MENTAL HEALTH LITERACY DISSEMINATION PROJECT

by

Shabnam McQuerrey

A project brief submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice

Spring 2019

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Shabnam McQuerrey

Approved: ___________________________  ___________________________
Barbara Habermann, Ph.D., RN, FAAN
Interim Senior Associate Dean of Nursing

Approved: ___________________________  ___________________________
Kathleen S. Matt, Ph.D.
Dean of the College of Health Sciences

Approved: ___________________________  ___________________________
Douglas J. Doren, Ph.D.
Interim Vice Provost for Graduate and Professional Education
I certify that I have read this project brief and that in my opinion it meets the academic and professional standard required by the University as a project brief for the degree of Doctor of Nursing Practice.

Signed: __________________________

Jennifer S. Graber, Ed.D., PMHCNS, BC
Professor in charge of project brief

I certify that I have read this project brief and that in my opinion it meets the academic and professional standard required by the University as a project brief for the degree of Doctor of Nursing Practice.

Signed: __________________________

Bridget Bieber, MSN, RNIII, CCRN
Project committee member

I certify that I have read this project brief and that in my opinion it meets the academic and professional standard required by the University as a project brief for the degree of Doctor of Nursing Practice.

Signed: __________________________

Sharon Dudley Brown, Ph.D., FNP-BC, FAAN, FAANP
Project committee member

I certify that I have read this project brief and that in my opinion it meets the academic and professional standard required by the University as a project brief for the degree of Doctor of Nursing Practice.

Signed: __________________________

Dee Campbell, Ph.D., APN-C, NE-BC, CNL
Project committee member
ACKNOWLEDGMENTS

I would like to sincerely thank my Project Faculty Mentor, Jennifer S. Graber, who supported my project from the very beginning. To my Project Site Mentor, Bridget Bieber, thank you for taking the time to ensure I was able to implement this project. Most importantly though, I wish to thank my husband, Jeff, for his endless love, support, and patience these past few years. Together we created two amazing sons in the midst of all this chaos; I love you boys!
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ABSTRACT

This Doctor of Nursing Practice project addresses the problem of stigmatization from bedside nurses towards patients with mental illness in acute care medical settings. Nurses within these non-psychiatric environments report a lack of education and skills to effectively care for patients with comorbid mental and physical illness. It has been shown that feelings of fear, apprehension, and insecurity lead to negative provider-patient relationships and diminished professional efficacy. Current literature shares evidence that educational initiatives focusing on mental health literacy improve knowledge and attitudes towards mental illness in healthcare professionals. This project uses the self-efficacy theory and social cognitive theoretical framework, with emphasis on vicarious and verbal persuasion informational experiences, to examine outcomes on mental health knowledge and attitudes of stigmatization.

Keywords: mental illness, mental health, knowledge, attitudes, stigmatization, bedside nurses, education, educational initiative, mental health literacy, acute care, medical settings
Chapter 1

INTRODUCTION

The following Doctor of Nursing Practice (DNP) project focuses on mental health literacy dissemination to address the issue of stigmatization towards patients with mental illness in acute care non-mental health medical settings. Medical nurses have been found to have high rates of stigmatization and negative feelings towards this patient population, while reporting a lack of education and skills to effectively care for individuals with comorbid mental and physical illness. Current evidence-based research shares that educational initiatives focusing on mental health literacy improve knowledge and attitudes towards mental illness in healthcare professionals while improving professional efficacy.

1.1 Background

Mental illness is reported to be the leading cause of global burden of disease at present (Wainberg et al., 2017). Patel et al. (2016) state that mental, neurological, and substance use disorders had an overall health burden increase by 41 percent over twenty years from 1990 to 2010. The Global Burden of Diseases, Injuries, and Risk Factors Study 2010 shares that 183.9 million disability adjusted life years (DALYs) or 7.4 percent of worldwide DALYs were due to mental and substance use disorders; also citing them as the leading
cause for years lived with disability (YLDs) at 175.3 million YLDs or 22.9 percent of all YLDs (Whiteford et al., 2013).

Specific to the United States (US), neuropsychiatric disorders accounted for 18.7 percent of nationwide DALYs in 2010 and were the leading category of diseases contributing to total number of years lost to illness, ahead of cardiovascular and circulatory diseases (NIMH, n.d.). The US Burden of Disease Collaborators (2013) share that alcohol use disorders, schizophrenia, bipolar disorder, and dysthymia are in the top 20 disease contributors to YLDs. Cox and Sawyer (2017) go on to say that despite improvements in US DALYs from 1995 to 2015, disease burden still remains higher in the US compared to other countries similar in size and wealth; with mental health and substance use disorders remaining the leading causes of burden.

Therefore, mental health is an area within healthcare deserving of added attention. However, there is presently a marked disparity in life expectancy of about 20 percent for individuals with mental illness as compared to the general population in high-income countries; with a standardized mortality ratio of 2.15 for individuals with serious mental illness as compared to those without (Noblett & Henderson, 2015). Noblett and Henderson (2015) propose these statistics are a result of both high rates of disease comorbidity in patients with mental illness and the potential effects of provider stigmatization towards these individuals. Current literature discussed in this paper supports the suggested problem.
1.2 Problem Identification and Significance

Chronic illnesses and the co-occurrence of those conditions are increasing, with the combination of mental and physical illness accounting for 30 percent of persons with comorbidities (Walker & Druss, 2016). These increasing rates of mental health comorbidities are further supported in a report by the Centers for Medicare and Medicaid Services (2014) showing that 77 percent of enrollees had two or more comorbid conditions and 41 percent had four or more, with mental illness co-occurring in 39 to 63 percent of all other physical health condition groups. Walker and Druss (2016) suggest that co-occurring mental illnesses are a result of physiological stress, unhealthy habits, and decreased access to health services related to mental illness, as well as a noted increase in risk for mental illness related to chronic medical conditions.

Consequently, health professionals in non-mental health settings, normally treating physical conditions, are increasingly caring for patients with comorbid mental illness. Giandinoto and Edward (2015) report roughly 30 to 50 percent of patients treated in acute care settings, such as emergency departments and intensive care units, are experiencing comorbid physical and mental illnesses. Zun (2017) shares that closure of inpatient and outpatient psychiatric facilities secondary to limited resources in the community have also contributed to the number of psychiatric patients seeking care in medical emergency departments. Patients admitted to acute care settings with
psychiatric health histories are noted to have higher than normal acuity levels as well (Rutledge et al., 2013).

Gacouin et al. (2017) performed a retrospective study of patients with preexisting mental illness admitted to a medical intensive care unit in France. It was found that 73 percent of the 1,743 patients with known mental illnesses included were admitted secondary to deliberate self-harm (Gacouin et al., 2017). Higher rates of acuity are seen in these admissions as 69 percent of individuals were mechanically ventilated, 22 percent received vasopressor support, 10 percent had renal replacement therapy, and 5 percent of patients died during their intensive care stay (Gacouin et al., 2017).

Rutledge et al. (2013) note increased risks for adverse health outcomes, secondary to stigmatization, for patients admitted to acute care facilities with mental illness. Unfortunately, stigmatization from health professionals can lead to the potential for discriminatory behaviors, diagnostic overshadowing, fragmentation and marginalization, and less timely or less adequate treatment for physical health conditions; this may contribute to higher rates of morbidity and mortality in patients with mental illness (Ungar, Knaak, & Szeto, 2016). The literature shows that stigmatization of mental illness is a global phenomenon, common among health professionals who endorse the stigma at comparative and sometimes higher rates in relation to the general population (Maranzan, 2016).
Current evidence shows that health providers may have biases towards patients with mental illness as a result of consistent contact when the patients are most unwell (Ungar, Knaak, & Szeto, 2016). Patients with mental illness are predisposed to increased anxiety and apprehension during their hospital stay, often leading to increased risk for disruptive behaviors (Rutledge et al., 2013). Current literature shows that medical nurses have negative emotions of fear and wariness in anticipation of aggression when caring for patients with mental illness; justifying their use of chemical or physical restraints based on their perceptions of patients (Giandinoto & Edward, 2015). Moreover, lack of skills associated with assessment, communication, and treatment of individuals with mental illness shows a positive correlation with increased stigmatization by medical non-psychiatric healthcare providers (Ungar, Knaak, & Szeto, 2016).

