EXPLORING THE PREPAREDNESS OF NURSES TO CARE FOR MEDICAL-SURGICAL
PATIENTS WITH A SECONDARY DIAGNOSIS OF MENTAL ILLNESS

by

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April, 2017

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The prevalence and impact of mental illness in the United States cannot be overlooked in acute medical settings where the complexity of care for medical-surgical patients increases with a secondary diagnosis of mental illness (MSMI). However, many nurses in acute care are not fully prepared to care for these patients. Research exploring nurses' preparedness to care for MSMI patients is scarce. The purpose of this study was to measure the components of nursing preparedness regarding MSMI patients and to explore what variables are more frequently associated with and most predictive of preparedness. Understanding this preparedness is the beginning of determining necessary changes for improved MSMI patient outcomes. The proposed preparedness model was guided by Bandura's social cognitive theory. It proposed nursing preparedness (nursing care self-efficacy and mental health care competence) to care for MSMI patients was influenced by personal, educational and professional variables. To determine the effect of the independent variables on preparedness, a descriptive correlational design was used with a convenience sample of registered nurses (N=260) in a large tertiary health care system who currently provided or had ever provided care for MSMI patients. Participants completed an on-line survey. The survey assessed participants for their level familiarity with mental illness (LOF), education, professional experiences with MSMI patients, self-reported nursing care self-efficacy (NCSES) and self-reported behavioral health care

competence (BHCC). Statistically significant higher mean competency scores related to BHCC subscales of assessment, practice and drug recommendation were observed in nurses who provided more frequent care for MSMI patients, received mentoring related to mental illness, and who participated in continuing education related to mental illness. Using simultaneous multiple regression the strongest predictors of preparedness were complex nursing care self-efficacy and mentoring.

Essential for the workforce of today and the future, this research lends direction to further research and filling the gap towards nursing preparedness for care of MSMI patients. The effect nurses have on MSMI patient outcomes can be altered with these findings as nursing leaders are informed of needed policy changes for empowerment of the nursing workforce and work environment with a preparedness for MSMI patients.

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PATIENTS WITH A SECONDARY DIAGNOSIS OF MENTAL ILLNESS

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by

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DEDICATION

This research is dedicated to all nurses who provide care for medical- surgical patients with a secondary diagnosis of mental illness and to all medical-surgical patients who have a secondary diagnosis of mental illness.   May nursing science assist with greater understanding of that which is misunderstood.

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The first mention is of family, my husband Michael, and our two daughters, Caroline and Elspeth. Your love, support and patience is unmeasurable. Thank you for encouraging this endeavor.

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CHAPTER 1: INTRODUCTION

The complexities in today's health care are numerous and continue to grow. In the United States, an estimated 18.6 percent of the adult population has a diagnosable mental disorder (NIMH, 2014). Mental disorders are among the most complex problems in medicine (Insel, 2014) yet many patients suffer from both physical and mental illnesses (van der Kluit & Goossens, 2011). Thus, a vital piece of the growing complexity of patient care is the increasing number of patients admitted to medical-surgical units with a secondary diagnosis of mental illness (MSMI). In 2009, 10 percent of patients in acute medical settings also had a secondary diagnosis of mental illness (HCUP, 2009). Consequently, the prevalence and impact of mental illness in the US adult population cannot be overlooked in the acute hospital setting.

The preparedness of nurses to competently care for the complex needs of patients with a secondary diagnosis of mental illness is paramount to positive outcomes for the patients' physical and mental health. However, though the numbers of these complex patients are increasing, few nurses on medical-surgical units are fully prepared to care for patient's mental health needs (MacNeela, Scott, Treacy, Hyde, & O'Mahoney, 2012, Zolnierek & Clingerman, 2012).

Providing quality care for the complex patients with a secondary diagnosis of mental illness can become a challenge if the nurse does not have adequate preparation. The patient's untreated symptoms of mental illness can become barriers to nurse and patient communication, impeding timely response and intervention for serious conditions (Farley-Tombs, 2012). Delays can lead to higher risks for adverse events (Daumit et al., 2006; Jones, Howard & Thornicroft, 2008; Lambert, 2011). Consequently, the care of MSMI patients often involve greater use of hospital resources, higher cost due to longer hospital stays (Bressi, Marcus & Solomon, 2006;

Kutney-Lee & Aiken, 2008; Wang & Mentes, 2009) and both the patient (Garey, 2013; Shattell, McAllister, Hogan & Thomas, 2006) and the nurse (McDonnell & Timmins, 2012; Schluter, Seaton & Chaboyer, 2011; Sharrock & Happell, 2006; Zolnierek & Clingerman, 2012) suffer additional distress.

Problem Statement

The nursing workforce needs nurses prepared to care for people with multiple conditions (Reinhard & Hassmiller, 2010). Nursing competencies for the effective provision of patients' care in various clinical settings and different situations is vital (IOM, 2010; Kane & Brackley, 2012; National Academies of Sciences, Engineering, and Medicine, 2016); Welsh, 2014). Medical-surgical patients' secondary diagnoses of mental illness are often disabling and could include depression, dementia, alcohol abuse, bipolar disorder, schizophrenia, or obsessive-compulsive disorder (Burgermeister, Kwasky & Groh, 2012). Persons with mental disorders tend to have poorer health in general. Appropriate nursing interventions can assist patients with the stress of acute and chronic illness to more effectively cope with related mental health risks. Failure to intervene appropriately can exacerbate illnesses (Kane & Brackley, 2012).

While there is much research that measures medical-surgical nurses' attitudes and stigma in regards to mental illness (van der Kluit, Goossens & Leeuw, 2013; MacNeela et al., 2012; Monks, Topping & Newell, 2013; Neville & Roan, 2013; Ouzouni & Nakakis, 2013; Reed & Fitzgerald, 2005; Ross & Goldner, 2009), there is little research exploring medical-surgical nurses' preparedness and perceived competence to care for these patients' complex physical and mental health needs. This research study provides a better understanding of the components of nurses' preparedness, i.e., self-efficacy and competence, to care for this population. This

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understanding will inform nurse leaders and educators as they prepare the workforce and work environment for quality patient care and optimal outcomes.

Background

Mental health is an integral and essential component of health. The World Health Organization estimates more than 450 million people suffer from mental disorders (2012). Exclusive of substance use disorders, such as drug or alcohol, it is estimated 18.6 percent of adults suffer from a diagnosable mental disorder in the United States (NIMH, 2014). Mental disorders and chronic diseases are highly interdependent and co-occur more commonly in vulnerable and marginalized groups such as poor populations, minority groups, and persons exposed to conflict, disasters or other emergencies (WHO, 2014).   Consequently, individuals with serious mental illness experience disproportionately higher morbidity and mortality rates than the general population (Howard & Gamble, 2011).

Although mental disorders such as schizophrenia, major depression, and bipolar disorder are risk factors for suicide, the majority of people with serious mental illness die from chronic diseases such as cancer, heart disease, stroke, pulmonary disease and diabetes (Gray, Hardy & Anderson, 2009; Insel, 2011; Olfson, Gerhard, Huang, Crystal & Stroup, 2015). Americans with mental illness die 14 to 32 years earlier than the general population. Their average life expectancy range is 49-60 years compared to the average life expectancy in the United States of 77.9 years (Gill, Murphy, Zechner, Swarbrick & Spagnolo, 2009).

The shortened life expectancy could be the result of impeded access to care or fewer healthcare options experienced by patients with mental illness. The detrimental side effects of some psychotropic medications (weight gain, hypertension, hyperlipidemia, hyperglycemia, insulin resistance and osteoporosis) combined with the physical and psychological

manifestations of mental illness, may delay the detection of medical complications and cause unnecessary deaths (Kutney-Lee & Aiken, 2008). Symptoms such as paranoia, isolation, anxiety, anhedonia, and psychosis may impair judgment and executive functioning making the navigation of or access to health care systems difficult (Welsh & McEnany, 2015). For many patients with mental illness, hospitalization is sought only when there are no other options or when illnesses are acute (Ahern & Kumar, 2013; Jones et al., 2008) resulting in increased lengths of hospitalization (Bressi et al., 2006; Kishi, Meller, Kathol & Swigart, 2004; Rutledge et al., 2013). Some patients attribute this delay to stigma they have experienced associated with a mental illness diagnosis, having encountered health care professionals who thought they were "faking" physical illness, were not taken seriously or were turned away when seeking health care (Chadwick, Street, McAndrew & Deacon, 2012). Therefore, the prevalence and impact of health diseases in adults with a secondary diagnosis of mental illness who are hospitalized in acute care settings is noteworthy.

Nurses make very important contributions to positive patient outcomes in medical-surgical settings. With more than 3.4 million registered nurses in the United States and 58% working in acute care settings (AACN, 2011), nurses are visibly the largest single component of hospital staff and primary providers of hospital patient care. Registered nurses' preparedness is requisite to managing the increasing complexities of patients admitted to acute care hospitals (Welsh, 2014). Mental health competencies insure that nurses are prepared to provide quality care for all patients with psychiatric disorders and patients at risk for these disorders. (Kane & Brackley, 2012).

The number of medical-surgical patients on acute in-patient units with a secondary diagnosis of mental illness is increasing, yet few nurses on medical-surgical type units are fully

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prepared to support the mental health needs of these patients (MacNeela et al., 2012; Zolnierek & Clingerman, 2012).   In qualitative studies exploring the experience of nurses caring for patients with mental disorders (including delirium and dementia) in medical-surgical settings, the need for knowledge, additional support and improved communication was clear (Arnold & Mitchell, 2008; Byers & France, 2008; Dahlke & Phinney, 2008; Monks et al., 2013; Moyle, Borbasi, Wallis, Olorenshaw & Gracia, 2011; Reed & Fitzgerald, 2005; Schluter et al., 2011; and Zolnierek & Clingerman, 2012).

When medical-surgical nurses are not prepared to manage patients with a secondary diagnosis of mental illness, then the care becomes challenging. Communication can be affected between nurse and patient influencing how information about current symptoms and prior medical conditions is conveyed and understood (Farley-Tombs, 2012). Adverse effects can result from improper use of restraints, overdosing of "prn" (as needed) antipsychotics or anxiolytics, and missed effects of psychotropic interactions with other medications (Daumit et al., 2006). When not prepared to manage a patient with a secondary diagnosis of mental illness, the medical-surgical nurse often perceives patient care processes as stressful, uncomfortable, unrewarding, and difficult (Zolnierek & Clingerman, 2012).

Nurse-patient communication, understanding, and trust is hindered by avoidance, stigmatizing, discrimination, and social distancing of patients with mental illness on medical-surgical units (Arnold & Mitchell, 2008; Brinn, 2000; Ketola & Stein, 2013; Liggins & Hatcher, 2005; MacNeela et al., 2012; Putman, 2008; Reed & Fitzgerald, 2005; Zolnierek, 2009). Health care professionals' poor attitude, inconsistent approaches, diagnostic overshadowing, insufficient skill and competence were cited as frequent problems when medical-surgical patients have a secondary diagnosis of mental illness (Chadwick et al., 2012).

Often patients with a psychiatric co-morbidity tend to be labeled as "difficult" by medical-surgical nurses (De Jonge et al., 2001; Zolnierek & Clingerman, 2012). Once the label is placed, the behavior of nurses and patients toward each other can become reflexive, with negative effects on nurse and patient communication and thus, negative effects towards the patients' positive physical and mental health outcomes (Farley-Toombs, 2012). Nursing care is delivered within the context of the nurse-patient relationship and the influence of the nurse-patient relationship affects patient outcomes (Zolnierek, 2014). As a relational phenomenon trust opens possibilities, and if responded to appropriately, trust sustains opening new possibilities (Saevi & Eikeland, 2012). However, even when a medical-surgical nurse has a positive attitude toward a patient with a secondary diagnosis of mental illness, the nurse may lack the preparedness to provide quality care (Sharrock & Happell, 2006).

These findings signified a lack of preparedness for many medical surgical nurses to provide care to patients admitted on medical-surgical units with a secondary diagnosis of mental illness. Understanding the components of nurses' preparedness is needed in order for this patient population to have positive physical and mental health outcomes. Nurse leaders are seeking best practices to prepare the nursing workforce and work environment for excellent patient care and quality outcomes.

Purpose Statement

Nurses working in medical-surgical or other non-psychiatric units may lack the preparatory components to provide quality care for patients with a secondary diagnosis of mental illness. The specific aim of this study was to evaluate the components of preparedness (nursing care self-efficacy and mental health care competence) of medical-surgical nurses regarding the care and management of patients with a secondary diagnosis of mental illness and explored what

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variables were more frequently associated with preparedness and more predictive of preparedness.

Research Questions

This study sought to answer the following research questions:

1. What are the perceived mental health care competencies of nursing staff who have managed, or may manage, hospitalized medical-surgical patients with a secondary diagnosis of mental illness (MSMI)?

2. What is the relationship between the nurses' personal characteristics (level of familiarity with mental illness), educational preparation, and professional experiences caring for MSMI patients and the nurses' self-efficacy and perceived mental health care competencies?

3. Which variable (personal, educational or professional) is the strongest predictor of nurses' self-efficacy and perceived mental health care competence to provide care for MSMI patients?

4. How well does a combination of variables (personal, education or professional) predict the levels of nurses' self-efficacy and perceived mental health care competence to provide care for MSMI patients?

Theoretical Approach

Bandura's social cognitive theory (SCT) reasons that the individual learns through reciprocal interaction among three factors: (1) personal factors include sub-dimensions of cognitive, affective, and biological events, (2) behavioral factors, and (3) environmental influences. These three factors result in a triadic reciprocity and influence self-regulatory

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mechanisms, one of which is self-efficacy. Self-efficacy refers to the level of a person's judgment of capability to successfully perform a behavior. It is the individual's belief in their capability to exercise some measure of control over their own functioning and their own environment (Bandura, 2001). Efforts can be directed at personal, environmental or behavioral factors for change (Pajares, 2002). Other regulatory factors are intentionality, forethought, and self-reactiveness.

Similarly, the idea of preparedness in nurses who care for medical-surgical patients with a secondary diagnosis of mental illness is related to self-efficacy. Nurses who feel confident with their capability to care for MSMI patients have gained that confidence through one of or a combination of those three influences (personal, environmental or behavioral). This assertion is developed into the proposed preparedness model.

The Latin verb *praeparare* means "to make ready beforehand". Preparedness is most often used in the literature for weather emergencies such as people taking disaster preparedness measures in advance of inclement weather (NOAA, 2014). Preparedness in nursing involves "readiness for practice" (Watt & Pascoe, 2013).   The proposed preparedness model posits a triad of influencing factors impacts a nurse's judgment of capability (self-efficacy) and perceived mental health care competence to "make ready beforehand", for their preparedness, to care for medical-surgical patients with a secondary diagnosis of mental illness.

The proposed preparedness model includes three factors that influence and are foundational for preparation of registered nurses to be competent with the care of patients with a secondary diagnosis of mental illness. These three factors are: (1) personal, (2) educational, and (3) professional. They will be discussed with the use of Bandura's Social Cognitive Theory for the proposed preparedness model.

Proposed Model of Preparedness
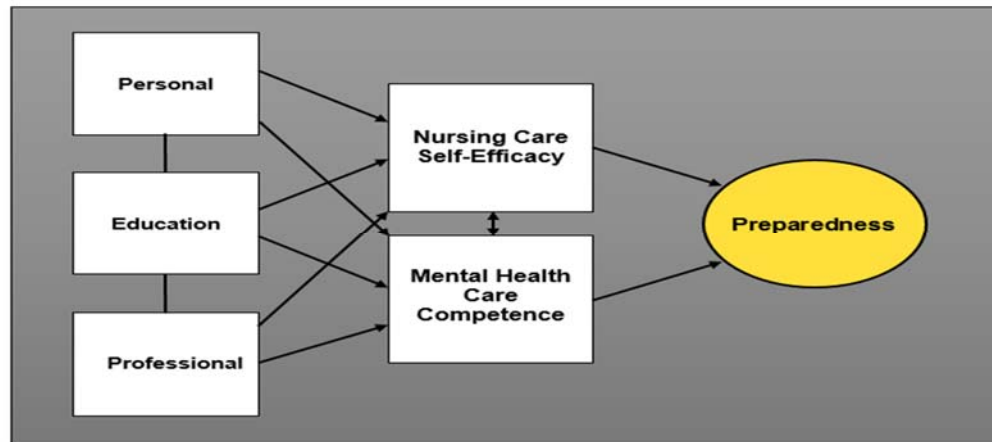
Use of Bandura's Social Cognitive Theory for Proposed Preparedness Model

Bandura's SCT is chosen for its' applicability to nursing education and to health care (Bandura, 2004). This theory sits in the philosophical world view at pragmatism, situating the human as an agent dynamically influenced by internal and external forces in a rapidly changing social world (Scott & Marshall, 2009).

From Bandura's social cognitive theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioral, and environmental influences that result in a triadic reciprocality (Pajares, 2002). These influences alter the level and strength of an individual's core features of human agency: intentionality, forethought, self-reactiveness and self-reflectiveness and operate through personal, proxy and collective modes (Bandura, 2006). Among the mechanisms of human agency, self-efficacy beliefs are foundational (Bandura, 2001) and lend choices for individual interactions and goal attainment by the individual's belief in what they can do or what can be done. Expectations of personal efficacy are derived from mastery,

vicarious experiences, verbal persuasion and physiological states (Bandura, 1977). Successes raise expectations while repeated failures will lower them.

According to the theory of social cognition, modeling is a chosen behavior, especially when the modeler has desired attributes and vicarious experiences are sought (Pajares, 2002). From these symbolic capabilities meanings are extracted. The proposed preparedness model would identify professional where nurses with self-efficacious behaviors will seek nurse mentoring or peer guidance and the mentees will model their mentors. High levels of competence are sought with mentoring and accordingly, the patient will have quality nursing care and optimal outcomes.

Self-efficacy perceptions are from performance attainment (Robb, 2012). Importantly, the direction of the selected performance attainment can promote competence. In the preparedness model, it is ideally proposed the medical-surgical nurse is better prepared to care for patients with mental illness when (1) personal had exposure to mental illness, (2) educational had experience with MSMI patients during nursing education, and (3) professional received mentoring in the working environment. Using the proposed preparedness model, the prepared nurse would thus score high in level of mental health competencies, facilitating quality patient care and desired patient outcomes.

Nurses with lesser levels of self-efficacy and thus preparedness will have lower levels of competence. The nurse with a lesser degree of self-efficacy will feel challenged more easily and need additional support to avert anxiety and achieve competence. The efforts of nurse leaders towards personal, educational or professional changes to boost preparedness would increase self-efficacy and the achievement of competence. Notably, the greatest personal self-efficacy is achieved when the nurse's psychological orientation is congruent with the structure of the social

system (Bandura, 2001). Choosing the appropriate environment is vital for further success, increased self-efficacy and greater competence.

The three factors that influence and foundationally contribute to the components of preparedness of registered nurses to care for patients with a secondary diagnosis of mental illness will be discussed. They are: (1) personal, (2) educational, and (3) professional.

Personal Factors

Personal is determined by the level of familiarity the registered nurse has with mental illness or those with mental illness. If there has been no exposure or little exposure to individuals with mental illness the nurse has a low level of familiarity. If the nurse has had exposure to a friend, or a relative with a mental illness, the level of familiarity is moderate. Accordingly, if the nurse lives, has lived with an individual who has mental illness, or if the nurse has a mental illness, there is a high level of familiarity.

Contact with a person with mental illness has the greatest effect on attitude towards the mentally ill (Corrigan, Kerr & Knudsen, 2005; Farley-Toombs, 2012). Nurses who have contact with those with mental illness in their own environment generally have attitudes that are more positive towards caring for patients with mental illness (Reed & Fitzgerald, 2005; van der Kluit & Goossens, 2011). Personal and social knowledge reflect a form of professional wisdom congruent with patient needs (MacNeela et al., 2012). Personal continually develops through ongoing experiences.

Educational Factors

Education is determined by whether or not the registered nurse was exposed to mental health content in the medical surgical setting during their nursing education, if psychiatric

content/clinicals were included in their nursing education, and the highest type of nursing degree awarded. Caring for patients in medical surgical courses with a secondary diagnosis of mental illness during their nursing education prepares the registered nurse for the complexities of care with this population (Christoffersen, Barron, Lynch, & Caroline, 2010; Roberts, Robinson Stewart & Smith, 2009). It is beneficial for nursing students to observe psychosocial skills being used, identified, and valued in the medical-surgical clinical area. Nurses with increased educational levels have attitudes that are more positive towards medical surgical patients with a secondary diagnosis of mental illness (Reed & Fitzgerald, 2005; van der Kluit & Goossens, 2011); however, some generic nursing programs do not offer psychiatric-mental health theory and clinical experience (Happell & Cutcliffe, 2011; Zolnierek, 2009).

Nursing education is obtained numerous ways. The numerous experiences and opportunities in nursing education prepare the registered nurse to communicate, listen, assess and intervene with appropriate actions for needed patient outcomes. It is very interactive. The personal and educational factors are affected with experiences life-long. They remain a reflection of their environment and can be influenced by many variables.

Professional Factors

Professional is determined by the number of years of nursing experience, certifications, continuing education, specific work experience and mentoring with respect to care of patients with a secondary diagnosis of mental illness. Support from peers and consultation-liaison services for management of patients with mental illness, though not always available, were satisfactorily reported by medical-surgical nurses (Harrison & Zohhadi, 2005; Zolnierek, 2009). The experience of the registered nurse in years of nursing and nurses with prior psychiatric

experience were more confident with caring for this population (Rutledge, Wickman, Drake, Winokur & Loucks, 2012).

The professional is guided and informed by personal and educational. Professional too has many variables and is a reflection of the environment. All of personal, educational and professional experiences regarding mental illness, whether positive or negative, are part of the determinant of the nurse and the caring the nurse can provide at the moment for patients with a secondary diagnosis of mental illness.

Preparedness

Personal, educational, and professional, all influence each other in a reciprocal triad which is impelled by Bandura's personal, behavioral and environmental factors. Nursing preparedness is determined by the reciprocal personal, educational, and professional. Nursing competencies for disaster preparedness have been developed and though research for nursing disaster preparedness is scant (Wilkinson & Matzo, 2015), findings indicated nurses with disaster preparedness confidence were more likely to have had prior experiences in natural disasters or shelters (Baack & Alfred, 2013).   The preparedness of medical surgical nurses to care for those with a secondary diagnosis of mental illness is affected by their personal, educational, and professional experiences. If there has been exposure, competence can be increased.

Numerous variables can affect the nurse's self-efficacy behaviorally, environmentally or personally, resulting in satisfaction or disappointment. The components of the proposed preparedness model: personal, educational, and professional, when satisfactorily attained, create degrees of self-efficacy and competence. Nurses with high self-efficacy and perceived competence provide optimal patient outcomes. All of these processes are continually emerging from interactions with the environment.

Definitions

The following definitions were used in this study:

Caring - ethical and moral ideal of nursing with interpersonal and humanistic qualities.

Education - nursing education inclusive of experience with caring for patients with secondary diagnosis of mental illness.

Mental health care competence - core knowledge for the nurse caring for persons with mental illness in a medical setting.

Mental illness - mental disorder, diagnosed or recognized.

Personal - level of familiarity with mental illness.

Preparedness - a concept composed of two parts: self-efficacy and mental health care competence, lends to the ability to successfully practice nursing care in a nurse-patient relationship. Personal experience, nursing education and professional experiences lend to self-efficacy and mental health care competence.

Professional - interactions with registered nurse(s) – mentor/mentoring – education – experience.

Self-efficacy - person's judgment of capability to successfully perform a behavior.

Conclusion

The purpose of this study was to evaluate the preparedness components of registered nurses to provide care for patients on medical-surgical units with a secondary diagnosis of mental illness. Psychiatric disorders affect an estimated 18.6% of the United States adult population (NIMH, 2014) and at least 10% of patients in acute medical settings (HCUP, 2009) as those with mental illness experience disproportionate morbidity and mortality rates, up to 3.5 times greater (Olfson et al., 2015), when compared to the general population. These vulnerable

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patients need medical-surgical nurses to care for their complexities when they are admitted to acute medical units. More effective patient outcomes can be realized when registered nurses are prepared for the care and successful management of medical-surgical patients with a secondary diagnosis of mental illness.

Utilizing principles from Bandura's SCT, this researcher sought to understand how the nurses' personal, educational and professional triad influences their preparation to provide care for this given population. Findings from this research will inform nurse leaders and educators where, in the triad, preparation is most needed for increased nursing competence. Importantly, these findings can inform nurse leaders of needed policy changes that can empower the nursing work force and work environment with a preparedness for MSMI patients that will increase positive patient outcomes while decreasing illness and the costs of hospitalization. Nurses' competence to manage the care of patients with these complex needs is essential for the workforce of today and the future.

