Using a Mental Health Board Game Intervention to Reduce Mental Illness Stigma Among Nursing Students

Anna Kristina Wassink

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USING A MENTAL HEALTH BOARD GAME
INTERVENTION TO REDUCE MENTAL ILLNESS
STIGMA AMONG NURSING STUDENTS

Anna Kristina Wassink

A Dissertation Submitted to the Graduate Faculty of
GRAND VALLEY STATE UNIVERSITY
In
Partial Fulfillment of the Requirements
For the Degree of
Doctor of Nursing Practice

Kirkhof College of Nursing

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Dedication

This scholarly project is dedicated to my husband. Chad, without your love, understanding, and encouragement I would not have been able to reach my goal. Thank you for reminding me to trust in Him.

I would also like to dedicate this scholarly project to my parents, Dr. Eric and Linda Gustafson, to my grandparents, Thomas and Greta Newhof and Dr. David and Audrey Gustafson, and to my aunt Elizabeth Boelema. Without your many selfless gifts and your constant encouragement, I would not be here today. Words cannot express my gratitude. I am so blessed.
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Abstract

Mental illness stigma can be displayed by anyone including those working in the health care field. Bachelor of Science in Nursing (BSN) students are one group within the health care field. The purpose of this project is to explore attitude change among BSN students related to mental illness stigma. The question guiding this project is whether a creative game implemented in conjunction with the existing educational and clinical experiences is helpful in reducing mental illness stigma in BSN students. Thirty-eight participants, 5 males and 33 females, a majority of whom were 20-21 years old, participated in this project. The intervention in this project was *The Mental Illness Stigma Game for BSN Students* and was implemented in addition to the existing educational and clinical course content. The comparison group and study group both received a pretest and posttest. The major differences between the two groups were that the comparison group did not receive the intervention and they participated in their mental health course content prior to receiving the pretest, as opposed to the study group. *The Mental Illness Clinician Attitudes Scale-Version 4 (MICA-4)* was used as a pretest and a posttest to measure the students’ attitudes. Data analysis was performed using SPSS with descriptive statistics, t-tests and ANCOVA. The results showed there was a significant difference between the two groups and between the pretest and the posttest in the study group. Additionally, a majority of students in the study group felt this intervention was effective in positively changing their attitudes about those with a mental illness. While the results do not demonstrate this board game’s effectiveness in decreasing stigma in all populations, further research should focus on testing this intervention on a wider scale and reevaluating students after they have been on the job for several months.
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CHAPTER 1
INTRODUCTION

With the diagnosis of a mental illness, there may come many changes both expected and unexpected for the individual diagnosed as well as for his or her friends or family. Expected changes could be the start of therapy or medication. This new treatment plan could lead to an increased health care cost for both the individual and possibly his or her family. Unexpected changes can include stereotyping, prejudice, and discrimination (Corrigan, 2005).

According to Corrigan (2005), stereotyping, prejudice, and discrimination can be displayed by the general public and can also be internalized by the individual who has been diagnosed with a mental illness. The internalization of stereotyping, prejudice, and discrimination is known as self-stigma. Self-stigma can result from public stigma. Public stigma occurs when those suffering from a mental illness develop a negative view of themselves; they come to agree with the beliefs others hold regarding them, and their behaviors change to reflect that same negative attitude toward them. Self-stigma can be decreased by targeting the public stigma.

Anyone not suffering from a mental illness can play a part in this public stigma. Healthcare providers also can be involved in stereotyping, discriminating, and prejudicial actions and behaviors. Education of healthcare providers on mental illness, stigma, and the effects of stigma is one way to decrease this public stigma. Although this decrease, and hopefully extermination, of the stigma toward those with mental illness will take a long time, there are many subpopulations of healthcare providers in which an
intervention could be easily implemented. One of these subpopulations is nursing students.

There is little information about the exact number of nurses or nursing students who hold negative attitudes about those suffering from mental illness. However, a few authors (Byrne, 1999; Aker et al., 2007) show that medical students and nursing students hold some stigmatizing thoughts toward those with mental illness. Aker et al. (2007) found the medical students’ scores on the testing tool either did not change significantly or increased over the testing period. According to Aker et al. (2007), the medical students were unable to develop positive, professional attitudes toward people with mental illness. Additionally, Llevena, Caceres, and Penas LLedi (2002) found no difference between the thoughts and feelings of either nursing students or medical students regarding those diagnosed with schizophrenia. In this study, only schizophrenia was identified; therefore, the similarity between attitudes of medical students and nursing students with regard to diagnoses other than schizophrenia is unclear. Furthermore, approximately three-quarters of the sampled group of nursing and medical students felt that those with schizophrenia are dangerous (Llevena et al., 2002). In reality very few of those who are diagnosed with schizophrenia are truly dangerous to themselves or those around them (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000).

The goal of this project was to determine if intervening early in nursing students’ education will decrease the stigma they may hold toward people with mental illnesses. The purpose of this chapter is to introduce the dilemma of mental health stigma as displayed by nursing students. The scope of this problem as it presents challenges for nursing students will be addressed. Additionally, the scope of this problem as it pertains
to students, as future nurses, will be examined. Finally, the significance of the problem and its relevance for nursing education will be discussed.

**Definitions and Background**

Mental health as defined by the World Health Organization is “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (World Health Organization, 2013, p. 1). Ultimately, one must keep in mind that health is not only the absence of a condition (World Health Organization, 2013). Each individual is able to maintain a state of health even in the presence of injury or disease.

The definition of stigma varies. Generally, stigma is defined as a mark or a scar that identifies or separates someone from others (Link & Phelan, 2001; Stigma, 2013). Goffman (1963) was one of the first to describe the concept of stigma. Goffman (1963) states stigma is “an attribute that is deeply discrediting” (p. 3). The difficulty in finding one so-called perfect definition of stigma is that no one person suffering the effects of stigma has the same experience. According to Goffman (1963) stigma changes an individual’s perception of a person “from a whole and usual person to a tainted, discounted one” (p. 3) thereby making the person into someone less than human. Doornbos, Groenhout, and Hotz (2005) state that “when we substitute an illness label for a person’s name, we fail to recognize that person as the unified whole that she or he was created to be” (p. 126).

In 1963, Goffman identified that stigma can result from a physical change, a moral change or what is known as an ethnic, racial or religious attribution. The moral
category is most ambiguous. At the time Goffman (1963) wrote, moral changes included a mental health disorder, substance abuse or addiction, unemployment, imprisonment, and self-harm or suicide attempts. It is important to note that while this definition was previously used, it is no longer relevant for current application. Today, a mental illness is more often seen as a condition which results from a physical disease process that can be effectively managed, similar to many other physical health conditions.

Today, the stigmatization of individuals with a mental health issue continues to be a problem in both the general population and in the health care provider population (Hung, Huang, & Lin, 2009; Overton & Medina, 2008). Nursing students can be included in either population. Baccalaureate nursing students are given, on average, four years of education before they can take their national board exam and become licensed health care providers. It is crucial to address stigma-based discrimination among nursing students before any existing thoughts of prejudice can develop into stigma toward those with mental health issues. Currently, there are few, if any, methods to address and to reduce the stigma of nursing students toward those with mental health issues.

**Statistics**

**Prevalence**

The United States Department of Health and Human Services (USDHHS) annually distributes statistics related to the prevalence of mental health illnesses and demographics of those diagnosed with the condition (Substance Abuse and Mental Health Services Administration [SAMHSA], 2010). In 2009, it was estimated that 19.9% of all United States adults had at least one or more diagnosable mental health illnesses that year (SAMHSA, 2010). Prevalence of serious mental illness in adults was greatest in
the 18 to 25 age group at 7.3%. Prevalence was 5.9% in the 26 to 49 age group and was 2.8% in the 50+ age group (SAMHSA, 2010). Additionally, close to 50% of all United States adults will experience some type of mental health illness at some point during their lifetime.

**Gender and Race**

According to the National Institute of Mental Health (NIMH, 2008), both men and women are equally likely to develop any mental health illness at any time. However, according to the SAMHSA (2010) in 2009, more women were found to have a serious mental illness than were men, at 6.4% and 3.2% respectively. In all, approximately 5.3% of white Americans, 4% of Hispanics or Latinos, and 3.7% of Blacks or African Americans were found to have a severe mental illness.

**Severity**

Mental illness can affect individuals in multiple ways, including their mood, their behavior, and their thoughts (Mental illness, 2011). Any mental health diagnosis can have lasting effects and can have serious impacts on an individual’s life. In 2009, approximately 11 million or 4.8% of United States adults had a severe mental health diagnosis (SAMHSA, 2010). A serious mental illness is defined as a mental, behavioral, or emotional disorder that results in serious functional impairment (SAMHSA, 2010). To be classified as a serious mental illness, the diagnosis needs to be either a current diagnosis or have been made within the last year, using the Diagnostic and Statistical Manual criteria. Additionally, in order to be classified as severe, the mental health illness needs to result in impairment that interferes, alters, or limits one’s ability to perform normal daily activity (NIMH, 2008).
Nursing

According to the USDHHS (2010), in 2008 there were 153,806 new Registered Nurses joining the workforce; this includes both Associate’s Degree nurses and Bachelor’s Degree nurses. In the same year, less than 1% (133,791) of all registered nurses worked in mental health. Even fewer had their certification in mental health nursing. According to the American Psychiatric Nurses Association (n.d.) and Hanrahan & Gerolamo (2004), there is a general shortage of nurses working in all areas of mental health nursing. The Institute of Medicine Report on Improving Mental Health Care states that education about mental illness and about mental illness stigma is effective in decreasing stigma and improving the attitudes of care providers with regard to mental illness (Institute of Medicine, 2006). Education that address stigma could potentially increase the numbers in the mental health workforce.

With the staggering number of people living in the United States who are suffering from some type of mental health issue, why then are there so few nurses working in mental health? Are the conditions of working in a mental health setting undesirable? Or, could there be an underlying attitude of stigma toward the mental health patients that the nurses are caring for? The stigma of both mental health illnesses and of psychiatric nursing needs to be removed. If stigma can be removed, it is possible that the issue of a shortage of psychiatric nurses could be resolved. It is also possible that many of the problems those with mental health illnesses deal with every day, due to mental health stigma, could be addressed.
Scope of the Problem

Mental illness can affect the emotional, psychological, and social aspects of an individual’s life that help him or her feel like a person. Happiness, optimism, hopefulness, purpose, spirituality, and self-worth are a few of the many attributes that can change with the development of a mental health illness (Centers for Disease Control [CDC], 2011b). Unfortunately, changes or abnormalities in these personal qualities can affect the way the individual with a mental health illness is treated or portrayed. Stigma can be demonstrated in different ways, both intentionally and unintentionally. Discrimination, negative comments, stereotyping, bias, jokes, embarrassment, avoidance, fear, name calling, and distrust are all ways stigma can be displayed. Words like retard, crazy, weird, cuckoo, loser or freak are words with a derogatory connotation that are often used in everyday language to describe those with a mental health illness (Byrne, 2001; Goffman, 1963). Byrne (2001) states that children learn to label people in a derogatory way from the media. Children and young adults also learn from their parents, from television, from peers; they often repeat what they know in an effort to be accepted by others. It is possible for nursing students to engage in any of these behaviors as their professional socialization must overcome earlier influences. Unless an attitude-changing intervention occurs during their lifetime, as children grow into adults they can continue to display mental health stigma intentionally or unintentionally. These attitude-changing occasions could include a personal experience, an organized event, or even a positive encounter with a mental health consumer.
Significance and Relevance for Nursing Education

Few, if any, psychiatric textbooks discuss the concept of mental health related stigma, in detail, even though stigma can affect many different aspects of a mental health patient’s life. The lack of stigma discussion in psychiatric textbooks could be due to the fact that very few, if any, psychiatric journals and journal articles make direct reference to mental illness stigma (Bryne, 2001). Several nurse educators developed their own educational session for use in their own classroom when they saw the need for instruction about mental illness stigma as well as an intervention for mental health stigma in nursing students (Hamaideh & Mudallal, 2009; Markstrom et al., 2009; Romem, Anson, Kanat-Maymon, & Moisa, 2008; Sadow, Ryder, & Webster, 2002; Webster, 2009). Few tools assessing stigma are in use in either nursing or medical education.

The Quality and Safety Education for Nurses (QSEN) Institute has developed several competencies to help nursing schools provide the best quality nursing education to nursing students. QSEN has six core competencies for nursing education. They include: patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety, and informatics (Cronenwett et al., 2005). Within the concept of patient-centered care, nurses and nursing students are encouraged to “recognize the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for patient’s preferences, values, and needs” (Cronenwett et al., 2005, p. 123). QSEN expects nurses to see situations from the patient’s perspective; to value what the patient knows about his or her diagnosis; to “seek learning opportunities with patients who represent all aspects of human diversity;” and to “recognize personally held attitudes about working with patients from different
ethnic, cultural and social backgrounds” (Cronenwett et al., 2005, p. 123). Although there are several other ways this QSEN competency can be met, by addressing mental health stigma in the baccalaureate nursing (BSN) student population, nurse educators are able to meet and partially fulfill this QSEN competency (see Appendix A).

A change in baccalaureate nursing students’ attitude of stigma toward mental health patients is not a change that can be made overnight. First, baccalaureate programs need to see the need for change. Curricula may need to be modified and class time needs to be dedicated for this topic. There is often much time focused on preparing nurses to have the psychomotor skills they will need upon entering the workforce. However, if nursing students fail to recognize their own attitude shortcomings they will not have the understanding and compassion they need to care for their patients in a kind and respectful way. If the students fail to see the patient as a whole human being, then despite providing the best possible physical care, they have failed. Emotional care and addressing the patient’s mental health issue is equally important to the provision of quality, holistic care (Smucker, 1998).

Nursing students are educated to be patient advocates. As such, they should be advocates for those with a mental illness (Goggins, 2010). Goggins (2010) states, “If you hear colleagues making negative comments, you have to do something about it, both as a professional and as a citizen...take action” (p. 3). Nurses must take action to change the stigmatizing beliefs and attitudes around people with mental illness, including those beliefs and attitudes manifested by nursing students.

Looking forward, the purpose of this project is to explore attitude change related to mental health stigma among baccalaureate nursing students. Additionally, the question
guiding this project is whether a creative educational game implemented in a classroom setting will change stigma related to attitudes toward people with mental illness.
CHAPTER 2
LITERATURE REVIEW

The purpose of this project was to explore attitude change among baccalaureate nursing students related to mental health stigma. The question guiding this project was whether a creative educational game implemented in a classroom setting will change stigma related to attitudes of nursing students toward people with mental illness. The purpose of this chapter is to provide a review of literature related to current and past mental health stigma reduction interventions in nursing students. This literature review was used to aid in the development of this project’s design and plan. The search methods and the research related to the various mental health stigma reduction methods will be outlined.

Stigma toward individuals with a mental illness is of great concern as there are many potentially harmful effects that may occur. Avoidance of the diagnosis and corresponding treatment can occur. Further, rejection by friends and family can result from lack of treatment. Work, school, or housing discrimination as well as physical harm and poor outcomes can all occur as a result of avoidance and rejection (Mayo Clinic staff, 2009). These harmful effects may escalate from many different people displaying many different negative attitudes and behaviors.

The literature supports that there is stigma against those suffering from mental illness. Stigma is displayed by both the general public, by health care providers, and by students in health professions, including nursing. Anyone who engages in discrimination, negative comments, stereotyping, bias, jokes, avoidance, fear, distrust, and name calling toward and against those with a mental health illness is displaying stigma (Grohol, 2010;
Mayo Clinic staff, 2009; Mental health stigma, n.d.). There are several scholarly articles, some of which will be discussed in the following pages, that address interventions to decrease stigma displayed by nursing students (Hamaideh & Mudallal, 2009; Markstrom et al., 2009; Kassam, Glozier, Leese, Loughran, & Thornicroft, 2011; Sadow, et al., 2002; Webster, 2009).

**Search Methods**

This integrative literature review was conducted using several electronic databases including: Cumulative Index for Nursing and Allied Health Literature (CINAHL), PubMed, MEDLINE, and Science Direct. As a general rule, literature from before 2004 was excluded; however, if an article provided relevant information or was from an author with authority on the topic, the article was included. Studies not in English and those not available online in full-text were excluded.

