original scale = 0.91; modified = 0.74) but a similar Cronbach's alpha for Practice/Intervention Competency (original scale = 0.90; modified scale = 0.84) and increased Cronbach's alpha for Resource Adequacy (original scale = 0.78; modified scale = 0.91; Tice, 2018). The Psychotropic Competency subscale in the original scale had a Cronbach's alpha of 0.78, which was attributed to be related to the lack of nurse knowledge and experiential deficits (Rutledge et al., 2012). All subscale scores showed adequate reliability estimates given a baseline Cronbach's alpha > 0.70 for all subscales and excellent reliability for two subscales with alpha of 0.84 and 0.91 (Remler & Van Ryzin, 2015). In this study, the Cronbach's alphas for all subscales and the total scale were excellent with alpha values of 0.89 or above (see Table 3).

Table 3

Scale Reliability and Descriptive Statistics for Study Variables

	Engagement		Clinical Learning Environment		Competency (BHCC)	
	MH	LTC	MH	LTC	MH	LTC
<i>M</i>	65.6	56.8	83.3	79.9	87.5	90
<i>SD</i>	9.9	14.6	10.2	11.9	14.8	10.7
Range	32	46	35	39	62	41
Minimum	49	33	69	58	48	68
Maximum	81	79	104	97	110	109
Cronbach's alpha		0.93		0.88	.94	.96
					Pre-BHCC Assessment	Post-BHCC 0.90
					Interventions	0.89
					Resources	0.91

Note. MH = Mental Health. LTC = Long Term Care

For Engagement, the minimum score is 17, the maximum score is 85.

For Clinical Learning Environment (CLE), minimum score is 22, maximum is 110.

For BHCC, the minimum score is 22, maximum score is 110.

Clinical Learning Environment Inventory-Actual

The Clinical Learning Environment Inventory-Actual (CLEI-A) is a 42-item scale survey with six subscales: Personalization (seven items), Student Involvement (seven items), Task Orientation (seven items), Innovation (seven items), Individualization (seven items), and Satisfaction (seven items; Chan, 2002). The subscales of Personalization (opportunities during clinical for interaction with caring and involved instructors or preceptors), Involvement (the degree to which students are actively involved in clinical activities), Innovation (the degree to which new learning activities and teaching strategies are tried in clinical education), Individualization (the degree to which students are allowed to make decisions and treated differently dependent on their abilities), and Task Orientation (the extent to which activities are clear and well planned) appeared to be

good measures of the proximal processes as well as the CLE, which is why the CLEI-A (Chan, 2002) was chosen for this study. Satisfaction measures overall student enjoyment of the CLE (see Appendix D).

According to Chan (2002),

a response to each item in the CLEI-A is marked on a 4-point, Likert-type scale, ranging between the alternatives of strongly agree, agree, disagree, and strongly disagree. The instrument can be readily scored by hand.

Underlining an item number and writing the letter "R" in the researcher use only column identified items that were reverse scored. Items not underlined or without the letter "R" were scored by indicating the corresponding number (i.e., 5 = strongly agree, 4 = agree, 2 = disagree, 1 = strongly disagree). The scoring direction was reversed for approximately half of the items. Omitted or invalidly answered items were scored as 3.

(p. 73)

The CLEI-A was developed as a survey instrument by Chan (2002) based on theories of classroom learning environments, literature review of classroom and CLEs, expert opinion of classroom and clinical education nurses, and interviews with student nurses. Chan modified an existing measurement tool, the College and University Classroom Environment Inventory, which was designed to measure higher education classroom learning environments. Although there are two versions of the CLEI (the CLEI-Preferred and CLEI-Actual), the CLEI-A, which was designed to measure how students perceived the actual CLE, was used in this study (see Appendix D).

In initial validation studies conducted with a sample size of 108 pre-registration nursing students, values obtained for Cronbach's alpha coefficient for the CLEI-A form ranged between 0.73 and 0.84 and for the preferred form from 0.66 to 0.80 (Chan, 2003). These reliabilities suggested each CLEI-A scale had adequate internal consistency for subscales containing seven items each in both the actual and preferred forms (Chan, 2003, p. 526). To calculate discriminant validity for the actual version, the value obtained for the mean correlation of a scale with other scales ranged between 0.39 and 0.45. For the preferred version, the correlations ranged from 0.23 to 0.42. These findings indicated the CLEI-A measured distinct, although somewhat overlapping, aspects of the hospital learning environment (Chan, 2003, p. 526).

Measuring Aspects of Engagement and Quality of Clinical Learning Environment

To measure engagement, the CLEI-A subscales of Student Involvement, Satisfaction (Chan, 2002), and four researcher-developed Likert scale items were combined to form a 22-item Likert scale. Six items were removed that had weak inter-item correlation with the total scale ($r < .2$). Four items were added to measure engagement: "During this clinical, I participated actively in all the learning activities"; "I feel excited and curious to learn more while at this clinical"; "During this clinical, I often think about, reflect on, or ask questions about what I am experiencing"; and "Rather than seeking out learning activities, I wait for the clinical instructor or staff to guide me" (reverse scored). These questions were developed based on Reeve and Tseng's (2011) identification of the four aspects of engagement in student learning: (a) behavioral engagement characterized by students being actively involved in their learning, (b)

emotional engagement characterized by student possession of emotions that facilitate learning tasks, (c) cognitive engagement where students use sophisticated learning strategies, and (d) agentic engagement where students actively seek learning opportunities rather than passively receiving them (Wang et al., 2018). This focus on learner dispositions, resources, and demands is a key construct in the PPCT model (Bronfenbrenner & Morris, 2006).

The remaining CLEI-A subscales measuring Personalization, Task Orientation, Individualization, and Innovation were used to index the perceived quality of the CLE. By separating subscales of the CLEI-A that were within the student's control and calling those aspects "engagement" from environmental factors over which the student did not have control (and calling those factors the clinical learning environment), person-environment interactions and their relationship to competency development could be studied (see Table 4).

Table 4

Scales to Measure Student Engagement and Clinical Learning Environment

CLEI-A (Chan, 2002)	Original CLEI-A	Tice Study
Clinical Learning Environment (22 items) Cronbach's alpha=.88		
Personalization	7 items (1,7,13,19,21,15,37)	7 items (1,7,13,19,21,15,37)
Task orientation	7 items (4,10,16,22,28,34,40)	5 items (4,22,28,34,40)
Innovation	7 items (5,11,17,23,29,35,41)	6 items (5,11,17,23,35,41)
Individualization	7 items (6,12,18,24,30,36,42)	4 items (18,30,36,42)
Engagement (17 items) Cronbach's alpha = .93		
Student involvement	7 items (2,8,14,20,26,32,38)	6 items (2,8,14,20,32,38)
Satisfaction	7 items (3,9,15,21,27,33,39)	7 items (3,9,15,21,27,33,39)
Engagement		4 items (43,44,45,46)

Data Analysis**Quantitative Data**

After the data were scanned and cleaned, values from each participant's BHCC and CLEI-A were entered into SPSS (Version 23 [IBM Corporation, Armonk, NY]). Descriptive statistics were used to describe the sample. Subscale, individual item, and total scores were calculated for the surveys. Mean scores (with standard deviations) and internal consistency coefficients (Cronbach's alpha) were calculated. Discriminant validity was checked by calculating the mean correlation of one scale with other scales.

Repeated measures ANOVA with Bonferroni post hoc tests were conducted to identify pre and post clinical differences in scores of the BHCC between groups over time. Alpha was set at 0.05. Frequencies were run to measure changes in interest in a

future career in mental health or geriatric nursing pre and post clinical within and across groups. Multiple linear regression was used to calculate relationships between the predictor variables of type of clinical setting (mental health-hospital, mental health-LTC), student engagement (measured by four researcher-developed items and the subscales of Student Involvement and Satisfaction from the CLEI-A), the clinical learning environment (measured by Personalization, Individualization, Innovation, and Task Orientation on the CLEI-A; Chan, 2002), prior student experience in mental health or LTC, English as a first or second language, future career preferences, and the criterion variable of total score on the BHCC.

Qualitative Data

Audio-taped interview sessions were transcribed using Trint transcription software. All personally and contextually identifying information was deleted before entry into NVivo 12. The RA assigned numeric codes linking the data to quantitative measures and replaced participants' names. Semi-structured interview data were coded and thematically analyzed by the researcher. The themes were shared with the research assistant and discussed. The researcher determined the themes used in the study. The theoretical framework with the constructs of processes, persons, contexts, and time served as the organizing template (Bronfenbrenner & Morris, 2006). Member checking was done to validate the analysis.

Ethical Considerations

There were no foreseen risks to participation in this study other than the minor inconvenience of the time and effort for self-evaluation taken to complete the surveys and participate in the focus group. The BHCC (Rutledge et al., 2012) and CLEI-A (Chan,

2002) surveys took about 5-15 minutes to complete. The surveys were posted in the online class learning platform where students could access them at a convenient time. The research assistant de-identified the surveys before the researcher entered them in SPSS (Version 23 [IBM Corporation, Armonk, NY]). The survey scores were not used to grade the students. Potential benefits to the student included an improved awareness of personal strengths and areas where more development was needed for PMH competencies. A benefit to the nursing program and the profession of nursing was the potential to gain information to improve mental health nursing clinical education.

Conclusion

This chapter explained the research methodology for the study including the rationale for selection of a mixed methods case study design, sampling and setting, and the process for obtaining informed consent. Ethical considerations pertaining to the use of students as research participants were addressed. Data collection and handling for the quantitative and qualitative strands and data analysis were also included.

Chapter IV presents the quantitative and qualitative findings of the study and describes the comparative cases that emerged from the data. This discussion includes how the data were merged and integrated and how the quantitative and qualitative data supported or contradicted each other. The PPCT model (Bronfenbrenner & Morris, 2006) guided analysis and discussion of the results.

CHAPTER IV

FINDINGS

The primary purpose of this study was to compare and contrast how baccalaureate student nurses' level of engagement and the overall quality of the clinical learning environment in inpatient mental health units and nursing homes were related to their (a) perceived levels of PMH nursing care competency and (b) interest in a future career working with the elderly and/or mentally ill. A mixed methods approach using case studies and a sequential explanatory design for data analysis and interpretation was chosen (Creswell & Poth, 2018). The analysis is organized by research questions.

Quantitative Results

Quantitative Research Questions and Hypotheses

- Q1 Is there a relationship between baccalaureate student nurses' level of engagement (IV) in mental health clinical education and the perceived quality of the clinical learning environment (IV) with changes in their PMH nursing competencies (DV)?
- H01 The level of student engagement in mental health clinical and the quality of the CLE are not associated with attainment of PMH nursing competencies.
- H1 The level of student engagement in mental health clinical and the quality of the CLE are associated with attainment of PMH nursing competencies.

To answer the first research question, multiple linear regression was conducted.

The dependent variable was PMH nursing competency and the independent variables were engagement level and the CLE. Results showed no significant correlations between

PMH competencies with student engagement or the perceived quality of the CLE.

Therefore, the null hypothesis was retained. However, a statistically significant, strong correlation between the CLE and student engagement was found with a Pearson correlation of .852 ($p = .000$; alpha set at 0.05).

