Tne Effect of In Our Own Voice on Stigma in BSN Students

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DNP Final Project Report

The Effect of In Our Own Voice on Stigma in BSN Students

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College of Nursing
Fall 2018

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Abstract

Stigma regarding mental illness is common throughout the world, and can lead to social isolation, low self-esteem, loss of income and employment, deterioration of life quality, impeded access to medical care, and a shorter lifespan for people diagnosed with a mental illness (Cleary, Deacon, Jackson, Andrew, & Chan, 2012; Corrigan et al., 2013). The purpose of this DNP project was to provide an evidence-based intervention called In Our Own Voice (IOOV) to first semester sophomore nursing students and assess its impact on their perceptions of mental illness stigma. Alterations in stigma were assessed through the Attribution Questionnaire-27 administered to students directly before and after the program. The present quantitative DNP project provided evidence that the National Alliance of Mental Illness’s IOOV presentation had a significant reduction in stigma of these nursing students in the factors of anger, dangerousness, fear, avoidance, help, and segregation, but not in blame and pity. However, there was a significant increase in their perceptions about coercion to treatment after the presentation.
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Background and Significance

Problem Identification

The National Institute of Mental Health (NIMH) estimated that in 2016, there were 44.7 million adults aged 18 or older in the United States with a mental illness (NIMH, 2017). Of those adults, there were approximately 10.4 million (4.2%) with serious mental illness (NIMH, 2017). This does not include individuals that are institutionalized or homeless, so the actual prevalence rate is most likely higher. “Serious mental illness (SMI) is defined as a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities” (NIMH, 2017, para. 4).

Stigma regarding mental illness has been well documented and is common throughout the world (Corrigan et al., 2013; Stuber, Rocha, Christian, & Link, 2014; Yamaguchi et al., 2013). “Mental illness stigma refers to the view that individuals with mental illness are marked, have undesirable characteristics, or deserve disdain” (Feeg, Prager, Moylan, Smith, & Cullinan, 2014, p. 694). Stigma is the negative attitudes and beliefs that influence people to reject, fear, avoid, devalue, or discriminate against those with mental illness (Corrigan et al., 2013; Parcesepe & Cabassa, 2013).

Context of the Problem

Stigma consists of labeling, stereotyping, prejudice, avoidance and discrimination (Stuber et al., 2014; Yamaguchi et al., 2013). Stigma can result in social isolation, low self-esteem, loss of income and employment, deterioration of life quality, impeded access to medical care, and a shorter lifespan among people diagnosed with mental illnesses (Cleary, Deacon, Jackson, Andrew, & Chan, 2012; Corrigan et al., 2013). Stigma towards individuals with mental illness is common in the general public and in healthcare workers (Corrigan et al., 2013; Stuber et al.,
Noble \& Henderson (2015) reported that 17-31% of people with mental illness experience stigma from medical healthcare providers. There were approximately 2,955,200 registered nurses in the United States in 2016 (U.S. Department of Labor, 2018). Emergency Department nurses may perform other activities and neglect patients with mental illness as reported by Da Silva Elias et al., (2013). The nurses ignored the psychosocial aspects of the patients and focused on the physical features and safety (Da Silva Elias et al., 2013). Bingham and O’Brien (2018) reported, “Nurses have also been noted to hold stigmatizing views about people with mental illness” (p. 312). They also reported that first-year undergraduate nursing students commonly had stigmatizing attitudes towards mental illness and proposed that reducing this stigma in undergraduate programs could potentially benefit both the undergraduate students and the people with mental illness in their care (Bingham \& O’Brien, 2018).

Scope and Consequences of the Problem

In 2013, mental disorders were reported to be the costliest conditions, with spending in the U.S. at 201 billion (Roehrig, 2016). “Individuals with mental disorders are subjected to prejudice and discrimination in employment, housing, medical care, and social relationships” (Stuber et al., 2014, p 490). Consequences of stigma include social isolation, low self-esteem, loss of income and employment, and deterioration of life quality (Cleary, Deacon, Jackson, Andrew, \& Chan, 2012; Corrigan et al., 2013; Parcesepe \& Cabassa, 2013).

Stigma surrounding mental illness may interfere with access to medical care (Cleary et al., 2012), with several negative consequences. For example, patients with mental illness with chronic medical conditions also have a shorter life span than those without mental health issues, possibly related to avoidance of care because of stigma (Cleary et al., 2012). The National
Alliance on Mental Illness (NAMI) reported that adults in the U.S. with serious mental illness die on average 25 years earlier than those without mental illness, mainly due to treatable medical conditions (NAMI, 2018).