A combination of keywords primarily used to search for journal articles included: mental health, stigma, nursing students, mental health education, nursing student population, discrimination, mental illness, undergraduate nursing students, baccalaureate nursing students, negative attitudes, and mental health consumers. These keywords matched titles and keywords for available journal articles. Although most of the literature focuses on undergraduate nursing students and interventions aimed at reducing stigma in that population, some literature related to mental health stigma in medical students was also included (Kassam et al., 2011). Ultimately, articles were selected based on their content and project relevance.

Google Scholar was also used. The keywords above were used to find titles for additional potential research articles to be reviewed for this project. Once titles and
authors were found, the information was put into one of the above research databases, retrieved, and then evaluated based on content and relevance to this project.

**Quality Appraisal**

The purpose of this literature review is to examine the literature related to decreasing mental health stigma in the undergraduate nursing student population. Due to general lack of studies on the topic, literature was not excluded based on the design of the study or based on the journal in which the article was published. If studies discussed mental health stigma in undergraduate nursing students and either proposed a method for reducing mental health stigma or tested a method for decreasing mental health stigma in undergraduate nursing students, they were included in this literature review. Additionally, studies in which interventions were geared toward the medical student population or advanced practice registered nurse students were also included. Related to the general lack of literature on the topic, there was also a lack of randomized controlled trials.

**Results**

A review of the literature suggests that the combination of one, two, or three types of interventions were most beneficial in reducing mental health stigma in nursing students. The intervention types include an educational intervention, a clinical intervention, and a creative intervention added to a combined educational and clinical intervention. Although not all studies used the same combination of interventions, each one of them brings important educational ideas to the forefront regarding the mental health education curriculum of health care students. Several studies used an intervention with both a pretest and posttest to evaluate the effectiveness of their interventions (Hamaideh & Mudallal, 2009; Markstrom et al., 2009; Sadow, et al., 2002). One study
even used creative projects and presentations in addition to the students’ journal writing to partially evaluate the success of the intervention (Webster, 2009).

**Educational Intervention**

Two studies in particular used educational interventions to decrease stigma against those with mental illness. Although both studies used very different interventions and targeted different student populations, they both identify concepts helpful in targeting mental health stigma as displayed by nursing students.

**An Educational Intervention for Medical Students**

Kassam et al. (2011) used an educational intervention to reduce mental health stigma in medical students. Kassam et al. (2011) looked at the use of an educational intervention split into five different components including: “personal testimony from a mental health service user” (p. 15), factual presentation about mental health, “personal testimony from a caregiver” (p. 15), a question and answer session, and a survey. Kassam et al. (2011) used both the Knowledge Quiz and the Mental Illness: Clinicians’ Attitudes (MICA) scale to assess knowledge, attitudes, and outcome data from coursework using these tools prior to and after the educational intervention.

The Knowledge Quiz is a 10 item true and false questionnaire that evaluated the students based on topics including, but not limited to, mental illness prevalence, violence, employment, healthcare access, and cost of health care for individuals with mental illness. The MICA is a 16 item Likert-like scale questionnaire. A low score on the MICA indicates a low stigmatizing attitude and a high score indicates a high stigmatizing attitude. In all, 408 students participated and were conveniently recruited to form the study sample.
Overall, the researchers found that their educational intervention was effective in students’ understanding “of factual content and personal testimonies” (Kassam et al., 2011, p. 1). Of the 408 students, 80% of the students understood the material presented and felt that it was relevant to their future career. Additionally, 80% of students felt that they would be more comfortable talking to a mental health patient or a caregiver of a mental health patient after the intervention than before. Although there were no significant changes in students’ attitudes or behavior, Kassam et al. (2011) state, “we can be confident that the training was successful in leading to greater knowledge amongst these students than those in the control condition” (p. 8).

Although this study looked at the medical student population, there are still several helpful findings that can be applied to nursing students. First, the MICA was effective in assessing the level of mental illness stigma in the study population. Second, an educational intervention was shown to be effective in increasing understanding and awareness of mental health issues in students. Additionally, education enabled students to feel more comfortable around patients with mental illness and their family members with mental illness. However, this study shows that there were no significant changes in attitude or behavior, the areas from which stigma can arise. Therefore, an educational intervention may not be the single most effective means of decreasing mental health stigma in nursing students.

**An Educational Intervention with Nursing Students**

Happell and Roper (2003) also looked at the use of an education intervention to decrease mental illness stigma. However, this study examined the effect of an educational intervention on post-graduate nursing students’ views toward those with mental illness.
The goal of this study’s intervention “was to increase the students’ awareness of and sensitivity to greater consumer participation within the mental health arena” (Happell & Roper, 2003, p. 343). In this study, 21 students comprised the convenience sample. This qualitative study was designed using a posttest to evaluate the effectiveness of the educational intervention.

This Australian study, used mental health consumers in the education of nursing students. Mental health consumers, for this study, were those who were diagnosed with a mental health illness and were involved in some type of mental health treatment. These mental health consumers were selected based on several criteria. Ideally, the mental health consumers would want to become effective instructors and they would already have considerable experience in the mental health care system. Due to the fact that there were no objectives in place for how these mental health consumers were to educate the nursing students, the mental health consumers were given freedom to develop their role in the educational preparation of the nursing students. The course time was split in two. Half of the course time was devoted to traditional nursing instruction and the other half to instruction from the mental health consumer instructors. Therefore, the students had the opportunity to receive different perspectives of psychiatric nursing, one from consumers and the other from their instructors (Happell & Roper, 2003).

On the last day of class, a questionnaire was given to the students who were in class on that day. The questionnaire was composed of seven questions which were “designed to gain insight into the students’ perceptions of the experience of being taught by the consumer academic as favourable or otherwise, and whether this contributed either positively or negatively to their learning and their psychiatric nursing practice” (Happell
& Roper, 2003, p. 346). Of the 25 students in the class, 21 were present on the day the anonymous questionnaire was distributed. The study showed that the role of the mental health consumer academic was found to be a positive and beneficial experience by the students. On the other hand, two students felt that this new role was not helpful and that the mental health consumer academic portrayed mental health nursing in a negative way. Although uncomfortable at times, the students still felt that this experience was an experience worth continuing for future nursing students.

There are several limitations to this study including the lack of a control group, the lack of pretest data, and a small convenience sample size with students from only one location. Although there are limitations, there are still several helpful points that can be drawn from their study. First, an out-of-the-box approach seems to be helpful in eliciting a positive mental health educational experience for the post graduate nursing students. However, similar to the Kassam et al. (2011) study, an educational approach alone does not seem to address all of the issues regarding the stigmatizing thoughts and attitudes of nursing students. This can be seen by the handful of students who believed that this was not the most beneficial way to address stigma toward those with a mental health illness as they were defensive about the portrayal of mental health nurses by the consumers. Finally, neither of the two previous studies assessed long term attitude change after the students entered the workforce.

**Clinical Intervention**

One identified study looked at the sole use of a clinical intervention to decrease mental illness stigma. Romem et al. (2008) sampled a group of 126 baccalaureate nursing students in their third year of school. Romem et al. (2008) specifically looked at the
effect of a clinical nurse clerkship or clinical intervention on students’ attitudes. “The purpose of the clerkship is to provide the students with the knowledge, skills, and attitudes that will enable them to provide professional care for individuals with mental illness in various health services in their families” (Romem et al., 2008, p. 397). The clinical placement lasted 4 weeks.

Romem et al. (2008) used the Attribution Questionnaire-27. The 27-item questionnaire is able to “examine a series of 9 constructs, 3 items each, that measure attitudes, affect, and behavioral intentions related to a hypothetical individual with mental illness” (Romem et al., 2008, p. 398). In particular, the Attribution Questionnaire-27 asks about a mental health patient with schizophrenia (Corrigan, 2008). Although there are nine constructs, this study looked at six of the nine constructs. After controlling for age, gender, and country of birth, they found that through the clerkship or clinical intervention, students became more understanding and compassionate. Students were also less afraid of the patients and were less nervous to be around them. Furthermore, students learned to be more aware of their responses to those around them. Additionally, the students were able to see the relationship between their negative thoughts and emotions, and the care and time they gave to their patients. These realizations that the nursing students arrived at are all important for the decrease of stigma.

Although the changes in the students’ attitudes were not found to be statistically significant, there are several applicable facts. First, a clinical intervention was found to be helpful in reducing nursing students’ stigma toward those with mental illness. Second, the project by Romem et al. (2008) took place in Israel. Most, if not all, Bachelor of Science in Nursing (BSN) programs in the United States are required to have both an educational
and a clinical component in their curriculum. Since this is the standard of BSN nursing education and required by each college and university with a BSN program, the clinical intervention alone is not possible. Therefore, in the United States, something more than a single clinical intervention must be considered when aiming to decrease BSN students’ mental illness stigma.

**Educational and Clinical Interventions**

An overwhelming majority of available research looks at the benefits of a combined educational and clinical intervention on stigma reduction in nursing students. This focus in the literature could be due to the fact that most BSN programs are required to have not only the standard classroom education, but also to have the hands-on clinical experience.

**Evaluation of Stigma after a Year of Coursework in a Nursing Program**

Sadow, Ryder and Webster (2002) conducted an educational and clinical intervention with the aim of determining if the education of students interested in health care encouraged stigma toward those with mental illness. This study took place in a large northeastern United States city, within a two-year nursing program. Of the 97 nursing students who were offered the chance to participate in this study, 73 agreed to participate. The study was designed as a basic pretest-posttest design.

No specific intervention occurred; students took courses in the regular sequence of the curriculum designed by the school. Students in both the first and second semesters of their nursing education were involved in nursing courses and a clinical experience. However, the clinical experience did vary from the first semester to the second semester with a nursing home experience in the first semester and an elder day care, obstetrics,
pediatrics, and rehabilitation in the second semester (Sadow et al., 2002). A specific mental health clinical was not included in these experiences.

Sadow et al. (2002) used the students’ scores on four different scales that were administered prior to and following the two semesters of course work: the Marlow-Crowne Social Desirability Scale, Form C, The Attitudes towards Mental Illness Scale, a researcher-composed instrument of vignettes, and the Courtesy Stigma Scale. Overall, the researchers found the educational and clinical intervention did decrease the mental illness stigma displayed by nursing students. However, the changes were not found to be significant. There were no interactions between the scores on the Marlow-Crowne Social Desirability Scale, Form C and the stigma measures. Courtesy stigma is stigma against those (family, friends, and health care providers) who are associated with or help people with a mental illness. Sadow et al. (2002) found that courtesy stigmatizing attitudes did decrease after the education and clinical intervention. Students with mentally ill friends did have lower stigmatizing scores on the vignette test both before and after placement. It is interesting to note that, students with a mentally ill family member had an increase in stigma throughout the intervention. Personal relationships with someone who has a mental illness should continue to be a variable to explore.

Although this intervention did address mental illness stigma and did show some ability to decrease mental illness stigma in nursing students, these scales did not appear to give an accurate representation of the changes. Other tools may give an accurate representation of the change in level of mental illness stigma displayed by nursing students. However, the number of tools used to evaluate the potential changes may have been overwhelming. The large amount of data may be contradictory, discrediting the
validity of the results and bringing into question whether positive change actually occurred.

**Educational and Clinical Experiences in Swedish Nursing Programs**

Markstrom et al. (2009) also set out to determine what, if any, changes took place regarding the attitudes of students toward those with mental illnesses after education and clinical placement. In all, 167 participants were recruited; this was a convenience sample taken from six separate universities in Sweden. A basic pretest-posttest design was used. The researchers used both the *Level of Familiarity Questionnaire* and the *Changing Minds’ Questionnaire* to assess students’ thoughts and attitudes both before and after theoretical and practical courses in mental health.

In particular, the researchers used the *Level of Familiarity Questionnaire* to determine the students’ level of comfort with people who have a mental illness. After data analysis, results showed a decrease in stigma toward those with mental illness following education and clinical placement. The students’ familiarity with mental illnesses was found to correlate with a decrease in mental illness stigma. One interesting finding is that, after clinical placement, nursing students were found to hold a more positive view of patients with schizophrenia and a more negative view of patients with drug addiction than they did at baseline.

This study accomplished three things. First, the study measures the attitudes of nursing students toward those with a mental illness. Second, the study applies an intervention. Finally, the study measures how the attitudes changed after the intervention experience. Overall, students were found to have a more positive view of people with a mental illness after the intervention than before. This is encouraging, in that it
demonstrates that an educational intervention combined with a clinical intervention can be effective in changing students’ attitudes.

**Educational and Clinical Intervention for Taiwanese Nursing Students**

Hung, Huang, and Lin (2008) studied a group of 12 nursing students from a Taiwanese nursing program. This was a convenience sample obtained from nursing students who came from two acute and two rehabilitation psychiatric wards of a hospital for the mentally ill in Central Taiwan. The students were involved with both coursework and clinical experiences. The study was designed with a qualitative approach; students were interviewed separately.

The researchers used Colaizzi’s seven-step procedure to analyze the data. After the interview sessions were recorded and transcribed (step 1), the transcripts were read and key points were highlighted (step 2). From the key points, concepts were identified and then put into clusters (step 3 and 4). The researcher then compared the themes within the transcripts to verify that all themes were identified (step 5). In order “to further validate the study findings” (step 6), students’ statements from the transcripts were used (Hung et al., 2008, p. 3128). Finally, an additional level of validation was provided by the using the initial statements from the nursing students to confirm the themes and ensure that the conclusions were accurate (step 7).

The four overall themes identified using Colaizzi’s seven-step procedure are as follows. First, breaking the stigma of mental illness includes removing all preconceived notions. These preconceptions are developed by watching TV, reading the newspaper, and from past experiences. The second theme requires developing a trusting relationship. This development includes the nursing students’ ability to be self-aware and set
boundaries with patients, but to still allow themselves to develop a trusting relationship with the mental health patient. The third theme involves gaining professional knowledge and skill through practicing, as well as knowledge application in a real setting, and the feeling of confidence at the end of the clinical experience. Finally, the process of the students’ growth is the last theme identified. Students found they needed to cope with the change in role and setting as well as identify their own limitations (Hung et al., 2008).

This qualitative analysis of a clinical and educational intervention was effective in identifying the attitude themes of their nursing students. Identifying the attitude themes enabled the instructors in this study to tailor future course instruction around the former students’ attitudes. This tailoring provides a more positive educational experience for nursing students. However, the sample size was very small with only seven participants completed the interviews. Due to the small sample size, the results have limited generalizability. Since the sample size is so small, it is possible that the students are so alike that the variety of attitudes and background is slight. In the future, it would be important to gather a sample size large enough to gather a wider variety of data. Additionally, this qualitative study is based on the researchers’ identification of the themes within the transcribed interviews. It is possible that the interpretation is biased in that the themes identified in the first interview were used to reexamine the initial interviews. On the other hand, the study suggests a process by which students identify and overcome stigma.

**Educational and Clinical Intervention in Jordanian Nursing Students**

Hamaideh and Mudallal (2009) wanted to “assess Jordanian nursing students’ attitudes toward mental illness, and to assess the effectiveness of teaching and contact on
changing nursing students’ attitudes about mental illness” (p. S335). The sample included one group of 193 Jordanian nursing students studying at the Hashemite University. In order to be included, the students had to have taken their mental health theory class and their mental health clinical during a specific academic year. Students were not required to participate in the study. Additionally, “students who have been working with patients with mental illness or who have taken any mental health course [in the past] were excluded from the study” (Hamaideh & Mudallal, 2009, p. S340).

This educational and clinical intervention was evaluated by the use of a pretest-posttest. The pretest was taken at the beginning of the semester and prior to the educational and clinical experiences; the posttest was taken at the end of the semester. The Opinion about Mental Illness Questionnaire (OMI) was used. The higher the OMI score, the better the students’ attitudes are toward those with a mental illness. The questionnaire takes between 10 and 15 minutes to complete. The OMI has 51 questions and they are scored on a six point Likert-like scale. The OMI measures five subscales. The subscales include: authoritarianism, benevolence, mental hygiene ideology, social restrictiveness, and interpersonal etiology (Hamaideh & Mudallal, 2009).

Hamaideh and Mudallal (2009) used ANOVA to determine “if opinion about mental illness differed according to age, gender, socioeconomic status, and place of residency” (p. S340) and to determine if the students’ attitudes changed after the intervention. After the intervention, students were found to have a positive attitude toward mental health patients and nursing in four of the five subscales. With regard to the nursing students’ “age, gender, socioeconomic status and place of residency” there was no connection to their attitudes (Hamaideh & Mudallal, 2009, p. S341). Additionally,
“there was significant difference in attitudes between participants who had prior contact with mentally ill clients and those who did not” in three of the five subscales (Hamaideh & Mudallal, 2009, p. S342). Overall, Hamaideh and Mudallal (2009) found that the attitudes of the nursing students changed in all five of the factors, but only had a significant change in four of the five subscales. Authoritarianism, benevolence, mental hygiene ideology, and interpersonal etiology had significant change. The fifth factor, social restrictiveness, had a positive change, but was not found to be significant.