As the level of student engagement and the CLE did not seem to influence perceived competency, linear regression was performed to gauge the influence of the following demographic variables on competency: prior work experience in health care settings, English language learner, and level of interest in a future career in mental health or in geriatric nursing. No significant correlations were found between competency and the demographic variables. Small to moderate correlations were found between engagement and interest in a mental health nursing career ($r = .397, p = .007$), interest in a geriatric nursing career ($r = .298, p = .036$), prior health care experience ($r = .288, p = .042$), and English as a second language ($r = .282, p = .045$; see Table 5).

- Q2 Does mental health clinical education in a nursing home or on inpatient mental health unit (IVs) have a significant effect on nursing students' attainment of PMH nursing competency, engagement and interest in a future career in mental health or gerontological nursing?
- Ho1 There are no significant differences between the two groups in PMH nursing competency attainment, engagement, or interest in a future career in mental health or gerontological nursing.
- H1 There are significant differences between the two groups in PMH nursing competency attainment, engagement, or interest in a future career in mental health or gerontological nursing.

Table 5

Correlations Between Study Variables and Demographic Variables

		Total BHCC POST	Total CLE (Context)	Engagement	Interest in MH Career	Interest in a Geriatric nursing career	First Language (English or Other)	Prior HC experience
Pearson Correlation	BHCC POST	1.000	.093	.054	-.110	-.168	-.201	.209
	CLE (Context)	.093	1.000	.852	.238	.282	.275	.163
	Engage- ment	.054	.852	1.000	.397	.298	.282	.288
	Interest in MH career	-.110	.238	.397	1.000	.451	.076	-.011
	Interest in geriatric nursing	-.168	.282	.298	.451	1.000	.385	-.004
	First Language	-.201	.275	.282	.076	.385	1.000	-.057
	Prior HC experience	.209	.163	.288	-.011	-.004	-.057	1.000
Significance (1-tailed)	BHCC POST	.	.292	.376	.258	.160	.117	.107
	CLE (Context)	.292	.	.000	.078	.046	.050	.168
	Engage- ment	.376	.000	.	.007	.036	.045	.042
	Interest in MH career	.258	.078	.007	.	.003	.328	.474
	Interest in geriatric nursing	.160	.046	.036	.003	.	.009	.491
	First Language	.117	.050	.045	.328	.009	.	.369
	Prior HC experience	.107	.168	.042	.474	.491	.369	.

To answer the second research question, repeated measures ANOVA, independent samples *t*-tests, and frequencies for pre and post clinical changes in interest in mental health or geriatric nursing were performed. Repeated measures ANOVA showed a statistically significant difference related to an increase in scores on the BHCC

tool for both groups over time. There were no statistically significant differences in scores between groups.

Independent samples *t*-tests were conducted to test for differences between the two groups in PMH competency attainment: the perceived quality of the clinical learning environment and student engagement. Alpha was set at 0.05. Results found no significant differences in BHCC scores between students who attended mental health clinical in inpatient mental health versus in a long-term care setting ($p = .556$). Post-clinical, students on mental health inpatient units for their mental health clinical had a mean score of 87.5/110 on the BHCC ($SD = 14.84$) and students attending nursing homes for mental health clinical had a mean score of 90/110 ($SD = 10.74$), indicating both groups attained relatively high scores on their self-evaluated PMH competencies post clinical.

There was a significant statistical difference between groups in student engagement ($p = .047$), with students in inpatient mental health having a mean engagement score of 65.5/85 ($SD = 9.9$) and students in nursing homes had a mean engagement score of 56.8/85 ($SD = 14.64$). There were no significant differences between groups in CLE scores ($p = .367$) with a mean CLE score being 83.3/110 ($SD = 10.25$) for students in mental health units and a mean CLE score of 79.9 ($SD = 11.9$) in the nursing home setting. To determine if significant differences between groups existed in any of the subscale variables for the CLE, independent samples *t*-tests were conducted to compare the groups on each subscale variable. Results confirmed there were no statistically significant differences between the groups on any of the subscales except for

Satisfaction ($p = .018$), which was used with the subscale of Student Involvement from the CLEI-A (Chan, 2002) and four researcher-created items to measure engagement.

Across cases, an increased number of students expressed interest in a future career in mental health or geriatric nursing post clinical. Prior to MH clinical, seven students reported being interested in MH nursing and two students were interested in geriatric nursing. Post mental health clinical, a total of 9/37 (24%) nursing students expressed they agreed or strongly agreed they were interested in a future career in mental health nursing and 5/37 (13.5%) agreed they were interested in a future career in geriatric nursing.

Summary

Results of linear regression showed no correlation between engagement and competency. A strong correlation was found between engagement and CLE. No significant correlations were found between competency and the demographic variables. Small to moderate correlations were found between engagement and interest in a mental health nursing career ($r = .397, p = .007$), interest in a geriatric nursing career ($r = .298, p = .036$), prior healthcare experience ($r = .288, p = .042$), and English as a second language ($r = .282, p = .045$).

No statistically significant differences were found between the groups in perceived attainment of PMH nursing competency. Students in both groups were able to attain moderately high levels of PMH nursing competency as measured by the BHCC (Rutledge et al., 2012). Students who reported that English was not their first language expressed a significantly significant interest in a future career in geriatric nursing pre and post clinical than students who reported their first language as English.

Qualitative Research Question

The research question for the qualitative strand of the study was as follows:

- Q3 What is the student nurse experience of attending PMH clinical education in nursing homes versus inpatient mental health units?

Case Context and Description

Consistent with a case study design, cases were also set up in NVivo 12. The cases were organized as (a) four junior-level students and one senior-level student attending MH clinical on inpatient MH units at the same hospital and (b) four junior-level and two senior-level students attending MH clinical in the same nursing home for veterans. Senior-level students were included both in the study as a means to validate themes emerging from the current students and to see if student perspectives of their experience changed over time.

Data Analysis and Representation

Student interviews with junior and seniors ($n = 11$) and participant observations and field notes stemming from the researcher's roles as clinical instructor and theory instructor were sources for the qualitative study. A constant comparative method was used for analysis and interpretation including searching for word repetitions, key words in context, metaphors and analogies, missing information, and looking for relationships between themes (Ryan & Bernard, 2003). Creswell and Poth's (2018) template for coding a case study (using a multiple or collective case approach) was used to organize and report the data in this section (p. 172).

The following initial codes for theme analysis were derived from the semi-structured interview questions and Bronfenbrenner and Morris' (2006) PPCT model: (a) processes (defined as examples of student interactions with other people, objects, ideas,

and activities in their clinical learning environment), (b) characteristics of students that impacted learning, (c) experience, (d) time factors, and (e) attaining competency.

Interview data were searched for examples related to the codes and organized in corresponding nodes in NVivo 12. With results of the quantitative data in mind, using the PPCT model (Bronfenbrenner & Morris, 2006) as the lens, the qualitative data were analyzed and organized with an attempt to both bracket the researcher's assumptions as a participant observer while also being alert for rich data that could help explain discrepancies in the quantitative data.

Within Case Theme Analysis

To develop an in-depth portrait of a case, the first step was to look at each group as a separate entity and develop the themes in each case (Creswell & Poth, 2018). Within case themes for Case One, student experience in inpatient mental health is explained first, followed by Case Two, student experience in a nursing home for veterans. For each case, an overarching theme, representative of the overall experience of being a student in the environment is presented. Next, themes related to variables affecting student satisfaction/engagement with the clinical experience is identified, followed by variables affecting dissatisfaction/disengagement. Table 6 provides a summary of the major themes within cases.

Case One: Common Themes in Inpatient Mental Health Setting

Overarching Theme: An Eye Opener

This theme came directly from one of the participant's responses to the initial interview question of "Tell me about your experience in mental health clinical on an inpatient hospital unit? What was it like?" She responded, "It was an eye opener for me. Being the first time going into a mental health facility to experience and interact with the people personally one on one. It was a good beginning, which is that we were wanting. (MH 9). Another student continued the theme of open eyes by contributing how the experience provided a new perspective: "Being at clinical in inpatient mental health gave me a different perspective of what mental health nursing can look like. I actually had an interest in mental health nursing, and I potentially might go into it in the future" (MH 7).

Another eye-opening experience was attending interprofessional team meetings between the psychiatrist, social worker, charge nurse, OT, and nurse manager that met daily to discuss patients and treatment planning: "Attending the team meeting helped me understand teamwork. Because if you tell me something from your perspective and what you see. And I've also given you mine, then we all put the information together and are able to deal with it" (MH 9).

Theme Two: An Unexpected Pleasure

This theme was representative of unexpected sources of student satisfaction and engagement in the inpatient mental health clinical setting. The mental health staff nurses, clinical instructor, and patients provided a sense of camaraderie, emotional safety, and connection that students had not expected to find on a mental health unit:

Those nurses were actually the best group of nurses that I've worked with during any kind of clinical. The nurses on all the floors were all super nice and supportive. They would always answer our questions. They weren't very standoffish, which I know some nurses in different hospitals can come off that way. I also have acute care clinical. And those nurses were just a lot different than the ones in mental health just because they were so busy running around. They [Acute care nurses] rarely take the time to talk to us, get to know us, or tell us about themselves and their experiences. So they [MH nurses] were definitely the best people to work with and they were very helpful during that time. And also my clinical instructor, she would always come visit us and talk to us for a while. So, great support. (MH 7)

The way I see the nurses there, I mean, they're all good, but the mental health nurses they are different. Like some inner religion or soul that is guiding them, their approaches. These people [patients] will say something awful to them and they will understand. "OK, I'll be back. I'll do this." And it never controls them there's no competition. They are relaxed. (MH 9)

So the nurses, how they interacted with each other, they were very comfortable and they helped each other out as much as they could, which is nice. Some different units, whether it's mental health or not I [don't] think all nurses actually help each other. Compared to like other med surg units and all. I feel like they're more connected as a group and more supportive. (MH 7)

Theme Three: Restricted Access

This theme was representative of sources of student dissatisfaction and disengagement in the inpatient mental health clinical setting. The following student statement was representative of this theme:

Student: There wasn't really too much going on that we could do. We were also told to stay behind the nurse's desk. A lot of time just in case something was happening. Again they were looking out for our safety. I'm a student, so I get that.

RA: Did you feel like that hindered your participation in any kind of learning activity at all? Being told to stay back?