Individuals with mental illness may avoid seeking healthcare because they have experienced stigma by healthcare providers. Knaak, Mantler, and Szeto (2017) reported that mental illness related stigma is a “major barrier to access treatment and recovery, as well as poorer quality physical care for persons with mental illnesses” (p. 111). Knaak et al. (2017) also reported that individuals with mental illness state feeling excluded from and receiving limited information regarding treatment decisions, getting threats of coercive treatment, extremely long wait times, being treated in a demeaning way, and being warned that they will never recover from their illness. Per Knaak et al., “the pervasiveness with which negative interactions are reported suggests the problem is not isolated to a few insensitive providers but is more systemic in nature” (2017, p. 111).

**Evidence-Based Intervention**

Personal contact interventions attempt to improve perceptions of individuals with mental illness by having them tell their story. Personal contact, both in person and filmed, has been shown as an effective intervention to decrease stigma and had a greater effect than an educational intervention (O’Reilly, Bell, Kelly, & Chen, 2011; Yamaguchi et al., 2013). In Our Own Voice (IOOV) is a personal contact program offered by NAMI (2018).

NAMI developed the IOOV program as an educational contact program to develop awareness about mental illness recovery in 1998 (NAMI, 2018). The IOOV program involves two individuals with a diagnosed serious mental health condition in remission, addressing five main areas: Dark Days; Acceptance; Treatment; Coping Strategies; and Successes, Hopes, and
Dreams (Wong et al., 2016). Portions of the DVD are shown, featuring individuals recounting their personal experiences with the recovery stage, and then the two individuals who are currently in recovery each speak on their personal experiences of the area (Wong et al., 2016). Both the video and the interactive discussion with the two presenters educate the participants about many features of mental illness. This program has been reported to be effective in decreasing stigma in adolescents, undergraduate students, pharmacy students, and Master of Social Work Students [Brennan & McGrew, (2013); Pinto-Foltz, Logsdon, & Myers, (2011); Pittman, Noh, & Coleman, (2010)].

**Purpose of the Project**

The purpose of this DNP project was to provide an evidence-based intervention called IOOV to first semester sophomore nursing students to decrease the stigma of mental illness. The primary aims of this project include examining demographic factors associated with stigma among BSN nursing students and assessing changes in stigma before and after the IOOV intervention.

**Process Improvement Model**

The Positive Deviance (PD) model was utilized to guide this DNP project. Deviance can be described to include both the positive and negative reactions and outcomes to nonconformity (Lindberg & Schneider, 2013). “Positive deviance is deviant or unconventional behavior that has a positive impact” (Lindberg & Schneider, 2013, p. 233).

The positive deviance model first appeared in nutrition research in the 1970s (Wishik & Van der Vynckt, 1976). Nutrition researchers in Vietnam noted that some children of poverty were better nourished than others with the same resources. By looking at these outliers or “positive deviants,” they used their nutrition habits and general behaviors to help guide nutrition
education for their peers (Lindberg, Nordstrand, Munger, DeMarsico, & Buscell, 2009). These researchers designed a process that allowed others to practice new behaviors and nutrition habits to improve their nutritional outcome. “Expertise from the community must be tapped and change must originate and be directed by the community” (Lindberg et al., 2009, p.61). PD evolved into a social change process to address serious, health-related issues in the developing world (Lindberg et al., 2009). This model has been used in healthcare settings for improving hand hygiene (Létourneau, Alderson, & Leibing, 2018), rates of breastfeeding (Ma & Magnus, 2012), diabetic care (Gabbay et al., 2013), MRSA prevention (Lindberg & Schneider, 2013), improving medical students’ clinical performance (Zaidi, Jaffery, Shahid, Moin, Gilani, & Burdick (2017), and procedures for management of acute myocardial infarction (Krumholz, Curry, & Bradley, 2011).