CHAPTER 2: REVIEW OF THE LITERATURE

Nurses working in medical-surgical or other non-psychiatric units may lack the preparatory components to provide quality care for medical-surgical patients with a secondary diagnosis of mental illness (MSMI). The purpose of this research was to examine the components of preparedness of medical-surgical nurses regarding the care and management of MSMI patients and to explore what variables are more frequently associated with preparedness and more predictive of preparedness. This chapter discusses the components of nursing preparedness for MSMI patients through a search, review, and examination of current literature.

Beginning is an overview that includes the prevalence of MSMI patients and the significance for nurse preparedness to care for this population safely and effectively. Then this literature review includes an examination of the concepts from the research questions posed for this study. These concepts are the variables foundational to the components of preparedness; personal, educational, and professional experiences regarding the care of MSMI patients, and the two conceptual components of nursing preparedness; nursing care self-efficacy and mental health care competence.

Overview of the Literature

Mental health is an integral and essential component of health. The World Health Organization (WHO, 2012) estimated that more than 450 million people suffer from mental disorders. Excluding substance use disorders, such as drug or alcohol abuse, an estimated 18.6 percent of adults suffer from a diagnosable mental disorder in the United States (NIMH, 2014). Mental disorders, among the most complex in medicine (Insel, 2014), and chronic medical conditions are highly interdependent and frequently co-occur (Flagg, Cox, McDowell, Mwose & Buelow, 2010; van der Kluit & Goossens, 2011). This co-occurrence is more common in

vulnerable and marginalized groups such as poor populations, minority groups, and persons exposed to conflict, disasters or other emergencies (WHO, 2014). Consequently, due to socio-economic, health system and clinical factors, individuals with mental illness and chronic medical conditions experience disproportionately higher morbidity and mortality rates in comparison with the general population (Druss, Zhao, Von Esenwein, Morrato & Marcus, 2011; Howard & Gamble, 2011).

Although mental disorders such as schizophrenia, major depression, and bipolar disorder are risk factors for suicide, the majority of people with mental illness die from chronic diseases such as cancer, heart disease, stroke, pulmonary disease and diabetes (Insel, 2011; Gray et al., 2009). The most common causes of death for persons with mental disorders are cardiovascular disease, cancer, and pulmonary disease (Druss et al., 2011). Due to the high co-morbidity of medical conditions Americans with mental illness die 14 to 32 years earlier than the general population with an average life expectancy range 17.9 to 28.9 years less than the average United States life expectancy of 77.9 years (Gill, Murphy, Zechner, Swarbrick & Spagnolo, 2009; Insel, 2011). For many patients with mental illness, hospitalization is sought only when there are no other options or when illnesses are acute, resulting in increased lengths of hospitalization (Ahern & Kumar, 2013; Bressi et al., 2006; Jones et al.,2008; Kishi et al., 2004; Rutledge et al., 2013). Therefore, the prevalence and impact of medical diseases in adults with a secondary diagnosis of mental illness who are hospitalized in acute care settings is noteworthy.

Nurses contribute to patient outcomes in medical-surgical settings. With more than 3.1 million registered nurses in the United States and 58% working in acute care settings, nurses are visibly the largest single component of hospital staff and primary providers of hospital patient care (AACN, 2011). The preparation of registered nurses to manage the increasing complexities

of patients admitted to acute care hospitals is requisite of positive patient outcomes. Essential in this preparation are mental health competencies insuring medical surgical nurses can provide quality care for patients with psychiatric disorders and patients at risk for these disorders (Fick, Hodo, Lawrence, & Inouye, 2007; Flagg et al., 2010; Kane & Brackley, 2012; Rutledge et al., 2012).

It is evident the number of patients on acute medical units with a secondary diagnosis of mental illness is increasing, and nurses are at the forefront of providing their care, yet few nurses on medical surgical units are fully prepared to support the mental health needs of these patients (Baker, Taggart, Nivens & Tillman, 2015; Fick et al., 2007; Flagg et al., 2010; MacNeela et al., 2012; Rice, Bennett, Clesi & Linville, 2014; Schofield, Tolson & Fleming, 2012; Zolnierek & Clingerman, 2012). Nursing care can become challenging when medical-surgical nurses have not been prepared to manage patients with a secondary diagnosis of mental illness.

Untreated or undertreated symptoms of mental illness such as anxiety, agitation, cognitive distortions or social withdrawal can affect communication between nurse and patient influencing how information about current medical symptoms and prior medical conditions is conveyed and understood.   Without effective nurse/patient communication patients may withhold health information. The nurse may mistakenly dismiss symptoms of an acute condition or aggressively address a somatic complaint. These barriers in communication can impede timely assessments, responses and interventions (Farley-Tombs, 2012; Ford, 2011; Schofield et al., 2012; Sharrock & Happell, 2006).

Challenges can result when nurses perceive the routines of care for MSMI patients as stressful, uncomfortable, unrewarding, and difficult (Brunero & Lamont, 2010; Fessey, 2007; Ford, 2011; Zolnierek & Clingerman, 2012). With these types of negative experiences, the nurse

often concentrates attention on the areas of care that attend to basic patient hygiene or necessary medication administration, planning for minimum interaction, detaching and avoiding communication (Reed & Fitzgerald, 2005).

Patient delays with management of prior medical conditions lead to higher risks for adverse events. The complications of untreated medical illnesses combined with mental illness increase patient acuity. Often nurses prioritize the acute physical and medical needs leaving mental health care last or only upon escalation of behavior (Jones et al., 2008; Lambert, 2011; Meako, Thompson & Cochrane, 2011). Improper use of restraints, overdosing of "prn" antipsychotics or anxiolytics, and missed side effects of psychotropic interactions with other medications can have consequential adverse effects (Cowdell, 2010; Daumit et al., 2006; Kutney-Lee & Aiken, 2008; Meako et al., 2011; Rice et al., 2014; Yevchak et al., 2012).

Thus, the care of patients with a secondary diagnosis of mental illness on medical-surgical units often involve greater use of hospital resources and higher cost due to longer hospital stays (Bressi et al., 2006; Kutney-Lee & Aiken, 2008; Meako et al., 2011; Rochefort, Ward, Ritchie, Girard and Tamblyn, 2012; Wang & Mentes, 2009). Often, both the patient and the nurse suffer additional distress (Garey, 2013; McDonnell & Timmins, 2012; Schluter et al., 2011; Schofield et al., 2012; Sharrock & Happell, 2006; Shattell et al., 2006; Zolnierek & Clingerman, 2012).

Limited research has been done exploring nurse attitudes, perceptions and views of MSMI patients. Research regarding attitudes of nurses towards MSMI patients has found the most negative attitudes were concerning dangerousness and unpredictability with MSMI patients diagnosed with drug addiction, alcohol addiction and schizophrenia (Bjorkman, Angelman & Jonsson, 2008). Nurses' therapeutic attitude towards MSMI patients who use illicit drugs was

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most positively affected by role support for help to formulate a response to personal and clinical care (Ford, Bammer & Becker, 2008) and feelings of competence (Van der Kluit et al., 2013). MacNeela's et al. (2012) study found stereotypical attitudes particularly resistant to disconfirmation. Some studies exploring nurses' attitudes regarding suicide in hospitalized medical-surgical patients found positive attitudes (Neville & Roan, 2013) and some found unfavorable attitudes (Ouzouni & Nakakis, 2013). Reed and Fitzgerald (2005) found mixed attitudes (50% indicated clear dislike but 50% indicated positive) toward caring for MSMI patients.

Research regarding nurses' perceptions of MSMI patients includes stigma related to MSMI patients, in particular older patients (Arnold & Mitchell, 2008). Lethoba, Netswera and Rankumise's (2006) study of professional nurse perceptions of MSMI patients found the majority had negative and stereotypical perceptions of MSMI patients. Neville and Roan's (2013) study also revealed negative perceptions toward MSMI patients. Similarly, in Monks, Topping and Newell's (2013) study the nurses' views of MSMI patients led to distance and escalation of distrust between the nurses and patients.

Despite research exploring nurses' attitudes, perceptions and views of MSMI patients, there is a paucity of research and little is known regarding nurses' experiences or their preparation to care for this significant population. This review of the literature examined research conducted in regards to the nurse's personal, educational and professional experiences that concern the care of MSMI patients and the components of nursing preparedness – nursing care self-efficacy and mental health care competence.

Concepts in the Literature

The concepts from the proposed preparedness model guided this review of the literature. Nursing research inclusive of the foundational concept variables personal, educational and professional experiences will be discussed as well as the research that included the two conceptual components of preparedness – nursing care self-efficacy and competence. In the review sixteen significant related factors were found that align within one or more of the concepts (see Appendix B for Concepts with Related Factors, Appendix C for Factors within Concepts, Appendix D for Authors with Combined Factors and Methods). These factors are discussed in their related concepts.

This literature review covered a 10-year span for a total of 15 research articles (see Appendix E for Search Method and Appendix F for Matrix of Research Studies Considering the Preparation and Experiences of Nurses Caring for Medical-Surgical Patients with a Secondary Diagnosis of Mental Illness).

Of the research found, delirium was the most often mentioned mental illness, and the neurocognitive disorder of dementia, while other mental illnesses frequently mentioned were psychotic conditions, major affective disorders, bipolar disorders, and substance-related disorders.

Foundational Concepts

Personal.

Personal in this review is understood as the level of familiarity a nurse has had with mental illness. Knowledge gained personally and socially reflects in some form on professional wisdom. New experiences are ongoing and affect the personal continually.

Cowdell's (2010) ethnographic approach found the nurses' approach to caring for MSMI patients was based on the nurses' personal experiences rather than knowledge or education. Several suggested they delivered care in the way they would like to be cared for however, their care focused largely on ensuring that the patients' physical needs were met.

Fessey (2007), Cowdell (2010) and Schofield, Tolson and Fleming (2012) used theoretical frameworks of 'person centered care' and malignant social psychology' to explore nurses' caring of patients with MSMI. Fessey's (2007) focused on nurses caring for patients who present with neurocognitive disorders (NCD). A NCD increases the risk of delirium.

Malignant social psychology (MSP) was developed by Kitwood in 1977 (Fessey, 2007) and includes negative communications that are undermining to an individual, such as ignoring, disempowerment, infantilization and stigmatization. Negative communications can further debilitate a patient with a NCD. This negative communication is 'old culture' communication that has been learned and used to communicate with individuals who have dementia. This negative communication is rarely deliberately delivered as the 'old culture' believed they were communicating in an appropriate and kind manner.

Fessey (2007) suggested person-centered care for patients with NCD. This 'new culture' of care views the patient as unique with respect of the patient's past and a focus on abilities rather than disabilities. Fessey's (2007) study demonstrated a gap in nurses' knowledge showing that nurses did not understand person-centered care completely or showed awareness of person-centered care as a specific method of care for people with a NCD.

Within the philosophical framework of Schofield's et al. (2012) study, the concept of person-centered care (PCA), per the tenets of social constructionism, forms just another version of social reality. This was discussed in the 'constructions of patients'. Patients were constructed

by nurses during times of altered behaviors as sources of disturbance and annoyance with devious behaviors, with patient behavior overshadowing the likelihood of serious illness. These constructions were distinctly different from constructions of patients once altered behaviors had subsided. Then the construction of patients was as unique individuals who were acutely ill and vulnerable, requiring individualized care characteristic of PCA discourse.

Schofield's et al. (2012) study analysis noted constructed ideas and systems of knowledge and beliefs that were communicated through the nurses' use of language. Linguistically, nurses constructed patients with delirium as overly physically active and unpredictable. The nurses were preoccupied with the need to be able to continuously observe patients with delirium and with the need to contain these patients. This communication reflects the nurses' practices and their communication with MSMI patients.

Cowdell's (2010) qualitative study also included MSP in the discussion of findings. It references the dis-empowerment of a medical-surgical patient with NCD in a single task which then has the cumulative effect of the patient withdrawing, communicating less, becoming more passive, retaining no desire to self-care and increasing the patient's risk of delirium.

One of the themes in Cowdell's (2010) study related to nursing staff's, philosophies for caring for people with NCD, addresses cultural norms that include a tendency to label patients. Another theme, the value that staff attach to their work, suggested caring for people with a NCD in an acute hospital is viewed by others, and perhaps by the nurses themselves, as relatively unskilled and not prestigious. Cowdell (2010) discussed the longstanding lack of political interest in the aged, the low status afforded to those who are aged, and the un-attractive career option gerontological nursing is often given.

Education.

Education in the preparedness model is a foundational concept that is inclusive of experience with caring for MSMI patients during nursing education. The research indicated a lack of nursing education that provides knowledge for the assessment of MSMI patients, early identification of illnesses, or necessary skills for appropriate and timely interventions. Nursing education for the development of competence and confidence to care for MSMI patients is a foundational concept.

Fick, Hodo, Lawrence and Inouye (2007), Fessey (2007) and Flagg's et al. (2010) research emphasized the need for nursing educational preparation for the assessment of mental illnesses in medical-surgical patients, in particular the disorder of delirium. Their studies indicated knowledge deficits from a lack of or limited preparation for assessment, identification and intervention with early onset of delirium and the sequelae of delirium.

Fick's et al. (2007) study assessed nurses' knowledge regarding the disorder of delirium superimposed on the neurocognitive disorder of dementia (DSD). The findings indicated a lack of preparation to assess and appropriately provide care for patients with delirium. Nurses were most likely to identify dementia (83%) and hyperactive delirium (52%) but much less likely to recognize hypoactive DSD (21%) or hypoactive delirium (41%). Notably, 21% of the nurses incorrectly attributed dementia and hypoactive DSD to normal aging. The knowledge deficit for recognition of delirium symptoms and preparation for the care of medical surgical patients with delirium is crucial as early detection of delirium is key for effective management of patient care. Inappropriate interventions such as medicating the patient or behavior without recognizing the delirium can intensify the problem or further delay its recognition.

Fessey's (2007) study suggested that although there is limited preparation, more is needed. Eighty-five percent of Fessey's (2007) 49 participants indicated they were only partly prepared with needed skills and knowledge for the care of medical-surgical patients with mental illness.

Flagg's et al. (2010) participants (n = 61) were only modestly confident they could identify, manage, and explain delirium to patients and their families. Most participants (more than 90%) could identify the hyperactive symptoms of delirium (confusion, wandering, verbal or physical aggression) but fewer (less than 77%) recognized signs indicative of a hypoactive presentation of delirium (lethargy, drowsiness, inattention). One of the conclusions from Flagg's et al. (2010) study was that as nurses are not confident with the knowledge to recognize the negative sequelae of delirium, nurses do not prioritize the need for routine delirium assessments and preventive measures.

Meako, Thompson, and Cochrane (2011), Baker, Taggart, Nivens, and Tillman (2015) and Yevchak's et al. (2012) reported that nurses' lack of preparation and education negatively impacted their ability to recognize and care for patients experiencing delirium. Meako et al. (2011) used a pretest-posttest study design to evaluate nurses' (n = 23) preparation to care for older hospitalized patients with delirium. The knowledge assessment confirmed a lack of preparation to recognize delirium or the risk factors associated with delirium in older adults including medications that contribute to delirium.

Likewise, a significant knowledge deficit regarding delirium (57.45%) and its' risk factors (78.38%) was reported in Baker's et al. (2015) study of 60 nurses on medical-surgical, orthopedic, oncology, progressive care, neuro-intensive care and cardiac care units. Seventy-five percent of their study's 60 participants reported having received no prior delirium-related

education. The participants (16) in Yevchak's et al. (2012) pilot study viewed delirium as an age-related change or a normal consequence of undergoing surgery. They did not accurately identify or assess hospitalized older adults with delirium nor did they understand the need for immediate action when delirium was identified.

Zolnierek and Clingerman's (2012) case study characterized a nurse's experiences of caring for MSMI patients within categories of tension, discomfort, lack of professional satisfaction and difficult. In the category of discomfort 'being unprepared' included lacking education and expertise to effectively provide care for the MSMI patient.

Sharrock and Happell's (2006) study indicated 3 of the 4 general nurses interviewed reported that the quantity and quality of exposure to mental health content in their undergraduate program did not prepare them to care for patients with mental illness in any setting, however, their mental health clinical placements increased their awareness and understanding of mental illness as it provided a life context for them to connect theory with practice.

Ford's (2011) study identified nurses' lack of educational adequacy to care for MSMI patients as a barrier, as it impedes the nurses' care of MSMI patients. This study further emphasized preparation of nurses for the vital role they have with medical-surgical patients who have a secondary diagnosis of substance abuse. Without adequate nursing preparation for medical surgical patients who abuse substances there is a risk nurses will progressively disengage from this cohort of patients who are already subject to discrimination within health care. These patients require nursing care in medical surgical settings for a diverse range of conditions (infectious complications of drug use, injury and trauma, and peri-natal and obstetric care for women).

Ford (2011) recommended preparing nurses with the use of a harm minimization framework of practice that focuses on reducing the consequences of substance abuse in the event that the abuse continues. In this harm minimization paradigm, acceptance of the patient's circumstances is paramount, knowing a 'quick fix' is not possible and placing focus of care on the patient's current health needs.

Kutney-Lee and Aiken's (2008) cross-sectional study showed a positive correlation with nurses' higher education and decreased hospital length of stay with surgical patients who have a secondary diagnosis of mental illness. The detrimental effect of having a mental illness on length of hospital stay was mitigated almost completely in hospitals with high proportions of baccalaureate-prepared nurses.

Bordieu's Theory of Practice was discussed in Cowdell's (2010) study. It explains three key concepts - practice, field, and habitus, to illuminate why the care observed was occurring. Practice is social interaction of everyday life, making it difficult to see social reality differently. Field is a social milieu in which there is struggle to secure four types of resources: economic, social, cultural and symbolic. In field, the nursing staff are at an advantage in every instance to patients. Staff had cultural capital but symbolic capital was limited for staff and patients. Habitus, a set of practices shared within a group within the field, provides guidance on everyday behavior and is often unquestioned.

Cowdell's (2010) data suggested a well- defined habitus that represented a cultural norm as few nurses had been educationally prepared for care of patients with delirium or a NCD but had developed ways of working with those with these secondary diagnoses. This implied that traditional knowledge-based education would not improve patient care. For short term system change in this embedded habitus, the nursing staff must be engaged in both cognitive and

affective domains. This is described as "integration of the learning of the head with learning of the heart" (Cowell, 2010, p.90) with examination of their own beliefs, behaviors, and impact for whom they provide care. For long term change reform is needed in societal and organizational attitudes towards the aged.

Schofield et al. (2012) called for policy makers to recognize the potentially horrid patient experiences and outcomes of delirium when not recognized and treated. With this recognition, it is necessary they prioritize preventive and supportive care with nursing education and strong implementation strategies to produce alternative discourses within care.

Professional experiences.

Professional experiences are a foundational concept in the preparedness model. Professional experiences encompass years of experience, work experiences, continuing education and the mentoring received for the care of MSMI patients. Nurses often provide care for MSMI patients though research indicated patients' mental illnesses are often un-recognized by nurses in the medical-surgical settings and consequently are not treated in a timely manner. Nurses with greater years of nursing experience have the expertise to more accurately recognize patient needs and manage patient care.

Seventy-nine percent of Flagg's et al. (2010) participants ($n = 37$) felt delirium was a common problem with their patient population and had experienced caring for MSMI patients. Flagg et al. (2010) addressed this as a concern as nearly a quarter of the respondents did not believe delirium to be a common problem in their patient population which could leave patients with symptoms of delirium unrecognized and untreated.

Baker et al. (2015) reported 85% of study participants had experience with providing care for MSMI patients with delirium, however there was a significant difference with the number of

correct knowledge of delirium questions ($p = 0.028$). Baker et al. (2015) emphasized caring for patients with delirium was experienced often but still under-recognized and under-treated.

Meako's et al. (2011) study indicated nurses with greater years of nursing experience (10+ years) could more accurately recognize the onset and duration of delirium (91%) and had more accurate medication knowledge (82%) when compared to nurses with experience of 0-2 years and 2-10 years.

The research of nurse experiences providing care for MSMI indicated a number of major challenges. These challenges include time for patient care, patient safety, adequate staffing to provide optimal patient care and the nurses' workload. Time is of the essence. Fessey (2007), Yevchak et al. (2012), Cowdell (2010), Rice, Bennett, Clesi, and Linville (2014) and Schofield et al. (2012) all addressed the theme of time, staffing, patient safety and workload. There is concern that with the demanding patient workload that adequate care is not provided. The need to prioritize care to meet so many patient demands is overwhelming. Finding a balance of time and energy to manage each of their patient's needs while providing the best and safest care possible is challenging.

With patient safety as the number one priority, more precautions are needed to provide safety and comfort for this complex population. "Our duty is to protect" and "finding a balance" were two themes that encompassed nurse experiences with care of the MSMI patient as well as other patients in the nurse's care (Yevchak et al., 2012, p.155). With increased patient vigilance, it was often reported nurses could only do the necessary work that needed to be performed (Yevchak et al., 2012) . Only the patient's basic physical needs then become the nurses' main concern and so the care provided is focused largely to ensure the patients' basic physical needs

were met. Nursing care of MSMI patients in Schofield's et al. (2012) research was constructed as 'care as surveillance' and 'care as containment'.

Care as surveillance and care as containment is frequently due to inadequate staffing levels. The exhaustion and stress nurses suffered from the scarcity of nursing staff were repeatedly cited (Fessey, 2007; Sharrock & Happell, 2006; Brunero & Lamont, 2010; Cowdell, 2010; Ford, 2011; Schofield et al., 2012; Yevchak et al., 2012; Zolnierek & Clingerman, 2012; Rice, et al., 2014). Participants felt that having a patient with delirium, with increased physical and cognitive functioning impairments, required more assistance to perform activities of daily living and took time away from caring for their other patients. Time was identified as a barrier to implementing non-pharmacological strategies for patients with a secondary diagnosis of delirium (Yevchak et al., 2012).

Kutney-Lee and Aiken's (2008) study importantly emphasized that adequate staffing with lower patient-to-nurse ratios lowered the mortality rates of medical-surgical patients' with mental illness. Sharrock and Happell's (2006) participants question how to prioritize caring for the medical-surgical patients with mental illness in regards to time – to care first for the mental health or the physical health? In this study, repeated references were made to the nurses' workload, patient turnover, work organization and orientation towards 'just meeting the patients' physical needs'.   From the experiences of participants in Sharrock and Happell's (2006) study, it was considered important to have a sense of being able to share the patient load with colleagues and having someone to turn to for advice, direction, help, validation and information.

Ford's (2011) study participants reported the time-intensive nature of care requirements for MSMI patients who use illicit drugs.   The nurses voiced frustration with the need for higher staffing levels as these patients' high care needs require a disproportionate amount of time,

limiting their capacity to adequately provide care for patients of much higher acuity. The inability to achieve tasks for other patients due to time needed for surveillance is difficult. Many reported the workload as being "endured" with much tension, discomfort and lack of professional satisfaction.

Tension, distress and stress were nurse experiences repeatedly cited with the care of MSMI patients. Fessey (2007) reported on nurses' experiences with patients as they sought to maintain effective care standards for medical and physical care needs for patients when they present with challenging behaviors such as resisting help. Fostering the patients' independence, choice, and dignity while also managing their needs as well as the physical and mental health needs of other patients presented a battle.

Likewise, Brunero and Lamont's (2010) study participants reported their nursing experiences as stressful when they struggled to manage the care of MSMI patients who displayed difficult to manage behaviors. Zolnierek and Clingerman's (2012) study reported a pervasive tension that influenced all aspects of care in regards to the patients' safety as it was felt the nurse needed to "keep watch" and "keep your eyes on them" to minimize patient risk. Like Ford's (2011) participants, concern for safety includes the MSMI patient's safety, the safety of other patients and the added concern for the nurse's personal safety, contributing to this tension.

Evidence of nurses' experiencing distress was discussed in Schofield's et al. (2012) research as the metaphor "it's a nightmare" is used to evoke the strength of feelings the nurse endured when caring for a patient with delirium. Participants in Yevchak's et al. (2012) study were distressed with the difficulties of delivering high-quality nursing care to a complex mix of patients. The nurse's experiences were described with clusters of tension, discomfort, lack of professional satisfaction, and difficulty with excessive care demands in Zolnierek and

Clingerman's (2012) study. Participants in Ford's (2011) study described the distress of an emotionally challenging care environment,that is potentially unsafe, where the nurses struggle to provide care to angry patients and experience frustration.

The research of Sharrock and Happell (2006), Ford (2011) and Zolnierek and Clingerman, (2012) explored nursing experiences that had a negative impact on the nurse and their continuing practice. This research addressed interpersonal conflicts experienced with the care of MSMI patients.