Student: I think it did, because it kind of did put fear in the back of my mind. Like they're gonna get mad at me if I'm walking around or something's going to happen if I walk around. Which I didn't think would even happen anyway if I were to be walking around on my own. But I just didn't want to risk getting in trouble or having them say, "oh you need to be staying behind the desk because we don't want anything happening to you." I just wanted to avoid conflict. If we were told to go out and explore more or talk to the patients, you know, even if that's not the patient we were focusing on that clinical. I feel like I would have

done more. But since the very first day, they're like," oh, you need to stay behind the desk" that's kind of what I did all four weeks. (MH 7)

Two other students explained:

There isn't as much to do. Because you can't do a lot, I don't think. I don't remember if we were allowed to give meds or not, but we couldn't bring our stethoscope or have like our name tag with a badge reel because it's a safety hazard to have that string and something they could use. It was just a lot different. There was a lot more sitting and talking versus actual nursing assessments and things. (MH 8)

The only thing that I didn't like was that at [Hospital Name] we weren't allowed to do like a lot of things like passing out meds or like being one on one with patients. But other than that, it was like super great and I loved it. I learned a lot. The nurses were super nice. (Senior nursing student MH 11)

Finally, student emotions could restrict students' engagement and learning in the

CLE:

The only thing that stopped me was my own emotions. You know to see young people being in this situation, being abused. They cannot lead a normal life. So, I try to fight for my emotions so they don't get in the way because it was my first time actually being environment seeing the life of the people on the other side - different from your life. And trying to imagine what they are going through was tough for me. But then my clinical professor told me that this is safe. This is a safe place for them. (MH 9)

Case Two: Common Themes in a Nursing Home Setting

The overarching theme for the environment and themes was associated with sources of satisfaction and dissatisfaction for Case Two.

Overarching Theme: The Great Divide

Reading through student transcripts of qualitative data was a puzzling experience for this researcher and her research assistant. We found ourselves asking each other whether these students were in the same clinical learning environment and wondering how their perceptions could be so different. These feelings of confusion aligned with the contradictory results of the quantitative data, which indicated that even though students in

clinical at the nursing home rated the clinical learning environment as a good one, rated their post-clinical competency on par with the other group, and students reported they gained or retained interest for a future career in mental health or gerontology, they had significantly lower levels of satisfaction and engagement with the clinical experience. These contradictory reports also aligned with the researcher's own experiences and feelings of frustration as a clinical instructor; she could see with her own eyes that about half the students were engaged and half were not. The overarching theme for the student experience of attending mental health clinical at a nursing home was identified as "the great divide." Student comments representative of this theme are shared.

The positive side of the divide: New nursing perspectives. These student quotes reflected the positive learning experiences of students attending mental health clinical at a nursing home. The statements also captured the variety of meaningful learning experiences and interactions with people, objects, and ideas that engaged them in processes contributing to competency development. The themes of new perspectives and seeing things differently identified by the students in inpatient mental health were also evident in the experiences of students in LTC.

I really enjoyed the clinical. I had the opportunity to practice therapeutic communication and learn more about different mental health conditions, which I wasn't really aware of before. And just like interacting with a patient to see how each of them behaves differently. Yeah. This was the first clinical that I felt like a nurse. Compared to my acute care clinical and my community health, I felt like a nurse at mental health (clinical at a nursing home). (LTC 3)

I feel like when most people think of a nursing home or assisted living, they think oh, these people just need a little help with daily living. But [in mental health clinical in LTC], we're going to complete the mental health exam. You're going to observe. You're going to notice. Look at their charts. Look at their medication. And are they having side effects, like learning the side effects of different medication. Coming from that perspective is what I enjoyed. I work at a nursing home. But when I worked [as a CNA], I didn't see it that way. But

when we went to clinical, I see it in a different way of care for the residents. So that's what I liked. It's like you see it differently, like a different perspective. (LTC 2)

The negative side of the divide: Feeling robbed.

It's frustrating hearing all the girls come back from Name of Hospital and hearing about all these mental health conditions that they got to experience and deal with, see, and ask questions about it. I didn't get any of that and I felt like that experience kind of robbed from me almost. You know, I'm paying for my education and that's the kind of experience I want. So sure, sounds selfish, but that's what it is. (LTC 1)

Honest to goodness, I was super excited to be placed with the nursing home initially. And then [a peer], she flat out told me that that place sucked and kind of put me in a bad mood about it. And I let that dictate a lot of my emotions toward clinical and the negativity that surrounded it. And I know this is something that you and I had talked about back when I was in clinical and I have definitely felt really bad about that because I really wish that I wouldn't have let other people dictate my feelings about being excited about something. (Senior LTC 6)

Theme Two: Feeling at Home

This theme was representative of sources of student satisfaction and engagement in the clinical setting.

At mental health clinical, I felt more comfortable talking to patients. It's like last semester at acute care I was very uncomfortable talking to patients and I made sure to let my clinical instructor know that. I did not feel like a nurse because I just did my head to toe and passed meds (when we're able to) but I really did not feel like I was doing much in acute care as compared to mental health. When I'm nervous, I completely shut down so that also like played a factor in it too. But in mental health I felt very comfortable. The residents there are very welcoming and they appreciated me talking to them more than anything else. (LTC 3)

I learned a lot from the nurses that I was paired with just because of the amount of time that they spend with their patients. They got to know them super well. And they were able to relay that knowledge to me about patients. So I just I found that I learned a lot about how to be a nurse in that sort of setting and how to care for a patient who is vulnerable in that setting. (Senior LTC 5)

The CNAs that I worked with were really, really nice and it was a nice clean environment. I liked the nursing home. Yeah, I think everything was really supportive there. (LTC 1)

Theme Three: Feeling “Less Than”

In the first semester of the nursing program, students received this message from a nursing faculty:

We were kind of told sophomore year, like, hey, you only have two weeks long term care and then it's all hospitals from here on out. And so when people got placed a long-term care facility for an entire semester [in their Junior year], I think that's where people kind of freaked out of it. And they were like, what the heck? And then at the same time, it was very rare to see a PIC line or an IV. Oh, I mean, there were a couple catheters, I think, but like it was very rare to see these more acute issues that we would have seen [at a hospital.] (Senior student LTC 6)

Other sources of dissatisfaction came from students assigned to the VA hospital for acute care and an LTC for veterans for mental health clinical. Some students with previous work experience as a CNA also expressed role confusion in the nursing home and questioned whether they could learn the nurse role in LTC:

I was at the nursing home [for mental health clinical]. I have a V.A. hospital for my acute care clinical, too. And so we were there for four weeks. I had a good clinical instructor. But I don't think that mattered much because of the location. (LTC 1)

And so we basically were like, in my opinion, like CNAs because we would get assigned a patient and then they us to go with our CNA [to meet our patient]. Which makes sense. But we're at a nursing clinical. We've done a rotation at a nursing home before last year in our sophomore year. So it was kind of just felt like it was repeating itself. (LTC 1)

A lot of the nurses that I felt like we got to follow in the hospital setting were very much interested in enriching students and asking them challenging questions and really wanting to help them learn and grow. Whereas in the nursing home, we had one nurse, just three of us roughly at a time. And a lot of times they were really overwhelmed because they had all of those patients to do treatments for. And the last thing that they really needed were three student nurses that are all doe eyed like, what do you want? And a lot of times I felt like the staff, like the CNA. We were we were preparing the patients, which honestly was great for the head to toe to be able to work with them, to get them dressed and stuff, but other people [students] were really frustrated. Like, I already know what it's like to be a CNA. (Senior LTC 6)

Contradictory and invalidating messages were part of the students' experiences in LTC beginning in the first semester in the program and continuing into their junior year. Confusing messages came from many people: students, staff, and faculty. Mismatches occurred not only in what they said but in their actions and the level of agreement or disagreement in how they viewed situations and set up learning activities. These experiences contributed to student ambivalence. Similar to sources of dissatisfaction for students in MH, students in LTC also reported feelings of being restricted but to a much lesser degree:

Student: So we went to the nursing home for four weeks. And it was it was OK. I feel like we got to do a lot of things. You got to experience the mental health side of it. The experience was really disorganized and there wasn't a lot to do.

RA: Can you elaborate on what you felt like was disorganized?

Student: They'd put you on the floor and you kind of have a plan [based on assignments your clinical instructor gave you] and then the nurse [manager] would be like, well "no" you can't do that. You can't do that. And then they would change it [and say], "Well, now these are your patients." You'd interview your patients and you'd be done in like an hour. And then the rest of the day, you don't have anything to do. (LTC 4)

[One of the RNs told us] "I'll be honest with you girls. This isn't a good place to learn mental health." And like, hearing that from a [former] mental health nurse and from someone that works there [in LTC care now] is like, OK, we're not crazy, we know. This isn't like the best learning experience for this rotation. (LTC 1)

Another contribution to feeling "less than" occurred when students talked to each other and compared notes on their experiences. Peers, especially those who were roommates or close friends, could have a significant impact on student attitudes and perceptions of their clinical experience. As students talked among themselves, rumors arose. Some students in LTC for mental health confided they thought they had been purposely placed in that clinical because they were considered the lowest students in the class:

If I'm being honest, it's not fair. When people get to go to inpatient mental health and others don't get to do that. But every single person, I guarantee you, a hundred percent of the class would rather have had time least at (Name of inpatient mental health hospital). (LTC 1)

Coming home from clinical every week. And she'd be like, oh, I don't want to hear what you did because it's not as cool as what I did today. Looking back at it now I totally regret not picking myself up more and believing in the fact that there is a reason and there's a purpose that I was placed at this location. It's a random thing. It's not something that you guys purposefully plan out at all. It's a random assignment. And that's a lot of self development that I feel like I've done over the course of time. (Senior LTC 6)

Cross Case Themes

After the within case themes were identified, cross case themes were explored to identify themes that were similar and different. Table 6 provides a visual organizer of the similarities and differences across cases. First, two themes highlighting similarities are discussed. Overall, there were many similar themes across cases. The themes of seeing new perspectives, making connections, receiving messages or being told, the influence of peers, time factors, and personal characteristics, especially emotions and attitudes of being open or closed came up frequently across cases.

Table 6

Within and Across Case Themes

Inpatient Mental Health	Shared Themes	Nursing Home for Veterans
Overarching Theme	Related to Competency	Overarching Theme
An Eye Opener: Being on an inpatient mental health unit allows students to see what mental health units are really like and provides students new perspectives about mental illness.	<p>Connecting the Dots</p> <ul style="list-style-type: none"> Competency development is a process which occurs over time and grows with experience, repetition, support, role modeling and feedback. Students in both settings agreed that they felt ready and mostly confident to provide PMH nursing care. This was consistent with the quantitative data. <p>Being Open: Developing PMH competency requires being open-minded, compassionate, patient, non-judgmental, skilled in answering sensitive questions, and confident.</p>	The Great Divide: Although students were attending clinical on similar units with the same clinical instructor, their perceptions of the experience were very different. About half viewed the experience very positively, and the other half, had a very negative view.
Common Theme Related to Student Satisfaction and Engagement	Related to Opportunities for Meaningful Learning and Time Factors	Common Theme Related to Student Satisfaction and Engagement
<p>An Unexpected Pleasure:</p> <ul style="list-style-type: none"> The clinical instructor as a safe anchor and source of support The patients as authentic storytellers that teach about different mental illnesses. The nurses ask us how we are doing and laugh and joke with us. Surprisingly, an emotionally safe place for learning. 	<p>Wanting More:</p> <ul style="list-style-type: none"> Opportunities for learning – lifting restrictions Active versus passive learning: Doing more, watching and listening less The power of questions and being asked versus being told Variety in mental health clinical experiences Greater understanding of psychotropic medications and being able to administer, learn to monitor and provide patient teaching. More time to learn PMH competencies. 	<p>Feeling at Home</p> <ul style="list-style-type: none"> The clinical instructor as a knowledgeable interpreter to connect experiences to mental health and as an advocate to open access to learning experiences The residents are warm, engaging, patient, enjoy interaction, have great stories to share. “I learned the most from them” Peers as a “double-check”, source of support, and feedback The home-like and friendly environment A resource-rich environment
Common Theme Related to Student Dissatisfaction and Disengagement:		Common Theme Related to Student Dissatisfaction and Disengagement:
<p>Restricted Access</p> <ul style="list-style-type: none"> Related to environment, patient acuity (acute mental health symptoms) Fighting against my own emotions The staff wouldn’t let us do much due to safety I wasn’t allowed to give medications or do assessments. 		<p>Feeling “less than”</p> <ul style="list-style-type: none"> Frustration due to role confusion Unknowing and ambivalence due to conflicting messages from many people and sources Making comparisons and feeling disadvantaged

Connecting the Dots

Students in both settings shared many examples of how they learned to “connect the dots” and gained new perspectives and greater confidence and competence in their PMH knowledge and skills.