The four basic steps in the PD model are: define, determine, discover, and design (Lindberg et al., 2009). The first step involves defining the problem (what practice needs to be changed), uncovering perceived challenges, and defining the desired outcome or new practice. The problem is stigma towards patients with mental illness by nurses and it must be replaced by appropriate, therapeutic care. There will be many challenges from several different occupations and power differentials (nurses, allied health professionals, and physicians). When healthcare providers’ culture of stigma occurs, it is not easy to change. Undergraduate nursing students are determined to be the positive deviants to implement the change, which is step two. There are many individuals involved in patient care and nurses can be good advocates and change agents. They can proactively change the culture of the work environment to one of zero tolerance against discrimination. The third step is discovering the behaviors and strategies to help the nursing students achieve the critical literacy skills to provide a change. Lawton, Taylor, Clay-Williams,
and Braithwaite (2014) reported that positive deviance be used to describe the behaviors of successful teams and organizations, as well as those of individuals. “Change efforts are best led from within the institution by people with first-hand knowledge of its work, history and norms” (Baxter, Taylor, Kellar, & Lawton, 2016, p.196). The final step is designing an educational process to implement change that can promote a more caring culture and improve patient care. The educational process used is the IOOV presentation by NAMI given to the first semester sophomore BSN students at the University of Kentucky.

Review of Literature

Measurement Scales

There are many scales used to measure stigma related to mental illness; however, few of these scales have been demonstrated to be valid and reliable. The Attribution Questionnaire (AQ) was developed by Corrigan in 2003 and had 21 questions, which measured six stereotypes (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). It has been modified throughout the years for use in children, non-English speaking participants, for a shorter version, and to include more subscales. The reliability and validity of the AQ was confirmed with an $a=0.7$ to 0.89 and a validity average of 0.50 [Brown, (2008); de Sousa, Marques, Rosário, & Queirós, (2012); Link, Phelan, Bresnahan, Stueve, & Pescosolido (2004); and Marques et al., (2011). The self-administered AQ-27 is the most recent modification by Corrigan and contains a short vignette about a male individual with schizophrenia. The vignette is followed by 27 statements that assess nine stereotypes about people with mental illness: responsibility, pity, anger, dangerousness, fear, help, coercion, segregation, and avoidance (de Sousa et al., 2012). Each statement is scored based on level of agreement with the items, with response choices ranging from 0 (not at all) to 9 (very much). The score for each stereotype is calculated by summing the
responses to the three questions encompassing each stereotype for a maximum score of 27 for each stereotype. For example, to calculate the score for blame, the responses to question numbers 10, 11, and 23 are summed. Higher scores represent greater endorsement of the corresponding attitude (de Sousa et al., 2012). The AQ-27 and its score sheet are shown in Appendix A.

This scale has been used to measure stigma in a mixture of settings with a variety of participants including adolescents, ED nurses, community college students, nursing students, pharmacy students, and psychiatric nurses (Bingham & O’Brien, 2018; de Sousa et al., 2012; Marques, Barbosa, & Queirós, 2011). Bingham and O’Brien (2018) used the AQ-27 pre- and post-intervention in their study on the effect of a guided clinical experience in an acute mental health unit with undergraduate nursing students. They reported a significant positive change in stigma in four of the nine stereotypes. Blair Irving et al., (2012) reported that the AQ-27 is sensitive to changes in attitudes related to an anti-stigma program they developed which included brief, behaviorally-focused, mental illness training on the Internet.

**Stigma Reduction Programs**

A review of the literature conducted on stigma reduction programs confirmed that the three most utilized programs include hallucination simulation, educational interventions, and personal contact. The participants in hallucination simulation programs wear headphones that play voice recordings which are like auditory hallucinations. This program is intended to increase understanding and bolster empathy for those with hallucinations (Skoy, Eukel, Frenzel, Werremeyer, & McDaniel, 2016). Simulation was shown to assist the individuals in understanding voice-hearing and its impact on functioning which decreased stigma (Brown et al., 2010; Orr, Kellehear, Armari, Pearson, & Holmes, 2013; Skoy et al., 2016).
Corrigan et al. (2007) stated that “education is especially useful for the widespread dissemination of anti-stigma programs; advocates can develop public service media which can quickly be disseminated across the country” (p.172). In an educational program the instructor replaces myths about mental illness with accurate facts to decrease stigma. Educational interventions were found to decrease stigma (Bingham & O’Brien, 2018; Blair Irving et al., 2012). As discussed earlier, Bingham & O’Brien (2018) used the AQ-27 in their study on an educational program with undergraduate nursing students and reported a decrease in stigma in 4 of the 9 stereotypes measured pre- and post-program. Blair Irving et al., (2012) developed a four-hour educational program, which focused on “knowledge about mental illness, fostering caregiver-resident relationships, and behavioral skills to work with mental illness behaviors” (p. 182). They reported a significant improvement in views on self-efficacy, and moderate improvement on knowledge and attitudes in their study involving licensed staff in long-term care facilities.