This inadequate skill-set can result in clinical distancing among care providers and subsequent negative patient-provider interaction, greatly impacting quality of care and potentially leading to poor health outcomes (Knaak, Mantler, & Szeto, 2017). Therapeutic pessimism, or pessimistic views held by providers in reference to likelihood of recovery from mental illness, can also cause less effective treatment (Knaak, Mantler, & Szeto, 2017). In order to improve attitudes towards mental illness and subsequently the quality of care or healthcare outcomes for medical patients with comorbid mental
illness, action must be taken to increase mental health literacy and self-efficacy among acute care medical nurses as bedside care providers.

Current literature allows background inquiry to better understand the attitudes and beliefs of nursing professionals towards patients with mental illness. A descriptive study done among 69 nursing professionals in an emergency department in Brazil found 95.3 percent of nursing professionals agree that patients with mental illness are unpredictable, 59.4 percent agreed that these patients are usually violent, 42 percent presented negative feelings of insecurity towards patients with mental illness, and only 50 percent agreed that they are comfortable caring for this patient population (de Melo, Priolli Jora Pegoraro, dos Santos, & Pillon, 2016). One cross-sectional observational study in a Brazilian emergency department and its prehospital emergency service found, among 146 nursing professionals, that those with mental health training had a higher self-perception of professional competency and less negative feelings towards patients presenting with mental health crises (Giacchero Vedana et al., 2017). Feelings of competency were found to have the strongest correlation to attitude as well in another cross-sectional study of 353 Dutch rehabilitation nurses (Kluit, Goossens, & Leeuw, 2013).

Ihalainen-Tamlander, Vahaniemi, Loyttyniemi, Suominen, and Valimaki (2016) found in a cross-sectional study of 218 primary health care nurses, that younger nurses have more negative views towards patients with mental illness than older nurses, finding the patient population frightening and
fearing for their safety. Zolnierek and Clingerman (2012) performed a qualitative, descriptive case study of a 26-year-old registered medical-surgical nurse with four years of working experience who had taken care of a patient with severe mental illness, finding four emerging feelings of tension, discomfort, lack of personal satisfaction, and difficulty. The nurse within the case study felt a sense of pervasive conscientiousness, unprepared and lacking the expertise and education to care for the patient, useless in addressing their mental health needs, and perceived a need for constancy of care (Zolnierek & Clingerman, 2012). This case study shows the necessity to use education as a means of increasing medical nursing self-efficacy when caring for patients with mental illness.

According to a systematic review by the Agency for Healthcare Research and Quality (2012), educational initiatives can aid in promoting self-efficacy among nurses, which can be crucial when delivering care to an unfamiliar patient population. Self-efficacy is described as a target outcome of knowledge dissemination. Increasing factual knowledge about mental illness and advocacy activities to change negative or inaccurate representations of mental illness are reportedly useful strategies to combat stigmatization among nurses (Corbiere, Samson, Villotti, & Pelletier, 2012). The literature shows that education can dispel stigma, therefore nursing school curriculums are starting to incorporate mental health literacy courses; however, for practicing nurses there is still a need for knowledge-based initiatives to promote positive
change (Maranzan, 2016). In fact, Rutledge et al. (2013) note that some hospitals have hired a mental health nurse consultant to aid in educational opportunities for non-mental health nurses on the topic of caring for patients with behavioral health issues.

Also of marked importance, Poreddi, Thimmaiah, Pashupu, Ramachandra, and Badamath (2014) suggest that nursing students bring their pre-established stereotypes and prejudices towards those with mentally illness with them into the field of nursing; finding negative attitudes of separatism, stereotyping, and pessimistic predictions to be most common among 148 nursing students in a cross-sectional descriptive design study. Chang et al. (2017) found in a cross-sectional study among 502 medical and 500 nursing students that those individuals having experienced a psychiatric-mental health clinical placement had more negative and stigmatizing attitudes. This warrants further exploration into the quality of clinical experiences, patient assignments, and faculty support during these relatively brief and singular rotations in order to improve knowledge acquisition and attitudes prior to entering the field as healthcare professionals. Keeping this information in mind, the efficacy of mental health literacy initiatives for nursing and healthcare students was also included in the clinical inquiry and review of literature for this DNP project.

1.3 PICOT Question

The significance of the above discussed healthcare problem warrants further review of the literature and clinical inquiry, wherein clinicians
assemble data by applying specific clinical parameters and then appraise that data to find the best choice of action. There are two types of clinical questions: background or foundational questions and foreground questions or those focused on select knowledge and answered by scientific evidence (Fineout-Overholt & Stillwell, 2015). The clinical issue for this DNP project relates to mental health knowledge and attitudes of stigmatization towards mental illness among nursing professionals in the medical critical care realm who frequently encounter patients with comorbid mental health conditions. Background questions for general information regarding this clinical issue included: What is the best method for reducing stigmatization towards mental illness and how do educational interventions affect attitudes towards mental illness? Other guiding inquiries included what information was currently available, and whether or not the latter foreground question would fill a gap.

One type of foreground question includes looking at an intervention, asking what intervention is most effective in producing an outcome. Foreground questions posed in the PICOT format allow for a well-built answerable and searchable inquiry. The “P” component addresses a specific population of interest, “I” an intervention or issue of interest, “C” a point of comparison or comparison intervention, “O” an outcome of interest, and “T” the time involved to demonstrate such an outcome or time at which the outcome is measured (Fineout-Overholt & Stillwell, 2015). The clinical PICOT question posed for this DNP project is: In bedside critical care nurses
(P - population), how does dissemination of a mental health literacy educational intervention (I - intervention), compared to no educational intervention (C - comparison), impact knowledge of mental health and attitudes towards mental illness (O - outcome) within an acute care non-mental health setting (S - setting)? Since time does not directly relate to the intervention of interest, it can be inferred or stated that the time of measurement is immediately post-intervention. Additionally, the “S” component of setting simply allows for identification of the setting in which outcomes of this intervention will be measured.
Chapter 2

REVIEW OF THE LITERATURE

A systematic evidence-based literature review was conducted by the DNP Student Project Leader in order to answer the above research question utilizing PubMed and CINAHL Plus databases (see Appendix A).

2.1 Search, Review and Synthesis

As the implementation phase for this DNP project was conducted during the year 2018, the literature review included articles within the previous five years from 2012 to 2017 for best evidence. Primary research articles, those in English only, and those pertinent or comparable to the intended population and intervention were included. Population characteristics included registered nurses, general nurses, nursing students, healthcare professionals, and healthcare students. Focus was placed on educational interventions related to mental health literacy dissemination. Individual search terms and Boolean operators used included a variety of combinations of the following: “educational intervention OR education OR training” AND “mental health OR mental illness OR mental disorder OR psychiatric illness” AND “registered nurses OR critical care nurses OR acute care nurses OR general nurses OR nursing students OR healthcare professionals OR healthcare students” AND “stigma OR prejudice OR attitude OR discrimination” AND “reduction”.

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After a careful selection process, seven studies were included in this review. The strength and quality of literature were graded with permission utilizing the Johns Hopkins Nursing Evidence-Based Practice Evidence Rating Scale. The Johns Hopkins Nursing Evidence-Based Practice Evidence Rating Scale is an appraisal tool for determination of the level and quality of evidence when reviewing research. The appraisal tool has three levels of evidence (I, II, and III), with a majority of level I and II evidence in a systematic review showing greater confidence in the potential practice change. The appraisal tool also grades the quality of evidence in three categories (A, B, and C), with A and B grades noting high and good quality evidence respectively (Dang & Dearholt, 2017). Each research article included in this review was appraised at a strength of level I or II and an A or B grade of quality (See Appendix B).