It was interesting to see and to compare my perceptions of what mental health nursing was like before [and after]. So I thought that was pretty cool, like to see what it's actually like on a mental health floor. (MH 8)

So I think my favorite part was just like helping her (my clinical instructor) or her helping me kind of connect the dots and she would talk through the mental status exam with me with the patients I had, and that was helpful. So I would say just like the collaboration with her was my favorite part. (LTC 6)

When you sit in one of those [interdisciplinary team care conference] meetings, you realize, oh, everyone is contributing to that individual to give them better care. I remember the behavioral analyst, she was explaining how she was observing showers and daily cares, and how she noticed that patients had more anxiety and got more agitated if they weren't covered up after taking a shower and just being mindful of that. So seeing that perspective of how the behavioral analysts contribute to the residents' care was interesting because like the nurses and the people doing the daily cares were like, “Oh right. Of course, we should cover them right away. The different perspective from that professional helped us. (LTC 2)

[The care conference I attended] was the end of life conversation, even though he was doing well, he wanted to switch his status from full code to DNR, DNI and his family was like, you can't do that. And he's like, yes, I can. I'm fully competent. I don't want all the CPR and all the lifesaving measures you would. I don't want that anymore. I'm old. (LTC 6)

I think I've learned the most from my interaction with patients. Talking with the patients, getting to know the patients was what helped me understand mental health, like how to implement, you know, the exams, like the mental health status exams and understanding how to interact with people who have like certain mental illnesses. (LTC 2)

I learned a lot about people's baseline because there was like a woman and she was pacing up and down hallways like talking to herself. It was kind of like odd behavior for me. But she was being discharged and I was like, well, how can they discharge her like that when she's obviously still having these hallucinations? [And they explained] well, that's her baseline and that's where she is normally.

She's safe. She's not hurting anybody. She's not hurting herself. So it's like, wow. Yeah. People's baselines are really different. (MH 10)

It was really helpful to have mental health content [in class] and I wish if you did like a mental health orientation [in clinical] where we could go over like an example of what a mental status exam looks like or how to interview a patient instead of just trying to figure it out as you go. But the fact that they let us do it in pairs was really helpful. It was just on that first day when we couldn't do it in pairs that was not helpful. Yeah. Having someone to do it with you definitely helps. (LTC 4)

While the above examples of competency development were inspiring, a more negative connecting of the dots seemed to be happening to students through distorted, probably unintentional, messages the students were receiving that (a) in inpatient mental health, they were not safe to interact with the patients independently and should be fearful of people with mental illnesses; and (b) in LTC, the work in a nursing home is not as valuable or exciting as that in inpatient mental health. Both groups of students complained of “sitting around having nothing to do.” As much as they complained about the frenzied pace of their acute care clinical experiences, their attitudes suggested they viewed that pace and a task orientation as more valuable and expected of a “real” nurse than “sitting and talking.”

Being Open

Students were asked about personal characteristics they thought would facilitate or hinder their ability to develop PMH competency. Eight of the 11 students interviewed mentioned the idea of being open in some form (open, open-minded, empathetic, accepting, non-judgmental), or talked about not being closed (thinking you know it all, not listening, being judgmental) as a barrier.

If you're close minded to experience, because I know not everybody was fond of the idea of going to mental health clinic [at LTC]. If you go there thinking I won't enjoy this clinical or I don't care for these people. Then you won't gain

anything from the experience whatsoever. And so just making sure you're open minded, you're open to the experience, you're open to the patients. You're just very approachable. (LTC 3)

Researcher: Did you have any fears or concerns before you came to [clinical in LTC 3]?

Student: Yes, but most of my concerns were biases that I have. Yeah, it was really it was more like stigma that hurt, like learned throughout my life. For example, I have a feeling, oh, we're going to a mental health, long term care clinical, what if the patients are violent. What is this? So just like all the biases we've talked about in class, I had some of those just going into clinical and these were really some of the nicest people I've ever seen. It was really nice to have those, like, biases. What's the word? Not having those biases anymore. (LTC 3)

Having too much fear kind of prevents you from learning more about the patient and interacting with them. It's OK to interact with them and knowing the right things to say. And when you have too much fear you are never going to take that step forward. You're never going to understand that they're going through or understand their illness. You're just gonna have that fear in the back of your mind and you won't ever want to deal with anybody, whether it's on the unit or out in the real world. (MH 7)

Other characteristics mentioned often were confidence and being prepared.

RA: What personal characteristics do you think students need in order to be successful in developing competency in mental health nursing?

Student: Definitely confidence in what you're doing. Being prepared. I think my first clinical I wasn't prepared to see the seclusion rooms. I didn't even know that they still use those. I didn't know the reasons that any mental health unit had that. So definitely being prepared for that. I don't remember hearing about it much during class either that they still use that or how they how they put patients in there. To me, it was just really sad. But then once I saw it myself and saw why they use it, I was more understanding of it. It's definitely necessary sometimes. (MH7)

Wanting More

Qualitative data indicated the majority of students highly valued their mental health clinical experiences. Most of the students interviewed expressed wanting more time in mental health clinical to acquire PMH competencies, especially psychotropic medication management, and de-escalation skills.

My sister is a nurse on a med-surg unit and she told me, ‘Make sure you learn your mental health skills because so much of nursing is mental health’. I want to make sure I learn this and am ready for practice [Field notes]. I loved my mental health experience. I wish it was longer. I was dealing with a patient that impacted me in so many ways. He was a psychiatric patient from [my same culture]. And because we shared the same cultural aspect it was a really meaningful experience. (Senior MH 11)

Community health was eight weeks where we spent four weeks at one site and four weeks at another site. We could do a similar thing for mental health, where everyone gets four weeks at long term care and four weeks at inpatient mental health. Everybody gets both experiences, noting the similarities between inpatient MH and the nursing home and the differences. (LTC 3)

I could have learned a lot more if we maybe had a little extra time [on the unit] or a couple more weeks with mental health. If we were to have more experience with passing meds, I think I would be a lot more confident. And also maybe having equal [time] between acute care and mental health clinical. I think that’s most important because we have 8 weeks of acute care [each semester] and only four weeks of mental health. I feel like it should be balanced somehow I think it’s important. (MH 7)

Well, like we get eight weeks [of clinical] for acute care clinical. And I think if we got like eight in mental health, we could see a lot broader view of the kinds of illnesses people go there with and how serious they are and how different people deal with them. And that would make it more obvious that mental health is just important as acute care nursing or dealing with medical problems. It's just as important. (MH 10)

RA: So how can faculty improve clinical mental health education do you think?

Student: I think they need more. I think students need more mental health. Learning I mean, lectures in general. You're going in to like you read about [mental illnesses] in a textbook and you learn about it, but you'd never realize how serious it is until you're actually on the unit. So, definitely trying to improve the education by giving us more lectures and then also maybe having do a simulation either in person or like through a course point [virtual simulations]. (Senior MH 11)

Students also wanted more “hands on,” meaning active versus passive learning in mental health clinical. Students recognized the value of observation and role modeling in clinical learning. Students appreciated when faculty and staff were flexible and open to trying new innovations in clinical.

One of the weeks we got to do flu shots, which was a good learning opportunity for us. When I didn't even think I was doing something wrong, like when I was putting the [safety] cap back on afterwards, I did that wrong and my clinical instructor was correcting me. So, like, I definitely learned stuff there. (Student in LTC)

I really like how we have four patients [assigned to two nursing students to care for]. Moving forward, I hope that continues. Instead of having one patient for the entire time, like it was nice to have four patients and rotate around and you feel like a nurse who has like four to one. I really liked the patient load. (Student in LTC 3)

In thematic analysis, questions, asking, and learning were high frequency words overall. Students expressed both how much they liked being asked questions as well as how important it was for their competency development to learn what questions to ask.

All the tools [we used in clinical] are really helpful, especially the mental status exam showing how we were supposed to look versus abnormal. So if we notice abnormalities within the patient we're able to document that. We already have an idea of what's quote unquote, normal. And for the depression skills, [using the Geriatric Depression Scale as a guide to] knowing which questions to ask. Like when it comes to depression, there's so many questions you can ask. So it's nice to have specific questions to ask. (LTC 3)

I really liked my clinical instructor when it came to like our post clinical conference. I felt like she always had good questions and it really made us think about what we were doing during the day and why we did certain things versus just kind of giving us all the answers, which I thought was really helpful. (MH 8).

I really liked how we did like interviews with you prior to doing it with the residents because it was good to learn. Oh, that's a good way to word that question. Oh yeah. Actually, keep it open ended. I shouldn't just ask "yes or no" questions. And then like going through interview. I really liked it when we took time to go in depth. Like the questions. Like the like behavioral, cognitive. Because then I would be like, oh yeah, I should ask that. Why didn't I think of it that way? So that I really liked that was easier after briefing it made it easier for me to do it, so I got to do it. (LTC 3)

Students expressed wanting more for patients who had mental illnesses and disabilities or vulnerability. Their conversations often touched on ethical and sociopolitical themes.

I think part of it is it takes a lot of time to really get to know somebody and what's going on inside of them. Like, I can look at you, I can look at a patient. It's not apparent to me what's really going on inside of them. And in order to get to know that, I need to spend a lot of time with that person and I have to develop a therapeutic relationship or they're not going to trust me and they're not going to really share how what's really going on inside. And so I see that as being a big problem in our current health care systems in that we don't have time. Yeah, not currently. Especially those in nurses, as you saw at the nursing home. I mean, they're basically giving medications to like 17 people. Like, how could they possibly have time to talk to them more? I don't know, you can't just magically make more time for patients who are experiencing mental health crises. But it's something that everyone, every nurse should be informed of and aware of that time is essential. I don't see that people are misusing the time that they have. But it's just a lack of time. That's definitely an issue. (Senior LTC 5)

Another student expressed,

People with developmental disabilities are already super overlooked and nobody takes the time to talk with them. It's super sad. That population in general is overlooked because they can't talk and advocate for themselves. It's frustrating in the group home too because staff there aren't trained. Not like nursing school. You go through all this to be a[health care] worker and in a group home you just have to pass a background check. You can work in a group home and work with the people or you can feed them and put him in front of a TV. There's a lot of people that just do the bare minimum. (MH 10)

Mixed Methods Question

The mixed methods research question was as follows:

- Q4 To what extent do the similarities and differences between the groups identified by the quantitative data support or contradict the qualitative data?