Ford's (2011) study with nurse participants who have cared for MSMI patients who use illicit drugs identified nurses' reported experiences in the specific theme of 'interpersonal challenges in the nursing role'. Sub-themes of these interpersonal challenges were experiences of violence, manipulation and irresponsibility that impeded care of these patients. These participants mention communication with MSMI patients who use illicit drugs as very difficult. They expressed concern about a therapeutic relationship when they lacked trust with their patients. Nurses expressed their lack of trust with descriptors such as "dishonest, they lie, deceit, cunning, lack of integrity and sneaky" (Ford, 2011, p. 245). Frustrated with the patient's deception, related to drug seeking and on-going drug use, nurses find it difficult to continue to make decisions about safe patient treatment and may use a confrontational style of communication with MSMI patients.

Some participants in Sharrock and Happell's (2006) study described low levels of confidence with caring for MSMI patients. The researchers determined that this lack of confidence could create anxiety, which further impeded skill development, and could result in a lack of success, further compounding feelings of uncertainty. Several of the participant's experiences were with MSMI patients who had multiple, complex problems of an enduring

nature and displayed a range of disturbances in mental functioning.   Their patients' secondary

diagnoses were either pre-existing or developed during the hospitalization. The participants had

some information of the secondary diagnoses however they used descriptions to depict patients'

behaviors and emotions. The nurses experienced the care demands of these MSMI patients with

complex needs were too often beyond their expertise.

Similarly, Zolnierek and Clingerman (2012) described from the participant's experience,

the phenomenon of "moral distress" in which an individual identifies an ethically appropriate

action to take but is not able to take that action. They expounded as moral distress lingers

"moral residue" is created (the wound that remains when one's values have been compromised).

As moral residue is cumulative it can lead to a sense of futility and burnout. Patients associated

with morally distressing events may be experienced by the nurse as "difficult".

Conceptual Components of Preparedness

Nursing care self-efficacy.

Nursing care self-efficacy is the nurse's judgment of their capability to successfully

perform nursing care. Nursing self-care efficacy is a component of preparedness in the proposed

preparedness model. In the preparedness model the three variable concepts personal, education,

and professional, create varying degrees of nursing-care self-efficacy. Nurses with competence

and confidence to provide care for the diversity of medical-surgical patients were positively

efficacious regarding their nursing care.   The research indicated some nurses do not judge

themselves capable of optimal nursing care for MSMI patients while others recognize the

necessity of caring for both the patient's physical and mental illnesses yet find the acute care

milieu foci were tasks to meet the patient's physical needs.

Brunero and Lamont (2010) identified the need to prepare nurses with the knowledge, skills and confidence to manage medical-surgical patients with mental illness (MSMI), whom the nurses had termed "difficult patients". The nurses had no preparation for "difficult" patients who displayed demandingness, aggression, manipulation and non-adherence with nursing advice. Significant increases in knowledge, skill, confidence and reduced nurse stress was shown using the learning methodology of scenario based learning via e-learning.

Yevchak et al. (2012) found that nurses were caring for both the physical and mental health needs of their patients. The study emphasized an understanding of the connection between physical health and mental health must become increasingly important in acute hospital settings to appropriately allow nursing staff to focus on physical and mental well-being while preventing adverse outcomes.

Sharrock and Happell (2006) reported the nurses' desire to move to a more considered approach to care for their patients by acknowledging their role in their patient's physical and mental health problems and embracing the concept of holistic care. The recognition to care for the mind and body in an integrated manner was important to the participants but they were faced with a work environment that focused on physical health and tasks.

Mental health care competency.

Mental health care competency comprises the core mental health knowledge for nurses caring for MSMI patients. These competencies are a component of preparedness in the proposed preparedness model. The concepts of personal, education, professional and nursing self-care efficacy have varying influences on mental health care competencies especially in regards to nursing assessment and intervention. Indicated in the research was the need for mental health

care competencies to prepare the nurse for MSMI patient care. Competencies for effective nurse-patient as well as inter-professional communication were emphasized.

Rutledge, Wickman, Drake, Winokur and Loucks (2012) used their Behavioral Health Care Competency questionnaire to have medical-surgical nurses evaluate their preparation to manage patients with mental illness. On the questionnaire nurses (*n* = 844) selected their level of competence in patient assessment, practice/intervention, recommendation of psychotropics and use of resources when caring for MSMI patients. Nurses scored moderately strongly with their preparation to assess MSMI patients and to assess resources for assistance with the care of MSMI patients. However, the nurses felt less strongly they were prepared to deliver care competently to MSMI patients or recommend psychotropic medications to providers for MSMI patients.

Fick's et al. (2007) study used vignettes to question participants regarding the choice of appropriate interventions to care for patients with delirium in acute care. The responses indicated that though the nurses did not recognize the symptoms of delirium upon assessment, they did recognize there was a change in the patient's status that required further investigation with the appropriate intervention to notify the provider of interventions such as assessment of glucose level or vital signs.

Fessey's (2007) study suggested that while there is some limited preparation, more is needed. Eighty-five percent of Fessey's (2007) 49 participants indicated they were only partly prepared with needed skills and knowledge for the care of medical-surgical patients with mental illness.

Cowdell (2010) reported interventions chosen to care for MSMI patients followed certain organizational standards rather than individual patient needs. Similarly, Fessey's (2007) study

indicated participant selection of interventions to care for MSMI   patients based upon time and staffing availability.   Flagg's et al. (2010) participants had the ability to assess patients for delirium and select appropriate interventions with only modest confidence. Yevchak's et al. (2012) data analysis reported the participants felt that "confusion is normal" and was not viewed as needing further assessment or intervention. The participants did mention the use of non-pharmacological interventions to modify the environment for control of patient stimulation as well as diversional, cognitive and physical activity.

Rice et al. (2014) reported nurses using intuitive assessment when they realized something did not look right or what they saw didn't make any sense to them. One of Ford's (2011) participants reported assessment with MSMI patients as difficult if she could not "see" a physical reason for the patient's distress.

Rutledge's et al. (2012) questionnaire measured degrees of competence with assessment and interventions for medical-surgical nurses when caring for MSMI patients. Using a scale of 1-5 with 5 indicating strongly agree, the nurses' average score for assessment was 3.64, indicating moderately strong competence to accurately assess MSMI patients.   The average score for intervention was 2.61, indicating moderate competency for choosing appropriate interventions for the care of MSMI patients.

Fessey (2007), Cowdell, 2010, Yevchak et al. (2012), Rice et al. (2014) and Ford (2011) emphasized the importance of effective communication for mental health care competence. The need for increased communication, additional education and support for nurses who care for medical surgical patients with delirium was emphasized from Fessey's (2007) research. Cowdell (2010) said that the communication between the nursing staff and patients have major impacts on patients' experiences. Detrimental effects can occur if patients and their abilities are

ignored. Observed in Cowdell's (2010) study was that a 'deeper level of communication' when caring for MSMI patients was rare, though witnessed occasionally, as care was largely focused on meeting physical needs

Yevchak's et al. (2012) study concluded that providing nurses with objective cognitive and delirium assessment tools can enhance communication among interdisciplinary healthcare team members and provide the best evidence-based care for patients with delirium. Rice et al. (2014) reported that nurses communicate as a team and rely on each other when caring for patients with a secondary diagnosis of delirium.

Ford (2011) suggested a 'person centered' ethos of motivational interviewing as a key skill for nurses to support patient self-determination and engender communication when a patient's deception about their behavior may be based on fear. Motivational interviewing focuses on avoiding the resistance that occurs in patients when faced with confrontational styles of communication.

The research reviewed called for changes that will increase nurses' mental health care competencies and provide support for interventions in order to promote the best patient outcomes. These included changes in nursing education, nursing and hospital administration, and system changes.

Sharrock and Happell (2006) endorsed support for medical-surgical nurses providing care for MSMI patients through psychiatric/mental health consultants to improve the quality of patient care while guiding with assistance and education of the generalist nurses. One of the intended uses of Rutledge's et al. (2012) assessment tool was to develop educational programs specific to a work setting by an evaluation of the effects of educational interventions to strengthen medical-surgical nurses' behavioral health care competencies.

Meako et al. (2011) suggested consideration be given to include delirium as a sixth vital sign in older adults as it is often undiagnosed. A system wide push to require hospitals institute facility-wide utilization of standardized delirium assessment measures to assess patient symptoms and fluctuation of symptoms pre, peri and post-operatively could avoid negative consequences of delirium. Yevchak (2012) also summarized needed policy changes in acute care facilities to promote standardized assessments of vulnerable populations. Such assessments are necessary, along with the provision of resources, for nurses to implement non-pharmacological care.

Kutney-Lee and Aiken (2008) emphasized the positive effect of adequate nurse staffing and education on the outcomes of medical-surgical patients with mental illness and the implications this has for hospital administrators and policy makers. This included payment policy changes to more appropriately compensate hospitals for the nursing care required to create positive outcomes for medical-surgical patients with mental illness.

Ford (2011) recommended workplace education and organizational role support for nurses caring for MSMI patients for movement towards 'harm minimization' as an approach to MSMI patient care. The study emphasized system support is needed for knowledge to be transferred into practice, into the working environment, to colleagues and organizational supporters (including management) with the provision of feedback.

Conclusion

This review of literature indicated that nurses need better preparation for the care and management of MSMI patients. Although it is not possible to conclude which of the foundational concepts – personal, education or professional experience, or which component of preparedness – nursing self-care efficacy or mental health care competence, was the greatest

determinant of nursing preparedness to care for MSMI patients, the research clearly highlighted gaps regarding the preparedness of nurses to care for this significant population. As discussed in Concepts in the Literature, there were distinct gaps identified in each of the preparedness concepts.

Preparedness gaps must be filled with better nursing preparation and knowledge development through education and guided experiences for nurses in order to gain confidence and competence with skills necessary to care for MSMI patients' physical and mental health. Nurses need better knowledge and experiences to prepare them for the assessment of MSMI patients with the confidence and competence to determine appropriate interventions for best patient outcomes.

To prepare nurses to care for MSMI patients, a focus on mental health care competence in all areas of nursing practice is required. Nurse educators, hospital administrators and policy makers must understand the significance of the identified gaps and their important role for actions to support this change. There are serious negative health consequences that can be avoided. Greater patient safety, positive patient outcomes, decreased health care costs and nurse satisfaction can be assured when nurses are supported to confidently and competently care for MSMI patients.

Further research is sorely needed to determine how the identified gaps can be filled to determine nurses' best preparation for the complex needs of MSMI patients. Research can also inform where the changes in the educational and health care systems are most needed to implement preventive and supportive strategies.   This research proposed to fill that gap with further examination of nursing's preparedness components regarding the care and management

of MSMI patients and exploring which conceptual variables are more frequently associated with

preparedness and more predictive of preparedness.

CHAPTER 3: METHODS

Nurses working in medical-surgical or other non-psychiatric units may lack the preparation and thus the competencies to provide quality care for patients with a secondary diagnosis of mental illness. The purpose of this study was to examine the components of nursing preparedness, i.e., nursing care self-efficacy and mental health care competence, of nurses regarding the care and management of medical-surgical patients with a secondary diagnosis of mental illness (MSMI) and to explore what variables are most associated with and most predictive of preparedness.

At the foundation of the proposed nursing preparedness model to care for MSMI patients are individual nurse experiences – *personal, educational* and *professional*. The proposed model posits these foundational experiences affect the components of nursing preparedness – nursing care self-efficacy and mental health care competence, These foundational variables of preparedness were measured by: (1) Use of a self-assessment instrument, The Level of Familiarity (LOF) Questionnaire (Corrigan, 2012) to gauge the nurses' *personal* familiarity with mental illness; and (2) Use of demographic data to determine the nurses' *educational* preparation (providing care for MSMI patients in the medical/surgical setting during nursing education, psychiatric clinical rotation during nursing education, mental health theory included in generic nursing education, and the highest degree of nursing education) and *professional* experiences (years of nursing experience, certification in nursing, mental health continuing education, primary work setting, frequency of care for MSMI patients, mental illnesses cared for with MSMI patients, and mentoring from peers related to care of MSMI patients).

The components of nursing preparedness, nursing care self-efficacy and mental health care competence, were also measured. Nursing care self-efficacy was measured with Welsh's

(2014) 16 item Nursing Care Self-Efficacy Scale (NCSES). This self-assessment tool measured nurses' perceptions of their self-efficacy for engaging in nursing practice. The subscales include complex nursing care self-efficacy (11 items) and fundamental nursing care self-efficacy (5 items).

Perceived mental health care competence was measured with a 23 item self-assessment instrument. The Behavioral Health Care Competency (BHCC) Survey (Rutledge et al., 2012) was used to measure medical-surgical nurses' perceived competence to care for patients when mental illness is a secondary diagnosis.

Research Design

A descriptive correlational design was used. Relationships between the nurses' perception of their nursing care self-efficacy, mental health care competence, personal (LOF), educational preparation and professional experiences were examined. In particular, nurses' perception of their nursing care self-efficacy and mental health care competence were examined in relation to the LOF score, nursing educational preparation and professional experiences. For this quantitative study, descriptive correlational research was appropriate as it explored relationships among variables and the degree of the relationships (Gliner, Morgan & Leech, 2009; Polit & Beck, 2012).

Setting and Sample

The population for this study was registered nurses who were currently providing or had ever provided care on medical-surgical units in acute care facilities in the south-eastern United States. These locations were chosen in part as the BHCC survey was first used in fall of 2010 in three hospitals in southern California. With that limited geographical representation, the nursing population in this section of the east coast could provide an informative comparison to the

original research with the BCCC. Most significantly, this population was chosen as there are multiple acute care facilities (eight) within a regional health organization serving predominantly rural populations with the exception of two facilities being urban locations. This regional health organization in the south-eastern United States, with approximately 1,440 licensed beds, annually serves more than 1.4 million people in 29 counties.

The multiple settings and availability of medical-surgical nurse participants who care for a wide breadth of urban and especially rural populations allowed for participation from multiple types of patient care units and thus provide ample representation and sample size. Informal permission was granted for access to this participant population for electronic survey pending University and Medical Center Institutional Review Board approval from the chief nursing officer of the regional health organization and the director of the nursing medical services. A pilot study of this research interest was completed prior to this study's development by the PI in a geographically comparable hospital setting (acute care with 350 licensed beds) with N of 150.

A convenience sample of medical-surgical nurses from the regional health organization was sought. The choice of convenience sampling for this study was suitable as all medical-surgical nurses in the regional health organization/institutions who met inclusion criteria were asked to voluntarily participate (Gliner, Morgan & Leech, 2009; Polit & Beck, 2012).

Inclusion criteria were:

Registered nurses (medical-surgical)

Who are direct care providers at the bedside or have ever provided bedside care

Regional health organization/institution employees in acute care

With no previous employment in psychiatric or chemical dependency settings

Exclusion criteria were:

Registered nurses in management who have never provided bedside care

Registered nurses presently working in psychiatric or chemical dependency settings

Registered nurses who are not employees of the regional health system

Those in the health care organization excluded per stated criteria for research participation included registered nurses who had experiences with MSMI patients.

Data Collection and Procedure

Permission from the regional health organization and University and Medical Center Institutional Review Board was obtained (Appendix A). Assistance for research was sought through communication with the health care system's research department and the medical center's chief nursing officer for health care system wide communication and approaches to the various medical-surgical unit's managers, educators and participants. A cover letter and Power Point™ was prepared as an explanation of the study and distributed by the research office to chief nursing officers (CNO) of each facility. The CNO from each of the eight facilities provided a person of contact for their facility. The CNO and/or the assigned individual received the e-mail communication and link to survey from PI. Surveys using the commercial survey software, *Qualtrics™*, were delivered to participant's institutional e-mail per assigned individual at each facility.

To enhance participation, the PI sent electronic informational notices via institutional e-mail. The first e-notice sent to institutions introduced the PI, described a brief study purpose and a time line of survey. The e-notice was sent to the CNOs and individuals of contact per institution a few days prior to release of survey and included a request that they inform their staff of the upcoming survey. Additionally the contacts were informed that the PI would be present on their units for brief periods of time once the survey was released to answer any questions.

The survey was then released to participants' institutional e-mail per the institutions contact individual. The survey was available for 16 days in order to accommodate participants' working schedules. Conveyed via the cover letter (Appendix G) consent was implied when the participant proceeded to the survey and submitted their responses. It was anticipated the participant would need approximately eight to ten minutes to complete the survey. The participants could exit the survey at any point prior to completion if they became uncomfortable during the survey process

The PI made visits (minimum of two each) to the eight institutions to encourage survey participation and answer participant questions until the close of survey (see Appendix H for study timeline). A reminder to complete survey was delivered electronically at mid-point of survey and one was sent just prior to end of survey. An e-mail to thank the participants at close of survey was released.

Ethical Considerations

This research did not include vulnerable populations (children, prisoners, etc.). Electronic survey responses were anonymous; data was de-identified and is not traceable to the participant. There were no monetary or other incentives offered for participation and subjects were not coerced to participate. Participation was encouraged by the PI's presence on units and e-mail reminders. There were no known risks to the participant for taking part in this research. The participant gain may have been improvement in their self-efficacy through contribution to and collaboration with nursing research. All data was exported from *Qualtrics™* to *Statistical Package for Social Sciences (SPSS®)* for analysis by the PI. It was stored in locked drawer at PI's private office and only viewed by the PI and research committee members.

After analysis, discussion, and recommendations from research findings was completed, dissemination to all institutions within the participating regional health organization was provided.

Instrumentation

Data was obtained via *Qualtrics™* electronic survey link. *Qualtrics™* is a browser friendly survey software licensed by East Carolina University. The survey was developed in *Qualtrics™* at East Carolina University by the PI. The survey link was sent to participants and upon participant submission the results were sent to Qualtrics™. *Qualtrics™* Data was exported from *Qualtrics™* into *SPSS®* for analysis. The survey can be viewed in Appendix I.

Demographics

Demographic information included race, gender, age, years of nursing experience, primary work setting, hours worked per week, shift most often worked, highest degree of nursing education, exposure to mental health content in the medical/surgical setting during nursing education, psychiatric-mental health theory and clinical experience inclusion in generic nursing education, frequency with which care is provided to MSMI patients, certifications in nursing, mental illnesses cared for with MSMI patients, continuing education regarding care of MSMI patients , and mentoring from peers regarding caring for MSMI patients. The demographics were anticipated to take approximately 2-3 minutes to complete.

Level of Familiarity Survey

The LOF survey is composed of ranked statements about familiarity with mental illness. Each statement can be answered by yes or no. If more than one statement is marked yes, the score of the statement with the highest rank in terms of level of familiarity is the recorded level

of familiarity. The highest score is 11, which is the statement "I have a severe mental illness".

The lowest score is 1, stating "I have never observed a person that I was aware had a severe

mental illness". When the LOF survey was developed the mean rank order correlations

summarizing interrater reliability was .83 (Corrigan, Green, Lundin, Kubiak & Penn, 2001). It

has been supported by multiple studies (Bjorkman et al., 2008; Bjorkman et al., 2009; Corrigan,

Edwards, Green, Diwan & Penn, 2001; Corrigan, Markowitz, Watson, Rowan & Kubiak, 2003;

Holmes, Corrigan, Williams, Canar & Kubiak, 1999). Corrigan (2012) developed *A Toolkit for

Evaluating Programs Meant to Erase the Stigma of Mental Illness*. The survey and scoring sheet

can be found in this toolkit. This part of the survey was anticipated to take survey approximately

two to three minutes to complete.

Nursing Care Self-Efficacy Scale

The Nursing Care Self-Efficacy Scale (NCSES) was developed by Welsh (2014) to assess

nurses' beliefs about their professional skills. It can be used to evaluate the effectiveness of

educational programs, to highlight needs for professional growth, and to create plans for

individualized skill development among clinical nurses. Additionally, the NCSES can be used to

indicate factors that may impact professional practice, patient safety and patient outcomes.

Adequate test-retest reliability was reported with initial pilot testing at Time 1 and Time 2

($r=0.93$, $p<.01$). Internal consistency reliability was also supported with adequate alpha co-

efficient at Time 1 (0.93) and Time 2 (0.95). The NCSES has a 0 to 10 response scale from "I

cannot do at all" to "Certain I can do". This scale takes approximately 2-3 minutes for

participants to complete. There are two components – complex nursing self-efficacy (11 items)

and fundamental nursing care self-efficacy (5 items).

The complex nursing self-efficacy subscale measures nurses' confidence levels in complex nursing care. The term complex does not imply greater importance than skills measured in fundamental nursing care self-efficacy but that additional resources for completion may be necessary. Complex nursing care is care that requires collaborating, interdependence, and leadership with other health care team members.

The fundamental nursing care self-efficacy subscale measures confidence levels for engaging in fundamental care that may be independent. The actions are based on the components of the nursing process: assessment, diagnosis, planning, implementation, and evaluation.

Behavioral Health Care Competency Survey

The BHCC survey was designed to measure hospital nurse perceptions of behavioral healthcare competency (Rutledge et al., 2012). Psychometric testing of the 31-item instrument based on the nursing process was conducted in 2010. With the use of principal component analysis with varimax rotation, 23 items led to a factor structure with four components supported by Eigenvalues greater than one and visual inspection of the Scree plot. Four subscales with adequate alpha coefficients were formed: Resource Adequacy (0.78), Patient Assessment (0.91), Practice-Intervention Competency (0.90), and Psychotropic Recommendation (0.78). Responses to each item are evaluated on a five-point Likert scale, from strongly disagree to strongly agree. The higher the BHCC score, the higher the participant's perceived behavioral health care competency. The initial testing suggests this is a valid and reliable tool for screening of perceived competency in caring for behavioral health patients on general care units in acute care (Rutledge et al, 2013). This portion of the survey was anticipated to take approximately three to four minutes to complete.

Data Analysis

Once the *Qualtrics™* survey was submitted by the participant, their responses remained in ECU's *Qualtrics™* survey package until close of survey and at that time data was imported into *SPSS®*. Descriptive statistics were used to describe the sample. The psychometric properties of each instrument were examined by measuring reliability of each item with calculation of Cronbach's coefficient alpha. Spearman correlations were used to investigate associations between variables.

Research Question One

What are the perceived mental health care competencies of nursing staff who have managed, or may manage, hospitalized medical-surgical patients with a secondary diagnosis of mental illness (MSMI)? This question examined mental health care competencies to see the varying levels of nurses' perceived competence as well as the ranges of nurses' perceived competence and averages. Descriptive statistics were used.

Research Question Two

What is the relationship between the nurses' personal characteristics (level of familiarity with mental illness), educational preparation, and professional experiences caring for MSMI patients and the nursing care self-efficacy and perceived mental health care competencies? One-way analysis of variance was completed among each of the independent variables (personal, educational and professional) and each of the dependent variables (NCSES and BHCC) to explore their relationships.

Research Question Three

Which variable (personal, educational or professional) is the strongest predictor of nursing care self-efficacy and perceived mental health care competence to provide care for MSMI patients? Analysis of variance for the effect of the personal variable (LOF) and components of the educational and professional variables on NCSES and BHCC subscale scores were completed to determine the strongest predictor.

Research Question Four

How well does a combination of variables (personal, education or professional) predict the levels of nursing care self- efficacy and mental health care competence to provide care for MSMI patients? The computation of simultaneous multiple linear regression was used. Multiple linear regression starts from a correlation matrix among all the variables of interest and statistically predicts criterion variables.

Summary

This chapter describes the research design, setting and sample, sampling method, data collection and procedure and data analysis plan used to address the research questions for this study. The survey with the instruments (LOF questionnaire, NCSES, and BHCC survey) and demographic items used in this study can be found at Appendix I. This study examined perceived nursing care self-efficacy and perceived mental health care competence of medical-surgical nurses regarding the care and management of MSMI patients and explored which variables were most associated with and most predictive of nursing care self-efficacy and mental health care competence.

CHAPTER 4: FINDINGS

The purpose of this chapter is to report the findings of the study of registered nurses'

preparedness to care for medical-surgical patients with a secondary diagnosis of mental illness.

The first section presents the data collection procedure. The second section presents the

characteristics of the study sample and the third section addresses each of the four research

questions.

Data Collection Procedure

Data collection and analysis began after the University and Medical Center Institutional

Review Board and participating hospitals' organizational approval. Data was obtained via

Qualtrics™ survey that was delivered to participants' employee e-mail by designated individuals

at each organization. Time needed to complete survey was reported under 10 minutes.All

surveys opened and closed on same date and at same time. Submission of survey responses

served as participant consent. At close of survey data were exported into *Statistical Package for

Social Sciences (SPSS®)*. IRB approval and participant consent for survey as well as the survey,

can be found in Appendices A, G and I.

Characteristics of Study Sample

The study sample consisted of 260 registered nurses (21 males and 235 females) currently

employed on acute care hospital units in the southeastern United States (see Table 1). Almost

half of the participants (47%) were over the age of 40 with the largest number (32.7%) in the 41-

55-year-old age group. The majority of participants were white (83.5%), and worked weekly

between 36-40 hours (75.7%) on the 7A- 3P or 7A - 7P shift (68.4%). Almost all (98%) of the

participants currently provided care for MSMI patients (89.2%) or have provided care for MSMI

patients (8.8%). Few participants (7%) reported previous employment on a psychiatric or

chemical dependency unit.