Personal contact programs attempt to improve public perceptions of individuals with mental illness by having them tell their story. Personal contact, both in person and filmed, has been shown as an effective intervention to decrease stigma (Brown et al., 2010; Corrigan et al., 2013; Corrigan, Morris, Michaels, Rafacz, & Rüsch, 2012; O’Reilly et al., 2011; Yamaguchi et al., 2013). Researchers have also found that personal contact had a greater effect on decreasing stigma than an educational intervention (Corrigan et al., 2013; Yamaguchie et al., 2013). Yamaguchie et al. (2013) reported in their study systematic review of 35 studies, that of the three programs, contact interventions were the most effective in decreasing mental illness stigma. Corrigan et al. (2012) reported in a meta-analysis of 72 outcome studies that personal contact reduces stigmatization of people with a mental illness, and that it is superior to hallucination
simulation and educational programs. Because of the evidence supporting the effectiveness of personal contact, a personal contact intervention (IOOV) was used in this project.

Agency Description

Setting

This project was conducted at the University of Kentucky, College of Nursing (UK CON) in Lexington, Kentucky. The mission of the college is to promote health and well-being through excellence in nursing education, research, practice and service while fostering diversity and inclusion (UK CON, 2017). The college is a public land grant university with more than 50 years of existence and currently offers both undergraduate and graduate services. According to the UK CON (2017), in the Fall of 2015 there were 79 Second-Degree BSN, 473 Pre-Nursing, 115 RN-to-BSN, and 523 Traditional BSN students in the undergraduate program from 36 states and two countries including China and South Korea. Of the 1,190 Total Undergraduate Enrollment, 155 students were of American Indian/Alaskan Native, Asian, African American, Hispanic or Latino and/or Native Hawaiian/Pacific Islander descent.

Target Population

First semester sophomore University of Kentucky BSN students were recruited to participate in this DNP project. The inclusion criteria included being a first semester sophomore BSN student enrolled in NUR 201-Assessment and Health Promotion Across the Lifespan at the University of Kentucky, College of Nursing and agreeing to complete both the pre-and post-test AQ-27 and the entire educational program. Exclusion criteria were non-completion of the surveys and/or the program. The sample size was 37 participants.
Stakeholders

There are many stakeholders in the area of reducing stigma. The stakeholders in this DNP project included the BSN students enrolled in NUR 201, the course faculty, the Assistant Dean of Undergraduate Program Studies and Associate Dean of Undergraduate Faculty Affairs, and the local NAMI Lexington.

Facilitators and Barriers to Implementation

Facilitators to the implementation of this DNP project included that the evaluation of the IOOV intervention in other populations showed a decrease in mental illness stigma. Another facilitator was that the program met a critical need in the community to decrease stigma in student nurses toward those with mental illness. There was also adequate funding for implementation because the IOOV program and the AQ-27 questionnaire were free of cost. Lastly, the resources needed for this DNP project included the classroom, which included a projector for playing the DVD.

Barriers to the implementation of this DNP project included the recruitment of participants for the project. The project was initially scheduled for November 2017 with the incentive of free lunch, and no participants came. After discussing the lack of participants with the professor of the NUR 201 class, it was decided to offer 5 quiz bonus points to participants in the project with an alternate written assignment for the bonus points available to those who did not participate in the project. The alternate assignment was reading the article "Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions" by Knaak, Mantler, and Szeto (2017) and write a two-page, double-spaced summary of the article. The project changes were sent to and approved by the University of Kentucky Institutional Review Board (UK IRB).
Project Design

This DNP project used a prospective pretest posttest design to evaluate the impact of the IOOV intervention with sophomore BSN nursing students’ perception of stigma about people with mental illness. The students’ levels of stigma were measured pre- and post-intervention using the AQ-27 in April 2018. The primary aims of this project include examining demographic factors associated with stigma among BSN nursing students and assessing changes in stigma before and after the IOOV intervention. After statistical analysis, the scores of the pre-test and post-test will be compared to examine the effect of the intervention on mental illness stigma. It is expected that the IOOV intervention will result in a decrease in post-intervention AQ-27 scores and therefore decrease mental illness stigma in the BSN students.