The sample size was large enough to get a variety of student responses. Additionally, the OMI was effective in determining if change occurred as a result of the intervention. Although this combination of educational and clinical intervention was effective, the addition of a creative intervention to the standard educational and clinical intervention might be even more effective.

**Creative Intervention Added to an Educational and Clinical Experience**

Very few studies look at a combination of all three interventions to address mental illness stigma in nursing students. Webster (2009) used a creative intervention combined with educational and clinical interventions. The research study looked at “how a creative, reflective learning project was used to encourage nursing students to express feelings about working with clients with mental illness, address stigma, and facilitate development of empathy” (Webster, 2009, p. 34). This study, conducted in the United States, took place while the students were in their mental health classes and clinical rotation. In all, 29 students were conveniently recruited from a nursing course taught by the researcher. The study lasted four weeks and was conducted during their 14-week clinical rotation. The creative reflective experience included an un-graded reflective
journal, patient education, post-conference and creative projects. Throughout the four week study, the students kept reflective journals, in which they recorded their thoughts and feelings about mental illness. The creative project asked students to recreate what they thought it was like for their client to live with mental illness. Students were able to complete their project through the use of a variety of mediums including posters, shadow boxes, paper-mâché, drawings or paintings, and poetry. Students were then interviewed to determine their perceptions and to understand their reflective experience project.

The students’ interview results were also included. The students were asked to answer two questions. The first was related to their perceptions of working with clients during their clinical rotation who had a chronic mental illness. The second was related to how the students used the creative, reflective experience to understand mental illness, patients with mental illness and how to demonstrate empathy.

Additionally, the reflective journals were implemented so that each student could write down and “reflect on any assumption he or she had about the client that could affect development of a therapeutic nursing student-client relationship” (Webster, 2009, p. 36). Some of the identified themes included: “bias, fear, stigma, discrimination, and culture” (Webster, 2009, p. 36). In the journals, students were required to write down their thoughts regarding what it might be like to live with a mental illness. This journal information was used as the basis for the students’ creative project about what it might be like to live with a mental illness.

The clinical experience was also important. In the clinical experience, students had the opportunity to interact with an assigned client, to teach and to be involved in psychoeducational groups. Additionally, the students were involved in a 90-minute post-
conference at the end of each week. In the post-conference they discussed therapeutic relationships, theory, theory application to practice, and communication skills.

After data analysis, Webster (2009) found that at the beginning students felt uncertain and uncomfortable with the situations that they had faced or could face. Several students were able to relate what they saw in their clinical site back to what someone in their family was experiencing. Students also identified the relationship between what they learned from the media and their expectations regarding future experiences. Some students were able to develop strong therapeutic relationships and to display true empathy over the four week intervention period. Other students found it difficult to develop a therapeutic relationship due to the assigned patient’s disease process or the medication side effects. The researcher believed a strong therapeutic relationship was important in developing a proper empathetic response.

Through the creative, reflective project nursing students were able to demonstrate their understanding of their client’s mental illness. Also, students were able to think in a different way about the impact of stigma. By sharing what they had learned, students were able to develop a deeper understanding of what it is like to suffer from a mental illness as well as what others found effective in caring for those with a mental illness.

The results of this study are not generalizable to other groups of nursing students. However, this study did show that through this combination of interventions, the nursing students were able to understand some of the everyday issues their clients were having as a result of their mental illness. Additionally, the students found that they were able to think differently about those with a mental illness because of their respective clinical
experiences and the assignments given in conjunction with those experiences. Although not statistically validated, this study still has merit when planning further interventions.

Summary

Although many studies were effective in decreasing mental illness stigma as displayed by health care students, it may be beneficial to look at decreasing mental illness stigma in nursing students from a different perspective. There are several characteristics in the studies above that can be incorporated into this scholarly project.

First, it seems there are as many different tools to measure mental illness stigma as there are studies about mental illness stigma. For the purposes of this project, the tool needs to be directed towards health care students. The tool also needs to have enough questions so that an acceptable amount of data can be gathered to determine reliability, validity, and statistical significance. Nursing programs use every minute available for nursing education; time will be limited. Therefore, the OMI that has 51 questions and takes between 10 and 15 minutes to complete may be too time consuming (Hamaideh & Mudallal, 2009). Additionally, the Attribution Questionnaire-27, used in the study by Romem et al. (2008), gives the test taker a scenario about a patient with schizophrenia (Corrigan, 2008), these focusing on only one mental illness. This scholarly project is focused on gauging nursing students’ attitudes, thoughts, and fears about mental illnesses in general instead of one specific mental illness.

In the Kassam et al. (2009) study, the MICA-2 scale was used to assess the students’ knowledge and attitudes related to mental illness stigma. The MICA-2 scale is a 16-item Likert-like scale questionnaire, specifically geared towards medical students. According to Kassam, Glozier, Leese, Henderson and Thornicroft (2010), in this tool, the
students can rate their answers as any one of the following: strongly agree (scored as a 1), agree (scored as a 2), somewhat agree (scored as a 3), somewhat disagree (scored as a 4), disagree (scored as a 5), and strongly disagree (scored as a 6). The lowest possible score is a 16 and indicates a low stigmatizing attitude; the highest possible score is a 96 and indicates a high stigmatizing attitude. The MICA-2 also has good consistency and reliability. Kassam et al. (2010) state, “the MICA scale has satisfactory internal consistency with a Cronbach’s alpha coefficient of 0.79 and a test-retest reliability of 0.80” (p. 4). According to Kassam et al. (2010), a change in the mean score greater than or equal to 10% indicates a significant change. Kassam et al. (2010) were unable to get a significant change with their sole educational intervention. It may be possible to determine if a creative intervention in conjunction with a combined educational and clinical intervention would elicit a significant change as measured on the MICA.

Second, an educational intervention alone and a clinical intervention alone were each found to be effective in reducing mental illness stigma in nursing students (Kassam, et al., 2010; Happell & Roper, 2003; Romem et al., 2008). However, baccalaureate nursing programs in the United States today generally have both an educational and clinical component. Therefore, it would be difficult to find a nursing program that only has an educational component or a clinical component. Additionally, it would be unwise to remodel the curriculum of a currently accredited baccalaureate nursing program to give it a single component. Furthermore, an intervention that, at the very least, includes both an educational and a clinical component is most accessible and feasible.

As most BSN programs have both an educational component and a clinical component, there are multiple research studies that look into their combined use. Overall,
these combined educational and clinical studies, were shown to be effective, even if they were or were not statistically validated (Sadow et al., 2002; Markstrom et al., 2009; Hung et al., 2008; Hamaideh & Mudallal, 2009).

Finally, very few studies look into the use of a creative intervention. The study by Webster (2009) was the only study that specifically identified either a project or activity that creatively supplemented the curriculum. Although the Webster (2009) study was shown to be quite effective in decreasing mental illness stigma in nursing students, the results were not statistically analyzed. However, Webster (2009) found that when students shared their thoughts and experiences with other students, they were able to have a better understanding of a patient’s real life experiences. An intervention that is statistically analyzed and which encourages students to share their thoughts, insecurities, and experiences with each other may be ideal. Ultimately, one must determine if including a creative element in addition to the educational and clinical portions of the program is a more effective way of decreasing nursing students’ stigma towards the mentally ill.

Generally, these studies provide a good basis for project development. Unfortunately, there seem to be several issues affecting the reviewed literature. Many of the articles identified are at least five years old. While a specific reason for this absence in current literature cannot be assumed, there are several possible suggestions. These possibilities could include a lack of research funding, lack of interest on the subject of mental illness stigma, or lack of time to study the issue. In addition, since Goffman discussed stigma in 1963, the body of literature is quite small and stigma addressed only sporadically.
Significance

If the nursing profession or other health care professions are unable to adequately address the issue of mental illness stigma in their students the harmful effects for those who suffer from a mental illness will persist (Mayo Clinic staff, 2009; Smith, 2002; Webster, 2009). Stigma results in avoidance of treatment by both the individual with mental illness and providers. The social effects of stigma may lead to isolation from friends, family, decent housing, and a decent job. Ultimately, those suffering from a mental illness deserve a good life and high-quality patient centered care from an empathic health care provider. People with a mental health illness deserve treatment similar to others who receive treatment for a heart or musculoskeletal issue, for example. However, this individualization cannot be provided by nurses and other health care providers if they stigmatize those with a mental illness.
CHAPTER 3
CONCEPTUAL FRAMEWORK

The purpose of this project was to explore attitude change in baccalaureate nursing students related to mental health stigma. The question guiding this project was whether a creative, educational game implemented in a classroom setting would change stigmatizing thoughts and attitudes toward people with mental illness. The purpose of this chapter is to set forth and discuss the conceptual framework used to plan, implement, and evaluate this project. When addressing problematic attitudes and behaviors, a framework that addresses behavior change is essential. Additionally, with regard to project implementation, a model that encourages sound evidence-based practice is also important.

Behavior Change: Theory of Planned Behavior

The Theory of Planned Behavior (TPB) was first explained by Icek Ajzen in 1988 (Morisky, 2002a). The TPB is based on three suppositions. First, when one makes a conscious decision to choose his or her own behavior, this decision is founded on one’s intent to actually carry out that particular behavior. Second, a person’s intent to carry out a behavior is based on three factors, including: his or her attitudes regarding the behaviors, social norms regarding the behavior, and his or her own perception of his or her own self-control related to performing that behavior. Finally, the level of importance an individual places on the three factors above will vary based on the particular behavior and specific situation (Polit & Beck, 2012). A model depicting the TPB and the interactions between the variables can be found in Appendix B, Figure 1.
Understanding and describing human behavior can be a difficult process. There are several concepts in the TPB that assist in the understanding of complex human behaviors. These concepts include: attitude toward behaviors, subjective norms, perceived self-control, intentions, and behaviors (Ajzen, 1991; Polit & Beck, 2012).

Attitude toward behaviors is defined as an attitude toward the completion or fulfillment of a behavior (Morisky, 2002b). Subjective norms are defined as the influence that comes from others related to one’s behaviors and attitudes. Perceived behavioral control is one’s understanding of his or her ability to engage or not to engage in a particular behavior. Intention is defined as an individual’s intent to take part in a certain behavior. Finally, behavior, as defined by Ajzen (1991), is the fulfillment of a particular attitude or action.

Attitudes toward the behavior, subjective norms, and perceived behavioral controls are three concepts that are linked together. These three concepts have effects on each other based on the specific situation. Additionally, all three of these concepts influence an individual’s intention to perform a specific behavior. The behavior itself is then determined by the intent to perform that behavior. Furthermore, according to Ajzen (1991), perceived behavioral control, one of the original three concepts, does play a part in an individual’s determination to engage in that precise behavior or activity.

According to the TPB, all behaviors are not “under volitional control and...are located at some point along a continuum that extends from total control to a complete lack of control” (Morisky, 2002a, p. 1190). Additionally, there are internal and external factors that are associated with behavior control. Internal factors are intangible, can be gained through study or learning, and include talents, abilities, data or information, and
emotions. On the other hand, external factors are often not under an individual’s direct control and can include environmental or situational factors (Morisky, 2002a).

**Project Application**

While this theory has many applications to health related behaviors, such as losing weight and quitting smoking, there is also an application to students’ behaviors as related to the patients they care for (Ajzen, 1991; Polit & Beck, 2012). A student’s attitude toward the treatment of a patient with a mental illness can affect the actual behavior that he or she displays to a person with a mental illness in the future.

To be more specific, an example of how the concepts of the TPB pertain to a student nurse and a person suffering from schizophrenia will be outlined in the following paragraph. Attitude would be a student’s initial reaction to providing treatment to an adult suffering from schizophrenia based on experiences related to mental illness that lead the student to treat the individual as a child. The concept of subjective norms in this example are those social norms that may suggest the student’s reaction is acceptable, because “everyone does it.” Perceived behavioral control would be student reactions that he or she should not treat the person with schizophrenia in this way. With regard to the definition of intention, all three of these suppositions affect the student’s intent to treat the person with schizophrenia as a child. The student’s actual behavior will be influenced by his or her intent to treat the person suffering from schizophrenia as a child as well as by his or her internal behavioral control which tells him or her not to engage in that behavior. This is only one of many possible scenarios representing the application of the TPB to the attitudes and behaviors of nursing students toward those with mental illness. In light of the TPB, the goal of this project is to use a creative intervention aimed at
changing students’ attitudes and the current social norms toward stigma and those with mental health illnesses. In turn, while not specifically measured in this project, according to the theory, the students’ intentions and ultimately behaviors will be affected.

**Project Implementation: Johns Hopkins Nursing EBP Model**

The Johns Hopkins Nursing Evidence-Based Practice Model (JHNEBPM) broadly encourages nurses to use available evidence-based research in the development of their nursing interventions and research. Evidence-based practice (EBP) is one of five core competencies identified in the Institute of Medicine’s 2003 report (Dearholt & Dang, 2012). Therefore, it is crucial that interventions, both old and new, ensure that the study design is based on the most current evidence. Of the five core QSEN competencies, this project addresses patient centered care and evidence-based practice.

According to Dearholt and Dang (2012), EBP is a method which can be used to approach problems within any health care organization. Not only does EBP incorporate the best evidence available, but it also takes evidence from a wide variety of disciplines. Both internal and external factors play a part in the development of a particular EBP topic or intervention. Additionally, EBP always addresses risks, benefits, cost, and potential outcomes.

There are three main concepts in the JHNEBPM; they are practice, education, and research. According to Dearholt and Dang (2012), practice is what nurses do every day; they take what they know and apply it with their patients in various health care situations. Education is the student’s or nurse’s growth in the wide expanse of nursing knowledge. Research is the generation of new nursing knowledge as based on current evidence.
The core of the JHNEBPM is evidence (Dearholt & Dang, 2012). The JHNEBPM splits all available evidence into two categories: research and non-research. The non-research category includes evidence related to clinical practice guidelines, expert opinion, organizational experience, clinical expertise, and consumer preferences. The research category includes experimental research, quasi-experimental research, non-experimental research, and qualitative research. According to Dearholt and Dang (2012), research is the strongest type of evidence and should be used most often when developing curricula, creating interventions, or working with patients. Yet, non-research evidence is still crucial to the development and implementation of nursing evidence.

There are many factors, both internal and external, that can influence nursing evidence. These internal factors include accreditation, legislation, quality measures, regulations, and standards (Dearholt & Dang, 2012). Internal factors and their effects can be seen most particularly in the program, office, hospital, or other organization involved in a particular intervention. External factors can include culture, environment, equipment/supplies, staffing, and standards. These external factors vary from one setting to the next based on many different variables such as financial budget, location, need, as well as availability of nurses and other staff. Regardless of the various combinations, all internal and external factors are evidence-based and have the potential to affect both research and non-research alike (Dearholt & Dang, 2012). A diagram of the JHNEBMP can be found in Appendix C.

**Project Application**

The JHNEBPM uses the “PET” process for organizing an EBP project (Dearholt & Dang, 2012). PET stands for practice question, evidence appraisal, and translation of
evidence and outcome analysis. As previously stated, the practice question in this project is whether or not a board game that addresses mental illness stigma will be effective in decreasing stigma displayed by nursing students. Chapter 2 evaluates the current research related to the stigma displayed by nursing students. Chapter 4 details a plan for evidence translation and reduction of the stigma displayed by nursing students. After evidence translation and project implementation, data from the intervention was analyzed for effectiveness.

With regard to the model specifically, the three main concepts—practice, education, and research, are involved in this project. An understanding and an awareness of future nursing practice is needed. When developing an intervention for nursing students, it is important to understand where they will be going, essentially, into a practice setting. In their practice, they will need to provide high-quality and respectful care to all their patients regardless of their patients’ state of health. Once there is an understanding of what is needed, a plan can be developed through research. A critical appraisal of the evidence is important in the development of an educational plan.