Table 1

*Demographic Characteristics of Participants (*N = 260)

Characteristic	*n*	%
Age at time of survey (years)		
23 - 25	34	13
26 - 30	38	15
31 - 40	60	23
41 - 55	85	33
56 +	37	14
Gender		
Male	21	8
Female	235	90
Race		
White	217	84
Black or African American	19	7
American Indian or Alaska Native	1	.4
Asian	8	3
Hispanic	3	1
Other	7	3
Hours worked weekly		
8 - 16	5	2
24 - 32	16	6
36 - 44	197	76
48 - 52	38	15
Primary shift worked		
7A - 3P	38	15
7A - 7P	133	51
7P - 7A	79	30
Participants who provide care for MSMI patients		
Yes	232	89
If No - Have ever provided care for MSMI pts		
Yes	23	8
No	4	2
Previous employment on psych or chemical dependency unit		
Yes	17	7

Note. Totals of percentages are not 100 for every characteristic due to rounding.

Personal Variable

The Level of Familiarity (LOF) questionnaire consists of eleven statements. Participants selected all statements that applied to them. Item or statements of the LOF are ranked from more to less intimate. Table 2 lists statements in rank order and reports the participants' most intimate or highest ranking response.

The highest LOF score for the majority of the participants was indicated as having a relative who has a mental illness (41.5%), followed by my job involves providing services for persons with mental illness (24.2%). The two lowest levels of familiarity (observed infrequently and never observed) were not chosen by any participant as their most intimate LOF.

Table 2
Number and Percentage of Levels of Familiarity with Indicated Highest Level of Intimacy

	Highest score for LOF	
LOF Questionnaire Statements	*n*	%
Have a mental illness (MI)	24	9.2
Live with person who has a MI	24	9.2
Have a relative who has a MI	108	41.5
Friend of the family has a MI	13	5.0
Job involves providing services for persons with MI	63	24.2
Worked with person who has MI at employment	10	3.8
Observed persons with a MI on a frequent basis	11	4.2
Watched a documentary on television about a MI	1	0 .4
Watched a movie or TV show depicting person with MI	4	1.5
Observed infrequently		
Never observed		

Educational Variable

Four characteristics (highest nursing degree, experience caring for MSMI patients during nursing education, psychiatric clinical rotation and mental health content in nursing curricula) comprise the educational variable (see Table 3). The educational characteristics of participants are shown in Table 3. Most participants (55.8%) reported their highest nursing education at BSN

level or above with one participant at PhD level (0.4%). The vast majority (85%) provided care

for MSMI patients and had a psychiatric clinical rotation (91.9%) during their nursing education.

While just over half of the participants (56.9%) had mental health content in both psych and

med-surgical theory/clinical, approximately one third of the participants (31.2%) had this content

only while in psych theory/clinical.

Table 3
Educational Characteristics of Participants

Characteristic	n	%
Highest degree awarded in nursing		
Diploma	5	2
ADN	107	41
BSN	112	43
Graduate degree-MSN, DNP-PhD	33	13
Provided care for MSMI patients during nursing education		
Yes	221	85
Psychiatric clinical rotation during nursing education		
Yes	239	92
Mental health content in nursing curricula		
Psych	81	31
Med-surgical	21	8
Both	148	57
Neither	7	3

Note. Totals of percentages are not 100 for every characteristic due to rounding.

Professional Variable

Five characteristics (years of experience, professional certification, continuing education

participation, frequency of caring for MSMI patients and mentoring received in caring for MSMI

patients) comprise the professional variable. Most participants reported either 5 years or less

experience (34.2%) or greater than 11 years of experience (45%) as shown in Table 4. The

majority of participants provided care for MSMI patients often to all of the time (63.8%),

however only 38.8% of the participants have received mentoring related to caring for MSMI

patients and only 14% have had continuing education related to mental illness. The largest

number of participants worked on a medical-surgical unit (40.4%) while 46.1% worked in

intermediate or critical care.

Table 4
Professional Characteristics of Participants

Characteristic	*n*	%
Years of nursing experience		
1	31	12
2 - 5	58	22
6 - 10	51	20
11 - 20	61	24
21 +	55	22
Professional certifications other than BLS/CLS	155	60
Continuing education related to mental illness	36	14
How often care provided for MSMI patients		
Never – rarely - sometimes	94	36
Often – all of the time	166	64
Received mentoring related to caring for MSMI patients	101	39

Note. Totals of percentages are not 100 for every characteristic due to rounding.

From a list of eleven mental illnesses participants selected all mental illnesses where they

provided care for MSMI patients. The most frequent diagnoses were anxiety (74.2%), substance

abuse (73.8%), depression (69.2%) and dementia (68.5%). With the exception of psychosis

(39%), greater than 50% of the sample reported caring for clients with bi-polar disorder,

schizophrenia, PTSD, suicidal ideation and delirium.

Data Analysis for Research Questions

Research Question One

What are the nursing care self-efficacy beliefs and mental health care competencies of

nursing staff who have managed, or may manage, hospitalized medical-surgical patients with a

secondary diagnosis of mental illness (MSMI)?

Nursing care self-efficacy scores.

The Nursing Care Self-Efficacy Scale (NCSES), a tool for measuring nurses' confidence in their nursing abilities, has two subscales - complex and fundamental nursing care – with 16 items on a scoring scale from low (0) to high (10) confidence. Scores on the NCSES varied little in means and standard deviation and respondents reported high self-efficacy for both complex and fundamental skills (see Table 5). Individual questions' means ranged from the lowest in the complex subscale, promote patient control over decision making with hospital care (M = 7.6, *SD* 2.3), to the highest in fundamental nursing care, evaluate patient response to care (M = 9.2, *SD* 1.2). The mean of items on the Complex subscale (*M*=8.6, *SD* 1.3) was 0.4 lower than the mean of items on the Fundamental subscale (*M*=9.0, *SD* 1.3).

Behavioral health care competency scores.

The Behavioral Health Care Competency (BHCC) instrument measures nurses' perceptions of their individual behavioral healthcare competencies in the areas of assessment, intervention, drug recommendation and resource adequacy. The means and standard deviations of the subscale score for the BHCC scale are shown in Table 5. Scoring for the 23 items included a full score range (1-5) on 39% of the items with 1 as the lowest perceived competence and 5 as the most competent. Single item means ranged from 2.7 (*SD* 1.1) to 4.3 (*SD* .55). The respondents rated their competence as lowest for drug recommendation (2.8) and highest for assessment (3.9).

Table 5

Means and Standard Deviations of Nursing Care Self-Efficacy and Behavioral Health Care Competency Subscale Scores

NCSES	*M*	*SD*
Complex nursing care	8.59	1.26
Fundamental nursing care	9.01	1.25
BHCC		
Assessment	3.9	.46
Practice/intervention	3.7	.53
Drug recommendation	2.8	.98
Resource adequacy	3.8	.66

Research Question Two

What is the relationship between the nurses' personal characteristics (level of familiarity with mental illness), education preparation, and professional experiences of caring for MSMI patients and the nursing care self-efficacy and perceived mental health care competencies?

One-way ANOVA was used to examine the relationships among the 3 independent variables - personal (level of familiarity), educational and professional and the two outcome variables - NCSES and BHCC.

Relationship among LOF, NCSES and BHCC.

For the analysis of variance for the effects of LOF on NCSES and BHCC subscale scores the LOF scores were sub-divided into three categories – highest LOF (9-11), moderate LOF (4-8), and none to low LOF (0-3). Those who indicated the highest LOF score (9-11) also have the highest mean score in each subscale as seen in Table 6.   A statistically significant difference was found among the subscales and highest LOF score on BHCC assessment, F (2, 256) = 3.90, p = .02, η^2 = .03.   Those with the highest LOF score had significantly higher scores regarding their perceptions of assessment competence.   This indicates participants with the most intimate LOF

perceived their competence to be higher with MSMI patient assessment than those with lesser

LOF.

Table 6
*Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of
Level of Familiarity Scores on NCSES and BHCC Subscale Scores*

Highest LOF Score	0 – 3		4 - 8		9 - 11				
Scale	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	η^2
NCSES									
Complex[a]	8.58	2.04	8.38	1.30	8.71	1.20	2.10	.12	.01
Fundamental[b]	8.52	2.13	8.86	1.28	9.12	1.20	1.71	.18	.01
BHCC									
Assessment[c]	3.56	.57	3.90	.44	4.01	.45	3.90	.02	.03
Practice[d]	3.40	.76	3.68	.55	3.79	.50	2.23	.10	.01
Drug Recommendation[e]	2.90	.74	2.82	.99	2.93	.99	.35	.70	.01
Resource Adequacy[a]	3.50	.50	3.79	.67	3.85	.65	.84	.42	.01

[a]df = 2, 254. [b]df = 2, 253. [c]df = 2, 256. [d]df = 2, 255. [e]df = 2, 252.

Relationship among educational variable, NCSES and BHCC.

The educational variable has 4 components - degree in nursing education, experience of

providing care for MSMI patients during nursing education, psychiatric clinical rotation during

nursing education, and mental health content (MHC) in nursing curricula. Analysis of variance

was completed for the effect of each component of the educational variable on NCSES and

BHCC subscale scores.

Degree in nursing education.

For the analysis of variance for the effects of degree in nursing education on NCSES and

BHCC subscale scores three education categories were used (diploma or associate degree, BSN

and MSN, DNP and PhD). The highest means for NCSES subscales were found among those

with MSN, DNP and PhD degrees, while the highest means for BHCC subscales were found

among those with DIP/ADN degrees (see Table 7).   A statistically significant difference was

found for the subscale in drug recommendation, $F(2,248), = 3.82, p = .01, \eta^2 = .03$. Those with

diploma and associate degrees in nursing had significantly higher scores regarding BHCC's drug

recommendation subscale.

Table 7
Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of Degree in Nursing Education on NCSES and BHCC Subscale Scores

	DIP/ADN		BSN		MSN/DNP/PhD				
Scale	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F(2,248)*	*p*	*η²*
NCSES									
Complex	8.47	1.38	8.61	1.04	8.85	1.55	1.34	.31	.009
Fundamental	8.93	1.34	9.02	.98	9.24	1.73	.83	.44	.006
BHCC									
Assessment	4.02	.45	3.91	.47	3.92	.41	1.71	.13	.01
Practice	3.81	.53	3.69	.52	3.64	.57	1.67	.14	.01
Drug Rec	3.09	.95	2.71	.99	2.80	1.00	3.82	.01	.03
Resource Ade	3.85	.66	3.83	.66	3.73	.65	.32	.66	.003

Providing care for MSMI patients during nursing education.

Analysis of variance for the effect of the experience of providing care for MSMI patients

during nursing education on NCSES and BHCC subscale scores was completed. As shown in

Table 8, those who cared for MSMI patients had the highest mean score for the BHCC subscales

indicating that they felt most competent in their ability to care for MSMI patients. There were

statistically significant differences for self-efficacy in practice ($p = .001, \eta^2 = .04$), drug

recommendation ($p = .03, \eta^2 = .01$) and resource adequacy ($p = .02, \eta^2 = .01$).

Table 8

Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of the Experience of Providing Care for MSMI Patients During Nursing Education on NCSES and BHCC Subscale Scores

| Provided Care | | yes | | | no | | | | |
Scale	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*η²*
NCSES									
Complex	219	8.57	1.32	38	8.682	.86	1.58	.61	.001
Fundamental	218	8.96	1.33	38	9.34	.61	1.75	.08	.01
BHCC									
Assessment	221	3.98	.45	38	3.83	.48	1.90	.05	.01
Practice	220	3.78	.51	38	3.48	.58	3.30	.001	.04
Drug Recommend	217	2.94	.99	38	2.58	.88	2.08	.03	.01
Resource Ade	219	3.86	.64	38	3.60	.71	2.24	.02	.01

Psychiatric clinical rotation during nursing education.

Analysis of variance for the effects of having a psychiatric clinical rotation during nursing education on NCSES and BHCC subscale scores was completed. Those who had a psychiatric clinical rotation during nursing education scored the highest means in all subscales except drug recommendation. Table 9 shows there were statistically significant differences among NCSES' complex (p = .001, t = 2.58, η² = .02) and fundamental (p = .001, t = 3.30, η² = .04) subscales, indicating a significant relationship between having a psychiatric clinical rotation during nursing education and perceived competence in general nursing care.

Table 9

Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of Having a Psychiatric Clinical Rotation During Nursing Education on NCSES and BHCC Subscale Scores

| Psychiatric Clinical Rotation | | yes | | | no | | | | |
Scale	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*η²*
NCSES									
Complex	237	8.65	1.15	20	7.89	2.07	2.58	.001	.02
Fundamental	236	9.09	1.09	20	8.14	2.32	3.30	.001	.04
BHCC									
Assessment	239	3.97	.46	20	3.82	.37	1.43	.15	.008
Practice	239	3.75	.52	19	3.62	.61	1.02	.30	.004
Drug Recommendation	236	2.87	.97	19	3.08	1.17	0.89	.37	.003
Resource Adequacy	238	3.83	.67	19	3.70	.52	0.86	.38	.003

MHC in nursing curricula.

Analysis of variance for the effects of MHC in nursing curricula on NCSES and BHCC

subscale scores was completed. As seen in Table 10 there were statistically significant

differences in all BHCC subscales with small and moderate effects. Participants who had MHC

in nursing curricula during both psychiatric disorders and in relation to the general provision of

nursing care reported greater perceived competence in all four of the BHCC subscales and most

significantly with their perceived practice.

Table 10
*Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of MHC in
Nursing Curricula on NCSES and BHCC Subscale Scores*

MHC in Nursing Curricula	In Relation to Psych Disorder		In relation To general Provision Of care		Both		Neither				
Scale	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	η^2
NCSES											
Complex[a]	8.74	.99	7.93	2.04	8.61	1.21	8.03	1.97	2.017	.09	.03
Funda[b]	9.24	.79	8.33	2.35	9.00	1.19	8.73	1.97	2.245	.06	.03
BHCC											
Assessmt[c]	3.89	.48	3.84	.52	4.00	.42	3.91	.41	3.021	.01	.04
Practice[d]	3.61	.56	3.55	.56	3.84	.47	3.33	.69	5.282	<.001	.07
Drug Rec[e]	2.60	1.071	2.90	.77	3.03	.92	2.50	1.00	3.814	.01	.05
Res Ade	3.74	.70	3.66	.85	3.90	.57	3.25	.80	3.808	.01	.05

[a]df = 4, 252. [b]df = 4, 251. [c]df = 4, 254. [d]df = 4, 253. [e]df = 4, 250.

Relationship among professional variable, NCSES and BHCC

The professional variable has 5 components – years of nursing experience, professional

certifications other than basic life support (BLS) and cardiac life support (CLS), continuing

education related to mental illness, how often care was provided for MSM patients and

mentoring received related to caring for MSMI patients. Analysis of variance was completed for

the effect of each component of the professional variable on NCSES and BHCC subscale scores.

Years of nursing experience.

Analysis of variance for the effects of years of nursing experience on NCSES and BHCC subscale scores was completed. For purpose of analysis, years of experience were collapsed into two categories - 1 to 5 years of experience and greater than 6 years and above (Table 11). There were statistically significant differences among NCSES complex (p = .01, η² = .02) and fundamental (p = .001, η² = .04) subscales indicating that participants with 6 or more years' experience perceived greater self-efficacy in providing complex and fundamental nursing care.

Table 11
Means, Standard Deviations, and One-Way Analyses of Variance for the Effects
of Experience in Nursing on NCSES and BHCC Subscale Scores

Years in Nursing	1-5 years		6 + years				
Scale	*M*	*SD*	*M*	*SD*	*t*	*p*	*η²*
NCSES							
Complex	8.32	1.38	8.74	1.17	2.53	.01	.02
Fundamental	8.67	1.37	9.20	1.16	3.21	.001	.04
BHCC							
Assessment	3.91	.44	3.98	.46	1.14	.25	.005
Practice	3.76	.55	3.72	.51	0.57	.56	.001
Drug Recommendation	2.87	1.00	2.87	.97	0.03	.98	.000
Resource Adequacy	3.85	.71	3.81	.64	0.41	.68	.001

Professional certifications.

Analysis of variance for the effects of professional certification other than BLS and CLS on NCSES and BHCC subscale scores was completed. While there were no statistically significant differences, Table 12 indicates that all participants with professional certifications other than BLS and CLS had higher means in all subscales than those who did not have additional certifications. The additional certifications were varied and can be seen in Appendix L.

Table 12

Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of Professional Certification Other Than BLS and CLS on NCSES and BHCC Subscale Scores

Professional Certification		yes			no				
Scale	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	η^2
NCSES									
Complex	154	8.63	1.16	101	8.52	1.41	0.63	.52	.002
Fundamental	154	9.08	1.11	100	8.92	1.46	0.97	.33	.004
BHCC									
Assessment	155	4.00	.44	101	3.89	.48	1.91	.05	.014
Practice	155	3.78	.53	100	3.67	.53	1.48	.13	.009
Drug Recommendation	153	2.92	.97	100	2.83	1.01	0.69	.48	.002
Resource Adequacy	155	3.87	.61	100	3.75	.73	1.46	.14	.008

Continuing education.

Analysis of variance for the effects of continuing education related to mental illness on NCSES and BHCC subscale scores indicated all participants who had continuing education related to mental illness had higher means for all subscales. Statistically significant differences are noted in Table 13 among the BHCC assessment and practice subscales (for both, p = <.001, η^2 = .06). There is a relationship of moderate effect size between continuing education related to mental illness and BHCC's assessment and practice subscales.

Table 13

Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of Continuing Education Related to Mental Illness on NCSES and BHCC Subscale Scores

Continuing Education		yes			no				
Scale	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	η^2
NCSES									
Complex	36	8.85	1.18	221	8.54	1.27	1.33	.18	.007
Fundamental	36	9.21	1.04	220	8.98	1.28	0.98	.32	.004
BHCC									
Assessment	36	4.24	.39	223	3.91	.45	4.15	<.001	.06
Practice	36	4.07	.48	222	3.69	.52	4.11	<.001	.06
Drug Rec	35	3.17	1.01	220	2.84	.97	1.86	.06	.01
Resource Adequacy	36	4.02	.60	221	3.79	.66	1.88	.06	.01

Frequency of care provided for MSMI patients.

For analysis of variance for the effects of frequency of care provided for MSMI patients on NCSES and BHCC subscale scores two categories for frequency of care were used – more often (often-all of the time) and less often (never-rarely-sometimes). All but one of the subscales (BHCC – resource adequacy) had higher mean scores when participants indicated they provided care more often for MSMI patients. Statistically significant differences for assessment (p = <.001, η^2= .07), practice (p = .001, η^2= .04), and drug recommendation (p = .001, η^2= .04) indicates participants have greater perceived confidence with assessment, practice and drug recommendation the more often care was provided for MSMI patients. The strongest relationship was found with perceived competence to assess MSMI patients when care was provided more often.

Table 14

Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of Frequency
of Care Provided for MSMI Patients on NCSES and BHCC Subscale Scores

Frequency of Care	More often			Less often					
Scale	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	*η²*
NCSES									
Complex	165	8.68	1.11	92	8.43	1.49	1.52	.12	.009
Fundamental	164	9.12	1.04	92	8.82	1.54	1.85	.06	.01
BHCC									
Assessment	166	4.05	.46	93	3.79	.40	4.50	<.001	.07
Practice	165	3.82	.52	93	3.59	.51	3.35	.001	.04
Drug Rec	164	3.04	1.01	91	2.60	.86	3.44	.001	.04
Resource Adeq	165	3.82	.71	92	3.83	.57	0.08	.930	.000

Mentoring related to caring for MSMI patients.

Analysis of variance for the effects of mentoring received related to caring for MSMI

patients on NCSES and BHCC subscale scores indicated those who received mentoring related

to caring for MSMI patients scored higher in all of the NCSES and BHCC subscales than nurses

who had indicated they did not receive mentoring (see Table 15). Statistically significant

differences were found among all but one subscale (NCSES Fundamental Care) with small,

medium and large association strengths indicating the strength of the relationship between

mentoring related to caring for MSMI patients, nursing care self-efficacy and perceived mental

health care competence.

Table 15

Means, Standard Deviations, and One-Way Analyses of Variance for the Effects of Mentoring Related to Caring for MSMI Patients on NCSES and BHCC Subscale Scores

Mentoring		yes			no				
Scale	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*p*	η^2
NCSES									
Complex	99	8.79	1.26	158	8.46	1.35	2.02	.04	.01
Fundamental	99	9.11	1.25	157	8.95	1.37	1.00	.31	.004
BHCC									
Assessment	101	4.11	.45	158	3.86	.43	4.31	<.001	.06
Practice	101	3.95	.53	157	3.60	.51	5.36	<.001	.10
Drug Rec	98	3.13	1.01	157	2.73	.94	3.23	.001	.04
Resource Ade	100	4.02	.57	157	3.70	.68	3.85	<.001	.05

Research Question Three

Which variable (personal, educational or professional) is the strongest predictor of nursing care self-efficacy and perceived mental health care competence to provide care for MSMI patients?

Analysis of variance for the effect of the personal variable (LOF) and components of the educational and professional variables on NCSES and BHCC subscale scores was completed and included in previous tables (Tables 6-15). The professional variable's components indicated the greatest statistically significant differences and strengths of association with the NCSES and BHCC subscales.

Mentoring related to caring for MSMI patients was indicated as the strongest predictor of the professional variable with statistically significant differences in all BHCC subscales and NCSES complex subscale. The second strongest predictor of the professional variable's components was frequency of care provided for MSMI patients (often) followed by continuing education related to mental illness.

The education variable had several statistically significant differences among the components, with MHC in nursing curricula during both psychiatric disorders and in relation to the general provision of nursing care as its' most significant while the LOF variable was significant only for the BHCC subscale of assessment. Thus, the professional variable is indicated as the strongest predictor of nursing care self-efficacy and perceived mental health care competence to provide care for MSMI patients.

Research Question Four

How well does a combination of variables (personal, education or professional) predict the levels of nursing care self-efficacy and perceived mental health care competence to provide care for MSMI patients?

Simultaneous multiple regression analysis was completed on each of the behavioral health care competency subscales for the best linear combination of variables from personal, educational, professional, and the NCSES-complex subscale. The variables in this combination were chosen for their statistical significance with high BHCC subscale scores during independent-group t-tests or one-way analysis of variance.

Table 16 indicates the correlation of these variables - frequency of care, continuing education, mentoring, providing care for MSMI patients during nursing education and nursing care-self efficacy complex and fundamental scores - with the four BHCC subscales. Correlational analysis of NCSES and BHCC subscales indicated NCSES complex and fundamental subscale scores have significant statistical correlations with all subscales of BHCC scores except drug recommendation. This signifies nurses with higher nursing care self-efficacy scores also score higher with perceived competence in the BHCC assessment, practice and resource adequacy subscales.

The strongest correlation of variables for assessment is indicated to be frequency of care, NCSES complex care, mentoring and continuing education (see Table 16 for statistical significance). The strongest variable correlation for practice is indicated to be mentoring, NCSES complex, continuing education, frequency of care and is frequency of care and mental health care. The variables that indicate the strongest correlation for drug recommendation are frequency of care, mentoring and mental health care. Resource adequacy's strongest correlation of variables is NCSES complex, mentoring and mental health care.

While mentoring is the only variable significantly correlated in each of BHCC's 4 subscales, NCSES complex variable is significantly correlated in 3 of the 4 subscales (assessment, practice, resource adequacy), as is the frequency of care variable (assessment, practice, drug recommendation), and mental health care (practice, drug recommendation, resource adequacy). The continuing education variable is significantly correlated in 2 of the 4 subscales (assessment, practice).

Table 16

Intercorrelations for Predictor Variables and BHCC Subscale Competencies

Variable	1	2	3	4	5	6	7	8	9	10
1. Frequency of care	-	.13*	.20**	.07	.09	.11	.29**	.22**	.21**	-.00
2. Continuing education		-	.23**	.04	.08	.06	.23**	.23**	.12	.10
3. Mentoring			-	.01	.12*	.05	.25**	.31**	.19**	.23**
4. Mental health care				-	-.03	-.11	.11	.19**	.13*	.13*
5. NCSES Complex					-	.85**	.28**	.28**	.05	.25**
6. NCSES Fundamental						-	.25**	.28**	.04	.26**
7. Assessment							-	.65**	.46**	.43**
8. Practice								-	.43**	.57**
9. Drug Recommendation									-	.30**
10.Resource Adequacy										-

Note: *correlations are significant at $p \leq .05$; **correlations are significant at $p \leq .01$.