Current research shows support for the effectiveness of educational initiatives as a means to improve knowledge and attitudes of mental illness and mental health patients among individuals in the healthcare field. Burns et al. (2017) performed a randomized controlled trial on a sample of 181 Australian nursing students in their first year of study between the ages of 18 and 24 years. The researchers implemented an educational training program entitled Mental Health First Aid (MHFA) and randomly allocated an intervention group of 92 participants and a control group of 89 participants. The MHFA education course was delivered over two days in 6.5 hour-long sessions focusing on mental health signs, symptoms, risk factors, and strategies for
assisting someone experiencing a mental health crisis. Both the intervention and control groups were assessed for measures of mental health literacy, self-confidence, and stigmatizing attitudes at baseline, immediately after intervention, and two months post intervention. Mental health literacy was measured utilizing a study specific vignette and questionnaire consisting of 20 true or false questions as well as an open-ended question measuring recognition of a specific mental health disorder. A higher correct score on the questionnaire indicated superior knowledge. Self-confidence in one’s mental health first aid intentions were measured utilizing a five-point Likert scale scoring confidence as well as another open-ended question based on previous research scoring action plans. Stigmatizing attitudes were measured utilizing a 7-item scale adapted from the Depression Stigma Scale and Social Distance Scale. Key findings from repeated measures ANOVA for time and group on outcome variables included statistically significant improvement among intervention group versus the control group across the three time periods of assessment for knowledge scores (p<0.001), confidence in helping (p<0.001), mental health first aid intentions (p <0.001), total personal stigma (p<0.05), personal dangerous and unpredictable stigma (p<0.05), and social distance scores (p<0.05) (Burns et al., 2017). From this level I and grade B quality appraised study, one can infer that mental health literacy educational training is effective in reducing stigmatizing attitudes in nursing students.
Another randomized controlled trial conducted by Clement et al. (2012) studied 216 British student general nurses in their university foundation year with a mean age of 23.9 years in the DVD educational intervention group, 25.1 years in the live intervention group, and 23.5 years in the lecture only group based on random allocation. The DVD group watched a video of mental health service users and caretakers discussing their experiences, the live group watched the same in person, and the lecture group received a discussion about stigma and mental health awareness. The researchers were looking at effect on knowledge, attitudes, and behaviors regarding mental health immediately after intervention and at four months post-intervention compared to baseline. The Social Contact Intended Learning Outcomes tool was used to assess mental health literacy after the educational initiative, attitudes towards mental illness were assessed using the Mental Illness: Clinician’s Attitudes scale and the Emotional Reactions to Mental Illness Scale, and behaviors were assessed with the Reported and Intended Behavior Scale. Use of t-test and one-way ANOVA tests showed statistically significant improvement in intended social proximity post-intervention in the DVD versus live group \((t = -0.71, p = 0.022)\) and at follow-up greater improvement in prosocial emotional reactions \((t = -0.99, p = 0.011)\). DVD and live groups when compared to the lecture group showed higher improved Mental Illness: Clinician’s Attitudes scale scores post intervention \((t = -2.72, p = 0.003)\) and at follow-up greater intended social proximity was noted \((t = 0.86, p = 0.015)\). Longitudinal regression analysis for
pre, post, and four month follow-up showed the Reported and Intended Behavior Scale intended social proximity score 0.59 points higher in DVD and live versus lecture group (p = 0.004), 0.56 point reduction in post-session and follow-up for all three groups (fully adjusted model, 95% CI -0.84 to -0.27, p<0.001) and average Mental Illness: Clinician’s Attitudes scale scores 1.9 points lower in DVD and live versus lecture post intervention (fully adjusted model, 95% CI, -3.25 to -0.57) (Clement et al., 2012). Results from this level I and A quality grade research study show that utilization of a DVD format anti-stigma intervention at one hour and eleven minutes in length has immediate and long-term maintained benefits improving attitudes towards mental illness in student general nurses; however, live and lecture groups also showed positive outcomes.

An experimental study by Itzhaki, Meridan, Sagiv-Schifter, and Barnoy (2017) took a sample of 101 nursing students in their third year of undergraduate nursing in Israel with a mean age of 23.15 years to assess the effectiveness of an educational intervention on attitudes and behavioral intentions towards patients with mental illness. The educational intervention consisted of lectures on mental illness, mental health patient encounters, simulations, and a film on coping with mental illness spread across the semester course. A 51-item questionnaire was developed specifically for this study as a measurement tool. Pre and post paired t-tests showed nursing students’ perceived functional characteristics of mentally ill patients improved
post-intervention ($t = 4.23, p<0.01$), perceived danger decreased post intervention ($t = 3.42, p<0.01$), and value diminution of mentally ill persons improved post-intervention ($t = 2.70, p<0.01$). Pearson r-tests show statistically significant relationships between intervention and outcome with nursing students’ perception of mentally ill patients as dangerous impacting behavioral intentions both pre and post intervention ($r = -0.38$ and $r = -0.24$ respectively) and professional lectures leading to improvement in attitudes and behavioral intentions towards patients with mental illness ($r = 0.2$, $p<0.05$) (Itzhaki et al., 2017). With an appraisal of level I and B quality grade, this research showed that core educational lectures on mental illness were a successful intervention for improving attitudes towards mental illness among nursing students.

Friedrich et al. (2013) performed an experimental study, appraised in this literature review as level I and grade A quality, on a sample of 1,452 medical students in their third year of medical school at four universities in England with a mean age of 23.6 years in the intervention group and 23.3 years in the control. An educational intervention consisting of a short lecture with information on mental health stigma and discrimination, as well as testimonies from individuals with mental illness and their caretakers, were delivered to participants with an additional role-play experience. Participants’ mental health-related knowledge, attitudes, intended behavior, and empathy were measured at baseline, immediately after intervention, and at a six-month
follow-up utilizing the Mental Health Knowledge Schedule (MAKS) tool, Community Attitudes toward the Mentally Ill scale, Reported and Intended Behavior Scale, and Jefferson (7-point Likert) Scale of Physician Empathy. Statistical analysis showed that MAKS scores improved immediately after educational intervention for intervention group versus control group in multivariable regression analysis (standardized beta = 0.11, p<0.01). Community Attitudes toward the Mentally Ill scale scores also improved immediately after intervention and at the six-month follow-up for intervention group versus control in two out of three items both adjusted and unadjusted for confounding variables (p<0.05 for all) (Friedrich et al., 2017). Results from this study show that utilization of a short lecture mental health educational intervention can improve knowledge and attitudes regarding mental illness in healthcare students.

Iheanacho, Marienfeld, Stefanovics, and Rosenheck (2014) performed a similar pilot study including 139 nursing students as well as medical students and one medical resident. The mean age of the original 83 participants from a Nigerian convenience sample was 24.6 years, with 57 post-intervention participants remaining. A didactic mental health educational intervention was delivered over four days as a review of basic information based on the World Health Organization Mental Health Gap Action Program Intervention Guide educational modules. Evaluation measures consisted of a study-specific 43-item questionnaire adapted from the Fear and Behavioral Intentions toward the
mentally ill tool, Community Attitudes toward the Mentally Ill scale, and World Psychiatric Association Program to Reduce Stigma and Discrimination questionnaire. Factor analysis and analysis of variance, as well as Hopkin’s Likert scale approach for effect size, were used to analyze data showing improvement in biopsychosocial perspectives on mental illness post intervention \( t = -2.33, p<0.01, \text{effect size} = 0.5 \), more favorable attitudes towards normalized activities and relationships for people with mental illness post intervention \( t = -3.86, p<0.0002, \text{effect size} = 0.58 \), and higher acceptance of socializing with people with mental health conditions post intervention \( t = -2.58, p<0.01, \text{effect size} = 0.43 \) (Iheanacho et al., 2014). This level I and grade B quality study shows that didactic mental health educational interventions can improve attitudes towards mental illness in nursing and other healthcare students.

Hawke, Michalak, Maxwell, and Parikh (2014) conducted an experimental study assessing the effect of a filmed theatrical mental health educational intervention on stigmatizing attitudes among 137 participants. The Canadian convenience sample consisted of healthcare providers, university healthcare students, people with bipolar disorder, and the general public. The mean age of healthcare professionals included in the sample was 48.9 years and the mean age of healthcare students included in the sample was 21.2 years. The Mental Illness Stigma Scale, Social Distance Scale, and Mental Illness: Clinician’s Attitudes scale were used to measure attitudes at baseline,
immediately after intervention, and at one month post-intervention. After statistical analysis in regard to healthcare providers, Mental Illness Stigma Scale scores showed statistically significant improvements after educational intervention (anxiety item p = 0.006; professional efficacy p = 0.010; relationship disruption p = 0.011; treatability p < 0.001) and Mental Illness: Clinician’s Attitudes scale scores significantly improved as well (p = 0.05) (Hawke et al., 2014). Results from this level I and grade A quality evidence study show that filmed dramatic educational interventions are an effective tool for improving healthcare providers stigmatizing attitudes and increasing their professional efficacy.