In light of this project, it is important to understand that these future nurses, in their practice, will need to provide safe and effective care. Research shows not only that nursing students can have stigmatizing attitudes toward those with a mental illness but also that there are several effective methods of reducing this stigma. Knowing that there are several methods of reducing stigma, the method that will fit best can be selected. Some of the many internal and external factors pertinent to this project include: current curriculum, current nursing department leadership, nursing department mission, state regulations for contact hours, and nursing student interest.
Summary

The TPB and JHNEBPM align well with this project’s goals. The TPB explains the complex concepts associated with a change in behavior. The use of an intervention that addresses mental illness stigma can be used to modify students’ attitudes and current social norms, thereby, changing the students’ intent to behave for the better toward those suffering from mental illnesses. The JHNEBPM places a strong emphasis on basing new work on current evidence, regardless of whether that evidence is classified as research or non-research. Practice, education, and research are all interrelated when planning an intervention that is based on the evidence. Overall, the TPB has been used to guide the development of the project, especially when determining how to target the issue of stigma displayed by nursing students toward those with a mental illness. Additionally, the JHNEBPM has been used to guide this project from the planning stage through development, and on to the final stages of project implementation and evaluation.
CHAPTER 4

METHODS

The purpose of this chapter is to provide the outline for this project’s plan. The project’s design, participant selection, the sample, the instrument, the project’s procedure, the strengths and limitations, and human subject consideration are discussed. Risks and benefits to participants are also briefly explored.

**Project Design**

The purpose of this project was to explore attitude change among baccalaureate nursing (BSN) students related to mental health stigma. Furthermore, the question guiding this project is whether a creative educational game implemented in a classroom setting will change stigma displayed toward people with a mental illness. A creative intervention was introduced in conjunction with the existing classroom and clinical education the BSN students at the selected site received. Specifically, this creative intervention was a mental health board game, *The Mental Illness Stigma Game for BSN Students*, which reviewed current mental health statistics and addressed various topics in mental health nursing. BSN students played this board game in groups of three to five. In order to measure the effectiveness of this creative intervention, the project’s design was quasi-experimental. A quasi-experimental study uses two groups that are not randomly assigned: an intervention group that receives the pretest, intervention, and posttest, and a comparison group that receives the pretest and posttest but does not receive the intervention.
Population and Setting

The population for this project was restricted to BSN students. Specifically, the population group was all BSN students who were currently in a mental health nursing rotation. The setting for this project was a mid-sized Christian liberal arts college located in a large city in the Midwestern United States.

Sample

The sample was a convenience sample from all students in this BSN program who were willing to participate. All the BSN students were informed of the project during their mental health nursing clinical class. Before the pretest was distributed, it was unknown how many of the 60 students would be willing to participate. Of the 60 eligible participants, 7 of the students were males and 53 were females. In all, there were 54 juniors, five seniors, and one post-baccalaureate student. All of the students were at least 20 years of age. Additional data on age and gender can be found in Table 1. Overall, this

Table 1

Characteristics of Sample at Pretest

<table>
<thead>
<tr>
<th>Variable</th>
<th>All Respondents</th>
<th>Study Group</th>
<th>Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% n</td>
<td>% n</td>
<td>% n</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>58.9 33</td>
<td>66.7 20</td>
<td>50.0 13</td>
</tr>
<tr>
<td>21</td>
<td>32.1 18</td>
<td>26.7 8</td>
<td>38.5 10</td>
</tr>
<tr>
<td>22</td>
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<td>3.3 1</td>
<td>0.0 0</td>
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<tr>
<td>23</td>
<td>3.6 2</td>
<td>0.0 0</td>
<td>7.7 2</td>
</tr>
<tr>
<td>24</td>
<td>3.6 2</td>
<td>3.3 1</td>
<td>3.8 1</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12.5 7</td>
<td>13.3 4</td>
<td>11.5 3</td>
</tr>
<tr>
<td>Female</td>
<td>87.5 49</td>
<td>86.7 26</td>
<td>88.5 23</td>
</tr>
</tbody>
</table>
sample is characteristic of nursing students in nursing programs today—more females than males and a majority of students between 20 and 23 years of age. In all, 56 participants returned the pretests, 28 were from the study group and 26 were from the comparison group.

**The Creative Intervention**

The board game that was used in this project was adapted from *Mary’s Stigma Game*. Canadian nurses Haase, Scharf, Leonard, Fulkala and Gradidge (2012) developed the game. It was developed for use by Canadian nurses and nursing students. For the purposes of this project, the game was adapted to fit BSN students in the United States. For example, Canadian related questions were omitted and questions about United States and current United States statistics were incorporated. However, many of the discussion questions could apply to either Canadian or American participants so remained untouched. Question types included both individual response and group discussion questions. In all, the questions covered a wide range of mental health topics. To see a scaled-down version of the board game, see Appendix D. Additionally, a complete list of questions used in this game can be found in Appendix E. The game instructions are straightforward and can be found in Appendix F. Participants formed groups of three to five to participate in the game. The instruction sheet for the game was passed out, in a packet, with the pawns, dice, and game chips. Chips were earned by answering questions, participating in group discussion and answering bonus questions. The player with the most chips at the end of the game won. Winners received a $5 gift certificate to their school’s campus store.
Instruments

Mental Illness: Clinicians’ Attitudes Scale (MICA)

The tool used in this project was the *Mental Illness: Clinicians’ Attitudes Scale* (Gabbidon et al., 2012). There are two available versions of the MICA, the MICA-2 and the MICA-4. Although each scale has the same number of questions and the questions are similar, the questions in the MICA-2 and MICA-4 are worded slightly differently. The MICA-2 is designed for medical students, trainee psychiatrists, and psychiatrists; it is not completely suitable for assessing the novice nursing student’s attitudes. The wording for the MICA-2 is directed more toward psychiatry than health care. Alternatively, the MICA-4, uses the term ‘health/social care professional’ instead of ‘psychiatrist.’ For this reason, the MICA-4 was better suited for BSN students and for use in this scholarly project. Permission to use the MICA-4 was obtained, with conditions (see Appendix G). The conditions included that no changes be made to the MICA, that translations are done using back translation, that the copyright information in the footer is included, and that the MICA is not passed on to a third party.

The MICA-4 takes, on average, 3.7 minutes to complete and according to Gabbidon et al. (2012) takes between two and five minutes. In this scholarly project, the participants took less than 5 minutes to complete the MICA-4 as well as the additional accompanying material. The scale is written at a 9th to 10th grade reading level; this corresponds to 14-16 year olds. Since this tool was used with BSN students who are at least in their third year of college, and generally 20 to 24 years old, this age reading level was appropriate.
The *MICA-4* “assesses attitudes towards mental illness of students or staff in any health discipline and is a 16-item scale modified from the *MICA v2* previously developed for medical students” (Gabbidon et al., 2012, p. 82). For each of the 16 questions, the students had the option to select one of six answers. These six answers are scored on a Likert-like scale and include: strongly agree, agree, somewhat agree, somewhat disagree, disagree and strongly disagree. The lowest possible score on the *MICA-4* is 16 and the highest is 96. A low score on the *MICA-4* corresponds to a low stigmatizing attitude and a high score on the *MICA-4* corresponds to a high stigmatizing attitude. The results of this questionnaire aided in determining whether this board game in conjunction with the existing educational and clinical intervention effectively decreased mental illness stigma displayed by nursing students.

The 16 questions in the *MICA-4* identify five key themes. The first, “health/social care field and mental illness” (p. 85), corresponds to item numbers 3, 5, 8, 10, 11, 12, and 16 (Gabbidon et al., 2012). The second, mental illness knowledge corresponds to items 1, 2, 5, 6, and 13 (Gabbidon et al., 2012, p. 85). The third theme is disclosure and it corresponds to item numbers 4 and 7. The fourth theme is the ability to distinguish between both physical and mental health; it corresponds to item 8, 13, 14, and 15 (Gabbidon et al., 2012). The last theme, providing care to patients with a mental illness, corresponds to item numbers 9, 11, and 14 (Gabbidon et al., 2012). Some of the questions contribute to measurement of more than one theme. Of the 16 questions, 10 are reverse scored; they include items 1, 2, 4, 5, 6, 7, 8, 13, 14, and 15. This meant that for these items strongly agree is scored with the highest number (6) and strongly disagree is scored with the lowest number (1).
Gabbidon et al. (2012) found the MICA-4 both reliable and valid. “The Cronbach’s α value for the 16-item MICA v4 scale was 0.72, indicating good internal consistency” (Gabbidon et al., 2012, p. 84). The researchers found that removing any one of the 16 questions did not have any effect on the significance of the α value. Furthermore, “item-total correlations were ≥ 0.02 for all items on the MICA v4 scale, indicating acceptable internal consistency” (Gabbidon et al., 2012, p. 84). In addition, Gabbidon et al. (2012) used Pearson correlation to analyze validity and it was found that a moderate correlation was present with the Reported and Intended Behaviour Scale (RIBS) and that the MICA-4 scale was sufficiently valid. With regard to face validity, Gabbidon et al. (2012) stated that the MICA-4 is adequately able to measure the attitudes of clinicians and that it is “particularly appropriate for students” (p. 84).

In the analysis of this scholarly project’s data, reliability was also evaluated. The Cronbach’s α value for the MICA-4 was 0.787 for the pretest and 0.703 for the posttest, both of which were very similar to the α value found by Gabbidon et al. (2012). To be

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>α value</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme 1 Pretest</td>
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<td>7</td>
</tr>
<tr>
<td>Theme 1 Posttest</td>
<td>0.419</td>
<td></td>
</tr>
<tr>
<td>Theme 2 Pretest</td>
<td>0.351</td>
<td>5</td>
</tr>
<tr>
<td>Theme 2 Posttest</td>
<td>0.406</td>
<td></td>
</tr>
<tr>
<td>Theme 3 Pretest</td>
<td>0.701</td>
<td>2</td>
</tr>
<tr>
<td>Theme 3 Posttest</td>
<td>0.694</td>
<td></td>
</tr>
<tr>
<td>Theme 4 Pretest</td>
<td>0.619</td>
<td>4</td>
</tr>
<tr>
<td>Theme 4 Posttest</td>
<td>0.618</td>
<td></td>
</tr>
<tr>
<td>Theme 5 Pretest</td>
<td>0.074</td>
<td>3</td>
</tr>
<tr>
<td>Theme 5 Posttest</td>
<td>0.350</td>
<td></td>
</tr>
</tbody>
</table>
certain, Cronbach’s α values were also obtained separately on the comparison and study groups’ pretests and posttests. The Cronbach’s α value for the comparison group’s pretest was 0.758 and was 0.777 for the posttest. Additionally, the Cronbach’s α value for the study group was found to be 0.790 for the pretest and 0.658 for the posttest. For all α values, the deletion of any item did not significantly affect the Cronbach’s α value. Furthermore, α values on each MICA-4 theme comparing study and comparison groups were also calculated (see Table 2). While some values were low, for the most part, the α values showed sufficient internal consistency within each theme. It is important to note that there are a small number of items within Theme 5 and a larger number of items within Theme 2. It is also possible that Theme 2 sampled more than one theme with items from Theme 2 in both Theme 1 and Theme 4. This could be part of the reason for the low α values for Themes 2 and 5.

**General Questionnaire**

Similar to the Gabbidon et al. (2012) study, students who chose to participate in this project, were also asked to provide basic personal and demographic information (see Appendix H). Students were asked, yes or no, as to whether they have a friend or family member that had been diagnosed with a mental health illness. They were asked to provide gender and age. Ethnicity was excluded because, with the small sample size, it would be easy to link a respondent to his or her answer.

**Participant Evaluation Questionnaire**

The participant evaluation questionnaire was used to gather feedback on the scholarly project (see Appendix I). This brief questionnaire asked participants to simply answer yes or no as to whether they thought *The Mental Illness Stigma Game for BSN*
Students in any way affected their attitude about mental health or about those suffering from mental illness. Participants were also asked whether there was a particular question that made them think differently about mental illness. Additionally, the participants were asked to provide feedback about using this board game in a classroom setting in the future. Finally, space was provided for students to add any comments they wished regarding the board game or about this scholarly project in general.

Procedures

Participant Selection

Participants were recruited from a BSN program located in the Midwestern United States. There were three selection criteria. First, the student needed to be enrolled in the institution. Second, the student needed to be enrolled in the concurrent mental health theory, mental health strategies, and mental health practicum courses. Finally, the student needed to be in the first year of their nursing program. As long as students met the selection criteria, they were not be excluded from this project or intervention for any reason including gender, age, race, current or past mental illness diagnosis, current or past family member mental illness diagnosis, or experience with patients with a mental illness.

Implementation

This project had two groups. The first group, the comparison group had only a pretest and a posttest. The second group, the study group had a pretest, followed by an intervention as well as a posttest. There were several reasons for the use of two groups in this project. First, due to the school’s class design, there was a natural split mid-semester when the students switch from community related nursing to mental health nursing or
vice versa. This mid-semester break allowed for easy creation of the two groups. Second, the results from both the comparison and study groups can be compared to determine if the board game intervention really was effective.

For both groups, the *MICA-4* was administered to determine the students’ baseline attitudes at the midterm break. After this, the study group engaged in their mental health and clinical experience, and received the creative intervention. At the end of the semester, both groups again took the *MICA-4* as a posttest. This design was used to evaluate the effectiveness of the intervention on student attitudes.

The pretest was comprised of the general questionnaire and the *MICA-4*. The pretest was presented to both the comparison and study groups either the last 10 minutes or first 10 minutes of the student’s class session. The posttest contained the *MICA-4* for both the comparison and study groups as well as a general evaluation containing open-ended questions for the study group to complete. The posttest was presented to both the comparison and study groups after completion of their final course examination.

**Informed Consent.** At the time of the pretest, all students were given an informed consent document that briefly explained the purpose of this scholarly project (see Appendix J). In the informed consent, students were also told why they were selected, they were instructed when they could expect to participate and what would be expected of them, and they were made aware of the risks and benefits of their participation. The BSN students were also informed that their participation in the project was optional and that it would not affect their grade. Finally, the students were encouraged to contact this student, this student’s chair person, the Institutional Review Board at the students’ school, or the Grand Valley State University Human Research
Review Committee through email or phone, with any questions or concerns. If the student agreed to participate, he or she signed the document and kept a copy for his or her records. Finally, the participants were verbally instructed to write down five numbers that are in some way meaningful to them. Participants were instructed to avoid years, birthdates, or other personally identifying numbers. These sets of numbers were used to link pretests, posttests, and the general questionnaire, and were not used to personally identify the participants. Participants were reminded to remember their five digit code so that they could provide it again at the posttest.

**General Questionnaire.** At the beginning of the survey, students were instructed not to provide any identifying information and that they had the right to refuse to answer any of the questions. This questionnaire was given with the pretest for both groups. This brief general questionnaire, the *MICA-4*, and the informed consent were stapled together.

**Participant Evaluation Questionnaire.** With the posttest administration, the study group participants were also given a brief questionnaire. Again, students were instructed not to provide any identifying information and that they had the right to refuse to answer any of the questions. There was no need to link the students’ evaluation to their responses on the other questionnaires. Therefore, although the general evaluation and the posttest were stapled together, they were separated before data coding and analysis.

**Procedure Summary.** Due to the design of this scholarly project the procedures for the study group and the comparison group were slightly different. Both the study group and the comparison group were given the pretest on the same day. A few weeks after the pretest was given, the study group participated in the intervention. The intervention occurred at the student participant’s clinical site. This student drove from
site to site to provide and facilitate the game. Once the participants played the board game and completed their clinical hours in their mental health rotation, both the study group and the comparison group were given the posttest containing the MICA-4 after their final examination. Additionally, the study group was also given the final evaluation questionnaire.

**Human Subjects Consideration**

As this study was an educational intervention conducted within an educational setting and specifically looked at an addition to current curricula, it presented minimal risk to the participants. Also, it was essential to ensure that the students’ anonymity was preserved throughout collection and analysis of data. As previously stated, students selected their own five digit number that could not be personally tied back to them. Each student kept track of his or her own number and placed it on both the pretest and posttest. The compiled finished surveys were kept in a secure location until data analysis took place. Three years after the data have been analyzed, the surveys will be shredded.

The MICA-4, the general questionnaire and the student evaluation were reviewed by the Human Research Review Committee (HRRC) at Grand Valley State University. As this study is an educational intervention with minimal risk to the participants, application for expedited review was permissible. Once this proposal was approved by the HRRC, this proposal was also submitted to the Institutional Review Board (IRB) at the study institution, per the institution’s guidelines.

Participants were intentionally sampled due to their place and educational level in the BSN program. Completion of the tool and questionnaires as well as participation in
the study was optional and did not reflect either positively or negatively on the student’s final grade.