Table 17 shows simultaneous multiple regression for regressing BHCC subscales and a combination of the variables – frequency of care, continuing education, mentoring, mental health care and NCSES complex care – to investigate the best prediction of nurses' competence with the BHCC subscales. The beta weights suggest that high nursing care self-efficacy complex scores contributed most to the BHCC assessment, practice and resource adequacy competencies while mentoring was the only variable that significantly contributed to all 4 BHCC subscales and was second in order of contribution with practice, drug recommendation and resource adequacy competencies.

The combination of variables to predict BHCC assessment competency was statistically significant, F (5,251) = 13.86, p < .001, with nursing care self-efficacy complex scores contributing most, followed by frequency of providing care, continuing education and mentoring. The R² value indicated 22% of the variance in the assessment competency was explained by the model, a typical to larger than typical effect.

The combination of variables to predict the BHCC practice competency was statistically significant, F (5,250) = 15.73, p < .001, as all 5 of the variables contributed to the prediction (see Table 17 for beta weights).   Twenty-four % of the variance in practice competency was explained by the model, a typical to larger than typical effect.

The combination of the variables that significantly predicted the BHCC drug recommendation competency, F (5,248) = 4.57. p < .01, were frequency of providing care and having a mentor. The R² value indicated 8% of the variance in the drug recommendation competency was explained by the model. This is a very small effect.

The combination of the variables that significantly predicted BHCC resource adequacy subscale competency F (5,250) = 8.33, p< .001, were three NCSES complex, mentoring and

mental health care, with a R² value indicating 14% of the variance in resource adequacy competency was explained by the model (a

small effect).

Table 17
Simultaneous Multiple Regression for Regressing BHCC Subscale Competencies on Frequency of Providing Care, Continuing Education, Mentoring, Mental Health Care and NCSES Complex Subscale

| Predictor Variable | BHCC Subscale | | | | | | | | | | | | | | | |
| | Assessment | | | | Practice | | | | Drug Recommend | | | | Resource Adequacy | | | |
	B	SEB	β	p	B	SEB	β	p	B	SEB	β	p	B	SEB	β	p
Frequency of care	.18	.05	.19*	.001	.12	.06	.05*	.056	.33	.12	.16*	.01	-.12	.08	-.09	.15
Continuing education	.22	.07	.17*	.004	.24	.08	.15*	.006	.16	.17	.05	.354	.10	.11	.05	.383
Mentoring	.14	.05	.15*	.01	.24	.06	.22**	<.001	.29	.12	.14*	.023	.27	.08	.20*	.001
Mental health care	.13	.07	.10	.07	.28	.08	.19*	.001	.31	.16	.11	.067	.27	.11	.14*	.012
NCSES Complex	.08	.02	.24**	<.001	.101	.02	.23**	<.001	.01	.04	.01	.796	.132	.03	.25**	<.001
R²		.22				.24				.08				.14		
N		256				255				253				255		
p		<.001				<.001				.001				<.001		

*p<.05; **p<.001.

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Summary

The purpose of this chapter was to report the findings of the study of registered nurses'

preparedness to care for medical-surgical patient with a secondary diagnosis of mental illness.

These findings and their explanations have been reported regarding the data collection

procedure, the characteristics of the study sample, and with data presentation and interpretation

for each of the four research questions. The final chapter, Chapter Five, will present a discussion

of the findings of Chapter Four per the research questions. This will be followed by key

findings, strengths and limitations of the study, implications and recommendations for education,

practice and further research, and conclusion of the discussion.

CHAPTER 5: DISCUSSION

The purpose of this study was to measure the components of preparedness (nursing care self-efficacy and behavioral health care competence) of medical-surgical nurses regarding the care and management of patients with a secondary diagnosis of mental illness and to explore what variables are more frequently associated with preparedness and more predictive of preparedness.

A descriptive correlational design using data from an on-line survey was used to measure the components of preparedness and explore the relationships between the components of preparedness and the characteristics of the personal, educational, and professional variables. Data was collected from nurses across 8 acute-care hospitals within a regional health organization in the south-eastern US. The survey was comprised of demographic questions and three instruments – (1) level of familiarity scale (LOF), (2) a nursing care-self efficacy scale (NCSES) and (3) a behavioral health care competence survey (BHCC).

There were four research questions designed around the evaluation and measurement of the components of preparedness (NCSES and BHCC) and the relationship between preparedness and the characteristics of the personal, educational and professional variables. Question one measured nursing care self-efficacy beliefs and mental health care competencies of the participants. Question two explored the relationship among nurses' personal, educational, and professional characteristics and nursing care self-efficacy beliefs and behavioral health care competencies. Question three explored which variable (personal, educational or professional) was the strongest predictor of nursing care-self efficacy and mental health care competence. The last question, question four, explored the best combination of variables – personal, educational or

professional – to predict the levels of nursing care self-efficacy and mental health care competence.

Discussion of Findings

Sample

Registered nurses who currently or had ever provided care for medical-surgical patients in an acute medical setting such as critical care, medical/surgical unit, oncology, women's health, neuro unit, nephrology or short stay were invited to participate in this study. From a health care system in the south-eastern United States, two-hundred and eighty-five nurses submitted the survey with 260 complete survey responses. The health system serves over 4.9 million people and has over 1,400 beds. The largest hospital in the health care system, a tertiary facility, had over 900 beds, while the other 7 hospitals were smaller community hospitals ranging from 142 to 6 beds.

Ages of participants below 40 was 51% with 47% over 40 years of age. The average age was 41. Ninety percent of the participants were female and 84% were white. Seventy-six percent worked between 36-44 hours a week. The demographics of participants mentioned above in this study were representative of the current U.S. workforce according to HHS's *The U.S. Nursing Workforce: Trends in Supply and Education (2013).*

The majority of the participants' primary work setting was a medical/surgical unit (41%), followed by intermediate care units (25%) and critical care units (23%). The participants who currently or have ever provided care for medical-surgical patients with a secondary diagnosis of mental illness (MSMI) was 97%. Only 7% of the participants had previous experience on psychiatric or chemical dependency units. The participants had cared for a range of mental illnesses with MSMI patients. Anxiety was the most common mental illness they identified as

having provided care for with MSMI patients (75%), followed by substance abuse (74%), and then depression and dementia (69%). Over 50 % of the participants had also cared for the diagnosis of bi-polar (68%), schizophrenia and PTSD (58%), suicidal ideations (56%), and delirium (51%). Psychosis was the least common mental illness cared for with MSMI patients (39%) and 8% identified "other" as a mental illness they had provided care for with MSMI patients. There was not a listing of mental illnesses for "other".

Research Question One

What are the nursing care self-efficacy beliefs and mental health care competencies of nurses who have managed, or may manage, hospitalized medical-surgical patients with a secondary diagnosis of mental illness (MSMI)?

Nursing care self-efficacy beliefs.

The nursing care self-efficacy beliefs were measured by the Nursing Care Self-Efficacy Scale (NCSES). The score from the nursing care self-efficacy scale reflected what nurses believed they can do with the skills they have under varying circumstances. Overall, the participants in this study were efficacious about their nursing care beliefs with a mean of 8.72 for the total scale on a 0 -10 scale. A 0 indicated their confidence in the ability to perform a nursing care activity as *cannot do at all,* while a 10 indicated *certain can do.* The NCSES has two components – complex nursing care self-efficacy and fundamental nursing care self-efficacy. The NCSES complex nursing care subscale requires collaboration, interdependence, and leadership with other health care team members. The fundamental nursing care may be independent and the actions are based on the nursing process – assessment, diagnosis, planning, implementation, and evaluation.

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Participants in this study had a mean of 8.59 for the complex nursing care self-efficacy subscale and a mean of 9.01 for the fundamental nursing care self-efficacy subscale indicating slightly greater confidence with independent nursing care than with interdependence with other members of the health care team. Interdependency is a factor within a "knowledge of systems" that refers to understanding the technical characteristics of complex systems. The "knowledge of systems" is less robust in the preparation of nurses and most other health professionals (IOM, 2011).

Welsh (2014) proposed a cut point of 8.0 on each subscale as a nursing care self-efficacy level that may benefit from evaluation and intervention. The only mean below 8.0 in this study was found within the complex nursing care subscale for the item "promote patient control over decision-making with hospital care" with a score 7.63.   Exploring educational approaches that can enhance nurses' confidence with this complex skill can make a difference with all patient interactions and may be especially helpful with the MSMI patient. The IOM's *Future of Nursing: Leading Change, Advancing Health* (2011) addresses The Chasm Report's "Aims for Improvement". One of these aims is patient centeredness that includes offering patients and their loved ones more control, choice, self-efficacy, and individualization of care. These are components of a system characteristic that includes patient satisfaction, safety levels and adverse events, and levels of variation in approaches to diagnosis and treatment. Educating nurses with systems knowledge includes how to examine and study processes as well as how to change processes and improve them. Barely above the recommended cut-off of 8 were two additional complex subscale items that can be addressed with increased systems knowledge - use research findings in practice (8.05) and manage interpersonal conflict in the workplace (8.11).

Mental health care competencies.

The mental health care competencies were measured with the Behavioral Health Care Competency Survey (BHCC). This instrument, developed by Rutledge et al. (2012), measures nurses' perceptions of 23 behavioral health care competencies in the areas of assessment, intervention, drug recommendation and resource adequacy. The score from each of the BHCC subscales reflects the nurses' perception of their competency in that subscale. The responses to each item were evaluated by the participants on a 5-point Likert-type scale from 1 – *strongly disagree* to 5 – *strongly agree*.

Participants in this study had mean scores in each of the BHCC subscales from 3.7 to 3.9 with the exception of the subscale - drug recommendation – with a mean score of 2.8. This indicates the participants felt moderately strong they could assess MSMI patient needs (3.9), that they could competently practice using appropriate interventions to care for MSMI patients (3.7), and that they knew when to access resources to assist them with caring for MSMI patients (3.8). They felt less strongly they could recommend psychotropics to care providers for MSMI patients.

The BHCC subscale scores of participants in Rutledge's et al. (2012) original study were somewhat similar. For both studies assessment and resource adequacy subscales had the highest means while practice and drug recommendation subscales were the lowest. In this study, all participants indicated higher perceived competence on all 4 subscales when compared to Rutledge's et al. 2012 study.

The assessment subscale had the highest BHCC subscale score for these participants (3.9). The scores of the 9 items in the assessment subscale ranged from the highest of 4.3, for

competence in recognition of signs and symptoms of alcohol, to the lowest of 3.5, for

distinguishing between dementia and delirium. No participants perceived their competence as

"strongly agree" with any of the assessment subscale items. Of the nine assessment items four

were scored between 4.0 and 4.3 (agree) and 5 were below "agree" with a range from 3.5 to 3.9.

This is a point of discussion as confidence with competent assessment is foundational in

the nursing process for the choice of appropriate interventions. The accurate assessment of

patients experiencing delirium is especially crucial as nurses often confuse delirium with

depression and/or dementia (Baker et al., 2015). Early detection of delirium is key for effective

management of patient care as the underlying cause of delirium intensifies if recognition is

delayed with continued patient deterioration and poor patient outcomes (Meako et al., 2011).

For the BHCC practice subscale there was a range of perceived competence from 3.5 to

3.9. There are 8 items in the practice/intervention subscale. The two lowest practice

interventions mean scores were effective intervention with a hallucinating patient and planning

for more time to take care of MSMI patients (3.5). This indicates perceived competence at a

"moderate agree". Scoring at slightly less than "agree" for interventions with a patient

experiencing hallucinations is indicative of a nursing educational need as well as a safety

challenge for the patient and the nurse. Early and appropriate interventions for restless, irritable

or agitated behaviors circumvent further patient deterioration (Alexander, Ellis & Barrett, 2016).

Effective interventions would also be challenging if appropriate time is not planned and/or

supported for the health complexities MSMI patients may experience. Skill, as well as the

necessary time and staff for MSMI patient needs can influence the chosen intervention (Flagg et

al., 2010).

The BHCC drug recommendation subscale score averaged 2.8 for the two items in the subscale, indicating a low moderate mean for perceived competence to recommend the use of psychotropics. The lowest score was 2.7 regarding confidence to recommend psychotropics to providers for MSMI patients with 43% of participants indicating they strongly disagreed or disagreed they were confident with this item, 30% neither agreed nor disagreed and a small percent either agreed (22%) or strongly agreed (5%).

The other item in this subscale, perceived competence to confidently recommend use of psychotropic drugs to providers for appropriate patients had a mean of 2.9. Thirty-four percent of the participants disagreed strongly or disagreed with this item, 32% neither agreed nor disagreed, while only 27% agreed and 5% agreed strongly. This indicates a lack of familiarity with psychotropic medications and their appropriate uses. Certainly, education can be directed to better inform nurses of psychotropic medications, their uses with MSMI patients and intended effects, however this may also indicate a greater need for adequate and early assessment of the MSMI patients' behavior, health and needs, coupled with the appropriate intervention of communication with the provider with knowledge of medications to be used for the patients assessed behaviors and needs. MSMI patients' behaviors and needs may vary depending on their diagnoses, both primary and secondary, and one diagnosis may easily effect or exacerbate the other.

For the 4th BHCC subscale, resource adequacy, the participants had a mean of 3.8, a moderately strong agree. This indicates the participants had moderately strong confidence regarding knowing when to ask for outside help (4.0) and knowing to call for outside help when they recognize a patient's mental health needs are beyond their capabilities (4.1). They agreed less strongly with confidence that help was available when they needed assistance with MSMI

patients (3.5) and that hospital resources were available when assistance with MSMI patients was needed (3.5). Recognizing when to ask or to call for help is critical with patient assessment and intervention, forming the basis for communication with other members of the health care team (Edwards & Donner, 2007). However, having the confidence that help and resources are available when needed is an organizational feature that contributes to a work environment that either constrains or enhances this recognition (Steis Penrod, Adkins & Hupcey, 2009). Kutney-Lee, Lake & Aiken (2009) suggest modifying organizational features to support surveillance is a promising strategy for reducing adverse patient outcomes and improving quality of care.

Further analysis of the NCSES and BHCC subscales (ANOVA) indicate a medium effect with NCSES complex subscale and BHCC assessment subscale (.27) and a slightly larger medium effect with NCSES complex subscale and BHCC practice subscale (.32). These medium effects indicate the proportions of the BHCC assessment and practice subscales variance that are attributable to the NCSES complex subscale. The participants who scored highest in NCSES complex subscale, had the highest confidence levels for engaging in complex nursing care that requires collaboration, interdependence and leadership, also had the highest perceived competence regarding BHCC assessment and practice. It will be beneficial to further explore participant responses to the personal, educational, and professional variables among those who scored highest in these items.

Research Question Two

What is the relationship between the nurses' personal characteristics (level of familiarity with mental illness), education preparation, and professional experiences of caring for MSMI patients and the nursing care self-efficacy and perceived mental health care competencies?

One-way analysis of variance was completed among each of the independent variables (personal, educational and professional) and each of the dependent variables (NCSES and BHCC) to explore their relationships.

Personal variable.

For the personal variable, the 11 level of familiarity scores (LOF) were sub-divided into three LOF categories – highest (9-11), moderate (4-8), and none to low (0-3). Interestingly, the participants who indicated the highest LOF category also had the highest mean score in each of the NCSES and BHCC subscales. Only among one of the subscales, the BHCC assessment subscale, was there a statistically significant difference ($p = .03$). Those who indicated the most intimate levels of familiarity with mental illness on a personal level (they have a mental illness, live with person who has a mental illness or have a relative who has a mental illness) scored statistically significantly higher regarding their perceived competence to assess a MSMI patient. Pearson product-moment correlational results between LOF variable scores and BHCC single items indicate statistical significance with 3 of the individual assessment subscale items – can assess psychological problems ($p = .02$), can identify signs and symptoms ($p = <.001$), can recognize behaviors related to ETOH/drug problems ($p = .01$) and with drug recommendation subscale – confident to recommend psychotropic drugs ($p = .01$).

Previous studies have reported individuals with a higher LOF are less likely to endorse prejudicial attitudes regarding those with mental illness (Corrigan et al.,2001; Reed & Fitzgerald, 2005) and that contact with those with mental illness has the greatest effect on attitude towards the mentally ill (Farley-Toombs, 2012) and leads to the greatest changes (Corrigan, 2014; Corrigan, 2016). While personal and social knowledge reflect a form of professional wisdom congruent with patient needs (MacNeela et al., 2012) perhaps those with higher LOF scores have

greater perceived confidence with their assessment of MSMI patients because they can engage with the MSMI patient during the assessment phase of the nursing process without the "stigma of mental illness" affecting the depth and breadth of the patient assessment. Resiliency studies (Zauszniewski, Bekhet & Suresky, 2010) indicate family members of those with mental illness demonstrate better communication with mentally ill individuals and express greater acceptance and understanding of mental illness.

Though not statistically significant, it can be noted participants with the highest LOF also scored above the mean of 2.8 for drug recommendation at 2.93. Did the participants' LOF assist with assessment and the appropriate intervention of communicating about medications for MSMI patients to the care provider? While those with the most intimate LOF still scored higher with BHCC practice than participants with lower LOF scores, it is vital that upon assessment appropriate interventions be chosen for the MSMI patient.

Educational variable.

There are four components in the educational variable – degree in nursing education, experience of providing care for MSMI patients during nursing education, psychiatric clinical rotation during nursing education, and mental health content (MHC) in nursing curricula. The analysis of variance for the effect of each of these components on NCSES and BHCC subscale scores found the greatest statistically significant differences was among the MHC in nursing curricula component and all four BHCC subscales.

Mental health content (MHC) in nursing curricula.

The participants whose nursing curricula included mental health content with the psychiatric disorders as well as in the general provision of nursing care had statistically

significantly higher scores regarding their perceived competence in assessment, practice, drug

recommendation and resource adequacy. The practice subscale indicated the greatest statistical

significance ($p = <.001$) and was followed with a lesser degree of statistical significance by

assessment, drug recommendation and resource adequacy (all $p = .01$). The analysis of variance

for the effects of MHC in nursing curricula and BHCC individual items indicated statistical

significance among 8 of the 23 BHCC individual items.

In this study, the experience of having the educational exposure with mental health

content as a part of the general provision of patient care, most likely as a secondary diagnosis, as

well as with psychiatric disorder education indicated higher perceived BHCC competence. This

included 57% of study's participants. One of the participants had a previous degree in

psychology (BA in Psychology) and had worked in the mental health field outside of the

medical-surgical setting prior to obtaining a nursing degree. Another participant was unsure how

mental health content was provided during their nursing education and sadly, perhaps what may

be a common problem, one participant commented that though psychiatric disorder content was

provided the faculty minimized the importance of such care and discouraged the professional

pathway.

A nursing education curriculum that addresses psychiatric disorders with the knowledge

development and opportunity to understand that patients with psychiatric disorders are admitted

to medical-surgical units for the same reasons as the patients without psychiatric disorders, but

that those with psychiatric disorders often have co-morbidities with higher rates of complications

and adverse events, promotes increased understanding regarding nursing care of the whole

patient and personalized, high-quality care (Scaer, 2014; Kemery, 2016). Theoretical nursing

education to understand psychiatric disorders has been shown to positively influence nursing

confidence about MSMI patients (Happell & Platina-Phung, 2012). Importantly, across the curriculum, especially in the clinical setting, several studies reported increased competence with a focus on the importance of communication (McMillan & Shannon, 2011), the use of nursing presence (Hegge, 2011; Farley-Toombs, 2012), the integration of psycho-social skills (Christofferson et al., 2010; Tarnow, 2012) and the conjunct clinical assessment of frequently associated physical illnesses and mental illnesses (Ai, Rollman, Berger, S., 2010; Waghorn, 2009). This integration of physical and mental health with enhanced communication, and practiced assessment and interventions for MSMI patients, moving from a reactive to a more calculated approach (Alexander et al., 2016), can increase BHCC competence, quality patient-centered care and patient outcomes.

Experience of providing care for MSMI patients during nursing education.

Having the experience of providing care for MSMI patients during nursing education had statistically significant findings among the BHCC assessment ($p = .05$), practice ($p = .001$), drug recommendation ($p = .03$) and resource adequacy ($p = .02$) subscales. This indicates those participants who provided care during nursing education had statistically significant higher scores regarding their perceived competence in each BHCC subscale. More specifically the individual items of statistical significance were – can recognize escalation signs ($p = .003$), can manage conflicts ($p = .002$), can intervene regarding hallucinations $p = (.02)$, recommend psychotropic drugs ($p = .02$), help is available when needed ($p = .02$) and hospital resources are available when needed (p $= .03$). With increased exposure to MSMI patients during nursing education there is a normalization and de-stigmatization of mental illness as nurses learn to provide care for this population (Alexander et al.,2016). This allows for development of greater mental health care competence, patient safety and positive patient outcomes.

Psychiatric clinical rotation during nursing education.

The analysis of variance for the effects of having a psychiatric clinical rotation during nursing education on NCSES and BHCC subscale scores was completed. While all participants with this educational experience scored the highest in all subscales except BHCC drug recommendation the statistically significant differences were only among NCSES complex ($p =$ .001) and fundamental ($p =$ .001) subscales. Having a psych clinical rotation during nursing education has a positive effect on NCSES complex and fundamental scores. Of the 16 individual items in the complex and fundamental subscales 12 were statistically significant among the participants that had a psychiatric clinical rotating during nursing education. This includes each of the fundamental subscale items. Importantly the findings indicate having a psychiatric clinical rotation during nursing education is grounding regarding nursing care self-efficacy and especially with the fundamentals of nursing care.

Degree in nursing education.

The last component in the education variable is degree in nursing education. Three education categories were used for analysis of variance for the effects of nursing education degree on NCSES and BHCC subscale scores – diploma or associate degree, BSN and MSN, DNP, PhD. The DNP, MSN, PhD category had the highest scores for the NCSES subscales, while the diploma or associate degree categories had the highest scores on each of the BHCC subscales. Only the BHCC drug recommendation subscale indicated a statistically significant difference ($p =$ .01) among those whose degree in nursing education was diploma or associate degree. These particular findings are challenging to rationalize as the mean scores with NCSES complex and fundamental care increased with higher level of education, while the highest mean in each of the BHCC subscales are the diploma and associate degree educated nurses.

Approximately, the diploma and associate nurses comprised 43% of participants in this study, BSN was also 43% and MSN, DNP, PhD comprised 12%. Consideration could be given to number of clinical days per degree and whether or not the programs had mental illness concepts integrated throughout the curriculum. Another consideration could be if there was dedicated pharmacology, particularly psychopharmacology. Additionally, consideration could be given to the amount of nursing experience each degree category had.

Professional.

The third variable, professional, has 5 components – years of nursing experience, professional certifications other than basic life support (BLS) and cardiac life support (CLS), continuing education related to mental illness, how often care was provided for MSMI patients and mentoring received related to caring for MSMI patients. Analysis of variance was completed for the effect of each component in the professional variable on NCSES and BHCC subscale scores. There were statistically significant findings in all but one component – professional certifications. Each will be discussed in order of statistically significant findings – mentoring, how often care was provided, continuing education related to mental illness and years of nursing experience.

Mentoring.

Participants who indicated they had mentoring related to caring for MSMI patients had the highest mean scores for all the NCSES and BHCC subscales compared with those who did not have mentoring. All but the NCSES fundamental subscale had statistically significant differences indicating higher nursing care self-efficacy scores in the complex subscale ($p = .04$)

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and greater perceived competence with BHCC assessment ($p = <.001$), practice ($p = <.001$), drug

recommendation ($p = .001$) and resource adequacy ($p = <.001$) among those who had mentoring.

Thirty-nine percent of the participants indicated they had experienced mentoring from

peers, educators, or supervisors in regards to caring for MSMI patients. When asked who had

mentored them and for what, several types of nurse mentors were listed with a range of

assistance they had provided (Appendix J). These different types of mentors are less important

than the participants' perception of having been mentored (Huybrecht, Loeckx, Quaeyhaeges,

Tebel & Mistiaen, 2011).

At the top of the list as mentors were the registered nurses they worked with (27). One

respondent indicated, "Nurses mentor each other for support". Their peers mentored them for a

range of mental health diagnoses in the medical-surgical setting, assisted them with the patients'

care, and lent their insights on situations with MSMI patients. Supervisors, nurse managers and

charge nurses were indicated as mentors, as were preceptors and clinical coaches. Specialists in

the field of mental health were mentioned such as behavior health services, attending physicians,

medical doctors and nurse practitioners, emergency nursing services and consulting

professionals. Considered as a mentor for one participant was the employee assistance program

(EAP). Someone from EAP had spoken to their unit regarding negative patient behaviors.

Additionally, the participants considered in-services as a mentoring experience, as well as

learning modules, mobile apps for patient management and simulation.