A level II grade A quality before and after quasi-interventional study by Ng, Rashid, and O’Brien (2017) sampled 206 Malaysian primary care nurses with a mean age of 33 years to assess attitudes towards mental illness after a brief four-and-a-half-minute video-based contact intervention (VBCI) sharing psychoeducation and interviews with mental health patients. The 15-item Opening Minds Stigma Scale for Healthcare Providers (OMS-HC-15) was used to measure attitudes pre and post-VBCI. Repeated measures testing showed a mean total scale score decrease of 14 percent (F = 251, p<0.001) showing improvement in primary care nurses’ attitudes towards mental illness post-VBCI. Multivariate analyses showed that independent variables associated with lower baseline OMS-HC-15 scores included previous psychiatric training, the desire for psychiatric training, and positive
experiences with patients or people with mental illness ($F = 5.6$, $p < 0.001$, $R^2 = 0.12$). The effect size (0.97) and standardized response mean ($SRM = 1.1$) showed moderate effect of the VBCI on OMS-HC-15 scores with narrow confidence intervals of 0.85 to 1.1 and 0.97 to 1.2 respectively. Furthermore, utilizing the minimum detectable change statistic, 30 percent of participants were found to have reduced scores post-VBCI (95% CI 24-36, $n=61$), reflecting true and positive changes in stigmatizing attitudes (Ng et al., 2017). From this research study, one can deduce that utilization of a short VBCI anti-stigma educational intervention is effective in improving attitudes towards mental illness among registered nurses.

In reviewing this evidence, the efficacy of mental health literacy educational interventions is visible among individuals in the healthcare field, both students and professionals. There is opportunity to apply such an intervention to this DNP project’s population of focus: bedside critical care nurses. The majority of research shows the value of mental health literacy dissemination among nursing and other healthcare students or hybrid groups of healthcare professionals. Therefore, a need can be identified for application of this research among a homogenous group of nurses; in specific bedside critical care or acute care nurses explicitly.

2.2 Theoretical Framework

Earlier in the background portion of this paper, the abundance of research examining attitudes alone among non-mental health nursing
professionals towards mental illness was discussed. There were predominantly stigmatizing attitudes and diminished professional efficacy among nursing professionals relative to patients with mental illness. The rationale for this evidence-based DNP project is rooted in Barbara Resnick’s self-efficacy theory and the social cognitive theoretical framework developed by Albert Bandura.

Resnick (2002) theorizes that self-efficacy and outcome expectations affect one’s behavior, motivation, thought patterns, and emotional reactions in different situations. The self-efficacy theory stems from the social cognitive theoretical framework which suggests that there is a reciprocal relationship between person, behavior, and environment (Resnick, 2013). The social cognitive theoretical framework proposes that four sources of experience including direct, vicarious, verbal persuasion or judgements by others, and derivation of knowledge by personal inference of physiological feedback influence self-efficacy (Bandura & Adams, 1977). One’s cognitive appraisal of those four components results in a degree of self-confidence in one’s ability to perform a certain behavior (Resnick, 2013). It is posited that greater self-efficacy leads to increased coping efforts (Bandura & Adams, 1977).

In the background investigations of this project it was also identified that nurses’ stigmatizing attitudes towards mental illness are impacted and reinforced by direct experiences with patients at their most unwell medical states (Ungar, Knaak, & Szeto, 2016) with predisposition to disruptive
behaviors secondary to high rates of symptoms of anxiety related to their mental health histories (Rutledge et al., 2013). Diminished knowledge and stigmatizing attitudes were found to have a strong relationship with a lack of skills to adequately treat these patients with comorbid mental illness (Ungar, Knaak, & Szeto, 2016) leading to negative patient-provider interactions and affecting health outcomes (Knaak, Mantler, & Szeto, 2017). Therefore, one can note how the source of direct experiences within a certain environment shapes individuals’ attitudes and consequently their behaviors. Moreover, lack of self-efficacy from inadequate skill-sets shows a need to provide experiences to nursing professionals, be they vicarious or through verbal persuasion, that can improve self-confidence.

This DNP project uses the self-efficacy theory and social cognitive theoretical framework, with emphasis on vicarious and verbal persuasion informational experiences, to examine outcomes on mental health knowledge and attitudes of stigmatization. Mental health literacy educational experiences, via these two informational sources, allow for self-efficacy-based mentoring and motivation. The review of literature also supports this theoretical framework, showing statistically significant and positive outcomes from providing educational experiences in line with vicarious and verbal persuasion opportunities for individuals in the healthcare field.
2.3 **Project Implications**

The proposed implication of this DNP project is to lay a foundation for change in practice within non-mental health medical settings regarding mental health educational initiatives and continuing education. The purpose of this project is to employ knowledge dissemination to improve self-efficacy among nurses and produce a positive attitudinal impact. Furthermore, the project has long-term goals of improving quality of care delivery and healthcare outcomes for patients with comorbid mental illness in medical settings.
Chapter 3

METHODOLOGY

Quality improvement projects are designed to improve patient care processes and health outcomes as well as system performance within specific healthcare settings (Ginex, 2017). The goals are to improve quality, safety, and value in healthcare (Goodman et al., 2016).

3.1 Design and Project Timeline

The Standards for Quality Improvement Reporting Excellence (SQUIRE) are guidelines for reporting quality improvement work to share both successes and failures focusing on the following questions: why did you start, what did you do, what did you find, and what does it mean (Goodman et al., 2016). This DNP project methodology was aimed to fall in line with the SQUIRE guidelines and provide answers upon completion to the aforementioned questions. Following the project methods, findings and the meaning of those findings were further examined to fulfill SQUIRE guidelines as noted in the project timeline (see Appendix C).

3.2 Setting and Participants

Data for this DNP project was collected at Christiana Hospital, an acute care medical setting and Level I trauma center in Newark, Delaware. The project took place within the hospital’s surgical and trauma intensive care unit,
a 22-bed unit with nursing care delivered by bedside critical care nurses, student nurse externs (SNEs), and patient care technicians (PCTs).

Project participants included a voluntary sample of nursing staff working within the surgical and trauma intensive care unit. Inclusion criteria consisted of bedside nursing staff, SNEs, and PCTs of all genders, ages, ethnicities, and educational levels. SNEs and PCTs were included for the project, in addition to bedside nurses, as they deliver direct patient care within the unit under nursing supervision. Exclusion criteria included staff not related to the field of nursing, currently in a management position, or not directly delivering patient care. There were 78 eligible staff participants per inclusion and exclusion criteria prior to the start of the project, with 60 pre-intervention participants and 36 post-intervention participants. The total number of participants both pre and post-intervention, being greater than 30, allowed for assumption of a sampling distribution and mean that was normally distributed based on a sufficiently large sample size, in accordance with the Central Limit Theorem (Ilvento, 2013).

3.3 Implementation Plan and Procedure

The DNP Project Student Leader submitted an application for this project to the University of Delaware’s Internal Review Board (IRB) and Christiana Hospital’s Nursing Research Council (NRC) and IRB for review and approval. The university’s IRB deferred to approval from Christiana Hospital’s IRB. Approval was obtained from the NRC, Christiana Hospital’s
IRB, and the managerial staff overseeing the unit setting of focus (see Appendix D). Project implementation was split into two main phases: pre-intervention phase (Project 1) and intervention/post-intervention phase (Project 2).

Project 1, the pre-intervention phase, was implemented over the course of three weeks. Participants were asked to complete a pre-intervention data survey consisting of unidentifiable demographic information (see Appendix E), the Mental Health Knowledge Schedule (MAKS) tool (see Appendix F), and the Opening Minds Scale for Health Care Providers (OMS-HC) tool (see Appendix G) to evaluate stigma-related mental health knowledge and attitudes of stigmatization towards persons with mental illness respectively. Project 2, the intervention/post-intervention phase, was implemented over the course of six weeks. During this second phase of implementation, the DNP Project Student Leader offered the educational intervention itself, a 30-minute mental health literacy educational initiative. After participation in the educational intervention, participants were asked to immediately complete a post-intervention data survey consisting of unidentifiable demographic information, the MAKS tool, and the OMS-HC tool again.

The educational initiative was assembled by the DNP Student Project Leader utilizing evidence-based information from the literature and reviewed by psychiatric advanced practice nurses and content experts for content validation. Specifically, the educational initiative was based on the design for
a multi-phased, mixed-methods study looking at 22 anti-stigma programs and sharing the following six successful ingredients: emphasis on recovery, social contact opportunities, positive tone, personal testimony, skill-building, and myth busting (Knaak, Modgill, & Patten, 2014). Programs including all six ingredients were significantly associated with more positive outcomes.

This DNP project’s educational initiative began with a short video-based component made available to the public from an anti-stigma mental health campaign created by the 35-year-old mental health educational organization, Healthy Minds Canada. This video-based component served as an eye-opener, setting the tone of the initiative with an emphasis on the need for attention to mental health disorders and recovery. A study by Ng, Rashid, and O’Brien (2017) shows that utilization of short video-based contact interventions have immediate positive outcomes for improving attitudes towards mental illness among registered nurses. Hawke, Michalak, Maxwell, and Parikh (2014) had similar success with a filmed dramatic educational intervention for use with healthcare providers; as did Clement et al. (2012) with a DVD group presentation for use with general nurses.