Methods

Procedure

An expedited medical approval for this DNP project was obtained from the University of Kentucky Institutional Review Board (UK IRB) on November 9, 2017. First semester UK sophomore BSN students enrolled in NUR 201 were voluntarily recruited for this project. In March 2018, they were invited to participate. I provided an overview of the IOOV intervention, the 27-item Likert pre and posttest AQ, and the estimated 2-hour time required. I explained that there would be two individuals with severe mental illness that would discuss their dark days, acceptance, treatment, coping strategies, successes, and hopes and dreams and play a short DVD. They were sent an email reminder of the date, time, and location the week prior to the intervention. Of the 119 students enrolled in the class, 37 chose to participate in the study. The intervention was conducted in a classroom on the 5th floor of the College of Nursing building, outside of their scheduled classes. After the participants reviewed and signed the consent form,
they completed the demographic and the AQ-27 questionnaires. Two individuals with schizophrenia trained as IOOV presenters and referred by NAMI Lexington, played the IOOV DVD addressing five main areas: Dark Days; Acceptance; Treatment; Coping Strategies; and Successes, Hopes, and Dreams, and both spoke to the students about their personal experiences during each of the five areas on the DVD. At the conclusion of the one-hour IOOV intervention the students completed the AQ-27.

The data were input to Microsoft Excel and analyzed using descriptive statistics in SPSS. Each of the nine stereotypes were calculated for means and ranges by summing the three corresponding questions. Paired t-tests were used in comparing the means for each stereotype pre- and post-intervention.

**Results**

Analysis was conducted to examine whether responses to the intervention differed by demographics. Frequencies of distribution of the participants showed that 83.78% were Caucasian, all were female, and the age range was 18-31 years. Only one participant in the DNP project was not from the United States, and 43.4% were from Kentucky. Pearson Correlation Coefficients for age at pretest showed no significance except in pity. The correlation coefficient is -.36, which shows that as age increases, pity at time 1 decreases and vice-versa. Pity at time 1 was also the only significant difference between Caucasian and non-Caucasian students with a p value of 0.02. There were no significant findings with age or ethnicity at posttest. The sample demographics are shown in Table 1.
### Table 1.
*Sample Demographics*

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>37</td>
<td>100</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age in Years</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>29</td>
<td>78.4</td>
</tr>
<tr>
<td>21-31</td>
<td>8</td>
<td>21.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residency</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kentucky Native</td>
<td>16</td>
<td>43.24</td>
</tr>
<tr>
<td>Non-Kentucky Native</td>
<td>21</td>
<td>56.76</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>31</td>
<td>83.78</td>
</tr>
<tr>
<td>Black</td>
<td>3</td>
<td>8.11</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>2.70</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>2.70</td>
</tr>
<tr>
<td>Mixed Race</td>
<td>1</td>
<td>2.70</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Education Track</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional BSN</td>
<td>37</td>
<td>100</td>
</tr>
</tbody>
</table>
The results of The MEANS Procedure showed a statistically significant positive difference in scores from pre- to post-intervention for anger, dangerousness, fear, avoidance, and segregation. This indicates that the IOOV intervention decreased stigma in those five areas. There is also a statistically significant negative difference in help and coercion meaning, that the scores in those increased. There was no significant difference in scores for blame and pity.

Table 2 shows the scores for each of the nine stereotype factors before and after the intervention.

Table 2.
Means and Paired t-test Scores of AQ-27 Factors Before and After the IOOV Intervention.

<table>
<thead>
<tr>
<th>Stereotype</th>
<th>Pre-intervention Mean</th>
<th>Post-intervention Mean</th>
<th>t Value</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blame</td>
<td>6.81</td>
<td>6.24</td>
<td>1.12</td>
<td>0.2695</td>
</tr>
<tr>
<td>Anger</td>
<td>6.35</td>
<td>3.97</td>
<td>5.04</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Pity</td>
<td>16.51</td>
<td>15.54</td>
<td>1.45</td>
<td>0.1568</td>
</tr>
<tr>
<td>Help</td>
<td>22.92</td>
<td>25.03</td>
<td>-4.13</td>
<td>0.0002</td>
</tr>
<tr>
<td>Dangerousness</td>
<td>11.14</td>
<td>5.24</td>
<td>10.10</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Fear</td>
<td>10.27</td>
<td>5.08</td>
<td>8.70</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Avoidance</td>
<td>14.59</td>
<td>7.89</td>
<td>8.92</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Segregation</td>
<td>7.81</td>
<td>4.16</td>
<td>6.69</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Coercion</td>
<td>12.14</td>
<td>13.73</td>
<td>-2.72</td>
<td>0.0101</td>
</tr>
</tbody>
</table>