The mentoring-mentee relationship is multi-faceted in nursing and all professions,

however all have key elements. Mijares, Baxley and Bond's (2013) theoretical definition of

mentoring is "mentoring is an interpersonal process that takes place between a trained, seasoned

mentor and a novice protégé. After accounting for cultural differences, mentoring entails

providing emotional support, sharing knowledge and experience, role-modeling and guidance"
(pg. 27). The consequences of mentoring are increased self-confidence, maximized learning, increased career satisfaction and promotion of personal and professional growth (Mijares, Baxley & Bond, 2013). Importantly, when mentors are educated in the art of mentoring outcomes are improved. Consequently, in nursing, the influence of mentoring improves service delivery to consumers as it increases competency, and increased competency improves healthcare outcomes (Mijares et al., 2013).

In this study, only nursing care self-efficacy and behavioral health care competence has been measured in relation to mentoring. The indications of this measurement clearly identify the need for further research to explore and best determine the most effective type(s) of mentoring for increased competency as well as research to determine the improved healthcare outcomes with the MSMI patient population. Some considerations for this exploration in light of nurses caring for MSMI patients are - how the mentor/mentee relationships developed (was it intentionally assigned, did one member seek the relationship, was the mentor/mentee connection planned), was there more than one mentor and if so why and how, were there mentors from other disciplines, and what type(s) of mentoring were used. Mijares et al.(2013) suggest the abstract concept of mentoring is open to subjective experience of both mentor and mentee and is measured most appropriately by qualitative methods.

How often care was provided for MSMI patients.

The frequency with which care is provided for MSMI patients had statistically significant findings with the NCSES and BHCC subscales. All the subscales had higher means when participants indicated they provided care more often. Statistically significant differences were indicated among participants who provided care more often and the BHCC assessment (*p* =

<.001), practice (*p* = .001) and drug recommendation (*p* = .001) subscales. This is indication that caring frequently for MSMI patients increases confidence and competence with the assessment of MSMI patients and drug recommendation. Findings, though not statistically significant were similar with the professional component's 'years of experience' as the BHCC assessment and drug recommendation subscales had the highest mean. This would indicate the experience of caring often for MSMI patients correlates with more years of experience.

Continuing education related to mental illness.

Analysis of variance for the effects of the component continuing education related to mental illness on NCSES and BHCC subscales indicated all participants who had continuing education related to mental illness had higher means in all NCSES and BHCC subscales. Statistically significant differences were found among those who had continuing education and the BHCC assessment *(p = <.001)* and practice (*p* = <.001) subscales.

Participants in this study were asked to indicate whether or not they had sought continuing education (CE) related to mental illness in non-psychiatric settings and if so to please list. Fourteen percent of the participants indicated they had received CE related to caring for MSMI patients and listed the topics (Appendix K). The most frequent CE listed was non-violent crisis intervention, followed by CE for dementia and substance abuse. Continuing education for Alzheimer, care of the suicidal patient, care of patient with mental illnesses and modules related to behavior were also listed. How the CE was obtained was only listed by two participants (a local mental health consortium and reading articles). Though not statistically significant, higher NCSES subscale scores, an indication of higher self-efficacy, aligns with seeking desired learning opportunities such as continuing education.

Moseley (2016) emphasizes from the 2015 Josiah Macy, Jr. Foundation Report the recommendation of maximizing opportunities for lifelong learning anytime, anywhere, with a push to facilitate individualized learning, personalized progression towards mastery, and active collaboration among educators and learners. This emphasizes the importance of understanding how individuals select continuing education. Is it from personal interest, desire to learn, self-inventory or mandated? Consideration of how continuing education related to mental illness or caring for MSMI patients is offered (face to face, electronically or journal or other articles), it's friendliness for users' schedules, particularly nurses who work day and night shifts, and the costs of continuing education, can assist with more successful continuing education offerings for larger numbers of nurses.

Years of nursing experience.

For the analysis of variance of the effect of years of nursing experience on NCSES and BHCC subscale scores the years of experience were collapsed into two categories – 1 to 5 years of experience and greater than 6 years of experience and above. There were statistically significant differences among the NCSES complex and fundamental subscales indicating that participants with 6 or more years of experience have greater nursing care self-efficacy with both complex and fundamental nursing care. Though not a statistically significant finding, those with 6+ years of experience had the highest mean in the BHCC assessment and drug recommendation subscales. This finding can be supported by Benner's (2001) descriptive and narrative research that identified the 5 levels of competency in clinical nursing practice from the beginning novice to the expert clinician. The participants with 6+ years of experience would have had more time in medical-surgical or other clinical settings for the growth and development of nursing care self-efficacy, especially those components of the NCSES complex subscale.   This is not to say their

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experience has been with MSMI patients. The BHCC subscale scores indicate they are not

experts with MSMI patients and are aware of the deficit. Registered nurse can move from a

position of proficient or expert back into a lower level of skill acquisition when faced with a

change in scope of practice within their current practice setting (Bowen & Prentice, 2016).

Professional certifications.

For the last component of the professional variable, professional certifications, there were

no statistically significant differences among those who had professional certifications other than

BLS and CLS. Interestingly, all participants who had professional certifications had higher

means in all NCSES and BHCC subscales than those who did not have professional

certifications. Sixty-percent of the participants had professional certifications other than BLS

and CLS. Seeking and obtaining professional certifications can be interpreted as a level of

perceived self-efficacy, that one can produce a given level of attainment (Bandura, 1997).

There were 42 different certifications the participants indicated they held (Appendix L).

Several of the certifications' expertise was similar but certification can be received from

numerous nursing certifying bodies. The most frequently indicated certifications were ACLS,

PALS and Med-Surg.

Research Question Three

Which variable (personal, educational or professional) is the strongest predictor of

nursing care self-efficacy and perceived mental health care competence to provide care for

MSMI patients?

The professional variable is indicated as the strongest predictor of nursing care self-

efficacy and perceived mental health care competence to provide care for MSMI patients.

Analysis of variance for the effect of the personal variable (LOF) and components of the educational and professional variables on NCSES and BHCC subscale scores were completed and presented in tables 6-15 in Chapter Four. Each of the variables and their effect on NCSES and BHCC subscales scores have been previously discussed.

The professional variable's components indicated the greatest statistically significant differences among the NCSES and BHCC subscales. Mentoring related to caring for MSMI patients was indicated as the strongest predictor of the professional variable (5 of 6 subscales statistically significant). The second strongest predictor from the professional variable's components was frequency of care (often) provided for MSMI patients (3 of 6). This was followed by continuing education related to mental illness (2 of 6).

The education variable had several statistically significant differences among its' 4 components. MHC in nursing curricula during both psychiatric disorders and in relation to the general provision of nursing had the most statistically significant findings among the education variable's components (4 of 6), followed by providing care for MSMI patients during nursing education (3 of 6), having a psychiatric clinical rotation during nursing education (2 of 6), and highest degree in nursing education (1of 6). The personal variable was statistically significant only for the BHCC assessment subscale.

Analysis of variance for the effect to the variables on NCSES and BHCC subscale scores indicate the professional variable as the strongest predictor of nursing care-self efficacy and perceived mental health care competence to provide care for MSMI patients. Working as a nursing professional with the guide of mentors regarding the care of MSMI patients, the experience of providing care often for MSMI patients and seeking continuing education to

enhance knowledge of MSMI patients are the strongest predictors of nursing care self-efficacy and perceived mental health care competencies in the professional variable.

Research Question Four

How well does a combination of variables (personal, education or professional) predict the levels of nursing care self-efficacy and perceived mental health care competence to provide care for MSMI patients?

Components of variables were analyzed to determine their statistical significance related to nursing preparedness - nursing care self-efficacy and perceived mental health care competence scores – for the care of MSMI patients.   From this analyses, components of the education and professional variables were chosen during independent-group t-tests or one-way analysis of variance for their statistical significance with BHCC subscale scores. The best linear combination of components from the educational and professional variables as well as the NCSES subscales were frequency of care, continuing education, mentoring, providing care for MSMI patients during nursing education and nursing care self-efficacy complex and fundamental subscale scores. These variables were correlated with the four BHCC subscales. Each of the BHCC subscales correlated with these variables in different orders of statistical significance.

Importantly, mentoring had statistically significant correlations with each of the BHCC subscales. Four of the variables significantly correlated with three of the BHCC subscales. Frequency of care had significant statistical correlations with the assessment, practice and drug recommendation subscales. The NCSES complex subscale significantly correlated with BHCC's assessment, practice and resource adequacy subscales, while the NCSES fundamental subscale correlated with assessment, practice, and resource adequacy subscales. Providing care for MSMI

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patients during nursing education correlated with the practice, drug recommendation and resource adequacy subscales. Continuing education related to caring for MSMI patients correlated with 2 BHCC subscales – assessment and practice.

Simultaneous multiple regression analysis was used to predict the best combination of the components - frequency of care, continuing education, mentoring, providing care for MSMI patients during nursing education and the NCSES complex subscale - for the preparedness of nurses to care for MSMI patients. The beta weights indicate high nursing care self-efficacy subscales scores contribute the most to nursing preparedness in the assessment, practice and resource adequacy subscales followed by receipt of mentoring for the care of MSMI patients significantly contributing to each of the BHCC subscales. The beta weights also indicate the frequency with which care is provided for MSMI patients (often), providing care for MSMI patient during nursing education and continuing education regarding caring for MSMI patients significantly contribute to this combination of variables for nursing preparedness to care for MSMI patients. Twenty-two percent of the variance in the assessment subscale can be predicted with this combination of variables as can 24% of the variance in the practice subscale. These are typical to larger than typical effect sizes. Eight percent of the variance in drug recommendation (a very small effect) can be predicted by these variables and 14% of the variance can be predicted in resource adequacy (a small effect).

Key Findings

The key findings from this research are the components of the variables that are more frequently associated with and most predictive of nursing preparedness to care for MSMI patients. The most significant finding is the most predictive combination of variable components for nursing preparedness to care for MSMI patients. The combination includes 5 components -

high complex nursing care self-efficacy perceptions, receipt of mentoring related to care of MSMI patients, frequency of care (often) with which care is provided for MSMI patients, having cared for MSMI patients during nursing education and continued education regarding the care of MSMI patients. Importantly, the aforementioned components are also most associated with nursing preparedness plus the NCSES fundamental subscale.

Relationship of Findings to Conceptual Model

The theoretical and research frameworks associated with this study proposed that nursing preparedness - nursing care self-efficacy and behavioral health care competencies – are dependent upon the variables – personal, education and professional. In this study, there were statistically significant findings among the independent variables' effect on NCSES and BHCC that indicated the strength of the relationships. However, data analysis using multiple regression to predict the best combination of variables for preparedness using NCSES as a dependent variable resulted in a very weak model. Using simultaneous multiple regression analysis on each of the BHCC subscales with NCSES as an independent variable, as well as the components of variables with the greatest statistical significance with BHCC subscale scores, found the best linear combination of variables to predict perceived mental health competence. Thus, with this study, the independent variables per the proposed model, significantly affect preparedness (NCSES and BHCC), however, the highest BHCC scores are dependent upon NCSES and components of other independent variables.

Strengths and Limitations

This study had several strengths and limitations. One strength is the generalizability of this study's findings. This is the first known study to explore the proposed concept's variables to

determine which are significantly associated with and most predictive of nursing preparedness to care for MSMI patients (nursing care self-efficacy and mental health care competencies) using the LOF, NCSES and BHCC instruments. However, because the sample size (N = 260) was adequate for analysis (Pallant, 2013) and the participants' demographic data was representative of the US nursing workforce (HHS, 2013), it can be inferred the findings are generalizable to nurses who work in acute care hospitals.

An additional strength is the exploration of registered nurses' preparedness to care for MSMI patients within a large hospital system that includes both tertiary and rural based hospitals. Their responses give an indication of nursing preparedness to care for MSMI patients across a great north-eastern part of a southern state. This portion of the state includes pockets of identified urban and rural distressed tracts (Hugh & Owen, 2014) where economic disparities greatly affect health. Understanding the nurses' perceptions of their preparedness to provide safe, effective care for MSMI patients in this region establishes a baseline of known preparedness. Indicators for variables that best predict nursing preparedness can assist nurse educators and leaders in this hospital system with development of nursing education, resource planning, and policy development for optimal nursing preparedness to care for MSMI patients across the system's nursing work force and work environment.

A limitation to this study was the findings were dependent on perceptions of the participants as opposed to observed or measured data. An additional limitation, due to the survey's confidentiality agreement, was the inability to determine from which hospital the responses came from as such, responses are an aggregate of all participants' responses. Although this study's aim was to explore the preparedness of nurses to care for MSMI patients from a representative workforce, information regarding preparedness of nurses within a

particular hospital could assist with prioritization of interventional planning for specific

identified needs, followed by the implementation and assessment for effectiveness. What can be

determined from this study are participant responses per nursing units, and analysis of the

preparedness components were completed for the total system's participants.

Implications and Recommendations for Education, Practice and Research

This research indicates preparedness of nurses to care for MSMI patients can most

significantly be bolstered when nurses have high complex nursing care self-efficacy perceptions

and have received mentoring from peers, educators, or supervisors in regards to caring for MSMI

patients. Additionally, this study's exploration of the preparedness of nurses to care for MSMI

patients lends direction to nursing education, more competent, confident nursing practice and

further research regarding care of the MSMI patient.

Complex nursing care self-efficacy is a predictor of nursing preparedness for MSMI

patients. Opportunities in nursing education and nursing practice such as collaboration,

interdependence and leadership with other health care team members lends to better

understanding of systems knowledge and patient-centered care. These opportunities must be

fully used for increased complex nursing care self-efficacy.

The findings of this study significantly indicate the importance of mentoring as a leading

key element of nursing preparedness to care for MSMI patients. Formal support in hospitals for

the experience of mentoring involves education for those mentoring as well as for the mentee.

Recommended nursing residency programs necessitating mentor-mentee relationships have been

developed with the goal of nurse retention, improved patient safety and outcomes and overall

cost reduction (National Academies of Sciences, Engineering, and Medicine, 2016). While there

is not a consistent model used for nursing residency programs, this is one format into which

education for mentor development and mentee relationships can be introduced, practiced and

researched for most effective outcomes. Ensuring these mentors are prepared for the

complexities of MSMI patients' needs could be included as part of the mentor development

programs.

Importantly, many mentors are not in formal roles and many nurses other than new

graduates seek mentors. Research exploring what constitutes a working environment that

promotes and embraces learning relationships is needed. Specifically, research exploring what

type of mentoring is most often sought and is most effective regarding nursing preparedness to

confidently and competently care for MSMI patients is needed. Additionally, research to explore

the preparedness of these effective mentors would contribute to knowledge of how to "grow" this

mentoring pool for nursing preparedness to care for MSMI patients.

The more often registered nurses provide care for MSMI patients and those that provided

care for MSMI patients during their nursing education are two of the five components this study

indicated that predict a nursing preparedness to care for MSMI patients. Nursing education

programs actively including more care of MSMI patients may need to first begin with

identification or growth of existing nursing faculty who are confident and competent with patient

assessment, especially assessment of patients with chronic illnesses, that can facilitate the

recognition and assessment of the co-morbidities of physical and mental illnesses.   In addition to

cardiovascular disease, MSMI patients have diagnoses of arthritis, cancer survivorship, chronic

pain, diabetes mellitus type 2, post-traumatic disabling conditions and vision and hearing loss

(IOM, 2012). Nursing faculty effectively prepared to incorporate the care of MSMI patients in

theory and practice, can provide for students more opportunities to provide care for MSMI

patients during their nursing education. Simulation can be used, with both low and high fidelity,

to educate students with assessment for known associated chronic physical and mental illnesses. One important educational component regarding chronic illness and a secondary diagnosis of mental illness is assessment of delirium versus dementia as well as the appropriate interventions necessary for safe practice and optimal patient outcomes.

This research indicated continuing education regarding caring for MSMI patients significantly contributed to nursing preparedness to care for MSMI patients. Lifelong learning is essential for nurses to work in evolving heath care environments (National Academies of Sciences, Engineering, and Medicine, 2016). This is especially important with the complexities of the MSMI population. Research exploring the continuing education content nurses need to care for MSMI patients is vital for development of programs that can enable nurses to gain, preserve, and measure competencies so necessary to provide safe, effective MSMI patient care. It is also essential these continuing education offerings are developed in ways the delivery and presentation can be available in a number of formats and with a focus such that competencies can be measured as learning outcomes.

While there is no conclusive research to determine the effectiveness of nursing certifications on patient outcomes, research is needed regarding a "certification" to provide care for MSMI patients. The complexities of this population in both acute care and out-patient settings combined with the impact the nursing workforce can have for improved patient outcomes necessitates recognition of this particular body of nursing knowledge. The "holders" of this "body of knowledge" can be at all levels of nursing and in every practice environment. They can champion – be the leaders – for effective change in nursing systems and nursing policy, to empower our nursing workforce and work environments for quality MSMI patient care and outcomes.

Nurses are prepared for so many roles. It is important that nurses understand their role with MSMI patients regarding effective care and health outcomes   Ensuring this during nursing education and re-enforcing during nursing practice is the responsibility of health care organizations, nursing associations, nursing educators, and all nurses.

Last, but not least, research to explore the nursing preparedness to care for MSMI patients from the patient's perspective could provide insight that is only available from a MSMI recipient of nursing care. The patient's perspective is valued and valuable for optimal patient outcomes.

Conclusion

In conclusion, the nursing profession is the largest segment of the United States' health care workforce with more than 3 million members. Nurses in acute care, on the front lines caring for patients, have the most direct effect on patient care and patient outcomes. MSMI patients, with astoundingly higher morbidity and mortality rates when compared to the general population, are frequently cared for on medical-surgical units where nurses may not be prepared for the complexities of the co-existing medical and psychiatric disorders that create some of the most unique challenges in the clinical practice setting. The preparedness of nurses to care for MSMI patients is paramount as they directly care for this complex population. The effect nurses have on MSMI patient outcomes related to improved health, increased safety and decreased length of hospitalizations can be altered with the preparedness of our nursing workforce and practice environments to care for MSMI patients.

This research signifies nursing care self-efficacy and mentoring are two key factors for the preparedness of nurses to care for MSMI patients. Every nurse needs the best preparation and every patient deserves the best nursing care. It is essential the findings from this study

embolden our nursing leaders and educators to translate these research findings to develop education, enhance practice and continue research to fill the gaps in nursing preparedness to care for MSMI patients. This will ensure a more robust nursing workforce and work environment for the present and for the future.

REFERENCES

AACN (American Association of Colleges of Nursing). 2011. *Nursing Fact Sheet, 2011.*

Ahern, J., & Kumar, C. (2013, June). Caring for a patient with mental illness in the acute care setting. *Lippincott's Nursing Center.com. 11(3).*

Ai, A. L., Rollman, B. L., & Berger, C. S. (2010). Comorbid mental health symptoms and heart diseases: Can health care and mental health care professionals collaboratively improve the assessment and management? *Health & Social Work, 35*(1), 27-38.

Alexander, V., Ellis, H., & Barrett, B. (2016). Medical–Surgical nurses' perceptions of psychiatric patients: A review of the literature with clinical and practice applications. *Archives of Psychiatric Nursing, 30*(2), 262-270.

Arnold, M., & Mitchell, T. (2008). Nurses' perceptions of care received by older people with mental health issues in an acute hospital environment. *Nursing Older People, 20*(10), 28-34.

Baack, S. & Alfred, D. (2013). Nurses' preparedness and perceived competence in managing disasters. *Journal of Nursing Scholarship, 45*(3), 281-287.

Baker, N. D., Taggart, H. M., Nivens, A., & Tillman, P. (2015). Delirium: Why are nurses confused? *Medsurg Nursing : Official Journal of the Academy of Medical-Surgical Nurses, 24*(1), 15.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1-26.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior, 31*(2), 143-164.

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science, 1*(2), 164.

Benner, P. E. (2001). *From novice to expert: Excellence and power in clinical nursing practice* (Commemorative ed.). Upper Saddle River, N.J: Prentice Hall.

Björkman, T., Angelman, T., & Jönsson, M. (2008). Attitudes towards people with mental illness: A cross-sectional study among nursing staff in psychiatric and somatic care. *Scandinavian Journal of Caring Sciences, 22*(2), 170-177.

Björkman, T., Östman, M., Svensson, B., Eklund, M., Brunt, D., Hansson, L.,…Bejerholm, U. (2009). Attitudes towards mental illness among health care students at swedish universities: A follow-up study after completed clinical placement. *Nurse Education Today, 29*(6), 660.

Bowen, K., & Prentice, D. (2016). Are benner's expert nurses near extinction? *Nursing Philosophy, 17*(2), 144-148. doi:10.1111/nup.12114.

Bressi, S., Marcus, S. & Solomon, P. (2006). The impact of psychiatric comorbidity on general hospital length of stay. *Psychiatric Quarterly, 77*(3), 203-209.

Brinn, F. (2000). Patients with mental illness: General nurses' attitudes and expectations. *Nursing Standard (Royal College of Nursing). Great Britain: (1987), 14*(27), 32.

Brunero, S., & Lamont, S. (2010). The 'difficult' nurse-patient relationship: Development and evaluation of an e-learning package. *Contemporary Nurse: A Journal for the Australian Nursing Profession, 35*(2), 136-146. doi:10.5172/conu.2010.35.2.136.

Burgermeister, D., Kwasky, A., & Groh, C. (2012). Promoting mental health concepts in a

    doctor of nursing practice curriculum: An integrated and global approach. *Nurse Education*

    in Practice, 12(3), 148.

Byers, D. C., & France, N. (2008). The lived experience of registered nurses providing care to

    patients with dementia in the acute care setting: A phenomenological study. *International*

    Journal for Human Caring, 12(4), 44-49.

Chadwick, A., Street, C., McAndrew, S., & Deacon, M. (2012). Minding our own bodies:

    reviewing the literature regarding the perceptions of service users diagnosed with serious

    mental illness on barriers to accessing physical health care. *International Journal of Mental*

    Health Nursing, 21, 211.

Christoffersen, J., Barron, A., Lynch, M., & Caroline, H. (2010). Integrating psychosocial skills

    into a medical-surgical curriculum in a baccalaureate nursing program. *Journal of Nursing*

    Education, 49(10), 573-577.

Corrigan, P., Kerr, A & Knudsen, L. (2005). The stigma of mental illness: explanatory models

    and methods for change. *Applied and Preventive Psychology, 11*, 179.

Corrigan, P. (2012). *A toolkit for evaluating programs meant to erase the stigma of mental*

    illness. Retrieved from

    http://www.scattergoodfoundation.org/sites/default/files/Evaluation%20Toolkit

Corrigan, P. W. (2014). *The stigma of disease and disability: Understanding causes and*

    overcoming injustices (First ed.). Washington, DC: American Psychological Association.

Corrigan, P. W. (2016). Beating stigma? Augment good intentions with the critical eye. *Stigma*

    and Health, 1(1), 1-2.Corrigan, P. W., Edwards, A. B., Green, A., Diwan, S. L., & Penn, D.

L. (2001). Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin, 27*(2), 219-225.

Corrigan, P. W., Green, A., Lundin, R., & Kubiak, M. & Penn, D. (2001). Familiarity with and social distance from people who have serious mental illness. *Psychiatric Services, 52*(7), 953-958. doi:10.1176/appi.ps52.7.953

Corrigan, P., Markowitz, F. E., Watson, A., Rowan, D., & Kubiak, M. A. (2003). An attribution model of public discrimination towards persons with mental illness. *Journal of Health and Social Behavior, 44*(2), 162-179.

Cowdell, F. (2010). The care of older people with dementia in acute hospitals. *International Journal of Older People Nursing, 5*(2), 83-92.

Dahlke, S., & Phinney, A. (2008). Caring for hospitalized older adults at risk for delirium: The silent, unspoken piece of nursing practice. *Journal of Gerontological Nursing, 34*(6), 41-47.

Daumit, G., Pronovost, P., Anthony, C., Guallar, E., Steinwachs, D. & Ford, D. (2006). Adverse events during medical and surgical hospitalizations for persons with schizophrenia. *Archives of General Psychiatry, 63*(3), 267-272.

De Jonge, P., Cardoso, G., Rigatelli, M., Zomerdijk, M. M., Huyse, F. J., Fink, P.,…Rigatelli, M. (2001). Mental disturbances and perceived complexity of nursing care in medical inpatients: Results from a european study. *Journal of Advanced Nursing, 36*(3), 355-363.

Druss, B. G., Zhao, L., Von Esenwein, S., & Morrato, E. H., & Marcus, S. (2011). Understanding excess mortality in persons with mental illness: 17-year follow up of a nationally representative US survey. *Medical Care, 49*(6), 599-604.

Edwards, M., & Donner, G. (2007). The efforts of critical care nurses to pass along knowledge about patients. *Canadian Journal of Nursing Research, 39*(1), 139.

Farley-Toombs, C. (2012). The stigma of a psychiatric diagnosis: Prevalence, implications and nursing interventions in clinical care settings. *Critical Care Nursing Clinics of North America, 24*(1), 149-156.