Convergence of the Qualitative and Quantitative Data

Quantitative and qualitative data converged when the results of each data set were similar. Convergent data analysis revealed no significant differences in perceived PMH competency attainment between cases as measured by the BHCC tool pre and post mental health clinical. All of the students received mental health theory in the classroom over the course of the semester. The first group of students attending clinical in

September 2019 had the least amount of theory before clinical (four weeks) and the fourth group of students attending clinical in February to March 2020 had the most theory before clinical practice (16 weeks). Across cases, students reported relatively high levels of PMH competency as measured by the BHCC (Rutledge et al., 2012) post-clinical with a mean gain of 18 points from baseline. In qualitative interviews, both groups of students reported similar high levels of confidence and readiness for practice as being as three to four points with five being “completely confident” and “completely” ready. Both groups of students had experienced PMH clinical instructors and reported satisfaction with clinical instruction and post conference debriefing as meaningful learning experiences.

Contradictory data were introduced by qualitative interview reports of half of the students in the nursing home setting and many of the students in inpatient mental health who reported “not being able to do much, mostly sitting and talking with the patients and staff,” which could be a meaningful learning activity but student attitudes did not convey that it was. Students in inpatient mental health reported being “restricted” and somewhat fearful about venturing out on the unit. Qualitative data also suggests the students received differing levels of time on the unit, access to meaningful learning activities, exposure to interactions with staff nurses as role models, access to tools such as computers, all factors the PPCT model (Bronfenbrenner & Morris, 2006) indicated would impact competency development.

Divergence of the Qualitative and Quantitative Data

Quantitative and qualitative data diverged when the results were dissimilar or contradictory. One puzzling finding was while the both cases rated their clinical learning environments as measured by four subscales of the CLEI-A (Chan, 2002) as relatively

similar and no significant differences were found between groups for any the four subscales individually, students in nursing homes scored significantly lower scores in engagement and satisfaction than students in inpatient mental health. These quantitative findings fit for three students interviewed but not for the other three. Qualitative findings also indicated the students in inpatient mental health reported less time on the units, no access to the electronic health record, and did few assessments; yet they rated their level of engagement higher. Qualitative data revealed students attending mental health clinical in a nursing home often experienced and expressed strong negative emotional responses to being assigned to a nursing home as a site for mental health clinical, especially when they compared their experiences to the other group and perceived their experience was not as valuable.

Summary

In this chapter, findings from quantitative and qualitative analyses were described. Areas of convergence and divergence between the quantitative and qualitative results were merged to better understand complementary and contradictory findings between data sets. In Chapter V, the results are interpreted and discussed and conclusions are made.

CHAPTER V

DISCUSSIONS AND CONCLUSIONS

The power of the proximal Processes to influence human development vary substantially as a function of the characteristics of the developing Person, or the immediate and more remote environmental Contexts, and the Time periods in which the proximal processes take place. (PPCT model; Bronfenbrenner & Morris, 2006, p. 795)

This chapter provides a summary of the study including background, purpose of the study, and methodology. Results and interpretation of the results are discussed for each research question and connected with findings of previous studies and areas for further research. Finally, the limitations of the study are disclosed and the study is concluded.

Background

A reality facing healthcare systems in the United States is the growing demand for registered nurses who have skill sets to provide safe and effective nursing care to older adults with chronic physical and mental health needs (Delaney, 2016; Husebø et al., 2018; Skaalvik, 2011). The demand for nurses with expertise in geriatric nursing and/or geropsychiatric nursing has far exceeded the supply (AAN, 2015). Ongoing workforce shortages and stigmatized societal attitudes that devalued work with these populations perpetuated cycles of rapid staff turnover and high vacancy rates due to stress and burnout (AACN, 2019; Konnert et al., 2019). To break these negative cycles, nurse

educators need to explore creative ways to identify, attract, recruit, and retain nursing students to join the ranks of mental health, geriatric, and gero-psychiatric nursing. Ensuring a sufficient workforce is one way to counteract workforce shortages contributing to staff disengagement and attrition.

Engagement is a concept posited to be protective against stress and burnout (Bernard, 2015; Bruce et al., 2010). Clinical learning environments (CLEs) provide students with an authentic milieu for active learning, which should be engaging, but little research has supported whether or not students are engaged in clinical learning and how to measure it (Loch, 2013).

Purpose of the Study

This mixed methods case study was conducted to compare and contrast how two groups of baccalaureate student nurses' engagement with people, objects, and ideas in CLEs shaped attainment of PMH nursing competencies and workplace attitudes. The two groups of interest were (a) students attending mental health clinical on inpatient mental health units, and (b) students attending mental health clinical in a nursing home.

Quantitative data were collected by surveys from junior-level students attending mental health clinical in each setting to measure four variables: (a) students' perceived levels of engagement (as measured by subscales of the CLEI-A (Chan, 2002)); (b) their perception of the quality of the CLE post clinical (as measured by subscales of the CLEI-A); (c) their perceived level of PMH nursing competency pre and post clinical (as measured by the BHCC; Rutledge et al., 2012); and (d) level of interest in a future career in mental health or geriatric nursing pre and post clinical (measured by two Likert questions).

Linear regression, repeated measures ANOVA, and independent samples *t*-tests were used to analyze the quantitative data collected from 37 students. A case study approach and thematic analyses were used to develop two in-depth cases using qualitative interview data from 11 nursing students in the sample pool. Finally, quantitative and qualitative data were integrated by analyzing and interpreting points where the data were in agreement and points where they diverged.

Summary of the Results by Research Question

Research Question One

Is there a relationship between baccalaureate student nurses' level of engagement in mental health clinical education and the perceived quality of the clinical learning environment with changes in their PMH nursing competencies?

There were no significant associations between student engagement or CLE and PMH competency.

Research Question Two

Does mental health clinical education in a nursing home or on inpatient mental health unit have a significant effect on nursing students' attainment of PMH nursing competency and interest in a future career in mental health or gerontological nursing?

No statistically significant differences were found between the groups in perceived attainment of mental health competency. Students in both groups were able to attain moderately high levels of PMH nursing competency as measured by the BHCC (Rutledge et al., 2012). Both groups made significant gains in competency over time with a mean increase of 19 points after four weeks of clinical. Across cases, an increased number of students expressed interest in a future career in mental health or geriatric nursing post clinical. Prior to MH clinical, seven students reported being interested in MH nursing and two students were interested in geriatric nursing. Post MH clinical, a

total of 9/37 (24%) nursing students expressed they agreed or strongly agreed they were interested in a future career in mental health nursing and 5/37 (13.5%) agreed they were interested in a future career in geriatric nursing.

Research Question Three

What is the student nurse experience of attending PMH clinical education in nursing homes versus inpatient mental health units?

Thematic analysis of the interview transcripts was used to develop in-depth portraits both within and across cases. The themes of an eye opener, an unexpected pleasure, and restricted access conveyed the portraits that emerged for students learning on inpatient mental health units. For students learning within a nursing home, the themes of the great divide, feeling at home or feeling robbed, and feeling “less than” were identified. Themes common to both groups were connecting the dots (growth theme) and wanting more (process theme).

Research Question Four

To what extent do the similarities and differences between the groups identified by the quantitative data support or contradict the qualitative data?

The quantitative data suggested all students achieved moderately high levels of PMH competency and had a relatively good quality CLE across settings. The number of students who maintained or reported a new interest in MH nursing pre and post clinical was in alignment with the engagement themes of an unexpected pleasure, feeling like a nurse, feels like home, and the growth theme of connecting the dots.

Quantitative data results showed lower levels of satisfaction and engagement for students attending clinical in nursing homes units. These findings aligned with qualitative data for three of the students interviewed but not with three of the other

students (the great divide theme). Students in inpatient mental health identified different sources of dissatisfaction from students in nursing homes but overall, the inpatient mental health students were more satisfied with and engaged in their experiences

Interpretation of the Findings

Research Question One

Is there a relationship between baccalaureate student nurses' level of engagement in mental health clinical education and the perceived quality of the clinical learning environment with changes in their PMH nursing competencies?

Learners' levels of engagement with the curriculum and the extent to which they chose to interact with learning activities was well supported in the literature as being a necessary prerequisite for learning and competency development (Newton et al., 2009; Wang et al., 2018). Nursing students' ability to transfer what they learned in university classrooms and skills labs to clinical practice was dependent on personal, social, and environmental factors with student engagement being a key factor (Hudson et al., 2019; Newton et al., 2009). In this study, there were no significant associations between student engagement or CLE and PMH competency. However, students who attended MH clinical in a nursing home had significantly lower levels of engagement and satisfaction than students on inpatient mental health hospital units; yet, both groups attained similar perceived levels of moderately high PMH post clinical. Previous studies suggested the less engaged students in nursing homes should have lower levels of competency development than the more engaged students in inpatient mental health. Two factors might have influenced these findings: (a) the scale designed to measure engagement, and (b) the complexity of identifying how other factors besides engagement contributed to competency development.

Measuring engagement. The measurement scale used for engagement was created by the researcher by using two existing subscales from the CLEI-A (Chan, 2002) with four Likert items to measure four aspects of engagement based on conceptual models of Reeve and Tseng (2011). This measurement scale might not have been an accurate measure of student engagement. In addition, use of student self-evaluation with Likert surveys could have been biased or inaccurate, although consistencies between the quantitative and qualitative data and field observations supported validity of the students' perceptions.

Measuring effects of other contextual factors. According to the PPCT model (Bronfenbrenner & Morris, 2006), although the proximal processes were central to development, the power of learner-environment interactions could vary substantially dependent on the characteristics of the developing person, the immediate and more remote environmental contexts, and time. These PPCT factors were all identified as sources of engagement and disengagement and satisfaction and dissatisfaction across groups. Although some of the students in the nursing home were significantly less satisfied and engaged, other factors such as a good quality CLE, experienced PMH clinical instructor, debriefing sessions, peer support, and/or mental theory class might have offset negative effects. It was also possible the students learned as much from learning activities they did not enjoy as from activities they did enjoy.

Effects of stigma as a remote contextual factor. In this study, stigma was a contextual factor that significantly impacted student engagement across settings but appeared to be more prevalent and negative in the nursing home. The effects of stigma on human development and disparity in health outcomes were well documented in the

literature (Boyd, 2018). Stigma can cause social distancing between individuals and their environment, resulting in less engagement and satisfaction (Inan, Gunusen, Duman, & Ertem, 2019).

Education is said to be an effective method to counteract stigma (Inan et al., 2019). Widespread anti-stigma programs designed to increase awareness of how stigma affects the quality of mental health care began to be widely implemented in 2005 (Inan et al., 2019). Stigma and mental illness have been addressed in most PMH curriculum and textbooks today including the text used by the students in the study (Boyd, 2018). In contrast, a gap in current literature is related to how nurse educators can address stigma and ageism in elder care.

Other contextual factors. Other sources of disengagement in LTC might have occurred given that 47% of the students at the nursing home had prior work experience as CNAs. Many of these students verbalized role confusion and uncertainty that they were being prepared for a nursing role. Students who had acute care clinical at the VA and mental health in an LTC for veterans wanted more variety in clinical experiences.