There was also an evidence-based didactic component based on the Substance Abuse and Mental Health Services Administration (SAMHSA) trauma informed care treatment and recovery principles, as well as information from the American Psychiatric Associations current Diagnostic and Statistical Manual of Mental Disorders (DSM-V). This component of the initiative
focused on mental health knowledge delivery to incorporate skill-building from a trauma informed care perspective and myth busting. Utilization of short lecture-based educational interventions were found to have positive outcomes on knowledge and attitudes of healthcare students in studies by both Friedrich et al. (2013) and Iheanacho, Marienfeld, Stefanovics, and Rosenheck (2014). Furthermore, based on the positive outcomes found in a study by Burns et al. (2017) utilizing the MHFA curriculum in their educational initiative, this project also integrated training based on MHFA guidelines which place emphasis on supporting individuals with mental health needs.

Finally, three separate interactive case scenarios were assembled by the DNP Student Project Leader and reviewed for content validation by psychiatric advanced practice nurses and content experts as noted earlier. The MHFA curriculum stresses inclusion of case scenarios to foster self-confidence (Burns et al., 2017). Those case scenarios specific to this DNP project’s educational initiative focused on strategies to assist someone with mental illness or crisis in an acute care non-mental health setting and concluded the 30-minute educational initiative.

The mental health literacy educational initiative itself was implemented by the DNP Student Project Leader on six different days for both day shift and night shift staff, totaling 12 different shifts of opportunity for participation in order to accommodate staff schedules. During the 12 different shifts, the initiative was offered every 30 minutes for any eligible staff. Voluntary
participants who completed the educational initiative were asked to immediately fill out the post-intervention data surveys and indicate whether or not they participated in the pre-intervention survey collection phase. Only post-intervention data surveys indicating participation in Project 1 were kept for aggregate data analysis and comparison of mean scores between the survey group in Project 1 and survey subgroup in Project 2.

3.4 Data Collection, Apparatus and Materials

Data was collected prior to the intervention from the Project 1 survey group and again immediately after the intervention in Project 2 from the survey subgroup utilizing the above-mentioned tools. The MAKS instrument collected data relevant to the participants’ knowledge related to mental health. This tool has been found to have an overall test–retest reliability was 0.71; with item retest reliability ranging from 0.57 to 0.87 suggestive of moderate to substantial agreement between two time points (Evans-Lacko et al., 2010). The MAKS is a self-administered tool that can be completed in about one to two minutes by participants. It is comprised of six stigma-related mental health knowledge categories including help seeking, recognition, support, employment, treatment, and recovery, as well as six items inquiring about mental health conditions (see Appendix F).

MAKS items are scored on an ordinal scale (1 to 5); with items in which the respondent strongly agrees with a correct statement having a value of 5 points while 1 point indicates a response in which the respondent strongly
disagrees with a correct statement. Any neutral answers are coded as having a value of 3 points for the purposes of determining a total score. Total score is determined only from items 1 to 6, with reverse coding required for item 6. The scores can range from 6 to 30 and a higher score indicates more knowledge related to mental health.

The OMS-HC instrument collected data relevant to the healthcare provider participants’ attitudes of stigmatization. This self-administered tool was specifically developed to assess outcomes of anti-stigma interventions among healthcare providers and can be completed in roughly two minutes by participants. The full 20-item OMS-HC tool consists of three main areas including attitude, disclosure and help-seeking, and social distance (see Appendix G). This tool has been found to have acceptable internal consistency for all forms of the scale with Cronbach’s coefficient alphas of 0.74 to 0.79 (Modgill, Patten, Knaak, Kassam, & Szeto, 2014). The OMS-HC is also scored on an ordinal scale (1 to 5), with items 3, 8, 9, 10, 11, 15, and 19 requiring reverse coding. The scores can range from 20 to 100 with a lower score as an indication of reduced attitudes of stigmatization and a higher score showing more stigmatizing attitudes.

Permission to use the MAKS tool was granted in writing based on the following criteria being met: no changes were made to the MAKS, copyright information in the footer was included, the MAKS was not passed on to a third party, the scale was not used for profit, and the appropriate reference citing the
following article by Evans-Lacko, Little, Meltzer, Rose, Rhydderch, Henderson, and Thornicroft (2010) were used when referring to the MAKS. The OMS-HC tool is property of the Mental Health Commission of Canada (MHCC) and written permission to use this material was granted in writing based on the following criteria being met: materials were not modified, intellectual property notices were not deleted, derivative works were not created, and usage or copies were only for educational and non-commercial use. The criteria for use of both of these tools were fulfilled (see Appendix H).

3.5 **Data Analysis and Evaluation Strategies**

Data collection from Project 1 and Project 2 was completed by the DNP Student Project Leader. The DNP Student Project Leader used a double-check and a second-verifier to ensure accuracy of tool grading and data entry into Microsoft Excel. For purposes of this DNP project and limitations set forth by the project site’s IRB against matching participants, data was evaluated in terms of aggregate unit data related to mental health knowledge and attitudes of stigmatization between the pre-intervention survey group and post-intervention survey sub-group. The pre-intervention and post-intervention data were compared as Project 1 and Project 2 via descriptive or summary statistics as well as inferential statistics. Independent samples $t$-tests were performed in JMP Pro13 and SPSS Statistics Version 25 for difference of means testing relative to both the MAKS and OMS-HC scores in Project 1 and
Project 2. From the statistical tests, appropriate visual statistics were made available.

3.6 Project Budget

This DNP project was implemented at a marginal cost of 90 dollars. Audiovisual equipment and internet were available for use with the necessary setup required for presentation of the educational initiative at the site free of cost. Participants, per hospital site IRB requirements, were not to receive payment for voluntary participation. Moreover, there were no costs associated with the educational initiative or tools being used. Printing costs were minimal with paper costs at 30 dollars and ink cartridges at 60 dollars; totaling 90 dollars which the DNP Student Project Leader was able to fund.

3.7 Management of Ethical Implications

The project proposal was examined by the University of Delaware’s IRB and Christiana Hospital’s NRC and IRB for approval prior to initiation with no deviations during implementation. The DNP Student Project Leader was the only team member working directly with voluntary participants and had completed mandatory educations prior to project implementation required by Christiana Hospital’s NRC and IRB, and the University of Delaware’s IRB. Participation was voluntary and individuals did not receive payment for participation per hospital site IRB requirements. Individual responses remained unidentified and confidential, and any demographic data collected were not direct indicators of the participants. There were no social, financial,
legal, or physical risks associated with participation. There were minimal psychological risks associated with the project as participants may have found the educational topic uncomfortable; however, voluntary participants were allowed to cease participation or leave the educational initiative at any time. There were no identified conflicts of interest.

The DNP Student Project Leader was available for reach by phone and email for participant inquiry, input, comments or concerns. The DNP Project Site Mentor, Bridget Bieber, serves as the unit’s own nursing staff educational resource and was available for assistance if needed by staff participants as well. Contact information for Christiana Care resources including the IRB, Employee Assistance Program, Care for the Caregiver, and Pastoral care was provided to all eligible participants as well. All of the above information was disclosed to eligible participants via a recruitment script email approved by Christiana Hospital’s NRC and IRB, and the University of Delaware’s IRB. There were no reported incidents to the IRB, DNP Student Project Leader, or DNP Project Site Mentor. The tools used for data collection remained concealed, within a locked file compartment, and in a locked room within the DNP Project Site Mentor’s office when not being reviewed for project purposes. The information was discarded after project conclusion utilizing safeguarded disposal channels per Christiana Hospital’s NRC and IRB requirements.
3.8 Project Products and Dissemination Plan

The DNP Student Project Leader plans to submit a manuscript of this project to the *Journal of Nursing Administration* for publication. Choice of this journal stems from a desire to challenge healthcare systems and nursing administration to include continuing education related to mental health in non-mental health medical settings. The DNP Student Project Leader intends to submit an abstract for a poster presentation at the 14th Annual Nursing Research Conference coordinated by the University of Delaware. The project will also be included as a podium presentation at a local evidence-based practice meeting in Spring 2019, hosted by University of Delaware’s Beta Xi Chapter of Sigma Theta Tau International. In addition, results from the project will be taken back to the project setting and shared with participants and other stakeholders via a poster display within the unit of implementation. The DNP Student Project Leader also purposes to do a podium presentation of results for a broader group of stakeholders at the project site hospital’s nursing grand rounds.
Chapter 4

RESULTS

4.1 Project 1

Project 1 represents a pre-intervention survey group of 60 voluntary participants. As seen in Table 1 below, the descriptive data is presented for the 60 participants who completed Project 1 surveys prior to the educational initiative. Fifty-four (90.0%) of the participants identified as female. Most participants were aged 18-35 (n = 45, 75.0%), were Registered Nurses (n = 49, 81.7%), had 0-10 years in their job role (n = 45, 75.0%), had a Bachelor’s degree (n = 38, 63.3%), and were not currently enrolled in any level of nursing school (n = 35, 58.3%). Demographic indicators for Project 1 appear in Table 4.1.