**Risks and Benefits**

There were few if any risks associated with participation in this project. There was no penalty for choosing not to participate in this project. It is possible that the game could have brought to mind concerns that a student may have had related to mental health nursing. However, students might have learned that they were not the only one experiencing similar concerns. While there were no specific threats to the participants, there were also very few benefits to the participants. One potential benefit was that students could have started to develop an awareness of their thoughts and actions toward those with mental illness. The students may have been given the tools, both through the intervention and through their other courses that will enable them to provide safe and respectful care to all their patients, including those suffering from various mental illnesses.

**Summary**

The *MICA-4* was the tool best suited for use in the BSN student population to measure their attitudes toward mental illness and toward those affected by mental illness. Although there were limitations to the project design and with the tool, there were also many benefits including low cost of implementation, tool reliability and validity, and ease of administration. Ultimately, the goal of this project was kept at the forefront: to help BSN students identify their own stigmatizing attitudes and beliefs as well as to assist them in providing high quality care to their patients in the future.
CHAPTER 5
RESULTS

The purpose of this scholarly project was to explore attitude change among Bachelor of Science in Nursing (BSN) students related to mental illness stigma. The question guiding this project was whether the creative educational board game implemented in an educational setting would decrease stigma displayed toward those suffering from a mental illness. The purpose of this chapter is to present the results of the board game intervention on the survey measuring stigma used in this scholarly project.

The independent variable in this project was the board game, *The Mental Illness Stigma Game for BSN Students*. The students’ scores on the *Mental Illness Clinicians’ Attitudes Scale (MICA-4)* represented the dependent variable. Using the *Statistical Package for the Social Sciences, Version 20 (SPSS)*, the information from the general questionnaire, the *MICA-4*, and the group results were analyzed.

The educational experiences of both groups in relation to mental illness were varied. The study group had limited mental health experience prior to beginning the pretest. However, the comparison group had both class and clinical experience prior to the pretest. Also, the participants in the comparison group had more personal contact with either a friend or family member with mental illness (see Table 3). For these reasons, it was anticipated that the comparison group’s scores on the *MICA-4* would be lower on the pretest, indicating less stigma.

At posttest, it is expected that the study group’s *MICA-4* scores will match or be lower than the control group’s scores after the clinical experience, the educational experience, as well as, the creative intervention experience.
Respondents

There were a total of 56 pretests returned from an available group of 60 nursing students. All 56 respondents answered every pretest question. Of the 56 respondents, 31 stated they had a friend suffering from a mental illness, 25 stated they did not. Further pretest information regarding return rate, age, and gender can be found in Table 3.

All available study group participants chose to return pretests and showed their willingness to participate in the game. In all, the return rate for pretests in the study group was 100%. Of the 30 study group participants, four were male and 26 were female. In the study group, the average score on the MICA-4 was 38, with a minimum of 27 and a maximum of 61.

The comparison group had a lower pretest return rate than the study group. The comparison group returned 26 pretests from an available group of 30 nursing students. The average score on the MICA-4 in the comparison group was 35.1, with a minimum of 23 and a maximum of 51.

All participants who completed the pretest were given the opportunity to complete the posttest at the final exam. This omitted participants who had to postpone the final exam and participants who took the exam in a different location (i.e., academic services) or who took the exam on a different day. In all, 40 of 56 participants returned the posttest. This represents a return rate of 71.4%. Of the 40 posttest respondents, two respondents did not complete the survey. The first respondent only completed the first page of the MICA-4 and the second respondent did not complete either page of the MICA-4. Therefore, the final total of participants in this scholarly project was 38. The final
response rate for all participants was 67.9%. Final data were analyzed only for those who completed both the pretest and the posttest.

Table 3

Characteristics of Pretest and Posttest Respondents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Group Pretest n=56 Posttest n=38</th>
<th>Study Group Pretest n=30 Posttest n=24</th>
<th>Comparison Group Pretest n=26 Posttest n=14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Potential Respondents</td>
<td>60 100.0</td>
<td>30 100.0</td>
<td>30 100.0</td>
</tr>
<tr>
<td>Pretest Return Rate</td>
<td>56 93.3</td>
<td>30 100.0</td>
<td>26 86.7</td>
</tr>
<tr>
<td>Posttest Return Rate</td>
<td>38 67.9</td>
<td>24 80.0</td>
<td>14 53.8</td>
</tr>
<tr>
<td>Pretest Age Distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>33 58.9</td>
<td>20 66.7</td>
<td>13 50.0</td>
</tr>
<tr>
<td>21</td>
<td>18 32.1</td>
<td>8 26.7</td>
<td>10 38.5</td>
</tr>
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<td>22</td>
<td>1 1.8</td>
<td>1 3.3</td>
<td>0 0.0</td>
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<td>23</td>
<td>2 3.6</td>
<td>0 0.0</td>
<td>2 7.7</td>
</tr>
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<td>24+</td>
<td>2 3.6</td>
<td>1 3.3</td>
<td>1 3.8</td>
</tr>
<tr>
<td>Posttest Age Distribution</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>23 60.5</td>
<td>14 58.3</td>
<td>9 64.3</td>
</tr>
<tr>
<td>21</td>
<td>12 31.6</td>
<td>9 37.5</td>
<td>3 21.5</td>
</tr>
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<td>22</td>
<td>0 0.0</td>
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<td>0 0.0</td>
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<td>23</td>
<td>1 2.6</td>
<td>0 0.0</td>
<td>1 7.1</td>
</tr>
<tr>
<td>24+</td>
<td>2 5.3</td>
<td>1 4.2</td>
<td>1 7.1</td>
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<td>Pretest Gender Distribution</td>
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</tr>
<tr>
<td>Male</td>
<td>7 12.5</td>
<td>4 13.3</td>
<td>3 11.5</td>
</tr>
<tr>
<td>Female</td>
<td>49 87.5</td>
<td>26 86.7</td>
<td>23 88.5</td>
</tr>
<tr>
<td>Posttest Gender Distribution</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>5 13.2</td>
<td>4 16.7</td>
<td>1 7.1</td>
</tr>
<tr>
<td>Female</td>
<td>33 86.8</td>
<td>20 83.3</td>
<td>13 92.9</td>
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<tr>
<td>Pretest Acquaintance with MI</td>
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<tr>
<td>Friend</td>
<td>31 55.4</td>
<td>14 46.7</td>
<td>17 65.4</td>
</tr>
<tr>
<td>Family Member</td>
<td>25 44.6</td>
<td>12 40.0</td>
<td>13 50.0</td>
</tr>
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<td>Posttest Acquaintance with MI</td>
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<td></td>
</tr>
<tr>
<td>Friend</td>
<td>21 55.3</td>
<td>12 50.0</td>
<td>9 64.3</td>
</tr>
<tr>
<td>Family Member</td>
<td>18 47.4</td>
<td>9 37.5</td>
<td>9 64.3</td>
</tr>
</tbody>
</table>

Note. Percentages are based within group.
In the study group, 26 of a possible 30 participants returned the posttest, equaling 86.7% of available respondents. However, two of these 26 study group participants did not fully answer the MICA-4. Therefore their incomplete posttest submissions were discarded and the number of posttest respondents was decreased to 24 with a return rate of 80%. In the comparison group, 14 of 26 participants returned the posttest, equating to 53.8% of available participants. There were no incomplete submissions in the comparison group.

**Stigma as Measured with the MICA-4**

The MICA-4 consists of 16 items. These 16 items correspond to five separate themes. Each theme contains between two and seven items. Some of the items overlap and correspond to more than one theme. All items are scored from one to six, with lower scores indicating low stigma. The average of all scores on the MICA-4 pretest was found to be 36.470 (see Table 4). The highest score was 61 and the lowest score was 23.

Table 4

**Overall Results for Pretest and Posttest Using ANCOVA**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Study Group (n=24)</th>
<th>Comparison Group (n=14)</th>
<th>Both Groups (n=38)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pretest Scores</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>38.040</td>
<td>33.790</td>
<td>36.470</td>
</tr>
<tr>
<td>( SE )</td>
<td>1.533</td>
<td>2.036</td>
<td></td>
</tr>
<tr>
<td><strong>Posttest Scores</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>( M )</td>
<td>34.290</td>
<td>32.710</td>
<td>33.710</td>
</tr>
<tr>
<td>( SE )</td>
<td>1.433</td>
<td>2.116</td>
<td></td>
</tr>
<tr>
<td>( t )</td>
<td>2.396</td>
<td>0.968</td>
<td></td>
</tr>
<tr>
<td>( p )</td>
<td>*0.025</td>
<td>0.351</td>
<td></td>
</tr>
<tr>
<td>( r )</td>
<td>0.780</td>
<td>0.250</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* * indicates significance.
Overall Results

The question that needs to be answered in this scholarly project is whether or not the board game in conjunction with the existing educational and clinical components of the curriculum was effective in reducing mental illness stigma. To start, data analysis shows that the comparison group and the study group were similar at the start of the project. The pretest means were not found to be significantly different as evidenced by a non-significant t-test (t=-1.667, p=0.781). ANCOVA was used to determine the true change in the dependent variable (i.e., MICA-4 posttests) while controlling for the effect of the covariate, the MICA-4 pretest (Munro, 2005). The six assumptions for ANCOVA were met prior to analysis. As expected, the comparison group’s score was lower at the time of the pretest than was the study group’s score. Additionally, both groups had a decrease in score over the course of the project period. Although there was a change in both groups, the data analysis shows that the change in the study group’s scores were significant while the comparison group’s scores were not significant (see Table 4).

When evaluating the study group’s data, it was found that four items had a change greater than 0.50 points: items 5, 7, 10, and 12. Item 5 decreased 0.83 point from pretest to posttest and asks participants to rate to what extent they believe those with mental illnesses are dangerous. Item 10 decreased 0.58 point from the pretest analysis to the posttest analysis. This item addresses the individual’s level of comfort when talking to a person with a mental illness. Item 7 decreased 0.54 point over the course of the study and inquires whether participants would disclose whether or not they would share their diagnosis with others should they ever be diagnosed with a mental illness. Of all the items on the MICA-4, the study group participants’ scores decreased the most for Item 12.
Item 12 asks participants to rate to what extent they believe the public should be protected from those suffering from a mental illness. On average, the score decreased from 4.00 to 2.79; this is a decrease of 1.21 points from pretest to posttest. Items 5, 10, and 12 are associated with Theme 1 (health/social care field and mental illness), item 5 is also associated with Theme 2 (mental illness knowledge) and item 7 is associated with Theme 3 (disclosure).

**Theme 1: Health/Social Care Field and Mental Illness**

Theme 1 is a seven-item subscale in the *MICA-4*. These seven items focus on determining whether respondents are comfortable working with people with a mental illness or whether they believe working in the mental health field is an honorable profession. The results show that the overall average on the *MICA-4* decreased for both groups; however, the change in score was only found to be significant for the study group. For this theme, the comparison group had a very small correlation between the items from the pretest and the posttest. On the other hand, the study group had a very high correlation at 0.870. Additional results regarding data analysis of Theme 1 can be found in Table 5.

**Theme 2: Mental Illness Knowledge**

Five items on the *MICA-4* correspond to Theme 2. These five items seek to determine the respondents’ current knowledge of mental illness as well as their willingness to learn about mental illness. Although both group’s averages on the *MICA-4* decreased slightly, neither change was found to be significant (see Table 6). However, it was found that the results were more highly correlated for the study group than they were for the comparison group.
Table 5

*Theme 1 ANCOVA Results*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Study Group (n=24)</th>
<th>Comparison Group (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>16.630</td>
<td>14.000</td>
</tr>
<tr>
<td>SE</td>
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<td>1.124</td>
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<tr>
<td>Posttest Scores</td>
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<tr>
<td>M</td>
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<tr>
<td>SE</td>
<td>0.726</td>
<td>0.973</td>
</tr>
<tr>
<td>t</td>
<td>3.174</td>
<td>0.244</td>
</tr>
<tr>
<td>p</td>
<td>*0.004</td>
<td>0.811</td>
</tr>
<tr>
<td>r</td>
<td>0.870</td>
<td>0.099</td>
</tr>
</tbody>
</table>

*Note.* * indicates significance.

Table 6

*Theme 2 ANCOVA Results*

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Comparison Group (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest Scores</td>
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<td></td>
</tr>
<tr>
<td>M</td>
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<td>10.570</td>
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<tr>
<td>SE</td>
<td>0.57</td>
<td>0.669</td>
</tr>
<tr>
<td>Posttest Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>11.210</td>
<td>10.070</td>
</tr>
<tr>
<td>SE</td>
<td>0.593</td>
<td>0.885</td>
</tr>
<tr>
<td>t</td>
<td>0.986</td>
<td>0.645</td>
</tr>
<tr>
<td>p</td>
<td>0.334</td>
<td>0.53</td>
</tr>
<tr>
<td>r</td>
<td>0.470</td>
<td>0.300</td>
</tr>
</tbody>
</table>

*Note.* * indicates significance.

**Theme 3: Disclosure**

There are two items that correspond to Theme 3 on the *MICA-4*. These two items ask participants to answer the degree to which they would or would not admit to others
that they had a mental illness. Table 7 shows a decrease in score on MICA-4 from pretest to posttest in both groups; however, the changes were found to be too small to be significant. Additionally, Table 7 shows that the study group’s scores on the MICA-4 were actually lower on the pretest than were the comparison group’s scores. Unlike the previous two themes, Theme 3 was not highly correlated for the study group, but was correlated for the comparison group.

Table 7

Theme 3 ANCOVA Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Study Group (n=24)</th>
<th>Comparison Group (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest Scores</td>
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<td></td>
</tr>
<tr>
<td>$M$</td>
<td>6.500</td>
<td>7.040</td>
</tr>
<tr>
<td>$SE$</td>
<td>0.653</td>
<td>0.378</td>
</tr>
<tr>
<td>Posttest Scores</td>
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<td></td>
</tr>
<tr>
<td>$M$</td>
<td>6.210</td>
<td>6.630</td>
</tr>
<tr>
<td>$SE$</td>
<td>0.505</td>
<td>0.412</td>
</tr>
<tr>
<td>$t$</td>
<td>0.653</td>
<td>0.990</td>
</tr>
<tr>
<td>$p$</td>
<td>0.525</td>
<td>0.333</td>
</tr>
<tr>
<td>$r$</td>
<td>0.240</td>
<td>0.460</td>
</tr>
</tbody>
</table>

Note. * indicates significance.

Theme 4: Distinguishing between Physical and Mental Health

Four items correspond to Theme 4. These four items assess the participants’ abilities to adequately distinguish between symptoms of mental illness and other physical illnesses. As expected, the comparison group had a lower score on the pretest than did the study group. Additionally, only the change in scores from the study group’s MICA-4 results were found to be significant. The comparison groups’ scores increased from pretest to posttest. There is a negative t-value and effect size due to an increase in mean
score from pretest to posttest in the comparison group. The data show that there was a significant change for the study group only. Additionally, the $r$ value for the study group indicated a high correlation between the pretest and the posttest, the same cannot be said for the comparison group’s correlation. Further results from the Theme 4 analysis can be found in Table 8.

Table 8

*Theme 4 ANCOVA Results*

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Comparison Group (n=14)</th>
</tr>
</thead>
<tbody>
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<td>$M$</td>
<td>$M$</td>
</tr>
<tr>
<td>Pretest Scores</td>
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<td>$SE$</td>
</tr>
<tr>
<td>$M$</td>
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<td>6.640</td>
</tr>
<tr>
<td>$SE$</td>
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<td>0.498</td>
</tr>
<tr>
<td>Posttest Scores</td>
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<td>$t$</td>
</tr>
<tr>
<td>$M$</td>
<td>6.710</td>
<td>6.930</td>
</tr>
<tr>
<td>$SE$</td>
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<td>0.606</td>
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<tr>
<td>$t$</td>
<td>2.541</td>
<td>-0.718</td>
</tr>
<tr>
<td>$p$</td>
<td>*0.018</td>
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</tr>
<tr>
<td>$r$</td>
<td>0.680</td>
<td>-0.250</td>
</tr>
</tbody>
</table>

*Note.* * indicates significance.

**Theme 5: Providing Care to Patients with a Mental Illness**

Three items in the *MICA-4* correspond to Theme 5. The three items ask respondents if and how they would treat people with a mental illness. Scores were identical for the study group and comparison group at the pretest. Although scores for both groups decreased, only the change in the study group’s scores was found to be significant (see Table 9). Results from both the study group and the comparison group appear to be correlated from pretest to posttest, which was also found to be true for the
Theme 3 results. While both groups had the same pretest score, only the study group’s change in score was found to be significant.