Time factors. “Wanting more” was a theme shared across cases. Qualitative interview data showed students thought only four weeks (32 hours) of MH clinical in this five-semester nursing program was not enough for them to learn entry level PMH competencies as well as they wanted to or as current healthcare demographics required. Students agreed mental health is important to overall good health, mental illness is prevalent, and more time for classroom mental health theory, clinical education, and simulation should be included in the nursing curriculum.

Research Question Two

Does mental health clinical education in a nursing home or on inpatient mental health unit have a significant effect on nursing students' attainment of PMH nursing competency and interest in a future career in mental health or gerontological nursing?

Results of the study suggested baccalaureate nursing students could learn PMH competencies in nursing homes as well as they could on an inpatient mental health unit. Student scores on the BHCC and qualitative data certainly indicated they could. Across cases, each of the eight groups made gains on BHCC scores post clinical. Scores ranged from a minimum mean gain of 13 points to a maximum mean gain of 36 points in four weeks.

These findings were not surprising given findings of previous studies that found nursing homes were warm and welcoming CLEs that had a slower pace for novice students where they could practice assessment skills, therapeutic communication, and encounter important psychosocial issues such as grief, loss and transition, and end of life care (Chen et al., 2007; Huls et al., 2015; Lea, 2014; Mezey et al., 2009). A variety of patients and medical conditions facilitated learning (Brynildsen et al., 2014). Student interviews confirmed these findings and highlighted many similarities between the two CLEs that made them ideal places to develop PMH competencies. Prominent features evident in both CLEs included access to collaboration with the interprofessional health care team, therapeutic milieus, and staff role modeling of communication and advocacy skills to address sociopolitical and ethical dilemmas when working with vulnerable populations (Huls et al., 2015; Mezey et al., 2009).

Salamonson et al. (2015) found English language learners and students with prior work experience in nursing homes were less satisfied with their clinical learning in

nursing homes. In contrast, this study found students who reported English was not their first language had a statistically significant difference in interest for a future career in geriatric nursing pre and post clinical and higher levels of engagement. Linear regression showed students with prior work experience and prior interests in mental health or geriatric nursing were more engaged.

Qualitative findings regarding prior student work experience as a CNA were inconclusive but appeared to be a point of dissatisfaction for students attending MH clinical in a nursing home, which was possibly related to role confusion. Students with prior CNA experience seemed to either have difficulty carrying out nursing assessments and reverted to a CNA role or else they balked at having to do tasks associated with a CNA role.

Research Question Three

What is the student nurse experience of attending PMH clinical education in nursing homes versus inpatient mental health units?

Evidence showed nursing students had negative attitudes toward clinical placement in nursing homes, viewed staff working in LTC as inferior, and assumed they would learn less in nursing homes than in acute care hospitals (Annear et al., 2014; Banning et al., 2006). These findings were confirmed in this study.

Reflecting on the qualitative themes emerging from the data, this researcher could “see” the emergent themes were symbolic of the culture and values of each setting. For example, in inpatient mental health, students felt constrained and restricted due to all of the safety considerations and rules designed to keep a mental health unit safe. Yet, they were “pleasantly and unexpectedly” surprised to find high levels of support, comfort, and connection in a place for “crazy” people.

The nursing home felt “like home” and was a place where students learned “to feel like a nurse.” On the shallow side, there was a belief that this place and the people who lived and worked there were “less than.” This myth was perpetuated at every level of the system. At the micro system level, it occurred when student nurses who were assigned to clinical in inpatient mental health told students assigned to a nursing home “that place sucks. My experience is better. I am going to learn more than you.” At the meso system level, it occurred when classroom teachers referred to LTC clinical as an experience to be “gotten through and over with.” At the eco system level, it occurred when healthcare workers in LTC were not paid a fair and equal wage. Fortunately, the macro system level included some nursing students who came from cultures where elders were valued. Those might have been the students who said “I like this place! I feel at home here.” These embedded messages were the ones students appeared to respond affectively to as they went to MH clinical in an inpatient MH hospital or in an LTC. The message of being “less than” or “feeling robbed” could help nurse educators understand why students going to clinical in LTCs often had such strong, negative reactions that appeared to shut down their openness to learning before they even stepped onto the unit.

Research Question 4

To what extent do the similarities and differences between the groups identified by the quantitative data support or contradict the qualitative data?

Merging the quantitative and qualitative data allowed the researcher to identify sources of student dissatisfaction between settings that were not explained by the quantitative data alone. Similar results conveyed by quantitative and qualitative results showing that students could develop equivalent levels of PMH competencies across settings strengthened the validity of the study findings.

Recommendations for Educators

Based on student feedback and previous study results, students learned different things in an inpatient MH unit than in a community setting such as a nursing home or community health agency. In inpatient MH, they saw acute mental health symptoms and had psychiatric nurse role models to shadow and learn from. In a nursing home, students saw how people appeared when symptoms were “managed” and how assessments and interventions to manage chronic symptoms varied from when people were acutely ill. Across settings, study results highlighted the essential and important role of the clinical nurse instructor. For a mental health clinical in a nursing home, the clinical instructor must be an experienced PMH nurse. Likewise, nursing leaders at the nursing home site must agree to the PMH focus and ensure appropriate residents with mental health conditions are selected with whom students could interact.

Across cases, students interviewed said they wanted more mental health clinical experience and would like mental health experiences in *both* acute and community mental health settings. Whenever possible, student opportunities to attend clinical at inpatient mental health and a nursing home would help them have a more realistic understanding and view of the continuum of mental illnesses. In communities where inpatient MH units are unavailable for the student mental health clinical, students could learn well in a nursing home. They were likely to have a more satisfying experience with appropriate planning by the nurse educator.

The PPCT model could be used as a planning guide. By identifying the people, processes (ideas, tasks, and meaningful learning opportunities), and time-related factors in the CLE, the nurse educator could assess resources and barriers to learning. Assessing

“Context” corresponds with bioecological systems from micro to macro level spheres of influence across systems (Bronfenbrenner & Morris, 2006). Thinking about the effects of each level on the immediate CLE could enable nurse educators to systematically and comprehensively analyze the CLE and identify possible explanations and solutions when challenges occur.

Both inpatient MH units and nursing homes provide meaningful learning environments to cultivate student attraction for a future nursing career working with vulnerable populations. This is especially true for those students who enter clinical with an existing interest or curiosity to explore work with the elderly or mentally ill. An opportunity to practice appropriately leveled tasks over time is important for competency development. There are many meaningful learning activities to engage in for students attending mental health clinical. For example, sitting and listening is an important part of improving therapeutic communication. However, students interviewed indicated they wanted to “do more.” The nurse educator’s job includes facilitating development and appreciation for all essential PMH skills—those that are more passive as well as active. Here, the BHCC tool could be used by the nurse educator and students to monitor progress in achieving PMH competencies over time (Rutledge et al., 2012). Students consistently indicated psychotropic medication management and de-escalation skills were areas of PMH competency that were harder to achieve. The nurse educator must plan creatively for how these competencies could be met on units that would not allow students to administer psychotropic medications or have interaction with agitated patients.

Many resources are available to assist the nurse educator to implement PMH clinical education. For inpatient mental health clinical, the APNA (2016) provides an online toolkit to help develop entry level PMH essentials for undergraduate nurses. The toolkit has learning objectives and activities for classroom and clinical education. Hartford Institute for Geriatric Nursing (2020) contains assessment tools with instruction sheets and short videos students watched to learn how to conduct mental health assessments with elders. Students benefited from conducting a mini-cognition assessment or using the Geriatric Depression Scale (Yesavage et al., 1983) to interview residents in a nursing home (see Appendix H). Students who used these tools to guide their practice began to understand the abstract and complex concepts of cognition, mood, and affect more clearly. The residents seemed to enjoy the experiences as well!

Suggestions for Additional Research

Clinical Education in Non-Traditional Settings

More research is needed to build an evidence base for best practices in teaching, designing, and evaluating student learning outcomes for mental health clinical education in non-traditional settings such as an LTC, community public health agencies, prisons, schools, primary care clinics, and homeless shelters. Nurse educators also need more evidence to support how much curricular time and simulation/clinical education practice students need to attain entry level PMH competency (Bowling et al., 2018). Strides have been made to counteract stigma in mental health nursing but more research and instructional strategies are needed to target stigma and ageism in elder care.

Personal characteristics. Study results demonstrated the need for more research into how personal characteristics and prior experiences impacted student competency

development during clinical education. Identification of personal characteristics of successful PMH and geriatric nurses might assist nurse educators in recruiting and mentoring students with these characteristics and interest in these specialties early in their nursing education program.

Engagement, satisfaction, competency development, and learning. More research is needed to explore the concept of student engagement as it relates to satisfaction or dissatisfaction in clinical education and PMH nursing competency development. Wang et al. (2018) found student satisfaction is an outcome of engagement. Findings from this study did not show significant relationships between student satisfaction and engagement or between engagement and competency development. This left several questions unanswered such as whether positive learning and growth occurred when students were dissatisfied during clinical learning. Also, it was unknown if competency development (which included knowledge, attitudes, skills, and mobilization of resources) required a different pedagogical approach to teaching and learning in the clinical learning environment.

Limitations of the Study

The study findings were limited by a small sample for quantitative data collection ($N = 37$). The study sample was also quite homogenous being composed of mostly young (21 to 26 years old) female nursing students in one baccalaureate program at one Midwestern university. Participants' self-evaluation of their PMH nursing competencies and engagement, the CLE, and prior relationships with the researcher might have biased their perceptions or caused them to inaccurately report responses. The researcher's roles

as a mental health clinical instructor and classroom teacher introduced strengths of being immersed in the naturalistic study settings as well as the potential for bias.

Students were interviewed after they completed clinical and received their grades. Participants could choose whether to be interviewed by the researcher or the research assistant. The research assistant interviewed five students and the researcher interviewed six students. Students interviewed by the researcher could have reported more positive responses while students interviewed by the research assistant might have overemphasized and complained about negative aspects because she was also a nursing student, although in a graduate program. Limitations of the study were lessened by the strengths of mixed methods to identify, analyze, and interpret contradictions between the two data sets. Merging the quantitative and qualitative data allowed the researcher to identify sources of student engagement between settings that were not explained by quantitative data alone.

Conclusion

The findings from this mixed methods study guided by Bronfenbrenner and Morris' (2006) PPCT model suggested baccalaureate nursing students could learn PMH competencies in nursing homes as well as they could on inpatient mental health units. However, students attending MH clinical in an LTC were less satisfied with their clinical learning experiences. The study identified possible sources of dissatisfaction as stigma, peer influences, limited time, and personal characteristics of students as major factors. Recommendations for nurse educators included attending to students' desire for more opportunities to attend MH clinical and more classroom theory related to mental health. Students were not opposed to MH clinical in a nursing home but also wanted to observe

“acute” mental health symptoms. Whenever possible, the opportunity to attend MH clinical in both settings could promote more favorable attitudes toward and interest in a future career in mental health and/or geriatric nursing. Nurse educators could use the PPCT model to help design new models of MH clinical education across acute mental health hospital and community settings to provide students with a more realistic understanding of mental illness, the effects of stigma, and how to provide continuity of care.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL



Institutional Review Board

DATE: February 5, 2020

TO: Maria Tice, MSN

FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1547188-2] Comparing student nurse experiences with developing psychiatric mental health nursing competencies in hospital and nursing home settings: A mixed methods study.