Discussion

The present quantitative DNP project provided evidence that NAMI’s IOOV presentation resulted in a significant reduction in stigma of these BSN students in the domains of anger, fear, dangerousness, avoidance, help, and segregation, but not in blame and pity. However, there was
a significant increase in coercion to treatment after the presentation. These findings replicate those from prior research and validate that IOOV seems to be successful in decreasing stigma when executed with select samples (Brennan & McGrew, 2013; Corrigan et al., 2010; Pittman, Noh, & Coleman, 2010; Rusch, Kanter, Angelone, & Ridley, 2008; Wong et al., 2016; Wood & Wahl, 2006). Pittman, Noh, & Coleman (2010) reported a significant positive change in knowledge, attitudes and social distance in their study with 30 Masters of Social Work students. Corrigan et al., (2010) reported in his study with 200 participants from four Midwest colleges, more positive recollections compared to negative recollections about an individual with SMI. They reported that IOOV yields better changes in cognitive processes, which lead to the creation and maintenance of stereotypes. Wong et al., (2016) conducted a pre- and post-test evaluation of 150 IOOV presentations in California with a wide range of settings and participants. They reported a decrease in desire for social distance and feelings of dangerousness, and an increase in belief of recovery, supportiveness and awareness.

**Implications**

This DNP project is relevant in addressing the problem of mental illness stigma in healthcare. The results supplement research that examined the efficacy of the IOOV intervention in reducing stigma. Nurses are good advocates and change agents. They can change the culture of the work environment to one of zero tolerance against stigma. By decreasing mental illness stigma through the IOOV program in undergraduate nursing students, a significant change can be made at all system levels. Changing future nurses’ attitudes toward mental illness empowers them to change the culture of the complex adaptive systems in which they will work. These nurses can potentially collaborate in advocating for mental health patients. When stigmatization...
occurs, they may confront others in a professional and informative way to foster a more therapeutic environment.

**Limitations**

Limitations of this study include the use of convenience sampling of university undergraduate nursing students without a control group. Of the participants, 83.8% were Caucasian, all were female, and the age range was 18-31 years. This homogeneity precludes generalization to more diverse samples. The AQ-27 was only measured immediately pre- and post-intervention and further study is needed to determine the long-term effects of the IOOV program. Lastly, the reliance on self-report questionnaires may have led to social desirability bias.

**Conclusion**

Most of the limited research into stigma towards mental health patients has been qualitative with convenience sampling and small numbers of participants (Clarke, Usick, Sanderson, Giles-Smith, & Baker, 2014; Da Silva Elias, Tavares, & Cortez, 2013; Doyle, Keogh, and Morrissey, 2007; McCann, Clark, McConnachie, & Harvey, 2007; Plant & White, 2013; Ross & Goldner, 2009). This leads to difficulty in generalizing data across samples and weaker proof for practice change. These qualitative studies can provide knowledge of the scope of stigma and possible reasons for its existence. But quantitative studies are needed, especially in the U.S., for evidence-based practice decisions regarding stigma interventions. This DNP project validated the effectiveness of IOOV in decreasing mental illness stigma in BSN students. Further research on IOOV and other interventions and its impact on stigma needs to be conducted. Future studies should also include a follow-up time to determine whether the change in stigma had a lasting effect.
References


social distance from people who have serious mental illness. *Psychiatric Services, 52*(7): 953-958.


Roehrig, C. (2016). Mental disorders top the list of the most costly conditions in the United States: $201 billion. *Health Affairs, 35*, (6),1130-1135.


Appendix A

AQA-27
ID Number __________________________ Date ____________

PLEASE READ THE FOLLOWING STATEMENT ABOUT HARRY:

Harry is a 30 year-old single man with schizophrenia. Sometimes he hears voices and becomes upset. He lives alone in an apartment and works as a clerk at a large law firm. He had been hospitalized six times because of his illness.

NOW ANSWER EACH OF THE FOLLOWING QUESTIONS ABOUT HARRY. CIRCLE THE NUMBER OF THE BEST ANSWER TO EACH QUESTION.