Table 4.1: Demographics of the Participants in Project 1

<table>
<thead>
<tr>
<th>Demographic Indicator</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>54</td>
<td>90.0</td>
</tr>
<tr>
<td>Male</td>
<td>6</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-35</td>
<td>45</td>
<td>75.0</td>
</tr>
<tr>
<td>36-55</td>
<td>12</td>
<td>20.0</td>
</tr>
<tr>
<td>56+</td>
<td>3</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
</tr>
<tr>
<td>Highest Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate’s</td>
<td>4</td>
<td>6.7</td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>38</td>
<td>63.3</td>
</tr>
<tr>
<td>Diploma</td>
<td>1</td>
<td>1.7</td>
</tr>
</tbody>
</table>
In Project 1, participants had a mean score of 23.23 on the MAKS indicating a high range of knowledge of mental health. On the OMS-HC, Project 1 participants had a mean score of 49.33 indicating moderate levels of stigmatization towards mental illness. Group statistics for Project 1 appear in Table 4.2.

Table 4.2: Project 1 Group Statistics for the MAKS and the OMS-HC

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAKS Mean Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project 1</td>
<td>60</td>
<td>23.23</td>
<td>2.499</td>
</tr>
<tr>
<td>OMS-HC Mean Score</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project 1</td>
<td>60</td>
<td>49.33</td>
<td>6.146</td>
</tr>
</tbody>
</table>

4.2 Project 2

Project 2 results represent a post-intervention survey subgroup of 31 voluntary participants, out of 36 total participants in Project 2, who indicated sustained participation between Project 1 and Project 2. Therefore, these 31 survey subgroup participants completed Project 2 surveys immediately after
completion of the educational initiative and indicated at that time that they completed a pre-intervention survey for Project 1 as well. Twenty-seven (87.1%) of the participants identified as female. Most participants were aged 18-35 ($n = 23, 74.2\%$), were Registered Nurses ($n = 27, 87.1\%$), had 0-10 years in their job role ($n = 24, 77.4\%$), had a Bachelor’s degree ($n = 22, 71.0\%$), and were not currently enrolled in any level of nursing school ($n = 20, 64.5\%$). Demographic indicators for Project 2 appear in Table 4.3.

Table 4.3: Demographics of the Participants in Project 2

<table>
<thead>
<tr>
<th>Demographic Indicator</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>87.1</td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>12.9</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>100.0</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-35</td>
<td>23</td>
<td>74.2</td>
</tr>
<tr>
<td>36-55</td>
<td>5</td>
<td>16.1</td>
</tr>
<tr>
<td>56+</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>100.0</td>
</tr>
<tr>
<td>Highest Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate’s</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>22</td>
<td>71.0</td>
</tr>
<tr>
<td>Diploma</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Graduate</td>
<td>4</td>
<td>12.9</td>
</tr>
<tr>
<td>High School</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>100.0</td>
</tr>
<tr>
<td>Job Role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered Nurse</td>
<td>27</td>
<td>87.1</td>
</tr>
<tr>
<td>SNE/PCT</td>
<td>4</td>
<td>12.9</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>100.0</td>
</tr>
<tr>
<td>Years of Experience in Job Role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-10</td>
<td>24</td>
<td>77.4</td>
</tr>
<tr>
<td>11-20</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>21-30</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>30+</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>100.0</td>
</tr>
<tr>
<td>Current Nursing School Enrollment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>20</td>
<td>64.5</td>
</tr>
<tr>
<td>Post Graduate</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>3</td>
<td>9.7</td>
</tr>
</tbody>
</table>
In Project 2, participants had a mean score of 24.52 on the MAKS indicating a high range of knowledge of mental health post-intervention. On the OMS-HC, participants had a mean score of 45.84 indicating low levels of stigmatization towards mental illness post-intervention. Group statistics for Project 2 appear in Table 4.4.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAKS Mean Score</td>
<td>31</td>
<td>24.52</td>
<td>2.528</td>
</tr>
<tr>
<td>OMS-HC Mean Score</td>
<td>31</td>
<td>45.84</td>
<td>5.080</td>
</tr>
</tbody>
</table>

4.3 **Comparison Project 1 and Project 2**

To determine if the mental health literacy educational initiative affected participants’ mental health knowledge and attitudes of stigmatization, Project 1 and Project 2 MAKS and OMS-HC mean scores were compared. An independent samples t-test statistical analysis was performed for difference of project means testing for both the MAKS and OMS-HC scores from Project 1 and Project 2. The independent samples t-test was used to determine differences in means from two samples, Project 1 and Project 2, where participants’ scores were not able to be matched. In order to determine whether assumptions of the t-test were met though, the Levene’s test for equality of variances was performed.

When looking at the MAKS mean scores, the significance (p-value) of the Levene’s test was .861. This p-value being greater than an alpha level of
.05 allows the assumption that the variances are equal (Kim, 2015). Therefore, the p-value associated with the t-test used for analysis was .023. The independent samples t-test revealed a statistically significant difference between MAKS scores for Project 1 ($M = 23.23$) and Project 2 ($M = 24.52$) at $t(89) = -2.311, p = 0.023$, indicating that the educational initiative intervention had an effect on increasing participants’ mental health knowledge (Figure 4.1).

Similarly, when looking at the OMS-HC mean scores, the significance (p-value) of the Levene’s test was .491. This p-value again being greater than an alpha level of .05 allows the assumption that the variances are equal as discussed above. Therefore, the p-value associated with the t-test used for analysis was .008. The independent samples t-test revealed a statistically significant difference between OMS-HC scores for Project 1 ($M = 49.33$) and Project 2 ($M = 45.84$) at $t(89) = 2.720, p = 0.008$. Findings show that the educational initiative intervention had an effect in decreasing participants’ attitudes of stigmatization (Figure 4.2). Results from the Levene's test for equality of variances and independent samples t-test appear in Table 4.5.

Table 4.5: Independent Samples T-Tests for the MAKS and the OMS-HC

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>$F$</td>
<td>$p$</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal variances assumed</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><strong>MAKS Mean Score</strong></td>
<td>.031, .861, -2.311, 89, .023, -1.28, .55, -2.39, -.18</td>
</tr>
<tr>
<td><strong>OMS-HC Mean Score</strong></td>
<td>.491, .485, 2.720, 89, .008, 3.49, 1.28, .94, 6.05</td>
</tr>
</tbody>
</table>

**Figure 4.1.** Bar Graph Illustrating Project 1 and 2 MAKS Mean Scores
**Figure 4.2.** Bar Graph Illustrating Project 1 and 2 OMS-HC Mean Scores

- Project 1: OMS-HC Mean Score = 49.33
- Project 2: OMS-HC Mean Score = 45.84
Chapter 5

INTERPRETATION OF THE DATA

5.1 Discussion

The Centers for Medicare and Medicaid Services (2014) show that 77 percent of enrollees have two or more comorbid conditions and 41 percent have four or more, with mental illness co-occuring in 39 to 63 percent of all other physical health condition groups. Other research shows that about 30 to 50 percent of patients treated in acute care settings, such as emergency departments and intensive care units, are experiencing comorbid physical and mental illness (Giandinoto & Edward, 2015). As health professionals in non-mental health medical settings are increasingly caring for patients with mental and physical comorbidities, it is crucial to ensure provider knowledge of mental health and positive attitudes towards mental illness. This DNP mental health literacy dissemination project addressed these key professional attributes among bedside critical care nurses in an acute care non-mental health setting.