SUBMISSION TYPE: Revision

ACTION: APPROVAL/VERIFICATION OF EXEMPT STATUS

DECISION DATE: February 5, 2020

EXPIRATION DATE: February 5, 2024

Thank you for your submission of Revision materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Nicole Morse at 970-351-1910 or nicole.morse@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.

APPENDIX B
CONSENT FORM

UNIVERSITY OF
NORTHERN COLORADO

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Comparing student nurse experiences with developing psychiatric mental health nursing competencies in hospital and nursing home settings: A mixed methods study.

Researcher: Maria Tice, MSN, RN, CNE, UNC Doctoral Student, School of Nursing; Asst Professor of Nursing, St. Catherine University, St. Paul, MN

Phone Number: 651-270-8183

e-mail: tice4229@bears.unco.edu

Research Advisor: Kathryn Records, PhD, RN, FAAN, School of Nursing
email: kathryn.records@unco.edu

I am a faculty member teaching mental health in the College for Women where you are attending school for your baccalaureate degree in nursing. This project is part of the requirements of my doctoral program at the University of Northern Colorado. This document will provide you with information about the study so that you can decide whether to participate in it.

With the help of a graduate student, I am studying junior and senior level nursing students in the College for Women to explore how they perceive they are able to learn mental health nursing competencies in nursing homes and inpatient mental health units during their assigned clinical education experiences. To complete this study, I am asking for your permission to participate in two different study activities. You can agree to participate in one or both of these, or you can decline to participate in either one. The two activities I am asking for your participation are to:

1. Agree to let me use the statistical results from the Behavioral Health Care Competency (BHCC) and Clinical Learning Environment Inventory (CLEI) surveys you completed as part of your clinical experiences in Fall 2018 or 2019, or that you will complete by the end of Spring semester 2020;
2. Volunteer for an interview conducted by me or by my graduate research assistant (who does not teach in the College for Women).
 - a. You can choose who you prefer to have interview you;
 - b. The interview will ask you to describe your perceptions about learning mental health nursing competencies during your mental health clinical experience.

Each of these activities is detailed, below. ***Please read each of the statements and initial each activity/section for which you agree to participate. Then sign your name and date the bottom of the form.***

1. I agree to allow the researcher, Ms. Tice, to include the (1) Behavioral Health Care Competency questionnaire and the 2) Clinical Learning Environment Inventory that I completed as part of my Interventions class during the Fall 2018, Fall or Spring 2019, or Spring 2020 semesters in the study. I understand that these questionnaires will not be accessed until after I have completed my mental health clinical experience and received my mental health clinical grade. I will allow the demographic questions I complete today to be

used in the study. I understand that these surveys are not used to grade me; they are used to evaluate the mental health clinical education program.

The forms will have my name removed by the research assistant and she will assign a study number to these forms so that all my information will remain confidential and will be reported as group data with no names associated with it. Both the research assistant and researcher will enter the data into a computer program for analysis and the accuracy will be checked by the researcher.

The de-identified and numbered surveys will be kept in a locked file cabinet in the researcher's office in a separate file from the signed consent form. The electronic data with the survey information will be kept in a password protected electronic folder on a secure site accessible to the researcher and research assistant only. The surveys and electronic data will be kept for three years, then destroyed.

#1 Initial here

2. I agree to participate in an individual interview with the graduate research assistant **or** Ms. Tice, to be conducted in Spring semester 2020 at a time that is convenient for me. The research assistant, Lauren Kizlik, will contact me to arrange the interview. I can choose whether I prefer to meet with Ms. Maria Tice or Lauren Kizlik, who is a graduate nursing student at St. Catherine University. She has been trained by Ms. Tice to conduct an interview for this study. Lauren has an undergraduate degree in Exercise Science. She has completed her CITI human subjects' protection training so that she understands how to conduct research ethically and she has prior experience in conducting research with professors at Mankato State University.

I understand that Ms. Tice will purposefully select a diverse group of students to interview after reviewing the BHCC and CLE results. Interviews will continue until saturation is reached. This means that I might not be contacted for an interview due to time limitations, as individual interviews of a potential pool of 151 students in a time frame of 3 months is not possible. The interview will be conducted in a private room in the nursing department on campus and is estimated to last no more than one hour. The interviewer will ask open-ended questions about my mental health clinical experience. I can share any information that I am comfortable sharing and can decline to answer any questions. I can leave the interview at any time or change my mind and decide not to participate without loss of any of the benefits I am entitled to as a student.

I agree to allow my comments to be included in the study. Any specific information that could allow others to guess my identity will be removed. If necessary, I agree to meet with Ms. Tice to review the final research report to ensure that any comments I have made are accurate as written. I understand that any the interview will be audio-recorded so that the interview can be transcribed word for word. The audio- recordings will be stored in a secure password-protected electronic folder, kept for 3 years, then destroyed.

#2 Initial here

3. There are no anticipated risks to me outside of what naturally occurs in a classroom. If I become upset for any reason when discussing my clinical experiences during the interview,

Ms. Tice or Lauren Kizlik will provide me with resources to address my concerns, such as connecting me with the counseling department on campus or with the director of the BSN program in the College for Women.

If I participate in the study, either by allowing my statistical survey data to be included or by agreeing to be interviewed, I will have my name entered into a random drawing for one of ten gift cards valued at \$10 each. There is no other direct benefit to participating in the study beyond a potential feeling of satisfaction that I am providing feedback to the program. My participation and the completion of this study may have a benefit to the nursing program and the profession of nursing if important information about how to improve mental health clinical education in nursing is gained. My decision to participate or not participate will not affect my grades in my nursing classes in any way.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. A copy of this form will be emailed to you if you request it. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Research, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

Having read the above and having had an opportunity to ask any questions, please initial any or both of the two sections that you would like participate in for this research study and then sign and date the bottom of the form.

#3 Sign here

Date

Print name

APPENDIX C

**BEHAVIORAL HEALTH CARE COMPETENCY
(WITH INDIVIDUAL ITEM MEAN SCORES)**

	Original BHCC (9 items) (Hospital nurses, N =834) Rutledge, Wickman, Cacciata, Winokur, Loucks, & Drake, 2013	Modified MHNCC (10 items) (BSN student nurses, N = 36) Tice, 2018
Subscale	Assessment	Assessment
Item	I can assess patients for potential psychiatric problems. 3.55/5	I can assess pts for potential mental health conditions using a mental status exam. 3.94/5
1 -C		
2 - NC	I can identify signs and symptoms of common psychiatric conditions (e.g. depression, schizophrenia, bipolar disorder). 3.68	I can identify signs and symptoms of common psychiatric conditions (e.g. depression, schizophrenia, bipolar disorder). 3.97
3- C	I can identify common neuroleptic, tranquilizers, and anti-depressant medications used with psychiatric patients. 3.54	I can identify common and serious side effects of psychiatric medications. 3.53
4- NC	I am able to assess patients for risk of suicide (suicidality). 3.60	I am able to assess patients for risk of suicide (suicidality). 4.36
5- NC	I recognize behaviors that indicate a patient may have alcohol or drug abuse problems. 3.90	I recognize behaviors that indicate a patient may have alcohol or drug abuse problems. 4.11
6 -NC	I can recognize signs and symptoms of alcohol withdrawal. 3.90	I can recognize signs and symptoms of alcohol withdrawal. 4.14
7-NC	I can recognize signs and symptoms of drug withdrawal. 3.76	I can recognize signs and symptoms of drug withdrawal. 3.89
8- NC	I can distinguish between dementia and delirium. 3.23	I can distinguish between dementia and delirium. 3.72
9-NC	I can recognize the warning signs in patients whose behavior may escalate to aggression or dangerous behaviors. 3.61	I can recognize the warning signs in patients whose behavior may escalate to aggression or dangerous behaviors. 3.81
		I know appropriate psychiatric drugs to request physicians to order for increasingly anxious or agitated behaviors. REWORD TO
		I can recognize when to administer PRN medication to manage increasing anxiety or agitation in patients that are not responding to non-pharmacologic interventions.
Cronbach's alpha	0.91	0.741 with addition of Item 10. Cronbach's alpha of 0.724 when this item is excluded from this subscale.
Subscale	Practice/intervention Competency (8 items)	Practice/intervention Competency (8 items)
NC	I can initiate appropriate nursing interventions for common psychiatric conditions such as depression, bipolar disorder, and psychosis. 3.24	I can initiate appropriate nursing interventions for common psychiatric conditions such as depression, bipolar disorder, and psychosis. 3.53
C	I can effectively interact with patients who have mental health problems. 3.27	I can effectively interact with patients who have mental illness. 4.03
NC	I am able to maintain a safe environment for patients on my unit who have a psychiatric condition. 3.48	I am able to maintain a safe environment for patients on my unit who have a psychiatric condition. 4.08
C	I can effectively manage conflicts caused by patients who have mental problems. 3.14	I can effectively manage conflicts caused by patients who have mental illness.3.25

NC	I can effectively intervene with a patient having hallucinations. 3.04	I can effectively intervene with a patient having hallucinations. 3.03
NC	I am able to use de-escalation techniques and crisis communication to avert aggressive behaviors.3.11	I am able to use de-escalation techniques and crisis communication to avert aggressive behaviors. 3.28
NC	I plan for more time to take of patients with psychiatric issues compared to my other patients. 3.35	I plan for more time to take of patients with psychiatric issues compared to my other patients. 3.72
NC	I am able to maintain a therapeutic relationship with most patients on my unit who have psychiatric issues.	I am able to maintain a therapeutic relationship with most patients on my unit who have psychiatric issues.
Cronbach's alpha	0.90	0.843
Subscale	Recommendation of Psychotropic Medication (2 items)	Omitted (0 items)
	I am confident that I can recommend use of psychotropic drugs to physicians for appropriate patients. 2.65	I know appropriate psychiatric drugs to request physicians to order for increasingly anxious or agitated behaviors. (Moved to Assessment subscale).2.97
	I recommend drugs to physicians for psychiatric patients. 2.56	
Cronbach's alpha	0.78	
Subscale	Resource Adequacy	Resource Adequacy
NC	I know when to ask for outside help (e.g. physician, psychiatric nurse, other) for a patient with psychiatric issues or dangerous behaviors. 3.88	I know when to ask for outside help (e.g. physician, psychiatric nurse, other) for a patient with psychiatric issues or dangerous behaviors. 3.97
NC	I call for outside resources (e.g. physician, psychiatric nurse, other) when I recognize a patient's behaviors are escalating beyond my capabilities. 3.96	I call for outside resources (e.g. physician, psychiatric nurse, other) when I recognize a patient's behaviors are escalating beyond my capabilities.4.22
NC	I am confident that help is available to me when I need assistance with patients who have co-morbid behavioral or psychiatric issues. 3.59	I am confident that help is available to me when I need assistance with patients who have co-morbid behavioral or psychiatric issues. 4.08
NC	Agency resources are available to me when I need assistance with behavioral health, or psychiatric issues, or substance abuse issues. 3.56	Agency resources are available to me when I need assistance with behavioral health, or psychiatric issues, or substance abuse issues. 3.92
Cronbach's alpha	0.78	0.91
Note: Subscale scores are on a scale of 1 = strongly disagree to 5= strongly agree. A score of three = uncertain.		