Table 9

**Theme 5 ANCOVA Results**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Study Group (n=24)</th>
<th>Comparison Group (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$M$</td>
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<td>4.570</td>
</tr>
<tr>
<td>$SE$</td>
<td>0.296</td>
<td>0.416</td>
</tr>
<tr>
<td>Posttest Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$M$</td>
<td>4.170</td>
<td>4.000</td>
</tr>
<tr>
<td>$SE$</td>
<td>0.287</td>
<td>0.348</td>
</tr>
<tr>
<td>$t$</td>
<td>2.070</td>
<td>1.593</td>
</tr>
<tr>
<td>$p$</td>
<td>*0.050</td>
<td>0.135</td>
</tr>
<tr>
<td>$r$</td>
<td>0.705</td>
<td>0.593</td>
</tr>
</tbody>
</table>

*Note.* * indicates significance.

**Open-Ended Posttest Question Results**

The posttest included an evaluation form for only the study group (see Appendix I). Four questions were included on this evaluation. First, the participants were asked whether or not *The Mental Illness Stigma Game for BSN Students* affected their attitude about mental health or about those suffering from a mental illness. For this question, participants were asked to select either yes or no and then elaborate if they wished. Participants were also asked if there was a question on the board game that really made them think differently about mental illness. The third question asked students for feedback regarding the game that might be helpful for those who hope to implement this board game or a similar game or intervention in the future. Finally, participants were asked to give any feedback regarding either the game or scholarly project.
Not all participants answered every question. All participants in the study group who took the posttest did in fact answer the first question. In all, 21 of the respondents said that they felt *The Mental Illness Stigma Game for BSN Students* did affect their attitude about mental illness or about those suffering from a mental illness and five respondents stated that they felt the board game did not affect their attitude.

The participants who felt the game did affect their attitude provided a brief explanation as to why. Although the explanations varied, a few topics emerged including new insights regarding the life and care of those with mental illness as well as the benefit of discussing mental illness and mental illness stigma with peers. One identified topic was that the game was helpful in bringing forth situations or variables in mental health nursing that the participants did not previously consider. One participant stated, “Yes, it helped me to identify... [that stigma does] exist, consider the roots of … [stigma] and think of strategies to promote positive and truthful views of mental illness.” Another topic was the benefit of discussing the board game questions with peers. One respondent stated, “I thought that discussing mental illness and stigma with others was a good way to become aware of things that maybe you hadn’t thought about it also [the board game] just made me even more aware of the issue.” Additionally, some participants identified they learned that either they had negative or hurtful attitudes toward those with mental illnesses or that they did not realize that these negative or hurtful attitudes could be such an issue in mental health care. A few participants suggested that a few of the questions were repeated too frequently while others felt that the repetition was helpful for getting a variety of opinions.
CHAPTER 6
DISCUSSION

The purpose of this scholarly project was to explore attitude change among Bachelor of Science in Nursing (BSN) students related to mental illness stigma. The guiding question of this project was whether the creative educational board game implemented in an educational setting will decrease stigma displayed toward those suffering from a mental illness. The purpose of this chapter is to discuss this scholarly project in context of the literature review, theories, methods, and data analysis. This chapter will also discuss benefits of the literature review and theories as well as implications for nursing practice. Sustainability as well as strengths and limitations will be addressed. Finally, the roles of a Doctor of Nursing Practice as they coincide with this scholarly project will also be discussed.

Results

Literature Review

Both the literature review and the two theories used were instrumental in the development of this scholarly project. Three types of interventions were identified in the literature review: the educational intervention, the clinical intervention, and the creative intervention used in conjunction with the combined educational and clinical interventions. A majority of studies identified in the literature review show that either an educational intervention, a clinical intervention, or a combination educational and clinical intervention were most effective in decreasing mental illness stigma as displayed by nursing students or medical students. For the purposes of this project, a creative intervention was added to the combined educational and clinical intervention.
As the comparison group took the pretest after they had a portion of their mental health theory education and all of their clinical experience, it is difficult to draw a conclusion as to whether the data show there was not a significant change for the comparison group as a result of their theory and clinical experience. However, the data in this project support the creative intervention when used in conjunction with the existing educational and clinical experience.

Additionally, several studies in the literature review used a pretest—posttest design (Kassam et al., 2011; Markstrom et al., 2009; Sadow et al., 2002). The pretest—posttest design, was helpful in determining the change in student’s attitudes toward mental illness and people suffering from mental illness. This was found to be true both in the studies in the literature review as well as in this scholarly project.

**Theory**

The Theory of Planned Behavior (TPB) was used to explain many of the complex concepts involved in behavior change. In the context of this scholarly project, the TPB was helpful in developing an intervention that was successful in changing students’ attitudes. According to the TPB, social norms and students’ attitudes are just two factors that should be considered when addressing behavior change (Ajzen, 1991). In this scholarly project, the creative board game intervention addressed both social norms and students’ attitudes. Although behavior was not specifically measured in this project, attitudes were measured; ultimately, these attitudes may have an impact on future behavior. Perceived behavioral control was another important factor in the TPB. While this factor was not specifically addressed by the board game, perceived behavioral control involves the participants’ personal knowledge of himself or herself and could
have been strengthened throughout the course of the scholarly project. All three of these factors ultimately affect the participants’ intention to treat a person with mental illness in a certain way, and, ultimately, their behaviors toward people with mental illness. Again, while behaviors were not observed or measured, intentions were measured using the MICA-4. The results showed changes in themes that may indicate potential changes in behavior related to working with people with mental illness, differentiating mental illness and physical health, and treating people with mental illness in general.

The Johns Hopkins Nursing Evidence-Based Practice Model (JHNEBPM) was used to guide the project implementation. The JHNEBPM uses a three step process for organizing an evidence-based practice project: practice question, evidence appraisal, and translation of evidence (Dearholt & Dang, 2012). This scholarly project used this model to develop a sound method for implementation. First the practice question was identified. Second, research relating to that practice question was found and critically appraised for adequacy. The evidence led to three types of interventions that were used in varying combinations with each other. Furthermore, the evidence was synthesized and an appropriate method for translation from evidence to practice was developed. In this scholarly project, the appropriate method for translation from evidence to practice was found to be a creative intervention combined with an educational and clinical experience.

Both the concepts in the JHNEBPM as well as the internal and external factors were used to guide project implementation. The three main concepts in the JHNEBPM are practice, education, and research. As previously stated, practice is what nurses do every day. This student was able to take the available knowledge and apply it in a particular situation. Throughout this process, this student was able to grow in one portion
of nursing knowledge—mental illness stigma. Moreover, this scholarly project contributes new information to the current body of research. Many internal and external factors did affect the implementation of this project. A few external factors related to this project include the nursing department seeing the need for this project, student availability, and available time for pretest and posttest. Additionally, project design, tool selection, and intervention design are all internal factors affecting the implementation of this scholarly project.

Overall, this model was effective in aiding the implementation of the project. This model was especially useful in the planning stages as it supports the use of both research projects and non-research projects alike. This flexibility allowed for easy, adaptive planning while maintaining the key concepts for evidence-based practice: practice, education, and research. Additionally, the JHEBPM aided in the identification of factors that could affect the implementation of this project. While the model does not give suggestions for troubleshooting these factors, simple knowledge of these factors was sufficient.

Summary of Findings

*The Mental Illness Stigma Game for BSN Students* did add an important component to the students’ traditional education program. The data show that *The Mental Illness Stigma Game for BSN Students* was effective in decreasing mental illness stigma when the game was incorporated as part of the mental health curriculum. Overall, the statistics demonstrated that the study group had a significant change in *MICA-4* scores from pretest to posttest, whereas the comparison group did not have a significant change.
While the game was effective in decreasing mental illness stigma in this group of nursing students, three of the *MICA-4* themes were found to have significant changes: Theme 1, Theme 4, and Theme 5. While the theme results are not necessary to answering the guiding question of this scholarly project, they are interesting to note. The first, fourth, and fifth themes relate to the health care field and mental illness, the ability to distinguish between physical and mental health, and the provision of care to those with a mental illness. The board game has several items that specifically ask participants to state and discuss their thoughts or feelings about caring for those with mental illness as well as to distinguish between symptoms of physical health and mental health. Conversely, the *MICA-4* themes of knowledge (Theme 2) and disclosure (Theme 3) were not specifically addressed in the board game and did not demonstrate significant attitude change. It is possible if more items on the board game addressed issues in Theme 2 and Theme 3 that the data would have shown a significant change in these two themes from pretest to posttest in the study group. Matching the stigma measuring scale to the issues addressed on the board game and vice versa could yield stronger results.

Furthermore, as expected, the comparison group did not have any changes that were found to be significant on any of the five themes. However, the comparison group was also shown to have the greatest number of participants who had a loved one with a mental illness. This could be one reason, in addition to their previous mental health coursework, that their initial *MICA-4* pretest scores were much lower than the study group’s initial *MICA-4* scores.
Student Evaluation

Overall, a majority of participants felt that this was a worthwhile experience. They provided feedback that not only supported their claim but will also assist in modifying this experience for future use. It is helpful to see that this intervention not only aided in positively changing students’ attitudes about mental illness but that it was also a positive experience for the participants.

Study Strengths and Limitations

A major strength of this study is that it focused on a highly understudied aspect of education for health care professionals. The strongest feature of this scholarly project was its design. The quasi-experimental pretest—posttest design allowed for quality comparison between the two groups. Additionally, the final return rate was found to be acceptable. The response rate was quite high even though a few potential participants chose not to begin the study and a few who began the study but did not choose to complete the posttest. Furthermore, the study’s pretest—posttest design with its study and comparison groups was tailored to fit within the course design at this specific nursing school. Also, this study was able to produce a Cronbach’s alpha coefficient on the tool similar to that produced by the authors of the tool. This study was also able to obtain data that showed the board game intervention was effective in decreasing mental illness stigma while controlling for the covariate of the students having taken the pretest.

Finally, this project addresses a significant problem which is understudied in health care professionals in general and in BSN students in particular. Addressing the issue of mental illness stigma in the undergraduate nursing student population is a good way to empower these future nurses to respectfully and holistically care for all their clients.
While this study was effective, there are several limitations. One possible limitation of this study is whether the sample is truly representative of BSN nursing students in the United States. This study was conducted at a Christian liberal arts college located in the mid-western United States. It is possible that due to the Christian affiliation, possible lack of diversity, and the school’s location that the results are not representative. A larger sample and representation of students could have been obtained by conducting the study at a number of nursing schools. Therefore, although these results are helpful for directing future research, these results cannot be generalized to all BSN students in the United States. Additionally, although the return rate was acceptable, there were quite a few students who chose to take the pretest and participate in the study and then chose not to complete the posttest. This resulted in more students dropping out of the comparison group than the study group. The final number of participants in the comparison group was smaller than the study group with 14 and 24 participants respectively.

The timing of data collection is another limitation. While students could choose not to participate, it is possible that the timing of the posttest after the final exam was a contributing factor. Requesting that the students complete the posttest on the last day of class or on another day may have been a better way to obtain a higher number of returned posttests and therefore a higher response rate. Furthermore, to get more reliable or accurate results it would have been prudent to give all students the pretest at the beginning of the semester. In this project, the pretest was given to the comparison group after they had already taken their mental health course content. The results may have been stronger if pretests were given to all of the participants at the very beginning of the
semester before the comparison group had their mental health content and clinical. Due to this limitation in pretest implementation, it is difficult to determine whether the pretest results of the comparison group was actually descriptive of baseline attitudes and actually more similar to the study group at baseline. Finally, only three of the five themes from the MICA-4 matched the focused items in the creative intervention.

**Organizational Strengths and Limitations**

The organization where implementation occurred is known for educating well-educated, well-respected nursing students. The Department of Nursing is also fully accredited through the Commission on Collegiate Nursing Education, which is an excellent commendation for the college and Department of Nursing. Also, the contact persons at this organization were very helpful and willing to answer any questions about possible implementation at their organization. This scholarly project was also new to the institution. Although the curriculum addresses stigma in their course work, the Department of Nursing had never trialed a creative educational intervention to address stigma such as this board game. Also, this Department of Nursing was relatively local to this student and was easy to access.

The organization had only one minor weakness. Like most other schools or departments of nursing, there is very little time to add additional content to a full curriculum. However, the mental health faculty members cooperated readily to find time to incorporate the intervention.

**Entering the Organization**

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was used in the initial planning stages. Throughout the planning stages, the SWOT was updated
when further data were made available. At the beginning of the planning process, this student thought that this project would be best implemented in a classroom setting. However, upon receiving approval to implement the project, the contact at the organization felt that it would be best to implement it in a clinical post-conference setting. There were several reasons for this suggestion. First, time was limited to implement in a classroom setting. More time was available for implementation of this project in a clinical post-conference setting. Additionally, students would be in smaller, more manageable groups of approximately eight to ten students. With this change, contact was made with each of the four clinical group preceptors. These four preceptors were very receptive to the project and were very willing to provide a free hour of clinical post-conference time for project implementation.

While the changes were initially frustrating, these changes and suggestions were helpful to the implementation of this project and served to make the project stronger. The smaller groups made implementation manageable. While this student had to drive from clinical site to clinical site, the smaller groups made it easier to start the games and answer questions from the participants. The feedback this student received from the clinical preceptors was very positive. All four clinical preceptors stated that this intervention was beneficial and a great idea for quickly and easily addressing multiple issues within the mental health care system. A few even asked if they could use this board game in the future.

Overall, the SWOT analysis was helpful in determining where and when to implement. The SWOT was also helpful in identifying potential issues and road blocks.
These concerns were quickly addressed by the institution and the project proceeded in a timely manner.

**Implications for the Future**

**Possibilities for Future Implementations**

Although the results of this scholarly project are not generalizable to all BSN students and programs in the United States, this project does provide several implications for future research. First, the data show that this creative intervention was effective in decreasing mental illness stigma in conjunction with the existing mental health course content. It is suggested that this intervention be implemented on a wider scale to determine if this particular board game continues to be effective. It may also be beneficial to trial this intervention in different geographic regions, with second degree BSN students, or with graduate students.

Healthy People 2020 also provides objectives to care providers and educators to direct future care and education in order to improve the health of all American citizens (About healthy people, 2012). Three new issues in mental health care were identified in the recently published Healthy People 2020 document. The three identified areas are “veterans who have experienced physical and mental trauma,” those living in communities that have experienced “psychological trauma caused by natural disasters,” and older adults who may have dementia and a mood disorder (Mental health and mental disorders, 2013, p. 2). If modifications were to be made to this board game or to the bonus questions, these three areas could be explored.

Furthermore, since there was not a significant change in Theme 2 and Theme 3, additional content that applies to these two themes could be incorporated into the board
game. The second theme determined the respondents’ current knowledge of mental illness in addition to their willingness to learn about mental illness. Theme 3 was related to the participants’ willingness to disclose whether or not they personally suffered from a mental illness. Additional study should be done to incorporate these two themes into the intervention so the results can be adequately measured by the MICA-4.

Collaborating with other professions such as medicine, psychology, social work, and physical therapy could also bring beneficial changes to the game. Those who participate in the board game could benefit significantly from not only a comprehensive board game but they could also benefit if played with other students from a variety of educational fields and health care professions, who may bring different experiences and perspectives to the game. This creative activity could address this understudied concern across all health professions who will encounter mental illness in their future practice.

Future research should also seek to determine numbers or percentages of nursing students who hold negative attitudes of those suffering from mental illness. Additional studies should also seek to determine if the level of stigma remains similar or changes after the student nurse graduates and has been on the job for a period of time. The board game could be used as part of the mental health curriculum as in this scholarly project with the MICA-4 measuring level of stigma both before and after the game. Then, the MICA-4 could again be used after the new graduate has been working for six months to a year. To make it efficient, perhaps the MICA-4 could be given as a mailed or electronically delivered survey.
Implications for Practice

While not all nurses will have a direct interest in mental illness stigma, there are still several implications for each nurse’s practice. Whether a nurse works in the mental health care field, in cardiology, or in labor and delivery, each and every nurse will come into contact with a patient suffering from a mental illness. For this reason, it is crucial for all nurses and nurse practitioners to be engaged by this issue to some extent. Nurses are able to provide better care for their patients if they have a good understanding of mental illness and mental illness stigma. The intervention used in this scholarly project has the potential to provide a portion of this education. However, with interprofessional collaboration, this education not only has the ability to affect nurses, but also others working in the health care arena, including but not limited to social workers, doctors, support staff, and physical and respiratory therapists. If nurses and nurse practitioners can be involved in removing mental illness stigma they will be instrumental in providing better care for all people with a mental illness.