Stigmatization has been linked to adverse health outcomes in patients admitted to medical acute care facilities with mental illness, secondary to discriminatory behaviors, diagnostic overshadowing, fragmentation and marginalization, and less timely or less adequate treatment for their physical
health conditions (Ungar, Knaak, & Szeto, 2016). Clinical distancing and subsequently poorer care quality is related to a lack of skills and knowledge necessary for caring for this patient population as well (Knaak, Mantler, & Szeto, 2017). With a marked disparity in life expectancy of about 20 percent for individuals with mental illness compared to the general population in high-income countries (Noblett & Henderson, 2015), this vulnerable population requires appropriate quality of care.

Giacchero Vedana et al. (2017) found that nursing professionals who had mental health training had higher self-perception of professional competency and less negative feelings towards patient with mental illness. Kluit, Goossens, and Leeuw (2013) also found that feelings of competency had the strongest correlation to attitude among nurses when caring for patients with mental illness. The Agency for Healthcare Research and Quality (2012) supports educational initiatives to aid in promoting self-efficacy among nurses, which can be crucial for those providing care for patients with mental illness in acute care non-mental health medical settings.

5.2 Interpretation of Findings

This DNP project corroborates the benefits of implementing mental health educational initiatives in order to improve nurses’ mental health knowledge and reduce attitudes of stigmatization towards mental illness. After participation in a mental health educational initiative, group mental health knowledge scores in bedside critical care nurses saw statistically significant
improvements. There was also a statistically significant decrease in attitudes of stigmatization among participants immediately post-intervention.

Post-test assessments using data from both Project 1 and 2 supports the effectiveness of this DNP project’s intervention. Findings reveal that dissemination of mental health literacy positively impacts knowledge of mental health and attitudes towards mental illness among bedside critical care nurses within an acute care non-mental health medical setting. Through further evaluation of demographic indicators from both Project 1 and 2, descriptive data shows a largely homogenous group of female, bachelor’s prepared, bedside critical care nurses between the ages of 18 to 35 years with less than 10 years of work experience benefited from the effectiveness of this evidence-based intervention. Keeping in mind that younger nurses predominantly have more negative views towards patients with mental illness (Ihalainen-Tamlander et al., 2016) and the literature showing that non-mental health medical nurses are increasingly caring for patients with comorbid mental and physical illness (Giandinoto & Edward, 2015), this DNP project’s outcomes also provide a successful method for addressing an existing problem.

Furthermore, knowing that nursing professionals with mental health training have higher self-perception of professional competency (Giacchero Vedana et al., 2017) and that these feelings of competency correlate to improved attitudes towards patients with mental illness (Kluit, Goossens, & Leeuw, 2103), educational initiatives as implemented in this DNP project
provide a means for improving nursing self-efficacy. This can be an easily integrated solution for the unfortunate problem of clinical distancing, therapeutic pessimism, and negative patient-provider relationships potentially leading to poor health outcomes for those with mental illness (Knaak, Mantler, & Szeto, 2017).

5.3 Implications for Nursing Practice

Based on Resnick’s self-efficacy theory, mental health literacy dissemination provides an opportunity to modify nurses’ cognitive appraisal of mental illness, and in turn self-confidence in their abilities to perform certain behaviors (Resnick, 2013). Through use of Bandura’s social cognitive theoretical framework which promotes vicarious and verbal persuasion informational experiences, this DNP project developed an effective educational initiative to significantly change bedside critical care nurses’ cognitive appraisal of mental illness. The outcomes of this project suggest that for self-efficacious nursing practice, it is crucial to improve the degree of mental health knowledge and attitudes of stigmatization within bedside critical care nurses in non-mental health medical settings. This can better equip nursing professionals with the skills and self-confidence necessary to provide care for a vulnerable and complex patient population.

5.4 Project Limitations and Need for Further Development

Limitations for this DNP project include IRB restrictions against matching participants’ survey responses between Project 1 and Project 2. The
inability to pair data collected limited the inferential statistical analysis. Additionally, the project was based on voluntary participation so a difference in sample size is seen between Project 1 (n=60) and Project 2 (n=31); the latter requiring sustained participation by the nurse between Project 1 and 2. A replication of this project using a true pre-post design and control group would provide stronger verification of the effects of the educational intervention provided in this DNP project.

Some opportunities for further development include evaluation of patient experiences and outcomes within acute care non-mental health medical settings that provide mental health specific educational initiatives for their bedside nurses, verifying downstream effects of their value. It would also be beneficial to explore the differences in effect of this DNP project’s educational initiative, for a variety of age and nursing experience groups if increased demographic spread of the samples are possible in the future. Moreover, it would be valuable to reassess mental health knowledge and attitudes of stigmatization again at one month, six months, and one year post-intervention in order to determine lasting outcomes of the educational initiative.

5.5 **Sustainability**

Strategies to ensure sustainability of this DNP project within the setting of implementation include sharing of the results with key stakeholders (see Appendix I), as well as unit and organizational leaders. The DNP student project leader plans to share the statistically significant results with
organizational nursing administration with a goal to either continue more pilot runs of the educational initiative within other units, or have the organization adopt the already developed education into their standard of practice for new nurse hire education and annual mandatory nursing education. The existing educational initiative is easily modifiable for yearly updates and was developed for application across all nursing area specialties. The organization can implement the educational initiative through its existing digital system learning platform that all employees have access to for other mandatory education without expending any additional resources. Similarly, the content of the educational initiative is easily translatable and can be implemented in the same fashion across other non-mental health medical settings as well.

5.6 **Significance of Project and Conclusions**

Improved patient-provider relationships for the population of individuals treated in medical settings with comorbid mental illness falls in line with a key Healthy People 2020 goal of improving mental health by guaranteeing access to both appropriate and quality mental health services (Office of Disease Prevention and Health Promotion, 2019). This appropriate quality of care is necessary not only in outpatient and primary health medical settings, but within acute care non-mental health medical settings increasingly treating patients with mental illness as well. This DNP project offers statistically significant results for improvement in mental health knowledge and attitudes of stigmatization after nursing staff participation in a mental
health educational initiative. This lays a foundation for organizational change within non-mental health medical settings to include such initiatives in order to achieve those same valuable outcomes with their own healthcare providers’ level of knowledge and attitudes towards mental illness. Nursing leadership willing to support mental health literacy dissemination within their organizations have an opportunity to facilitate beneficial change in both nursing practice and patient outcomes.
REFERENCES


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Appendix A

PRISMA FLOW DIAGRAM

Records identified through PubMed and CINAHL Plus databases (n = 197) → Records after duplicates removed (n = 174) → Records screened (n = 174) → Full-text articles assessed for eligibility (n = 41) → Studies included in this review (n = 7) → Full-text articles excluded
- Inapplicable population (n = 12)
- Inapplicable mode of intervention (n = 9)
- Not primary research (n = 11)
- Article not in English language (n = 2) → Records excluded (n = 133)
## Appendix B

### EVALUATION AND SYNTHESIS OF THE EVIDENCE

<table>
<thead>
<tr>
<th>STUDY</th>
<th>DESIGN</th>
<th>SAMPLE</th>
<th>APPRAISAL LEVEL/GRADE</th>
<th>OUTCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burns, S., Crawford, E., Hallett, J., Hunt, K., Oth, H. J., &amp; Tiley, P. I. M. (2017)</td>
<td>Randomized Controlled Trial</td>
<td>181 Australian nursing students</td>
<td>Level I/B</td>
<td>Improvements among intervention group across 3 time periods for knowledge scores, confidence in helping, mental health first aid intentions, total personal stigma, personal dangerous/unpredictable stigma, and social distance scores</td>
</tr>
<tr>
<td>Clement, S., van Nieuwenhuijzen, A., Kassam, A., &amp; Thorsen, G. (2012)</td>
<td>Randomized Controlled Trial</td>
<td>216 British General Nurses (GNs)</td>
<td>Level I/A</td>
<td>Utilization of DVD anti-stigma intervention (1 hour and 11 minutes) shows immediate benefit and long-term maintained benefits improving attitudes towards mental illness amongst student GNS</td>
</tr>
<tr>
<td>Friederich, B., Evers-Lacroix, S., Linton, J., Rybbier-Decker, D., Henderson, C., &amp; Thorsen, G. (2013)</td>
<td>Experimental Study</td>
<td>1,452 British medical students</td>
<td>Level I/A</td>
<td>MAGS scores improved immediately after short lecture educational intervention for intervention group v control group; CAMI scores improved immediately after intervention and at 6-month follow-up for intervention group v control</td>
</tr>
<tr>
<td>Hawke, I. D., Michalak, E. E., Maxwell, V., &amp; Parikh, S. V. (2014)</td>
<td>Experimental Study</td>
<td>137 healthcare providers, students, general public, &amp; individuals with BO</td>
<td>Level I/A</td>
<td>Fringe dramatic educational intervention shows significant improvement in healthcare providers professional self-efficacy; showing significant improvements in stigmatizing attitudes as well</td>
</tr>
<tr>
<td>Hearsnecht, T., Marienfeld, C., Stefaniouka, E., &amp; Rosenheck, R. A. (2014)</td>
<td>Pilot Study</td>
<td>139 nursing and medical students, 1 medical resident</td>
<td>Level I/B</td>
<td>Educational initiative reviewing basic mental health information improved attitudes towards mental illness among healthcare students</td>
</tr>
<tr>
<td>Ishkar, M., Meridian, G., Sage-Schiffer, T., &amp; Barney, S. (2017)</td>
<td>Experimental Study</td>
<td>101 Israeli nursing students</td>
<td>Level I/B</td>
<td>Core educational intervention of lectures on mental illness prove successful in improving attitudes towards mentally ill patients in nursing students</td>
</tr>
<tr>
<td>Ng, Y. P., Rashid, A., &amp; O’Brien, F. (2017)</td>
<td>Quasi-experimental Study</td>
<td>206 Malaysian primary care nurses</td>
<td>Level I/A</td>
<td>Utilization of a short video (4.5 minute) as anti-stigma educational intervention shows immediate positive outcomes for improving attitudes towards mental illness amongst registered nurses</td>
</tr>
</tbody>
</table>
Appendix C