KEY: C=Change in item wording or organization, NC = No change from original.

Numbers indicate mean individual item scores on each item for the original population of RNs in practice and student nurses in a pilot study (Rutledge, et al., 2012; Tice, 2018)

APPENDIX D

**ADAPTED CLINICAL LEARNING ENVIRONMENT
INVENTORY-ACTUAL**

The purpose of this questionnaire is to find out your opinions about this clinical placement. This form of the questionnaire assesses your opinion about what the clinical placement is actually like. Indicate your opinions about each questionnaire statement by circling

SA if you STRONGLY AGREE

D if you DISAGREE

A if you AGREE

SD if you STRONGLY DISAGREE

That it describes what the clinical placement is actually like

- | | SA | A | D | SD |
|---|----|---|---|----|
| 1. The instructor/clinician considers student feelings. | | | | |
| 2. The instructor/clinician talks rather than listens to the students. | | | | |
| 3. Students look forward to coming to this clinical placement. | | | | |
| 4. Students know exactly what has to be done in the clinical. | | | | |
| 5. New ideas are seldom tried out in this clinical. | | | | |
| 6. All staff at this agency are expected to do the same work in the same way. | | | | |
| 7. The instructor/facilitator talks directly with students | | | | |
| 8. Students put effort into what they do in this clinical. | | | | |
| 9. Students are dissatisfied with what is done at clinical. | | | | |
| 10. Getting a certain amount of work done is important in this clinical. | | | | |
| 11. New and different ways of teaching are seldom used in this clinical. | | | | |
| 12. Students are generally allowed to work at their own pace. | | | | |
| 13. The instructor/clinicians go out of their way to help the students. | | | | |
| 14. Students "watch the clock" in this clinical. | | | | |
| 15. After clinical, students feel a sense of satisfaction. | | | | |
| 16. The instructor/clinician often gets sidetracked instead of sticking to the point. | | | | |
| 17. The facilitator thinks up fun activities for the students. | | | | |
| 18. Students have a say in how the shift is spent. | | | | |
| 19. The instructor/clinician helps students who are having trouble with the work | | | | |
| 20. Students in this clinical group pay attention to what others are saying. | | | | |
| 21. This clinical placement is a waste of time. | | | | |
| 22. This is a disorganized clinical placement. | | | | |
| 23. Teaching approaches at this clinical are characterized by innovation and variety. | | | | |
| 24. Students are allowed to negotiate their work load in clinical, | | | | |
| 25. The facilitator seldom goes around during clinical to talk to the students, | | | | |
| 26. Students are seldom involved with the process of handing important information over to the staff before they leave. | | | | |
| 27. This clinical is boring. | | | | |
| 28. Clinical assignments are clear so students know what to do. | | | | |
| 29. The same facilitators work with the students for most of this clinical. | | | | |
| 30. Teaching approaches allow students to work at their own pace. | | | | |
| 31. The facilitators are not interested in students' problems. | | | | |
| 32. There are opportunities for students to express opinions at this clinical. | | | | |
| 33. Students enjoy coming to this clinical. | | | | |
| 34. Clinical instructors are punctual. | | | | |
| 35. The facilitator would often think of interesting activities. | | | | |
| 36. There are few opportunities for students to pursue his/her particular interest in this clinical. | | | | |
| 37. The facilitator is unfriendly and inconsiderate towards students. | | | | |
| 38. The facilitator dominates debriefing sessions. | | | | |
| 39. This clinical placement is interesting. | | | | |
| 40. Workload allocation in the clinical experience is carefully planned. | | | | |
| 41. Students do the same types of tasks in every clinical. | | | | |
| 42. The instructor/clinician decides the students' activities during clinical. | | | | |
| 43. During this clinical I participated actively in all the learning activities. | | | | |

44. I feel excited and curious to learn more while at this clinical.
45. During this clinical, I often think about, reflect on, or ask questions about what I am experiencing.
46. Rather than seeking out learning activities, I wait for the clinical instructor or staff to guide me (reverse score).

APPENDIX E
DEMOGRAPHIC FORM

**COMPLETE THIS FORM ONLY IF YOU AGREE TO PARTICIPATE IN
AT LEAST ONE PART OF THE STUDY.**

Student Demographic Form

1. Name: _____

2. Where did you attend mental health clinical?

Regions ____ MN Veterans Home ____

3. What is your age range? (Please mark appropriate range with an X)

- a. 20-25 years _____
- b. 26-30 years _____
- c. 31-39 _____
- d. 40 or over _____

4. Is English your first language? Please mark with an X.

YES ____ NO ____

If not, what is your first language?

_____.

5. Do you have any previous work experience in healthcare? E.g. nursing assistant, other?

YES ____ NO ____ If yes, what did you do?

_____.

For how long? _____

APPENDIX F
SEMI-STRUCTURED INTERVIEW PROTOCOL

Semi-structured Interview Protocol*

1. Tell me about your mental health clinical experience. **(Experience)**
 2. Talk about the people in clinical who were most helpful in your clinical learning.
 - a. How did they help you?
 - b. What did you learn from them? **(Interactions with people).**

[Try to reach saturation by gaining input about clinical staff, especially nurses serving in a preceptor role, academic clinical instructors, certified nursing assistants, peers, patients, interdisciplinary health team members].
 3. a. What personal characteristics do you think students need to be successful in developing competency in mental health nursing?
 b. What personal characteristics of students are most likely to interfere with developing competency in mental health nursing? **(Personal characteristics of students).**
- [If examples are needed, attitudes such as fear or anxiety, aptitude for a subject, prior experience, maturity, cognitive and emotional intelligence, would be some examples].
3. a. What learning activities did you participate in during mental health clinical?
 b. Which activities were most meaningful?
 c. Which activities did you enjoy most? **(Participation in learning activities)**
 d. Which activities did you enjoy least?
 4. a. What did you like most about the clinical environment at _____?
 The least? Why?
 b. Which factors in the environment helped your learning?
 c. Which factors in the environment interfered with or prevented with your learning? **(Environment)**
 5. What factors related to time helped or hurt your learning experience in this clinical? Please elaborate.
(Time factors- for example is 4 clinical days long enough or too long? Are you getting enough classroom theory related to mental health?)
 6. a. Overall, how would you rate your confidence in your mental health nursing competencies after attending MH clinical at _____ (Regions or the nursing home), with 0 being not at all and 5 being fully confident?
 b. What factors helped in learning PMH nursing?
 c. What factors prevented learning PMH nursing?
 d. Did you learn anything else? If so, please describe. **(Attaining PMH competency)**
 7. **With 0 being not ready at all and 5 being fully ready, How ready are you to provide care for mentally ill patients at this point in time?**
 8. Is there anything else you would like to share or suggest?

APPENDIX G

MODIFIED BEHAVIORAL HEALTH CARE COMPETENCY

ASSESSMENT					
I can assess patients for potential mental health conditions using a mental status exam.	SA	A	U	D	SD
I identify signs and symptoms of common psychiatric conditions (e.g. depression, schizophrenia, bipolar disorders).	SA	A	U	D	SD
I can identify common and serious side effects of anti-psychotic, anti-anxiety, mood	SA	A	U	D	SD
stabilizers and anti-depressant medications used with patients experiencing a mental illness.	SA	A	U	D	SD
I am able to assess patients for risk of suicide (suicidality).	SA	A	U	D	SD
I recognize behaviors that indicate a patient may have alcohol or drug abuse problems.	SA	A	U	D	SD
I can recognize signs and symptoms of alcohol withdrawal.	SA	A	U	D	SD
I can recognize signs and symptoms of drug withdrawal.	SA	A	U	D	SD
I can distinguish between dementia and delirium.	SA	A	U	D	SD
I can recognize the warning signs in patients whose behavior may escalate to aggression or dangerous behaviors.	SA	A	U	D	SD
PRACTICE/INTERVENTION					
I can initiate appropriate nursing interventions for common psychiatric conditions such as	SA	A	U	D	SD
depression, bipolar disorder, and psychosis.	SA	A	U	D	SD
I can effectively interact with patients who have mental illnesses.	SA	A	U	D	SD
I am able to maintain a safe environment for patients on my unit who have a psychiatric condition.	SA	A	U	D	SD
I can effectively manage conflicts caused by patients who are mentally ill.	SA	A	U	D	SD
I can effectively intervene with a patient having hallucinations.	SA	A	U	D	SD
I am able to use de-escalation techniques and crisis communication to avert aggressive behaviors.	SA	A	U	D	SD
I plan for more time to take care of patients with psychiatric issues compared with my other patients.	SA	A	U	D	SD
I am able to maintain a therapeutic relationship with most patients on my unit who have psychiatric issues.	SA	A	U	D	SD
I know appropriate psychotropic drugs to request physicians to order for increasingly anxious or agitated patients.	SA	A	U	D	SD
RESOURCE ADEQUACY					
I know when to ask for outside help (e.g. physician, psychiatric nurse, other) for a patient with	SA	A	U	D	SD
psychiatric issues or dangerous behaviors.	SA	A	U	D	SD
I call for outside resources (e.g. physician, psychiatric nurse, other) when I recognize a patient's behaviors are escalating beyond my capabilities.	SA	A	U	D	SD
I am confident that help is available to me when I need assistance with patients who have	SA	A	U	D	SD

APPENDIX H

**GERIATRIC AND GERO-PSYCH NURSING CURRICULUM
AND COMPETENCY RESOURCES FOR
NURSE EDUCATORS**

Resource	Description	Link
The Portal of Geriatrics Online Education	A comprehensive, free collection of educational materials, evidence-based literature, teaching tools, and 26 virtual patients cases that integrate physiological, psychological and functional changes that occur with aging.	https://www.pogoe.org/
Geropsychiatric Nursing Competency Enhancements	The <i>Geropsychiatric Nursing Competency Enhancements</i> (Beck, Buckwalter, & Evans, 2012) contain seven documents geared for entry-level nurses and APNs who care for older adults but are not prepared as gerontological experts. They build on already existing competencies for ease of adoption.	https://www.pogoe.org/product/20660
Recommended Baccalaureate Competencies and Curricular Guidelines for the Nursing Care of Older Adults: A Supplement to The Essentials of Baccalaureate Education for Professional Nursing Practice	Developed by the American Academy of Colleges of Nursing (AACN) and the Hartford Institute for Geriatric Nursing, NYU College of Nursing, this document contains Gerocompetency Statements relating to Baccalaureate Essentials I-IX, and competencies, content, and teaching strategies for curriculum development.	https://www.aacnnursing.org/Portals/42/AcademicNursing/CurriculumGuidelines/AACN-Gero-Competencies-2010.pdf
Consult Geri	A clinical website of the Hartford Institute for Geriatric Nursing with many interactive resources teaching students how to assess health of elders using evidence-base tools. The Try It Series provide screening tools and videos that students enjoy using in clinical education.	https://consultgeri.org/