1. I would feel aggravated by Harry.
   1  2  3  4  5  6  7  8  9
   not at all  very much

2. I would feel unsafe around Harry.
   1  2  3  4  5  6  7  8  9
   no, not at all  yes, very much

3. Harry would terrify me.
   1  2  3  4  5  6  7  8  9
   not at all  very much

4. How angry would you feel at Harry?
   1  2  3  4  5  6  7  8  9
   not at all  very much

5. If I were in charge of Harry’s treatment, I would require him to take his medication.
   1  2  3  4  5  6  7  8  9
   not at all  very much

6. I think Harry poses a risk to his neighbors unless he is hospitalized.
7. If I were an employer, I would interview Harry for a job.

1 2 3 4 5 6 7 8 9
not likely
very likely

8. I would be willing to talk to Harry about his problems.

1 2 3 4 5 6 7 8 9
not at all
very much

9. I would feel pity for Harry.

1 2 3 4 5 6 7 8 9
none at all
very much

10. I would think that it was Harry’s own fault that he is in the present condition.

1 2 3 4 5 6 7 8 9
no, not at all
yes, absolutely so

11. How controllable, do you think, is the cause of Harry’s present condition?

1 2 3 4 5 6 7 8 9
not at all under personal control
completely under personal control

12. How irritated would you feel by Harry?

1 2 3 4 5 6 7 8 9
not at all
very much

13. How dangerous would you feel Harry is?

1 2 3 4 5 6 7 8 9
not at all
very much
14. How much do you agree that Harry should be forced into treatment with his doctor even if he does not want to?

1 2 3 4 5 6 7 8 9
not at all very much

15. I think it would be best for Harry’s community if he were put away in a psychiatric hospital.

1 2 3 4 5 6 7 8 9
not at all very much

16. I would share a car pool with Harry every day.

1 2 3 4 5 6 7 8 9
not likely very much likely

17. How much do you think an asylum, where Harry can be kept away from his neighbors, is the best place for him?

1 2 3 4 5 6 7 8 9
not at all very much

18. I would feel threatened by Harry.

1 2 3 4 5 6 7 8 9
no, not at all yes, very much

19. How scared of Harry would you feel?

1 2 3 4 5 6 7 8 9
not at all very much

20. How likely is it that you would help Harry?

1 2 3 4 5 6 7 8 9
definitely would not help
definitely would help
21. How certain would you feel that you would help Harry?

   1  2  3  4  5  6  7  8  9
not at all certain  absolutely certain

22. How much sympathy would you feel for Harry?

   1  2  3  4  5  6  7  8  9
none at all  very much

23. How responsible, do you think, is Harry for his present condition?

   1  2  3  4  5  6  7  8  9
not at all responsible  very much responsible

24. How frightened of Harry would you feel?

   1  2  3  4  5  6  7  8  9
not at all  very much

25. If I were in charge of Harry’s treatment, I would force him to live in a group home.

   1  2  3  4  5  6  7  8  9
not at all  very much

26. If I were a landlord, I probably would rent an apartment to Harry.

   1  2  3  4  5  6  7  8  9
not likely  very likely

27. How much concern would you feel for Harry?

   1  2  3  4  5  6  7  8  9
none at all  very much
The AQ-27 Score Sheet

Name or ID Number________________________________ Date ____________

The AQ-27 consists of 9 stereotype factors; scores for each factor are determined by summing the items as outlined below: **Note**: items are reversed score prior to summing up for the Avoidance scale.

- _______ Blame = AQ10 + AQ11 + AQ23
- _______ Anger = AQ1 + AQ4 + AQ12
- _______ Pity = AQ9 + AQ22 + AQ27
- _______ Help = AQ8 + AQ20 + AQ21
- _______ Dangerousness = AQ2 + AQ13 + AQ18
- _______ Fear = AQ3 + AQ19 + AQ24
- _______ Avoidance = AQ7 + AQ16 + AQ26 (Reverse score all three questions)
- _______ Segregation = AQ6 + AQ15 + AQ17
- _______ Coercion = AQ5 + AQ14 + AQ25

The higher the score, the more that factor is being endorsed by the subject.
## Appendix B

Demographic Form

<table>
<thead>
<tr>
<th>Number</th>
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| Gender | Male  
Female |
| Ethnicity | White  
Black  
Hispanic  
Native American  
Asian  
Middle Eastern  
Mixed Race  
Other |
| Age in years |  |
| Education Level | Traditional BSN  
Second degree BSN  
RN to BSN |
| State/Country of Origin |  |