Fessey, V. (2007). Patients who present with dementia: Exploring the knowledge of hospital nurses. *Nursing Older People, 19*(10), 29-33.

Fick, D. M., Hodo, D. M., Lawrence, F., & Inouye, S. K. (2007). Recognizing delirium superimposed on dementia. *Journal of Gerontological Nursing, 33*(2), 40-47.

Flagg, B., Cox, L., McDowell, S., Mwose, J. M., & Buelow, J. M. (2010). Nursing identification of delirium. *Clinical Nurse Specialist: The Journal for Advanced Nursing Practice, 24*(5), 260-266.

Ford, R. (2011). Interpersonal challenges as a constraint on care: The experience of nurses' care of patients who use illicit drugs. *Contemporary Nurse: A Journal for the Australian Nursing Profession, 37*(2), 241-252. doi:10.5172/conu.2011.37.2.241

Ford, R., Bammer, G., & Becker, N. (2008). The determinants of nurses' therapeutic attitude to patients who use illicit drugs and implications for workforce development. *Journal of Clinical Nursing, 17*(18), 2452-2462. doi:10.1111/j.1365-2702.2007. 02266.x

Garey, J. (2013, august 10, 2013). When doctors discriminate. *The New York Times,* pp. SR6.

Gill, K. J., Murphy, A. A., Zechner, M. R., Swarbrick, M., & Spagnolo, A. B. (2009). Co-morbid psychiatric and medical disorders: Challenges and strategies. *Journal of Rehabilitation, 75*(3), 32-40.

Gliner, J., Morgan, G., and Leech, N. (Ed.). (2009). *Research methods in applied settings an integrated approach to design and analysis* (Second Ed.). New York, NY: Routledge, Taylor & Francis Group.

Gray, R., Hardy, S., & Anderson, K. (2009). Physical health and severe mental illness: If we don't do something about it, who will? *International Journal of Mental Health Nursing.* 18, 299-300. doi: 10.1111/j.1447-0349.2009.00840.x

Happell, B. & Cutcliffe, J. R. (2011). A broken promise? exploring the lack of evidence for the benefits of comprehensive nursing education. *International Journal of Mental Health Nursing, 20*(5), 328-336.

Happell, B., & Platania-Phung, C. (2012). Mental health placements in a general health setting: No substitute for the real thing. *Journal of Clinical Nursing, 21*(13-14), 2026-2033.

Harrison, A. & Zohhadi, S. (2005). Professional influences on the provision of mental health care for older people within a general hospital ward. *Journal of Psychiatric and Mental Health Nursing, 12*(4), 472-480.

HCUP facts and figures: statistics on hospital-based care in the United States, 2009.

Hegge, M. J. (2011). The lingering presence of the nightingale legacy. *Nursing Science Quarterly, 24*(2), 152-162.

Holmes, E. P., Corrigan, P. W., Williams, P., Canar, J., & Kubiak, M. A. (1999). Changing attitudes about schizophrenia. *Schizophrenia Bulletin, 25*(3), 447-456.

Howard, L. & Gamble, C. (2011). Supporting mental health nurses to address the physical health needs of people with serious mental illness in acute inpatient care settings. *Journal of Psychiatric and Mental Health Nursing, 18*, 105.

Hugh, W., & Owen, Todd. (2014). *North Carolina's distressed urban tracts: A view of the state's economically disadvantaged communities* No. CURS Report No. 2014-01). The University of North Carolina at Chapel Hill: Center for Urban and Regional Studies.

Huybrecht, S., Loeckx, W., Quaeyhaegens, Y., De Tobel, D., & Mistiaen, W. (2011). Mentoring in nursing education: Perceived characteristics of mentors and the consequences of mentorship. *Nurse Education Today, 31*(3), 274-278. \

IOM (Institute of Medicine). 2010. *A summary of the February 2010 forum on the future of nursing: Education*. Washington, DC: The National Academies Press.

IOM (Institute of Medicine). 2011. *The future of nursing: Leading change, advancing health.* Washington, DC: The National Academies Press.

IOM (Institute of Medicine). 2012. *Living well with chronic illness: A call for public health action.* Washington, DC: The National Academies Press.

Insel, T. (2011, September 6). Director's blog. No health without mental health. Retrieved from www.nimh.nih.gov.

Insel, T. (2014, October 8). Director's blog: Atonement. Retrieved from www.nimh.nih.gov.

Jones, S., Howard, L. & Thornicroft, G. (2008). Diagnostic overshadowing: worse physical health care for people with mental illness. *Acta Psychiatrica Scandinavica, 118*, 169.

Kane, C. & Brackley, M. (2012). Essential psychiatric, mental health and substance use competencies for the registered nurse. *Archives of Psychiatric Nursing, 26*(2), 80.

Kemery, S. (2016). Caring for patients with schizophrenia on the med-surg unit. *MedSurg Nursing, 25*(5), S4.

Ketola, J. & Stein, J.V. (2013). Psychiatric clinical course strengthens the student-patient relationships of baccalaureate nursing students. *Journal of Psychiatric and Mental Health Nursing, 20*, 23-24.

Kishi, Y., Meller, W. H., Kathol, R. G., & Swigart, S. E. (2004). Factors affecting the

relationship between the timing of psychiatric consultation and general hospital length of

stay. *Psychosomatics, 45*(6), 470-476.

Kutney-Lee, A., & Aiken, L. H. (2008). Effect of nurse staffing and education on the outcomes

of surgical patients with comorbid serious mental illness. *Psychiatric Services, 59*(12), 1466-

1469. doi:10.1176/appi.ps.59.12.1466.

Kutney-Lee, A., Lake, E. T., & Aiken, L. H. (2009). Development of the hospital nurse

surveillance capacity profile. *Research in Nursing and Health, 32*(2), 217-228.

doi:10.1002/nur.20316

Lambert, K. (2011). Caring for patients with mental health disorders. Retrieved from

www.rn.com/*nursing-education/course-details/?course_id=2134*

Lethoba, K. G., Netswera, F. G., & Rankhumise, E. (2006). How professional nurses in a general

hospital setting perceive mentally ill patients. *Curationis, 29*(4), 4-11.

Liggins, J., & Hatcher, S. (2005). Stigma toward the mentally ill in the general hospital: a

qualitative study. *General Hospital Psychiatry, 27*, 359-364.

MacNeela, P., Scott, P., Treacy, M., Hyde, A. & O'Mahony, R. (2012). A risk to himself:

Attitudes toward psychiatric patients and choice of psychosocial strategies among nurses in

medical-surgical units. *Research in Nursing & Health, 35*(2), 200-213.

Mc Donnell, S., & Timmins, F. (2012). A quantitative exploration of the subjective burden

experienced by nurses when caring for patients with delirium. *Journal of Clinical Nursing,*

21(17), 2488-2498.

McMillan, L. R., & Shannon, D. (2011). Program evaluation of nursing school instruction in

    measuring students' perceived competence to empathetically communicate with patients.

    Nursing Education Perspectives, 32(3), 150-154.

Meako, M. E., Thompson, H. J., & Cochrane, B. B. (2011). Orthopaedic nurses' knowledge of

    delirium in older hospitalized patients. *Orthopedic Nursing, 30*(4), 241-248. doi:

    10.1097/NOR.0b013e3182247c2b

Mijares, L., Baxley, S. M., & Bond, M. L. (2013). Mentoring: A concept analysis. *Journal of

    Theory Construction & Testing, 17*(1), 23-28.

Monks, R., Topping, A., & Newell, R. (2013). The dissonant care management of illicit drug

    users in medical wards, the views of nurses and patients: A grounded theory study. *Journal

    of Advanced Nursing, 69*(4), 935-946.

Moseley, M. J. (2016). Educators and lifelong learners: The Macy report's recommendation #1.

    The Journal of Continuing Education in Nursing, 47(1), 3-4. doi:10.3928/00220124-

    20151230-01

Moyle, W., Borbasi, S., Wallis, M., Olorenshaw, R., & Gracia, N. (2011). Acute care

    management of older people with dementia: A qualitative perspective. *Journal of Clinical

    Nursing, 20*(3), 420-428.

National Academies of Sciences, Engineering, and Medicine (2016). *Assessing progress on the

    institute of medicine report.* The Future of Nursing. Washington, DC: The National

    Academies Press.

Neville, K., & Roan, N. (2013). Suicide in hospitalized medical-surgical patients: Exploring

    nurses' attitudes. *Journal of Psychosocial Nursing & Mental Health Services, 51*(1), 35-43.

(NIMH) National Institute of Mental Health. (2014). *Statistics*. Retrieved from

    www.nimh.nih.gov/health/publications/the-numbers-count-mental-disorders-in-

    america/index.shtml

NOAA (National Oceanic Atmospheric Administration). 2014. Retrieved from www.noaa.gov.

Olfson, M., Gerhard, T., Huang, C., Crystal, S., & Stroup, T. S. (2015). Premature mortality

    among adults with schizophrenia in the united states. *JAMA Psychiatry, 72*(12), 1172-1181.

    doi: 10.1001/jamapsychiatry.2015.1737.

Ouzouni, C., & Nakakis, K. (2013). Nurses' attitudes towards attempted suicide. *Health Science*

    Journal, 7(1), 119-134.

Pajares. (2002). Overview of social cognitive theory and of self-efficacy. Retrieved from

    www.emory.edu/Education/.

Pallant, J. (2013). *SPSS survival manual* (5th ed.). China at Everbest Printing Co.: McGraw-Hill.

Polit, D.L., & Beck, C. T. (2012). *Nursing Research, 9*[th] ed., Baltimore, MD: Lippincott,

    Williams & Wilkins.

Putman, S. (2008). Mental illness: Diagnostic title or derogatory term? (Attitudes towards mental

    illness) developing a learning resource for use within a clinical call centre. A systematic

    literature review on attitudes towards mental illness. *Journal of Psychiatric and Mental*

    Health Nursing, 15(8), 684-693.

Reed, F., & Fitzgerald, L. (2005). The mixed attitudes of nurse's to caring for people with mental

    illness in a rural general hospital. *International Journal of Mental Health Nursing, 14*(4),

    249-257.

Reinhard, S., & & Hassmiller, S. (2010). The future of nursing: transforming health care. *AARP International. the Journal.* Retrieved from http://journal.aarpinternational.org/a/b/2012/02/The-Future-of-Nursing-Transforming-Health-Care

Rice, K., Bennett, M., Clesi, T. & Linville, L. (2014). Mixed-methods approach to understanding nurses' clinical reasoning in recognizing delirium in hospitalized older adults. *Journal of Continuing Education in Nursing, 45*(3), 136. doi:10.3928/00220124-20140219-02

Rochefort, C., M., Ward, L., Ritchie, J., A., Girard, N., & Tamblyn, R., M. (2012). Patient and nurse staffing characteristics associated with high sitter use costs. *Journal of Advanced Nursing, 68*(8), 1758-1767.

Robb, M. (2012). Self-efficacy with application to nursing education: a concept analysis. *Nursing Forum,* 166.

Roberts, K., Robinson, K., Stewart, C. & & Smith, F. (2009). An integrated mental health rotation. *Journal of Nursing Education, 48*(8), 454.

Ross, C. A., & Goldner, E. M. (2009). Stigma, negative attitudes and discrimination towards mental illness within the nursing profession: A review of the literature. *Journal of Psychiatric and Mental Health Nursing, 16*(6), 558-567.

Rutledge, D., Wickman, M., Cacciata, M., Winokur, E., Loucks, J., & Drake, D. (2013). Hospital staff nurse perceptions of competency to care for patients with psychiatric or behavioral health concerns. *Journal for Nurses in Professional Development, 29*(5), 255.

Rutledge, D., Wickman, M., Drake, D., Winokur, E. & Loucks, J. (2012). Instrument validation: hospital nurse perceptions of their behavioral health care competency. *Journal of Advanced Nursing, 68*(12), 2756-2765.

Saevi, T., & Eikeland, T. (2012). From where does trust come and why is "from where" significant? *Phenomenology & Practice, 6*(1), 89.

Scaer, R. C. (2014). *The body bears the burden: Trauma, dissociation, and disease* (Third ed.). New York: Routledge.

Schluter, J., Seaton, P., & Chaboyer, W. (2011). Understanding nursing scope of practice: A qualitative study. *International Journal of Nursing Studies, 48*(10), 1211-1222.

Schofield, I., Tolson, D., & Fleming, V. (2012). How nurses understand and care for older people with delirium in the acute hospital: A critical discourse analysis. *Nursing Inquiry, 19*(2), 165-176.

Scott, J. & Marshall, G. (2009). *A Dictionary of Sociology:* Revised Third Edition. Oxford University Press.

Sharrock, J., & Happell, B. (2006). Competence in providing mental health care: a grounded theory analysis of nurse's experiences. *Australian Journal of Advanced Nursing, 24*(2), 9-15.

Shattell, M. M., McAllister, S., Hogan, B. & Thomas, S. P. (2006). "She took the time to make sure she understood": mental health patients' experiences of being understood. *Archives of Psychiatric Nursing, 20*(5), 234-241.

Steis, M. R., Penrod, J., Adkins, C. S., & Hupcey, J. E. (2009). Principle-based concept analysis: Recognition in the context of nurse–patient interactions. *Journal of Advanced Nursing, 65*(9), 1965-1975.

Tarnow, K. G. (2012). Integrating psychosocial care into medical-surgical nursing. *Journal of Nursing Education, 51*(11), 660. doi:10.3928/01484834-20121023-02

U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Bureau of Health Professions. (October 2013). The U.S. nursing

workforce: trends in supply and education. Retrieved from

http://bhpr.hrsa.gov/healthworkforce/index.html.

van der Kluit, M. & Goossens, P. (2011). Factors influencing attitudes of nurses in general health

care toward patients with comorbid mental illness: An integrative literature review. *Issues in*

Mental Health Nursing, 32(8), 519-527.

van der Kluit, M., Goossens, P. & Leeuw, J. (2013). Attitude disentangled: A cross-sectional

study into the factors underlying attitudes of nurses in Dutch rehabilitation centers toward

patients with comorbid mental illness. *Issues in Mental Health Nursing, 34*(2), 124-132.

Waghorn, J. (2009). Depression in chronic medical illness. *Mental Health Practice, 12*(9), 16-20.

Wang, J., & Mentes, J. C. (2009). Factors determining nurses' clinical judgments about

hospitalized elderly patients with acute confusion. *Issues in Mental Health Nursing, 30*(6),

399-405.

Watt, E. &. Pascoe, E. (2013). An exploration of graduate nurses' perceptions of their

preparedness for practice after undertaking the final year of their bachelor of nursing degree

in a university-based clinical school of nursing. *International Journal of Nursing Practice,*

19, 23.

Welsh, D. (2014). Self-efficacy measurement and enhancement strategies for medical-surgical

clinical nurses. *Medsurg Nursing, 23*(6), 371-377.

Welsh, E. R., & McEnany, G. P. (2015). Approaches to reduce physical comorbidity in

individuals diagnosed with mental illness. *Journal of Psychosocial Nursing and Mental*

Health Services, 53(2), 32-37. doi:10.3928/02793695-20150120-01

Wilkinson, A. & Matzo, M. (2015). Nursing education for disaster preparedness and response.

The Journal of Continuing Education in Nursing, 46(2), 65.

World health organization and calouste gulbenkian foundation. Integrating the response to

> *mental disorders and other chronic diseases in health care systems.* (2014). Geneva, World

> Health Organization. Retrieved from

> *http://www.who.int/mental_health/publications/gulbenkian_paper_integrating_mental_diso*

> *rders/en/*

World health organization flyer (2012). Making a difference in the lives of people with mental

> *disorders*. Retrieved from http://www.who.int/mental_health/en/

Yevchak, A., Steis, M., Diehl, T., Hill, N., Kolanowski, A., & Fick, D. (2012). Managing

> delirium in the acute care setting: A pilot focus group study. *International Journal of Older*

> *People Nursing, 7*(2), 152-162.

Zauszniewski, J. A., Bekhet, A. K., & Suresky, M. J. (2010). Resilience in family members of

> persons with serious mental illness. *Nursing Clinics of North America, 45*(4), 613-626.

> doi:10.1016/j.cnur.2010.06.007

Zolnierek, C. (2009). Non-psychiatric hospitalization of people with mental illness: systematic

> review. *Journal of Advanced Nursing*, 65(8), 1570-1583.

 Zolnierek, C. (2014). An integrative review of knowing the patient. *Journal of Nursing*

> *Scholarship, 46*(1), 3.

Zolnierek, C. & Clingerman, E. (2012). A medical-surgical nurse's perceptions of caring for a

> person with severe mental illness. *Journal of the American Psychiatric Association, 18*(4),

APPENDIX A: UMCIRB APPROVAL

UMCIRB Approval

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB

To: Jeanette Avery

CC: Ann Schreier

Date: 7/20/2016

        UMCIRB 16-000972
Re: Exploring the Preparedness of Nurses to Care for Medical-Surgical Patients with a
        Secondary Diagnosis of Mental Illness

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) is for the period of 7/20/2016 to 7/19/2017. The research study is eligible for review under expedited category # 7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a continuing review/closure application to the UMCIRB prior to the date of study expiration. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Name	Description
A Survey for Nurses Who Provide Care for Medical-Surgical Patients with a Secondary Diagnosis of Mental Illness	Data Collection Sheet

A Survey for Nurses Who Provide Care for Medical-Surgical Patients with a Secondary Diagnosis of Mental Illness	Surveys and Questionnaires
Intro.Explanation.Consent.survey link	Consent Forms
Letter of explanation.consent with survey link	Recruitment Documents/Scripts
References.IRB	Additional Items

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

IRB00000705 East Carolina U IRB #1 (Biomedical) IORG0000418
IRB00003781 East Carolina U IRB #2 (Behavioral/SS) IORG0000418

Study.PI Name:
Study.Co-Investigators:

APPENDIX B: REVIEW OF LITERATURE-CONCEPTS WITH RELATED FACTORS

Review of Literature - Concepts with Related Factors

Factors	Personal	Education	Professional	Nursing care self-efficacy	Mental health care competencies
Knowledge deficit		x	x	x	
Experiences		x	x	x	
Preparation		x	x		x
Person centered care	x				x
Systems	x	x	x	x	x
Nurse distress		x	x	x	
Policy change	x	x	x	x	x
Workload			x		x
Safety		x	x		
Care	x	x	x	x	x
Communication	x	x	x		x
Assessment	x	x	x	x	x
Teamwork			x		x
Time			x		
Intervention	x	x	x	x	x
Malignant social psychology	x			x	

APPENDIX C: REVIEW OF LITERATURE-FACTORS WITHIN CONCEPTS

Review of Literature

Factor #	Factors within Concepts
1	Knowledge deficit
2	Experiences
3	Preparation
4	Person centered
5	Systems
6	Nurse Distress
7	Policy Change
8	Workload
9	Safety
10	Care
11	Communication
12	Assessment
13	Teamwork
14	Time
15	Intervention
16	Malignant social psychology

APPENDIX D: REVIEW OF LITERATURE-AUTHORS WITH COMBINED FACTORS
AND METHODS

Review of Literature – Authors with Combined Factors and Methods - Quantitative, Qualatative, and Mixed (M)

| Author | F a c t o r s | | | | | | | | | | | | | | | | Methods | | |
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Quan	Qual	M
Sharrock &Happell, 2006	x	x	x	x	x		x	x					x	x				x	
Fick et al., 2007	x		x												x		x		
Fessey., 2007	x	x	x	x		x		x	x	x	x			x	x	x			x
Kutney-Lee & Aiken, 2008			x		x		x	x		x							x		
Cowdell, 2010		x			x		x			x	x			x	x	x		x	
Brunero & Lamont, 2010	x	x	x			x												x	
Flagg et al., 2010	x	x	x									x					x		
Ford, 2011		x	x	x	x	x	x	x	x	x	x	x		x				x	
Meako et al., 2011	x	x	x				x										x		
Schofield et al., 2012		x		x	x	x	x	x		x	x		x	x				x	
Yevchak et al., 2012	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	
Rutledge et al., 2012	x		x		x										x		x		
Zolnierek & Clingerman, 2012	x	x	x		x	x	x		x			x		x	x			x	
Rice et al., 2014	x							x		x	x	x							x
Baker et al., 2015	x	x	x														x		
Total	11	11	12	5	8	6	8	7	4	7	6	5	3	7	5	2	6	7	2

APPENDIX E: REVIEW OF LITERATURE-SEARCH METHOD

Review of Literature - Search Method for Literature Review

Time span	10 years – from 2005 - 2015
Searched for peer reviewed articles	Pubmed – 48 items CINAHL – 22 items Psych Info – 13
Search terms	Nurses or registered nurses and hospital units (obstetrics & gynecology, oncology, surgical, medical-surgical, urology, neurology, nephrology, acute care setting, cardiac and rehabilitation) and mental disorders or mental illness or psychiatric diagnosis
Additional Search for peer reviewed articles	OneSearch – displayed 353 items - 30 selected for closer review Terms - Registered nurses, medical-surgical patients and mental illness
Total	133 articles reviewed from all searches
Excluded	Non-research articles and those not inclusive of nurses, mental illness nurse experiences or the preparation of nurses for care of those with mental illness
Included	Pubmed – 2 CINAHL – 5 OneSearch – 9 One article was repeated in CINAHL and OneSearch
Total articles	15
Methods of Research	Qualitative – 7 Quantitative – 6 Mixed-Method - 2
Mental Disorder Delirium	Specific diagnosis in 9 articles (4 qualitative, 4 quantitative, 2 mixed-methods
Other Mental Disorders	Specific diagnoses mentioned in 6 articles (4 qualitative, 2 quantitative) Frequently mentioned – psychotic conditions, major affective disorders, bipolar disorders, substance-related disorders
Data for qualitative studies	Combination of focus groups, interviews, observation and open-ended questions
All studies conducted by nursing	2 studies included nurses with inter-professional research teams
Total nurses in combined studies	11,172

APPENDIX F: MATRIX OF RESEARCH STUDIES CONSIDERING THE PREPARATION
AND EXPERIENCES OF NURSES CARING FOR MSMI PATIENTS

Matrix of Research Studies Considering the Preparation and Experiences of Nurses Caring for
MSMI Patients

Units – cardiac, neurology, orthopedic, pediatric, rehabilitation, medical-surgical unit, general,
vascular, mid-wifery

Mental illnesses – dementia, psychosis, major affective disorders, bipolar disorders, substance
abuse

References	Research Focus	Design/Methods	Results	Conclusions
Sharrock & Happell, 2006	To explore and describe the subjective experience of nurses providing care for those with mental illness on medical and surgical units	Qualitative Grounded theory	-Mental health care acknowledged as part of work -discrepancy between education and experienced practice -work environment focused on physical and is organized into tasks -education, for majority (3 of 4) - mental health and general nursing separate (theory & clinical) -low levels of confidence with mental health nursing practice Themes -striving for competence in providing mental health care -undergraduate education -support systems	-study adds depth to understanding experiences and challenges for nurses & factors to influence development of mental health nursing expertise -supports notion that nurses not educated for mental health in general settings face difficulties when faced with these co-morbidities
Fick et al, 2007	Assess nurse knowledge and recognition of delirium superimposed on dementia (DSD) and delirium motoric subtypes	Quantitative (with 2 qualitative open-ended questions) Cross-sectional survey - case vignettes - Mary Starke Harper Aging Knowledge Exam (MSHAKE)	-no relationship between vignettes and MSHAKE -nursing experience and education not related to detection of delirium (gap in education) -nurses most likely to correctly identify dementia and hyperactive delirium	-early detection is key to delirium management -nurses play key role in detection of DSD -use findings to plan and test interventions for increased nursing recognition of DSD