DNP PROJECT TIMELINE

<table>
<thead>
<tr>
<th>DNP Project-related Activities</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Apr</td>
<td>May</td>
</tr>
<tr>
<td>Write the Methods section</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Write an IRB application</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Submit IRB applications to your site and UD</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Data Collection</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Data Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write up Results and Implications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Appendix D

IRB APPROVAL

CHRISTIANA CARE
Institutional Review Board
FWA00006557

Helen F. Graham Cancer Center & Research Institute
West Pavilion - Suite 2350
4701 Ogletown Stanton Road
Newark, DE 19713
302-623-4983 phone
302-623-4989 phone
302-623-6863 fax

MEMORANDUM

Steven Kushner, MD
Chairman, IRB
Gary Johnson, PhD
Chairman, IRB
Jerry Castellano, Pharm.D, CIP
Director
Joint Ethics Review, MSEA, CIP
IRB Education Coordinator
Health Research, BA, CIP
IRB Regulatory Affairs/Editor
Sonia Martinez-Colon
Executive Assistant
Wendy Basiert
Administrative Assistant
Lee Caldwell
Administrative Assistant

DATE: August 10, 2018

TO: Shahnaz Zandi, BSN, RN, CCRN
Nursing Research
Christiana Hospital

FROM: Sonia Martinez-Colon

RE: CCC# 38123 - Mental Health Literacy Dissemination Project:
(DDD# 604048)

This is to officially inform you that your protocol was approved by Expedited Review per 45 CFR 46.110(f)(7) with an Alteration of Consent 45 CFR 46.116(d), by Jerry Castellano, Pharm.D, CIP, Corporate Director of Christiana Care Health System Institutional Review Board (IRB000000480), on 07/27/2018. Approval was granted for a period of one year, from 07/27/2018 through 07/26/2019.

The above stated CCC# (Christiana Care Corporation number) has been assigned to your research. That number, along with the title of your study, must be used in all communication with the IRB Office.

Changes in this protocol after the initial approval may not be initiated without Institutional Review Board review and approval, except where necessary to eliminate apparent immediate hazards to the human subject. Also, if you encounter any adverse effects or deaths that must be reported to the company and the FDA, the committee must be so informed immediately by phone.

In addition, a periodic review of this protocol will be conducted in six months to a year from the above approval date. At that time, you will be required to complete a review form with all available information collected to date on your protocol.

A final requirement is that you notify the Institutional Review Board when this protocol is completed, and all results are to be summarized for the committee’s review.

If you have any questions, please contact the IRB Office.

This approval verifies that the IRB operates in accordance with applicable ICH, federal, local and institutional regulations, and with all GCP Guidelines that govern institutional IRB operations.

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Appendix E

SUMMARY OF MEASURES/QUESTIONNAIRES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic variables</td>
<td>Gender, Age, Job role (SNE, PCT, RN), Years of experience, Highest level of education, current nursing school enrollment status (undergraduate, graduate, post-graduate)</td>
<td>6</td>
</tr>
<tr>
<td>Clinical variables</td>
<td>Mental health knowledge (MAKS)</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Attitudes of stigmatization (OMS-HC)</td>
<td>20</td>
</tr>
</tbody>
</table>
Appendix F

MENTAL HEALTH KNOWLEDGE SCHEDULE

Instructions: For each of statements 1–6 below, respond by ticking one box only. Mental health problems here refer, for example, to conditions for which an individual would be seen by healthcare staff.

1. Most people with mental health problems want to have paid employment.

2. If a friend had a mental health problem, I know what advice to give them to get professional help.

3. Medication can be an effective treatment for people with mental health problems.

4. Psychotherapy (eg counseling or talking therapy) can be an effective treatment for people with mental health problems.

5. People with severe mental health problems can fully recover.

6. Most people with mental health problems go to a healthcare professional to get help.

Instructions: For items 7–12, say whether you think each condition is a type of mental illness by ticking one box only.

7. Depression

8. Stress

9. Schizophrenia

10. Bipolar disorder (manic depression)

11. Drug addiction

12. Grief

Thank you very much for your help.

## Appendix G

### OPENING MINDS SCALE FOR HEALTH CARE PROVIDERS

#### Opening Minds Scale for Health Care Providers (OMS-HC)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I am more comfortable helping a person who has a physical illness than I am helping a person who has a mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>If a person with a mental illness complains of physical symptoms (e.g., nausea, back pain or headache), I would likely attribute this to their mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>If a colleague with whom I work told me they had a managed mental illness, I would be just as willing to work with him/her.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>If I were under treatment for a mental illness I would not disclose this to any of my colleagues.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I would be more inclined to seek help for a mental illness if my treating healthcare provider was not associated with my workplace.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I would see myself as weak if I had a mental illness and could not fix it myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I would be reluctant to seek help if I had a mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Employers should hire a person with a managed mental illness if he/she is the best person for the job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I would still go to a physician if I knew that the physician had been treated for a mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>If I had a mental illness, I would tell my friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>It is the responsibility of health care providers to inspire hope in people with mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Despite my professional beliefs, I have negative reactions towards people who have mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>There is little I can do to help people with mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>More than half of people with mental illness don’t try hard enough to get better.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>People with mental illness seldom pose a risk to the public.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>The best treatment for mental illness is medication.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>I would not want a person with a mental illness, even if it were appropriately managed, to work with children.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Healthcare providers do not need to be advocates for people with mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>I would not mind if a person with a mental illness lived next door to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>I struggle to feel compassion for a person with mental illness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix H

INSTRUCTIONS FOR USE OF MAKS AND OMS-HC

Instructions for Using the Mental Health Knowledge Schedule (MAKS)

Conditions of use
Permission to use the MAKS is granted on condition that:

- No changes are made to the MAKS
- The copyright information in the footer is included
- The MAKS is not passed on to a third party
- The scale should not be used for profit
- Please cite the reference below when referring to the MAKS

For additional detail on the instrument development and psychometric properties please refer to:
Evans-Lacko, S; Little K; Meltzer H; Rose D; Rhydderch D; Henderson C; Thornicroft G. Development and Psychometric Properties of the Mental Health Knowledge Schedule (MAKS) (Canadian Journal of Psychiatry 2010 Jul; 55, 440-448.)

Instructions for Using the Opening Minds Scale for Health Care Providers (OMS-HC)

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Appendix I

STAKEHOLDER MATRIX

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Importance</th>
<th>Influence</th>
<th>Magnitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedside Nursing Staff</td>
<td>90</td>
<td>90</td>
<td>8100</td>
</tr>
<tr>
<td>Unit RN Education Team</td>
<td>80</td>
<td>80</td>
<td>6400</td>
</tr>
<tr>
<td>Nursing Professional Development Specialist</td>
<td>70</td>
<td>80</td>
<td>5600</td>
</tr>
<tr>
<td>Unit RN Management Team</td>
<td>60</td>
<td>70</td>
<td>4200</td>
</tr>
<tr>
<td>Unit Medical Team</td>
<td>10</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>