Implications for Policy

Suggestions for nursing practice lead to health policy implications. While nurses and nurse practitioners have an obligation to be involved in mental illness, mental illness stigma reduction, and reform within the health care system, they also have a responsibility to advocate for mental health care and mental illness stigma reduction in the broader public arena. There are several ways that nurses and nurse practitioners can be involved in changing the public’s perception about mental illness. One way is through the use of the activity identified in this scholarly project. As this intervention is easily modified for many different groups, not only is this an inexpensive method for mental
illness stigma education but it also has the potential to be quite sustainable. However, the use of the board game is not the only method nurses and nurse practitioners can change the public’s perception about mental illness. By contacting legislators about this important issue and by joining mental health nursing organizations, nurses and nurse practitioners are able to work together to make an impact on a national level. Together, these groups can work together to organize advocacy events and to provide educational opportunities, all with the goal of changing the public’s perception of mental illness and ultimately improved delivery of care in the mental health care system. It is crucial that nurses, nurse practitioners, other health care providers, and the general public be involved in mental health advocacy and reduction of mental illness stigma. Avoiding this issue is turning a blind eye to the issues of the millions of people suffering from mental illness.

**Sustainability**

The intervention in this scholarly project, *The Mental Illness Stigma Game for BSN Students*, has the potential to be quite sustainable. For this intervention to happen, nursing faculty needs to see that there is an issue with mental illness stigma in the nursing student population and also that this is one potential solution to the issue. This project can be sustainable for several reasons. First, the board game is inexpensive and once obtained can be reused without cost for several years until it wears out or until the facts and questions need updating. Additionally, this takes between 45 minutes and one hour to play from start to finish. Although many nursing programs are loaded with important content, it could be quite possible to easily incorporate this intervention as part of a program’s current mental health curriculum during clinical post-conferences. Furthermore, to facilitate this board game, no particular expertise is required. This feature
makes it even easier to implement and promote this intervention’s sustainability. With approximately one hour of class or clinical post-conference time, this activity has the potential to make a lasting, positive impression on the nursing students.

**Doctor of Nursing Practice Roles**

A nurse practitioner has many roles. While not an exhaustive list, practitioner, educator, collaborator, consultant, and researcher are a few of these roles. A Doctor of Nursing Practice (DNP) student is also responsible for showing that the eight essentials of DNP education have been met. According to Moran, Burson, and Conrad (2014), “the DNP scholarly project reflects the culmination of the attainment of the DNP Essentials” (p. 387). Although every scholarly project may not involve every role, every single essential, or even each competency in each essential, all DNP projects should in some way show how the student was able to meet the essentials that were employed in the completion of the project.

Moren et al. (2014) outline the eight essentials as follows: Scientific Underpinnings for Practice (Essential 1), Organizational and Systems Leadership for Quality Improvement and Systems Thinking (Essential 2), Clinical Scholarship and Analytical Methods for Evidence-Based Practice (Essential 3), Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care (Essential 4), Health Care Policy for Advocacy in Health Care (Essential 5), Interprofessional Collaboration for Improving Patient and Population Health Outcomes (Essential 6), Clinical Prevention and Population Health for Improving the Nation’s Health (Essential 7), and Advanced Nursing Practice (Essential 8). Although some Essentials were more extensively applied throughout the implementation of this
project, they were all addressed in some part of this project. In the following section, this student will discuss how the roles of an advanced nurse practitioner were met in the completion of this scholarly project.

**Researcher**

This scholarly project began several years ago with the development of a research question (Essential 1). The development of this research question included research on several topics of interest. Once the topic of mental illness stigma was selected, a literature review was performed to determine types of interventions and a population of interest (Essentials 1, 2, 3, 7, and 8). Tool selection was the next step of this process. Selecting a tool also involved exploring the mental health research for a tool that could adequately measure the variables in this scholarly project. The role of the researcher continued throughout the process with project implementation (Essentials 6, 8), data collection (Essential 6), data analysis (Essentials 3, 4, and 6) and dissemination (Essentials 3, 8). The greatest challenge as researcher was to narrow down the field of research to a manageable question. In retrospect, selecting a topic and reviewing the literature was the easiest step of the process.

**Practitioner**

The role of practitioner, although not directly fulfilled in the implementation of this project, was fulfilled in other areas of this student’s coursework. As a practitioner, this student was able to manage care for many patients at both a private primary care office as well as a free community-health clinic (Essential 8). Additionally, this student was able to identify the importance of addressing mental illness stigma in order to provide holistic care for many individuals. This student’s experiences as a practitioner all
affect each of the other enacted roles. As a practitioner, this student was able to grow in the role of educator, collaborator, and consultant.

**Consultant and Collaborator**

Before project implementation, an organizational assessment and SWOT analysis were performed on the institution where the project was to be implemented (Essential 6). The SWOT analysis was helpful in determining what issues need to be overcome or addressed throughout the project’s design and implementation (Moran, Burson, & Conrad, 2014). This analysis was helpful in determining the timeline and methods for project implementation. This student was able to work with the institution to determine the best way to carry out the project. There were many challenges as a DNP student entering a new organization. Maintaining credibility while entering into a new system as a novice is challenging. However, through listening and collaborating with key members of the organization, this student was able to adequately provide the most beneficial method for implementing the project.

**Educator**

Education occurred in many ways during the fulfillment of this project. Education occurred throughout coursework with peers and instructors as to the fruitfulness and necessity of this project (Essential 5). This student was also able to be an educator through the delivery of the board game to the participants in this project. Education will also continue to occur through project dissemination with publication of the dissertation as well as dissertation defense and any further dissemination opportunities. Being passionate about the research topic was beneficial because it made educating others easy.
Having a passion for the topic and seeing engaged students and faculty were sources of encouragement for this student throughout this scholarly process.

**Conclusion**

Mental illness stigma can be displayed in several different ways by many people, including health care professionals. As identified in this scholarly project, BSN students are just one group within the broader health care profession. The purpose of this project was to explore attitude change among BSN students through the use of *The Mental Illness Stigma Game for BSN Students*, a creative intervention used to supplement the existing curriculum. After project implementation, data collection, and data analysis, the data show that there was a significant change from pretest to posttest in the study group. While a few modifications should be made in the future, this game has been shown to be effective in decreasing mental illness stigma in this particular group of BSN students.

The literature review as well as the JHNEBP model and the TPB were effective in guiding the development and implementation of this scholarly project. Each was instrumental in formulating different aspects of this study’s design. While there were several limitations to this scholarly project, there were also many aspects of this project that made this study’s design strong. The results, strengths, and limitations also led to the formulation of several suggestions for future research. The game presented within this scholarly project is quite sustainable and has the potential to be modified by others for future use in many different arenas. Throughout this project, this student was able to display not only the roles of a nurse practitioner but also the current essentials of DNP education. In the future, the hope is for this scholarly project to continue to aid in the
education of families, nurses, nursing students, other health care professionals, or anyone else who comes into contact with people suffering from mental illness.
APPENDIX A

QSEN Core Competencies: Patient-centered Care
Patient-centered Care

Definition: “Recognize the patient or designee as the source of control and full partner in providing compassionate and coordinated care based on respect for patient’s preferences, values, and needs” (Cronenwett et al., 2005, p. 123).

<table>
<thead>
<tr>
<th>Knowledge</th>
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<tbody>
<tr>
<td>Integrate understanding of multiple dimensions of patient centered care:</td>
</tr>
<tr>
<td>• patient/family/community preferences, values</td>
</tr>
<tr>
<td>• coordination and integration of care</td>
</tr>
<tr>
<td>• information, communication, and education</td>
</tr>
<tr>
<td>• physical comfort and emotional support</td>
</tr>
<tr>
<td>• involvement of family and friends</td>
</tr>
<tr>
<td>• transition and continuity</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elicit patient values, preferences and expressed needs as part of clinical interview, implementation of care plan and evaluation of care</td>
</tr>
<tr>
<td>Communicate patient values, preferences and expressed needs to other members of health care team</td>
</tr>
<tr>
<td>Provide patient-centered care with sensitivity and respect for the diversity of human existence</td>
</tr>
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<table>
<thead>
<tr>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value seeing health care situations “through patients’ eyes”</td>
</tr>
<tr>
<td>Respect and encourage individual expression of patient values, preferences and expressed needs</td>
</tr>
<tr>
<td>Value the patient’s expertise with own health and symptoms</td>
</tr>
<tr>
<td>Seek learning opportunities with patients who represent all aspects of human diversity</td>
</tr>
<tr>
<td>Recognize personally held attitudes about working with patients from different ethnic, cultural and social backgrounds</td>
</tr>
<tr>
<td>Willingly support patient-centered care for individuals and groups whose values differ from own</td>
</tr>
</tbody>
</table>
| Demonstrate comprehensive understanding of pain and suffering, including physiologic models of pain and comfort | Assess presence and extent of pain and suffering  
Assess levels of physical and emotional comfort  
Elicit expectations of patient & family for relief of pain, discomfort, or suffering  
Initiate effective treatments to relieve pain and suffering in light of patient values, preferences and expressed needs | Recognize personally held values and beliefs about the management of pain or suffering  
Appreciate the role of the nurse in relief of all types and sources of pain or suffering  
Recognize that patient expectations influence outcomes in management of pain or suffering |
|---|---|---|
| Examine how the safety, quality and cost effectiveness of health care can be improved through the active involvement of patients and families  
Examine common barriers to active involvement of patients in their own health care process  
Describe strategies to empower patients or families in all aspects of the health care process | Remove barriers to presence of families and other designated surrogates based on patient preferences  
Assess level of patient’s decisional conflict and provide access to resources  
Engage patients or designated surrogates in active partnerships that promote health, safety and well-being, and self-care management | Value active partnership with patients or designated surrogates in planning, implementation, and evaluation of care  
Respect patient preferences for degree of active engagement in care process  
Respect patient’s right to access to personal health records |
<table>
<thead>
<tr>
<th>Explore ethical and legal implications of patient centered care</th>
<th>Recognize the boundaries of therapeutic relationships</th>
<th>Acknowledge the tension that may exist between patient rights and the organizational responsibility for professional, ethical care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the limits and boundaries of therapeutic patient-centered care</td>
<td>Facilitate informed patient consent for care</td>
<td>Appreciate shared decision-making with empowered patients and families, even when conflicts occur</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discuss principles of effective communication</th>
<th>Assess own level of communication skill in encounters with patients and families</th>
<th>Value continuous improvement of own communication and conflict resolution skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe basic principles of consensus building and conflict resolution</td>
<td>Participate in building consensus or resolving conflict in the context of patient care</td>
<td></td>
</tr>
<tr>
<td>Examine nursing roles in assuring coordination, integration, and continuity of care</td>
<td>Communicate care provided and needed at each transition in care</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1. QSEN Core Competencies: Patient-centered Care**

APPENDIX B

The Theory of Planned Behavior Diagram
Figure 2. The Theory of Planned Behavior. Adapted from Ajzen, I. (1991).
Reprinted from Organizational Behavior and Human Decision Process, 50, Icek Ajzen. The Theory of Planned Behavior, Pages No. 179-211, Copyright (1991), with permission from Elsevier (see Appendix L).
APPENDIX C

The Johns Hopkins Evidence-Based Practice Model Diagram
Figure 3. The Johns Hopkins Nursing Evidence-Based Practice Model. Adapted from Dearholt, S. L., & Dang, D. (Eds.). (2012). *Johns Hopkins Nursing Evidence-Based Practice: Model and Guidelines* (2nd ed.). Indianapolis, IN: Sigma Theta Tau International. (Recreated with Permission from The Johns Hopkins Hospital and Johns Hopkins University.) Used with permission (see Appendix M).
APPENDIX D

The Mental Illness Stigma Game for BSN Students
Figure 4. The Mental Illness Stigma Game for BSN Students
APPENDIX E

The Mental Illness Stigma Game for BSN Students: List of Questions
Game Board Questions

1. Discuss how those with mental illness are vulnerable.

2. Why, in general, is the public afraid of mental illness?

3. Self-stigma is the negative image those with mental illness have of themselves. How is self-stigma perpetuated?

4. It is difficult to change people’s mind, but you can change people’s actions. How could we change the actions of those who stigmatize?

5. Discuss why a large portion of those with a mental illness are homeless.

6. People who have connections to a person with mental illness tend to be less stigmatizing. How can you create such opportunities?

7. Those with a mental illness need a sense of hope to realize recovery is possible. Where does this hope come from?

8. Discuss why stigma is one of the key barriers preventing those with a mental illness from seeking help.

9. Many people with a mental illness say it is harder to live with associated stigma than with the illness itself. What has been your experience?

10. Health care professionals may develop stigmatizing views of suicidal behavior. Are suicidal persons put at greater risk?

11. People with a mental illness often feel patronized, punished, or humiliated in their contact with health care professionals. What has been your experience?

12. How does stigma affect educational and employment/career opportunities for those with a mental illness?
13. How does delivering patient/client care with compassion foster mental health wellness?

14. How does changing our words such as “patients” to “consumers” make a difference in regard to stigma?

15. There is growing support that psychiatrists and mental health professionals are part of the stigma problem. What do you think?

16. Why do you think evidence suggests knowledge does not change deep seated depression?

17. What are your thoughts about using the term “stress leave” rather than saying I am off work for “depression?”

18. Mental health patients identify stigma as the biggest problem they face. How can community mental health nurses fix this?

19. What bias might nurses adopt from other colleagues which influence their attitudes towards psychiatric patients?

20. Talk about public role models who campaign against stigma. Are they effective and if so, how?

21. What might be some reasons for patients with mental illness to feel that they are spoken to like children and not included in decision making?

22. People with a mental illness often receive substandard care for physical problems. What has to be done to correct this?

23. How does stigma affect housing opportunities for a person with mental illness?

24. You are asked to give a talk on mental illness stigma. What would you include in your talk?
25. Psychiatric nurses are specialized in working with mentally ill clients. Discuss whether or not this reinforces stigma.

26. What does being diagnosed with a mental illness mean to individuals and their families?

27. What can you do to stop the stigma attached to psychiatric nurses such as they are not “real nurses?”

28. What would you include in a care plan to help a patient who is self-stigmatizing?

29. Share with the group some programs available in your community that support quality of living for those with a severe mental disorder.

30. How would you change current nursing practice to increase time you engage directly with patients?

31. 70%-90% of people with a mental illness smoke. How does this perpetuate the stigma of mental illness? What can we do about it?

32. Words have power. They can soothe or hurt. Have you ever thought about the power of your words?

33. How does a sense of worthlessness influence lifestyle choices?

34. Do you have an idea for reducing stigma?

“Game Board Questions” adapted from Mary’s Stigma Game by Dr. Mary Haase, Debra Scharf, Deborah Leonard, Allyson Fulkala & Elaine Gradidge
Bonus Card Questions

1. “True or False: Depression is a bad mood or a state of mind, not a medical illness. False. Everyone feels blue from time to time, but when feelings of sadness, hopelessness and even thoughts of death cloud your daily life, it's not the blues -- it's clinical depression. An estimated 14.8 million Americans ages 18 and older have major depression, a mood disorder that, when left untreated, can be chronic, recurrent and disabling” (Discovery fit & health, 2013).

2. “Mental illness is not as rare as you may think. The number of American adults who will have a psychiatric disorder during their lifetime is:
   a. 1 out of 2
   b. 1 out of 3
   c. 1 out of 4
   d. 1 out of 5
   According to the National Institute of Mental Health, approximately 26.2 percent of American adults will have a psychiatric disorder that is severe enough to be diagnosed. In addition, 45 percent of people diagnosed with mental illness have symptoms of two or more psychiatric disorders” (Discovery fit & health, 2013).

3. “Mental illnesses, just like physical illnesses such as diabetes, can be mild, moderate or severe. What percentage of Americans experience mental illness so severe it is chronic or debilitating?
   a. 2 percent
   b. 6 percent
   c. 10 percent
   d. 12 percent
   While an estimated 1 in 4 American adults has a form of mental illness during their lives, about 1 in 17, or 6 percent, of Americans develop severe mental illness. A study conducted by the World Health Organization, the World Bank and Harvard University found that the impact of mental illness on countries such as the United States is worse than the burden of cancer” (Discovery fit & health, 2013).