			-least likely to recognize hypoactive form of DSD or hypoactive delirium alone	
Fessey, 2007	Exploring knowledge, understanding and implications for care of adult nurses working with patients who present with dementia in general hospital wards	Mixed methods Qualitative-questionnaire Qualitative-participants rationale to selected answers	Quantitative Nurses are managing some aspects of care for people with dementia in acute settings well, but more education, support and communication is required Qualitative 4 themes -attitudes towards dementia and implemented care -time and staffing -challenging behaviors -knowledge and understanding of dementia	Dementia is complex condition for nurses to manage in acute settings –nurses have some knowledge of patient centered approach but not as specific method of care for people with dementia -gap in nurses' knowledge and understanding of dementia
Kutney-Lee & Aiken, 2008	Identify surgical patients with co-morbid mental illness (psychotic conditions, major affective disorders, bipolar disorders), compare their outcomes with those of patients without mental illness, and determine the effects of nurse staffing and education levels on patient outcomes	Quantitative Cross-sectional -nurse survey -patient discharge records -American Hospital Association (AHA) Annual Survey -Pennsylvania Department of Health Hospital Questionnaire	-higher % of patients with mental illness were admitted as an emergency -higher % of patients with mental illness had public insurance -higher percentage of patients with mental illness had co-morbidities (hypertension, chronic lung disease, diabetes, substance abuse) -patients with mental illness experienced more post-surgical complications -patients with mental illness had average length of stay almost one full day longer (overall 17.4% longer-but 14.8% shorter in hospitals where nurses had more education) -nurse staffing had notably stronger	-levels of nurse staffing most consistent and prominent organization characteristic prediction of patient outcomes -these findings suggest nurse staffing may be one of most important components of surveillance that protects patients from adverse outcomes -patients with mental illness are vulnerable to poor outcomes because of impaired cognition and their poor communication skills require nurses spend more time understanding them (these could include those with dementia) -implications for hospital administrators and policy makers as fatal consequences are associated with high patient to nurse ratios

			effect on prevention of death for those with mental illness	-nurse education important element in length of stay with surgical patients with mental illness
				-growing numbers of patients with psychiatric illness combined with evidence of poor outcomes with inadequate staffing and lower % of educated nurses, suggest payment policy changes to compensate hospitals for nursing care required to produce good outcomes for those with mental illness
Cowdell, 2010	Explore the experiences of patients and nurses of care received by older people with dementia in acute hospitals	Qualitative Ethnographic study	People with dementia Themes -experience of being in the hospital -interactions with staff -uncertainty about the future Nursing staff -philosophies of caring for people with dementia (also influenced by culture in which they worked) -value staff attach to their work (viewed as unskilled and not prestigious) -ability of staff to provide care (more confidence in providing physical than psychosocial care; focused on physical needs) -staff appear "switched off" -little evidence that staff view patients as individuals -unequal power relationships	Discussed using Bourdieu's Model of Practice -practice -social interaction of everyday life -social milieu in which we exist and habitus (practices shared within a group in the field-social and symbolic capital) Patients – found being in hospital difficult and distressing experience Nurses – strive to give "good" care but constrained by organization and environmental factors, and lack of support and education to provide person centered care Staff- showed lack of empathy; worked within imbedded habitus Long-term -need to reform societal and organizational attitudes to dementia

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			-habitus deeply ingrained "special institutional culture" -staff accept the way they deliver care as "the way things are" -on the whole, staff appear to have little empathy with patients with dementia Need to engage staff in cognitive and affective domains "integration of the learning of the head with learning of the heart" to examine beliefs and behavior and its impact on people with dementia for whom they are providing care	Short-term -Develop innovative methods of practice development -recognize people with dementia can communicate given time and support -listen to these patients and learn from their experiences -engage in emotional and intellectual level for reconsideration of approaches to dementia care
Brunero & Lamont, 2010	To develop an educational approach that engaged nurses in experiential learning experience about difficult nurse patient relationships, and strategies for managing these	Qualitative -Action research	Phase One -extent of problem and learning need (from focus group-themes of action items -blaming the patient -observing own emotional and behavioral responses -develop interpersonal skills through experiential style learning -educational access to a majority of nurses Key themes senior nurses expressed -Reporting the struggle with patients who displayed, demandingness, aggression, manipulation, non-adherence with nursing behaviors and other similar behaviors Phase Two	Positive improvement in levels of stress, confidence, skill and knowledge post e-learning Project developed need to further explore use of e-learning methodology in educating nursing staff

			-scenario based learning and e-learning Phase Three -dissemination and evaluation	
Flagg et al. 2010	To describe nurses' ability to recognize delirium on intensive care and medical-surgical units, knowledge of negative outcomes associated with delirium, knowledge of symptoms of delirium, and confidence in identifying delirium in patients	Quantitative (with open-ended questions) Descriptive cross-sectional -nurse knowledge of sx associated with delirium -negative sequelae associated with delirium -confidence levels regarding assessing for delirium	Identification of signs and symptoms of delirium -1/4 did not believe delirium to be common problem (if unrecognized not identified as problem) -90% recognition of hyperactive delirium -less than 77% recognize hypoactive delirium Recognition of sequelae -not aware of increased risk of dementia with delirium or increased risk of discharge to nursing home -importance of negative sequelae not well recognized Confidence -somewhat confident they could identify, manage, and explain delirium to patients and families (deficient knowledge most likely major factor with lack of confidence) Short answers -it is incorrectly assumed a standard neuro exam is sufficient to identify signs of delirium -lack of knowledge re delirium prevents routine assessment of delirium	Nursing education needed regarding importance of routine assessment and negative outcomes associated with delirium Use of valid and reliable tool for delirium assessment needed (recognition needed for difference between disease-based changes in neuro status and development of delirium) System barriers such as time, support and communication should be tested.

			-time not factor with not conducting delirium assessments	
Ford, 2011	Explore impediments to the nursing role when providing care for patients who use illicit drugs as reported by study participants	Qualitative -self-reports (open-ended question)	Two main themes as impediments to care -educational inadequacy -Interpersonal challenges --Violence, fear for own safety (aggressiveness, lash out, agitated, dangerous, angry, irrational) --manipulation (destruction of trust) --irresponsibility	Sense of risk and vulnerability restricts nursing practice in terms of time and personal engagement with the patient If nursing role is not preserved there will be disengagement from cohort of patients already subject to health care discrimination Education is needed – to understand illicit drug dependence is not acute problem with immediate and lasting solutions, but chronic problem -know how to manage and diffuse violent situations --Learn harm minimization strategies --Use person centered ethos of motivational interviewing Appropriate resources are needed (organizational)
Meako et al, 2011	Explore nursing knowledge re delirium and delirium risk in orthopedic patients	Quantitative -Pre-test/post-test quasi experimental design	Educational intervention (in-service lecture for baseline knowledge re delirium) Years of Experience highest base-line knowledge Improvement on all but test item related to medications (from pre to post-test)	-With aging population orthopedic and med-surg nurses need delirium education -nursing education to include nationally recommended baseline competencies -consider delirium as a 6th vital sign (baseline of patient cognitive level)
Schofield et al, 2012	Explore meanings and motives underpinning nurses' understanding of	Qualitative -Critical Discourse Analysis -participant observation	Three related constructions of patients and their care -linguistic construction of	Reinforce need to prevent delirium whenever possible.

			acutely confused older people as overly physically active and unpredictable -nurses' linguistic preoccupation with need to be able to continuously observe acutely confused older patients -nurses' linguistic preoccupation with the need to contain acutely confused older patients Care -as surveillance -as containment Constructions of care are contingent on constructions of patients Care is mediated by hegemonies within context of nurses' professional practice -risk management assumed to encompass client needs -after confusion subsides great care is taken to maintain patient's self-respect and dignity	Findings are important – emphasize construction of patients as risk objects and patient care as surveillance and containment ignoring patients with delirium are acutely ill with complex medical, nursing and person-centered needs -dominant discourse of safety needs to give space to discourses of illness severity, dignity and compassion and delirium prevention -responding to hyperactive presentation of delirium as definitive of delirium excluded hypoactive presentation of delirium -realization of improved delirium care can be made possible when policy makers, service leaders and empowered practitioners combine to produce alternative discourses within health care
delirium and care of patients with delirium		-interviews		
Yevchak et al, 2012	Describe acute care nurses' experience and knowledge regarding nurse assessment and management of delirium in hospitalized older adults	Qualitative -focus group -open-ended questions -discussion guide	Three major themes -confusion is normal -our duty is to protect -finding a balance Temporal theme -managing patient transition between physical settings of care Facilitators to non-pharmacological interventions -sitters -teamwork Barriers to non-pharmacological interventions -time	-Education re delirium -Policy changes for routine assessment of cognitive status (with nursing resources to implement non-pharmacological interventions) -Value nursing interventions that involve interactional skills

			-Lack of education re best practices	
Rutledge et al, 2012	Development and testing of Behavioral Health Care Competence survey for nurses in acute care	Quantitative -survey	Moderately strong -assess patients with behavioral needs and knew when to access resources to assist Less strong -able to deliver care competently or recommend psychotropic meds Instrument adequately measures several important health care competencies for nurses in acute care	Study gives direction for further research and development of educational programs towards -evaluate nurse competency (needs assessment) -develop educational programs specific to needs -Evaluate effects of interventions towards hospital nurses' behavioral health care competencies
Zolnierek & Clingerman, 2012	Explore medical-surgical nurse's perception of caring for patients with mental illness	Qualitative -descriptive -case study	Four categories -tension ---fear ---safety ---self and others -discomfort ---being unprepared ---not understanding person or illness -lack of personal satisfaction ---cyclic pattern ---hopelessness -difficult ---constancy ---burdensome ---competing responsibilities ---aversion	-moral distress to be addressed (how to understand challenges) -knowing the patient to individualize care -Education and exposure to mental illness needed -provision of nursing care and health outcomes need illumination
Rice et al, 2014	Enhance understanding of nurses' clinical reasoning in recognizing delirium in hospitalized older adults	Mixed methods -Phase I-patient with delirium identification & nurse baseline assessment re delirium -Phase 2-inerviews with nurses who provided care for patients in Phase I	Six major areas -Detection of confusion -Significance of age -Distinction between acute and chronic confusion -effect on workload -labeling -knowledge acquisition Nurse action and consequences are dependent on clinical knowledge and	Effective clinical reasoning is dependent on development of cognitive (critical thinking) and metacognitive (reflective) skills

			intuitive knowledge that guide assessment	
Baker et al, 2015	Explore nurses' knowledge of delirium and it's risk factors	Quantitative -questionnaire (Nurses' Knowledge of Delirium [NKD])	Nurses had significant lack of knowledge about delirium and its risk factors	Delirium is difficult to recognize, thus under-treated Nurses must continue to expand knowledge of delirium for frequent and accurate assessments required for intervention before delirium further complicates patients' health Nursing education in all care settings vital to proactively recognize under-recognized condition

APPENDIX G: PARTICIPANT CONSENT FORSURVEY

A Survey For Nurses Who Provide Care for Medical-Surgical Patients with a Secondary Diagnosis of Mental Illness

Dear Participant,

I am a PhD (c) at East Carolina University in the College of Nursing. I am asking you to take part in my dissertation research entitled, "Exploring the Preparedness of Nurses to Care for Medical-Surgical Patients with A Secondary Diagnosis of Mental Illness".

The purpose of this research is to examine the components of nursing preparedness, i.e., nursing care self-efficacy and mental health care competence, of nurses regarding the care and management of medical-surgical patients with a secondary diagnosis of mental illness (MSMI). By doing this research, I hope to learn what has contributed to nurses' preparedness and competence for the care and management of this patient population. Your participation is completely voluntary.

You are being invited to take part in this research because you are employed with XXXX Health as a registered nurse that provides bedside care for medical-surgical patients in acute settings. The amount of time it will take you to complete this survey is less than 10 minutes.

If you agree to take part in this survey, you will be asked questions that relate to four general areas.   One area will be about your demographics and the other three ask you to rate your level of familiarity with a person with mental illness, your beliefs about your professional skills and your perception of your mental health care competencies.

This research is overseen by the ECU Institutional Review Board. Therefore, some of the IRB members or the IRB staff may need to review the research data. However, the information you provide will not be linked to you. Therefore, your responses cannot be traced back to you by anyone, including me. Even though the identity of participants in this study cannot be traced all data will be stored securely with this researcher until destroyed.

If you have questions about your rights when taking part in this research, call the Office of Research Integrity & Compliance (ORIC) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, call the Director of ORIC, at 252-744-1971. I can be reached at 252-349-1723 (cell) or by e-mail averyj@ecu.edu.

You do not have to take part in this research, and you can exit the survey at any time before completion. If you decide you are willing to take part in this study, your consent will be implied by you continuing with the following survey. You may wish to keep a copy of this letter of introduction and explanation.

Thank you for taking the time to participate in my research. Link to survey is following.

Sincerely,

Jeanette Avery, PhD (c), MSN, CNE

Principal Investigator

Please use following link to complete survey – survey can be accessed by clicking on link below or you may wish to copy and paste link into your browser.

XXXXX   Survey link   XXXXX

APPENDIX H: STUDY TIMELINE

Study Timeline	
Date	Action
6.14.16	Submitted IRB
6.21.16	Approval from CNOs at each of the 8 health care facilities
7.20.16	IRB approval
7.22.16	Note to CNOs and designated individuals at institutions in preparation for survey release on 8.1.16
8.1.16	Survey "live" via *Qualtrics*™ survey link to all institutions
8.2.16	Began hospital visits to encourage participation – answer questions - visited #1
8.3.16	Visited #6
8.4.16	Visited #s 2, 3, 5, 7 and 8
8.8.16	Reminder letter via e-mail sent to designated contact-who sent to all RNs
8.10.16	Visited #4
8.11.16	2nd visits to hospitals began – visited #1
8.12.16	2nd reminder letter distributed
8.13.16	2nd visits to #2, 3, 7 and 8
8.15.16	2nd visits to #s 4, 5 and 6
8.16.16	Note to all CNOs and designated individuals of survey # to encourage participation
8.16.16	Survey closed at 2359
8.17.16	Letter of appreciation sent to all institutions
8.17.16	Exported data into *SPSS*®)
8.17.16	Began analysis

APPENDIX I: SURVEY

2016 Survey. Nurses Who Care for MSMI Patients

Q1.
Do you provide bedside care for medical-surgical patients in an acute medical setting such as critical care, a medical/surgical unit, oncology, women's health, a neuro unit, nephrology unit or short stay?
❍ Yes
❍ No
If Yes Is Selected, Then Skip To Have you ever been employed as a regi...

Q2.
Have you ever provided bedside care for medical-surgical patients in an acute medical setting such as critical care, medical/surgical unit, oncology, women's health, neuro unit, nephrology unit or short stay?
❍ Yes
❍ No
If No Is Selected, Then Skip To Have you ever been employed as a regi...

Q3.
Have you ever been employed as a registered nurse on a psychiatric unit or in a chemical dependency patient care setting?
❍ Yes
❍ No

Q4.
 Did you have a psychiatric clinical rotation during your nursing education?
❍ Yes
❍ No

Q5.
During your nursing education did you experience providing care for medical-surgical patients with a secondary diagnosis of mental illness?
❍ Yes
❍ No

Q6.
During your nursing education was mental health content provided in relation to psychiatric disorders (psych theory and clinical) or in relation to providing general health care (integrated in medical-surgical theory and clinical)?
○ In relation to psychiatric disorders
○ In relation to provision of general health care
○ Both
○ Neither
○ Additional comments? _____

Q7.
How often do you provide care for patients with a secondary diagnosis of mental illness?
○ Never
○ Rarely
○ Sometimes
○ Often
○ All of the Time

Q8
When caring for medical-surgical patients with a secondary diagnosis of mental illness what mental illness(es) do your patients have?   Select all that apply with your experiences.
❑ Depression
❑ Anxiety
❑ Bi-polar (manic-depressive)
❑ Substance abuse
❑ Delirium
❑ Dementia
❑ Schizophrenia
❑ PTSD
❑ Psychosis
❑ Suicidal
❑ Other

Q9.
Since practicing as a registered nurse have you had any continuing education (such as in-services or workshops) related to mental illness in non-psychiatric settings?
○ Yes - please list _____
○ No

Q10.
Since practicing as a registered nurse have you experienced mentoring from peers, educators, or supervisors in regards to caring for medical-surgical patients with a secondary diagnosis of mental illness?
❍ Yes
❍ No
If No Is Selected, Then Skip To This section of the survey will have ...

Q11.
Who mentored you? and for what? Please describe.

Q12.
This section of the survey will have you read statements regarding your Level of Familiarity (LOF) with persons with mental illness. Please read each of the following statements carefully and check the statement(s) that represent your experience with persons with mental illness.
❑ I have watched a movie or television show in which a character depicted a person with mental illness.
❑ My job involves providing services/treatment for persons with mental illness.
❑ I have observed, in passing, a person I believe may have had a mental illness.
❑ I have observed persons with mental illness on a frequent basis.
❑ I have a mental illness
❑ I have worked with a person who had a mental illness at my place of employment.
❑ I have never observed a person that I was aware had a mental illness.
❑ A friend of the family has a mental illness.
❑ I have a relative who has mental illness.
❑ I have watched a documentary on television about mental illness.
❑ I live with a person who has a mental illness.

Q13.
The next items will ask you to respond on a scale of 0 (I cannot do) to 10 (certain I can do).

	0 (1)	1 (2)	2 (3)	3 (4)	4 (5)	5 (6)	6 (7)	7 (8)	8 (9)	9 (10)	10 (11)
Promote patient control over decision-making with hospital care.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Deliver care that addresses cultural differences.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Teach patients about self-care for optimal health.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Use research findings in practice.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Manage interpersonal conflict in the workplace.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Use resources effectively to meet patient care demands.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Guide team members when situations rapidly change.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Provide emotional support for hospitalized patients.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Delegate patient care tasks appropriately.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Collaborate effectively with the interprofessional team.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Intervene to minimize patient pain and suffering.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Safely perform the technical skills required for patient care.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Prioritize interventions to address changing patient needs.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Implement interventions to effectively treat patient problems.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Interpret patient data from a variety of resources.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Evaluate patent response to care.	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

Q14.
The next items will ask you to respond on a scale of 1 (strongly disagree) to 5 (strongly agree).

	strongly disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I can assess patients for potential psychiatric problems.	○	○	○	○	○
I can identify signs and symptoms of common psychiatric disorders (e.g. depression, schizophrenia, bipolar)	○	○	○	○	○
I can identify common neuroleptic, tranquilizers, and anti-depressant medications used by patients with mental illness	○	○	○	○	○
I am able to assess patients for risk of suicide (suicidality).	○	○	○	○	○
I recognize behaviors that indicate a patient may have alcohol or drug abuse problems.	○	○	○	○	○
I can recognize signs and symptoms of alcohol withdrawal.	○	○	○	○	○
I can recognize signs and symptoms of drug withdrawal.	○	○	○	○	○
I can distinguish between dementia and delirium.	○	○	○	○	○
I can recognize the warning signs in patients with a secondary diagnosis of mental illness whose behavior may escalate to aggression or dangerous behaviors.	○	○	○	○	○
I can initiate appropriate nursing interventions for common psychiatric disorders such as depression, bipolar disorder, and psychosis.	○	○	○	○	○
I can effectively interact with patients who have a secondary diagnosis of mental illness.	○	○	○	○	○
I am able to maintain a safe environment for patients on my unit who have a secondary diagnosis of mental illness.	○	○	○	○	○

I can effectively manage conflicts caused by patients who have a secondary diagnosis of mental illness.	○	○	○	○	○
I can effectively intervene with a patient having hallucinations.	○	○	○	○	○
I am able to use de-escalation techniques and crisis communication to avert aggressive behaviors.	○	○	○	○	○
I plan for more time to take care of patients with a secondary diagnosis of mental illness compared with my patients who do not.	○	○	○	○	○
I am able to maintain a therapeutic relationship with patients on my unit who have a secondary diagnosis of mental illness.	○	○	○	○	○
I am confident that I can recommend use of psychotropic drugs to providers for appropriate patients.	○	○	○	○	○
I recommend psychotropics to providers for patients with a secondary diagnosis of mental illness.	○	○	○	○	○
I know when to ask for outside help (e.g. provider, psychiatric nurse, other) for a patient with a secondary diagnosis of mental illness.	○	○	○	○	○
I call for outside resources (e.g. provider, psychiatric nurse, other) when I recognize a patient's mental health needs are beyond my capabilities.	○	○	○	○	○
I am confident that help is available to me when I need assistance with patients who have a secondary diagnosis of mental illness.	○	○	○	○	○

Hospital resources are available to me when I need assistance with patients who have a secondary diagnosis of mental illness.	❍	❍	❍	❍	❍

Q15. What is your year of birth?

❍ 1935
❍ 1936
❍ 1937
❍ 1938
❍ 1939
❍ 1940
❍ 1941
❍ 1942
❍ 1943
❍ 1944
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❍ 1989
❍ 1990
❍ 1991
❍ 1992
❍ 1993
❍ 1994
❍ 1995

Q16.
What is your gender?
❍ Male
❍ Female

Q17.
Please indicate your race.
❍ White
❍ Black or African American
❍ American Indian or Alaska Native
❍ Asian
❍ Native Hawaiian or Pacific Islander
❍ Hispanic
❍ Other

Q18.
What is your highest degree in nursing?
❑ Diploma
❑ ADN
❑ BSN
❑ Graduate Degree in Nursing - MSN, DNP - please state _____
❑ PhD

Q19.
Where is your primary work setting?
- ❑ Critical care
- ❑ Intermediate care
- ❑ Medical/surgical unit
- ❑ Oncology
- ❑ Women's health
- ❑ Neuro unit
- ❑ Nephrology unit
- ❑ Orthopedics
- ❑ Rehabilitation
- ❑ Short stay
- ❑ Other _____

Q20.
How many years have you practiced as a registered nurse?

- ❍ 1
- ❍ 2
- ❍ 3
- ❍ 4
- ❍ 5
- ❍ 6
- ❍ 7
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○ 59
○ 60

Q21.
Approximately, how many hours do you work a week?
○ 8
○ 12
○ 16
○ 24
○ 32
○ 36
○ 40
○ 44
○ 48
○ 52

Q22.
Choose the shift closest to what you primarily work?
○ 7a-3p
○ 3p-11p
○ 11p-7a
○ 7a-7p
○ 7p-7a

Q23.
Do you have professional certification other than Basic Life Support or Cardiac Life Support?

○ Yes - please list _____
○ No

APPENDIX J: MENTORING RECEIVED TO CARE FOR MSMI PATIENTS

Mentoring Received Regarding Care of MSMI Patients

Types of mentors	#	Received Mentoring
Behavior Health Services	7	Resource Support when I was transferred to psych med Provided guidance Care of ECT patients Manager of BHS provided in-service on bipolar disorder Psych nurse encouraged me not to go into patients room alone – patient in and out of psychosis
Staff - RN Nurses mentor each other for support	29	Experiences with MSMI patients Dealing with brain metastasis Mental health issues All 2ndary psych disorders Assisting in care How to best handle the patients Management of acute events How to care for suicide precautions Resuming home meds of patients with bipolar Observing for substance withdrawal and prevention PTSD Rape trauma Borderline personality disorder schizophrenia suicide Basic insight on situations that came up while caring for MSMI patients Dementia Possible triggers for abnormal behavior How to deal with patients with mental illness
Charge nurse	9	Different psych disorders Best ways to communicate Anxiety and depression suicide Dealing with psychosis, schizophrenia delirium, hallucinations

Clinical coaches	6	Patients going through substance withdrawal
		bipolar
		Anxiety and depression
		Providing quality care for adults with a range of different diagnoses
		Methods of communication; techniques that have worked for them
Nurse manager	5	Manic-depressed patients
		How to react and what to say/do while caring for these patients
		Anxiety and depression
Attending physicians, MD, NP	3	psychosis
		Dr for understanding meds and pt's behavior
EAP	1	Abusive patients towards nurses and the line between patient satisfaction
Supervisor	3	How to approach a manic patient
		Management of acute events
Preceptor	5	She guided me as to how to react/talk to psych patients
		About treating patients with personality disorders
Emergency nursing services	1	Watching for signs of mental illness with trauma/surgical population
Consulting professional	1	
Additionally mentioned		
Inservice	2	
Learning modules	1	Related to suicide precautions and patient care
Mobile app	1	For management of trauma patients with pre-existing mental health diagnosis
Simulation	1	schizophrenia

APPENDIX K: CONTINUING EDUCATION SOUGHT TO CARE FOR MSMI PATIENTS

Participant Reported Types of Continuing Education Sought for Care of MSMI Patients

Topic	#
Care of Suicidal Patient	1
Substance Abuse	3
Care of patient with mental illness	1
Non-violent crisis intervention	7
Dementia	5
Alzheimers	2
Modules related to behavior	2
Additionally listed	
CEU	2
Reading articles	1

APPENDIX L: PROFESSIONA CERTIFICATIONS (OTHER THAN BLS AND CLS)

Types of Professional Certification (other than BLS & CLS)	
Certification	#
AACN	1
ABLS (1) & ACLS (48)	49
ASLS	11
BDLS	1
Breastfeeding	1
CCRN	10
CDN	1
CEN (1) & CNE (4) & NE-BC (5)	10
Certified pharmacy technician	1
CGRN	1
CMC	1
CMSRN	9
CNN	1
CNOR	1
CRRN	3
CRN	1
ENA	1
ENEP	1
ENPC	5
FCCS	2
FNP-C	1
Inpatient obstetrics	1
Med-Surg (16) & RN-BS-Med (3) & RN-BC (5)	24
NIHSS	1
Nonviolent crisis intervention (2) & CPI (4)	6
NRP	9
OCN	5
Orthopedic nurse certification	1
PALS	30
PCCN	4
Psych certification	2
RNFA	1
SANE-A	1
Stable	2
Stroke	1
TNCC	13