4. “Name the age group most likely to die from suicide:
   a. children ages 10-14
   b. teens ages 15-19
   c. adults ages 20-24
   d. adults ages 65 and older
   While suicide was ranked the third-leading cause of death of adolescents and adults ages 15 to 24 in 2006, according to the National Institute of Mental Health,
14.2 percent of adults 65 or older died by suicide that year. Compared that to the percentages for other age groups: 1.3 per 100,000 children; 8.2 per 100,000 teens; 12.5 adults ages 20 to 24; and the national average of 10.9 per 100,000. This places adults ages 65 and older as the group most likely to die from suicide” (Discovery fit & health, 2013).

5. Which of the following is NOT currently considered a mental illness by the American Psychiatric Association?
   a. Acute Stress Disorder
   b. Binge Eating Disorder
   c. Intermittent Explosive Disorder
   d. Sleepwalking Disorder

   While about 11 million Americans have an eating disorder (such as anorexia or bulimia), many more have a binge eating disorder. An estimated 25 million Americans are affected by this eating disorder, an illness that is characterized by the consumption of a profuse amount of food along with feelings of guilt and loss of control” (Discovery fit & health, 2013).

   False: Many factors play into how and when a person may develop a mental illness, such as genetic predisposition, brain chemistry, chronic stress (such as physical abuse), infection and environmental contributors (including major life changes such as divorce). Bad parenting is not one of them” (Discovery fit & health, 2013).

7. “People with mental illness often also have:
   a. Mental Retardation
   b. Violent Behaviors
   c. No Chance for Recovery
   d. A Relative with Mental Illness

   Mental illness may run in families. Obsessive-compulsive disorder (OCD) is a good example of this -- if you have OCD, there’s a 25 percent chance someone in your immediate family does, too” (Discovery fit & health, 2013).

8. “True or False: Only women have eating disorders.
   False. While women are more likely than men to develop an eating disorder, men also experience the debilitating disease. It’s estimated that about 10 million American women are living with an eating disorder, compared to roughly 1 million men. Men are also more likely to develop a binge-eating disorder than a restrictive type such as anorexia” (Discovery fit & health, 2013).
9. “Drug therapy, behavior therapy and psychotherapy are often used to treat mental illness. Which of the below treatments is NOT used as a complementary therapy?
   a. Exercise
   b. Daily Structure
   c. Radiation Therapy
   d. A Healthy Diet
   
   While radiation therapy may be successful in treating many forms of cancers, it's not considered a treatment for mental illness. Lifestyle changes such as exercise, good nutrition and techniques to improve the structure of daily life may be helpful in reducing symptoms of psychiatric disorders. The National Institute on Disability and Rehabilitation Research conducted at the Center for Psychiatric Rehabilitation at Boston University funded a study that looked at how exercise, for example, affected the health of people diagnosed with severe mental illness. The results? Not only did participants improve their physical health but also improved their mood, self-esteem and alleviated symptoms of depression” (Discovery fit & health, 2013).

10. “True or False: Children don’t get depressed; it’s just a part of growing up.
    False: Children are at risk for developing mental illnesses that we commonly associate with adults. Between 5 and 9 percent of kids develop severe psychiatric disorders, according to a report released by the President's New Freedom Commission on Mental Health” (Discovery fit & health, 2013).

11. “True or False: “I can’t do anything for a person with mental illness.
    Fact: You can do a lot, starting with how you act and speak. You can create an environment that builds on people’s strengths and promotes understanding. For example: Don’t label people with words like ‘crazy,’ ‘wacko,’ or ‘looney’ or define them by their diagnosis. Instead of saying someone is ‘a schizophrenic,’ say ‘a person with schizophrenia.’ Learn the facts about mental health and share them with others, especially if you hear something that is untrue. Treat people with mental illnesses with respect and dignity, as you would anybody else. Respect the rights of people with mental illnesses and don't discriminate against them when it comes to housing, employment, or education. Like other people with disabilities, people with mental health needs are protected under Federal and State laws.” (Substance Abuse and Mental Health Services Administration’s Resource Center to Promote Acceptance Dignity and Social Inclusion Associated with Mental Health [SAMHSA ADS Center], 2009, p. 1).

12. True or False: “People with mental illnesses are violent and unpredictable.
    Fact: Actually, the vast majority of people with mental health conditions are no more violent than anyone else. People with mental illnesses are much more likely
to be the victims of crime. You probably know someone with a mental illness and don’t even realize it” (SAMHSA ADS Center, 2009, p. 1).

13. True or **False**: “Mental illness is the same as mental retardation.
Fact: These are distinct disorders. A mental retardation diagnosis is characterized by limitations in intellectual functioning and difficulties with certain daily living skills. In contrast, people with mental illnesses-health conditions that cause changes in a person's thinking, mood, and behavior-have varied intellectual functioning, just like the general population” (SAMHSA ADS Center, 2009, p. 1-2).

14. True or **False**: “Mental illnesses are brought on by a weakness of character.
Fact: Mental illnesses are a product of the interaction of biological, psychological, and social factors. Research has shown genetic and biological factors are associated with schizophrenia, depression, and alcoholism. Social influences, such as loss of a loved one or a job, can also contribute to the development of various disorders” (SAMHSA ADS Center, 2009, p. 2).

15. True or **False**: “Once people develop mental illnesses, they will never recover.
Fact: Studies show that most people with mental illnesses get better, and many recover completely. Recovery refers to the process in which people are able to live, work, learn, and participate fully in their communities. For some individuals, recovery is the ability to live a fulfilling and productive life. For others, recovery implies the reduction or complete remission of symptoms. Science has shown that having hope plays an integral role in an individual's recovery” (SAMHSA ADS Center, 2009, p. 2).

16. “True or False: People who talk about suicide usually don’t kill themselves.
**False.** People who are thinking about suicide usually find some way of communicating their pain to others – often by speaking indirectly about their intentions. Most suicidal people will admit to their feelings if questioned directly” (National Alliance for the Mentally Ill [NAMI], n.d.).

17. “True or False: There’s really nothing you can do to help someone who’s truly suicidal.
**False.** Most people who are suicidal don’t really want their lives to end – they just want the pain to end. The understanding, support, and hope that you offer can be their most important lifeline” (NAMI, n.d.).

18. “True or False: Discussing suicide may cause someone to consider it or make things worse.
**False.** Asking someone if they’re suicidal will never give them an idea that they haven’t thought about already. Most suicidal people are truthful and relieved when questioned about their feelings and intentions. Doing so can be the first step in helping them choose to live” (NAMI, n.d.).

19. “True or False: People with mental illness have hopes and dreams and they are regular people like you and me; people who – through no fault of their own – just got sick. True!” (NAMI, n.d.).

20. True or **False**: “People with mental illness cannot tolerate the stress of holding down a job.
Fact: In essence, all jobs are stressful to some extent. Productivity is maximized when there is a good match between the employee's needs and working conditions, whether or not the individual has mental health needs” (SAMHSA ADS Center, 2009, p. 2).

21. True or **False**: “People with mental health needs, even those who have received effective treatment and have recovered, tend to be second-rate workers on the job.
Fact: Employers who have hired people with mental illnesses report good attendance and punctuality, as well as motivation, quality of work, and job tenure on par with or greater than other employees. Studies by the National Institute of Mental Health (NIMH) and the National Alliance for the Mentally Ill (NAMI) show that there are no differences in productivity when people with mental illnesses are compared to other employees” (SAMHSA ADS Center, 2009, p. 2).

22. What percent “of adults with mental health symptoms believed that people are caring and sympathetic to persons with mental illness”?
   a. 5%
   b. **25%**
   c. 50%
   d. 85%
According to the CDC, only 25% of adults with mental health symptoms thought that others were sympathetic and caring toward them and others with mental illnesses. (Centers for Disease Control [CDC], 2011c).

23. Group Discussion: Discuss your thoughts and/or fears about caring for pediatric mental health patients. What worries you the most?

24. Group Discussion: Discuss thoughts about post-partum depression and risks for impaired maternal-infant attachment.
25. Group Discussion: Do you think support groups add to or decrease stigma associated with mental health disorders? Why or why not?

26. Group Discussion: Discuss with group some physical exam findings that can be found on a person with a mental health disorder.

27. True or False: Depression is a normal part of the aging process. 
   **False**, depression is not a normal part of the aging process (Halter et al., 2009).

28. Group Guess: List a few states that you would consider having a high rate of mental illness. Answer: States with more than 9% of the population with a mental illness include: Arizona, Oklahoma, Missouri, Illinois, Michigan, West Virginia, Tennessee, Arkansas, Louisiana, Mississippi, Alabama, and Delaware (Centers for Disease Control [CDC], 2011a).

29. Group Guess: List a few states that you would consider having the lowest rate of mental illness. Answer: States with less than 7% of the population with a mental illness include: Alaska, Washington, Montana, Colorado, Nebraska, Kansas, North Dakota, Minnesota, Iowa, Wisconsin, New Hampshire, and Connecticut (CDC, 2011a).
APPENDIX F

Board Game Instructions
The Mental Illness Stigma Game for BSN Students

Rules & Instructions

Game Pieces
- Pawns
- Die
- Red Chips
- Board Game
- Bonus Cards

Set-Up Instructions
- Each player selects a pawn and places it on the ‘START’ square.
- Carefully mix ‘Bonus Cards’ and place face down on the table.
- Roll the die to see which player starts. The player who rolls the lowest number starts first.
- Continue rolling in clockwise direction.

Game Board Squares
- The player that lands on one of the game board squares containing a question is responsible for answering that question. After the player has a chance to answer the question, the remaining group players may add if needed.
- If a player lands on the ‘draw a card’ square, he/she has the chance to answer the question. If the card is a group card, work with the group to answer the question.

Scoring
- For each board game square question answered, player takes 1 chip.
- For each group card answered correctly, each group member may take 2 chips.
- For each bonus card answered correctly, player takes 3 chips.
- Player with the most chips at the end ‘wins.’

Have Fun!
APPENDIX G

Permission to Use the MICA-4
MICA4 Scale

Gabbidon, Jheanell <jheanell.gabbidon@kcl.ac.uk>  
To: Anna Wassink <annakwassink@gmail.com>  
Cc: Andrea Bostrom <bostroma@gvu.edu>

Tue, Jun 11, 2013 at 5:33 AM

Dear Anna,

Many thanks for your email and for your interest in using the MICA. The MICA 4 was in fact validated using undergraduate nursing students. I have attached a copy of the scale, manual and relevant paper. You have permission to used the scale as per the conditions outlined in the manual.

Your research sounds very interesting. I would be interested to see this board game if at all possible.

Best wishes,

Jheanell Gabbidon
Research Worker - SAPPHIRE Research Programme
Institute of Psychiatry
Health Services and Population Research Dept
PO29
De Crespigny Park
SE5 8AF
Tel: 0207 848 5087
You may also contact the MIRIAD research team at: miriad@kcl.ac.uk

NEW: One day summit on Stigma and Discrimination in Mental Health. Theme - 'Sharing Stories to Stop Stigma'. 4 July 2013.

Presenting findings from the five year NIHR research programme on stigma and discrimination in mental health. Guest speakers include Frank Bruno, Norman Lamb and Lord Stevenson.

Register here: http://www.sapphire.iop.kcl.ac.uk/SAPPHIREsummit.html

From: annawassink@gmail.com [mailto:annawassink@gmail.com] On Behalf Of Anna Wassink
Sent: 10 June 2013 12:34
To: Sabbdon, Jheanell
Cc: Andrea Bostrom
Subject: MICA4 Scale

3 attachments

- MICA 4_final.pdf
  23K
- MICA Manual FINAL updated jan 2013.doc
  37K
- MICA v4 2013.pdf
  172K
APPENDIX H

General Questionnaire
General Questionnaire

Please do not write your name on this questionnaire or give any identifying information.

You may choose not to answer any question for any reason.

By completing this questionnaire, you are giving your consent to participate.

Gender:

☐ Male  ☐ Female

Age:

☐ 17  ☐ 18  ☐ 19  ☐ 20  ☐ 21  ☐ 22  ☐ 23  ☐ 24+

Do you have a friend who has been diagnosed with a mental health condition?

☐ Yes  ☐ No

Do you have a family member who has been diagnosed with a mental health condition?

☐ Yes  ☐ No

Have you had your mental health clinical yet (1st half of the semester)?

☐ Yes  ☐ No

Thank you very much for your time!

#_____ _____ _____ _____ _____
APPENDIX I

Final Evaluation Questionnaire
Final Evaluation Questionnaire

Please do not write your name on this questionnaire or give any identifying information. You may choose not to answer any question for any reason. By completing this questionnaire, you are giving your consent to participate.

Did the Mental Illness Stigma Game for BSN Students affect your attitude about mental health or about those suffering from a mental illness?

☐ Yes  ☐ No

If so, how? If not, why?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Was there any question in the board game that really made you think differently about mental illness?

________________________________________________________________________
________________________________________________________________________

What feedback do you have about that will help those who wish to use this board game in a classroom setting in the future?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Is there anything else you wish to add about the board game or this scholarly project?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for your time!
APPENDIX J

Informed Consent
1. TITLE: Using a Mental Health Board Game Intervention to Reduce Mental Illness Stigma among Nursing Students

2. RESEARCHERS: Anna K. Wassink, BSN, RN (Principal Investigator); Dr. Andrea Bostrom (Chairperson)

3. PURPOSE: The purpose of this project is to explore attitude change related to mental illness stigma among baccalaureate nursing (BSN) students.

4. REASON FOR INVITATION: You are invited to be a part of this project because you are a nursing student starting the mental health clinical rotation.

5. HOW PARTICIPANTS WILL BE SELECTED:
   - Participants will be selected based on three things:
     i. You need to be enrolled at Calvin College.
     ii. You need to be enrolled in the Mental Health Theory (307), Strategies (308), and Practicum (309) Courses.
     iii. You need to be in the first year of the nursing program.

6. PROCEDURES:
   - Students who are going into the Mental Health Clinical portion of this program will participate in this study. If you choose to participate, you will be asked:
     i. to take a pretest before you play the game during Nursing 307. This pretest will take approximately 5-10 minutes to complete.
     ii. to play a board game involving die and game cards with questions related to mental illness. It is expected that the time commitment for the board game will be approximately 1 hour. This game will occur during your Nursing 309 Practicum post-conference (early to mid-November) at your mental health clinical site. The actual date and time will be determined by your clinical instructor.
iii. To take a posttest. This posttest will take place before your final Nursing 307 exam. This posttest will take approximately 5-10 minutes to complete.
iv. If you choose not to participate, you will not be penalized and will be allowed to remain on the floor with the patients at your clinical site.

- Students who have just completed the Mental Health Clinical portion of this program will also have a chance to participate in this study. If you choose to participate you will be asked to:
  i. To take a pretest during Nursing 307. This pretest will take approximately 5-10 minutes to complete.
  ii. To take a posttest. This posttest will take place before your final Nursing 307 exam during. This posttest will take approximately 5-10 minutes to complete.
  iii. If you choose not to participate, you will not be penalized.
   **If you are interested, you will be given a chance to play the board game at some time after the posttest.

7. RISKS: There is minimal risk involved with your participation in this project. It is possible that this game will bring to mind some concerns that you may have related to mental health nursing. However, you may learn through the game that you are not the only one experiencing similar concerns. At any time, if you feel uncomfortable or for any other reason, you may stop participating.

8. POTENTIAL BENEFITS TO YOU: Through your participation, you could grow in your awareness of thoughts and actions toward those with mental illness.

9. POTENTIAL BENEFITS TO SOCIETY: Your participation could help in directing education for future BSN students.

You are not required to participate in this project. You may choose to withdraw from this project at any time and for any reason. If you choose not to participate in this project, your grade will not be affected in any way.
Your confidentiality will be protected by a series of coded numbers; names and other identifying information will not be used. Data will be kept in locked cabinets and in encrypted electronic files.

QUESTIONS: If you have any questions or concerns, you may contact me, directly at 616-481-5593 or gustanna@mail.gvsu.edu. Or you may call or email my project advisor Dr. Andrea Bostrom (616-331-7172; bostroma@gvsu.edu). Questions regarding human subjects can be directed to the Research Protections Program office at GVSU (616-331-3197; rpp@gvsu.edu) or to the Institutional Review Board at Calvin College (616-526-8718).

Signature: ____________________________________ Date: _____________________

Witness: _____________________________________ Date: _____________________

*You will receive a copy of this document for your records.
APPENDIX K

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Question RE: Johns Hopkins Nursing EBP: Model & Guidelines 2nd edition (Dearholt & Dang, 2012)

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Thank you in advance for any help you are able to provide. Forgive me and let me know if I need to be contacting someone else regarding this.

Sincerely,
Anna

---

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Debra Case <dcase@jhmi.edu>
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