

Nursing as a Process of Humanization: The Impact of an Undergraduate Mental Health Nursing  
Course on the Prejudice Toward People Living with a Mental Illness

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## **Abstract**

### **Nursing as Humanization: The Impact of an Undergraduate Mental Health Nursing Course on the Prejudice Toward People Living with a Mental Illness**

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The stigma attached to mental illness can be more detrimental than the illness itself. The undergraduate mental health nursing course is an optimal time to cultivate students' positive attitudes toward people living with a mental illness and address the presence of prejudice against such individuals. Two quasi-experimental studies were conducted to determine the impact of an undergraduate mental health nursing course on students' attitudes toward people living with a general mental illness, depression, and schizophrenia.

The first study used a quasi-experimental single-group pretest posttest design. The sample included nursing students ( $N = 44$ ) in an accelerated Bachelor of Science in Nursing program in New York City. The intervention was the undergraduate mental health nursing course. Students completed pretest data at the beginning of the 2021 summer term and posttest data at the end of the term. Prejudice toward the mental health conditions of general mental illness, depression, and schizophrenia were measured through the use of three shortened, condition-specific versions of the Prejudice towards People with Mental Illness scale: Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV); Prejudice towards People with Depression, Shortened Version (PPD-SV); and Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV) scale. Each of the three instruments has the same four subscales that represent dimensions of prejudice: fear/avoidance, unpredictability, authoritarianism, and malevolence. Paired-samples  $t$  tests were used to analyze the data.

A statistically significant decrease in prejudice scores was found concerning general mental illness ( $p = .03$ ,  $d = 0.23$ ), depression ( $p = .01$ ,  $d = 0.31$ ), and schizophrenia ( $p = .013$ ,  $d = 0.34$ ). Subscale analysis revealed a significant decrease in attitudes of fear and avoidance toward people living with a general mental illness ( $p < .001$ ,  $d = 0.46$ ), and schizophrenia ( $p = .001$ ,  $d = 0.54$ ), but not for depression. Attitudes regarding the unpredictability of those living with a mental health condition significantly decreased regarding the conditions of general mental illness ( $p = .016$ ,  $d = 0.38$ ), and depression ( $p = .001$ ,  $d = 0.5$ ), but not schizophrenia ( $p = .062$ ). No significant change was found in the subscales of authoritarianism and malevolence for any of the three conditions.

The second study used a quasi-experimental, pretest-posttest, nonequivalent-groups design with nursing students ( $N = 126$ ) from the same accelerated Bachelor of Science in Nursing program in New York City. Participants were assigned either to an intervention group ( $n = 72$ ), wherein they completed a mental health nursing course, or a control group ( $n = 54$ ), wherein they completed a pediatric/maternal health nursing course. Data were collected from two cohorts of students in the fall 2021 and spring 2022 terms. All the participants completed a pretest at the beginning and a posttest upon completion of the course. The PPMI-SV, PPD-SV, and PPS-SV were used to assess students' attitudes toward people living with a general mental illness, depression, and schizophrenia. The second study also measured the attitudes toward the recovery of individuals living with a mental illness through the Consumer Optimism Scale. Two-way mixed analyses of variance were used to determine the differences in students' attitudes. Pearson product-moment correlation analyses were used to assess the relationship between prejudice toward people who experience a mental illness and attitudes toward recovery.

A statistically significant decrease in prejudice toward those living with a mental illness was found among the students who took the mental health nursing course compared to students who took a pediatric/maternal health nursing course ( $p = .033$ , partial  $\eta^2 = .062$ ). There was no significant difference between groups in attitudes toward people living with depression, but a statistically significant decrease was found over time, regardless of the course taken ( $p = .008$ , partial  $\eta^2 = .056$ ). There was no significant change in either group regarding those with schizophrenia, toward whom the highest degree of negative attitudes was found. Furthermore, a subscale analysis revealed that, among the facets of prejudice, the intervention had the most positive impact on fear/avoidance for general mental illness ( $p = .040$ , partial  $\eta^2 = .058$ ) and schizophrenia ( $p < .001$ , partial  $\eta^2 = .164$ ). There was no impact on authoritarian or malevolent attitudes. Additionally, the mental health nursing course had no measurable impact on students' attitudes toward recovery in mental health. However, a moderate-to-strong negative relationship was found between recovery attitudes and prejudice toward people who experience a mental illness ( $r = -.43$  to  $-.60$ ).

These results show that a mental health course with elements to encourage amelioration of negative attitudes toward those with mental illness led to modest improvements in attitudes. Major curricular reform is needed to optimize the impact of undergraduate education. Possible changes include a more holistic approach toward mental health that does not over accentuate the biomedical model, the use of nontraditional clinical sites that provide students an opportunity to interact with those further along in their recovery, and the inclusion of those in recovery in the curriculum.

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## **Chapter I**

### **Introduction to the Dissertation**

In my experience it has been mostly health professionals who have been at fault when it comes to treating me with respect and dignity...overhearing the comments of nurses in [the emergency department] or on the ward, and in some cases these comments were said directly to me. They included: 'It's your own fault you're here' and (most hurtful of all) 'Don't you think we have better things to do, treating people with real problems?' — Nadia, after seeking care (Thornicroft et al., 2007, p. 119)

### **Background**

According to the World Health Organization (2022), close to a billion people worldwide, almost 12% of the earth's population, met the criteria for a mental illness in 2019. These illnesses encompass a wide range of mental health disorders including eating disorders, anxiety disorders, autism spectrum disorder, and dementia. The stigma attached to mental illness must be acknowledged, challenged, and diminished within undergraduate nursing education. Stigma is a form of dehumanization, devaluation, and theft of personhood (Yanos, 2018). In past research, nurses have self-reported stigmatizing beliefs including authoritarian attitudes that ultimately diminish care (Arvaniti et al., 2009). Caring for those who have a mental illness is not just an occurrence among specialized mental health nurses, as the prevalence of mental illness assures that all nurses will care for such individuals no matter the specialty (Bingham & O'Brien, 2018). Furthermore, undergraduate nursing students have also self-reported detrimental stigmatizing attitudes (Palou et al., 2021). Even a small amount of stigmatization among nurses can lead to innumerable deleterious encounters (Hinshaw & Stier, 2008). Undergraduate nursing education

is a pivotal time to help students develop positive attitudes toward people who experience a mental illness and thus optimize care (Happell et al., 2019).

### **The Stigma Attached to Mental Illness**

The stigma attached to mental illness can be just “as harmful as the symptoms” (Feldman & Crandall, 2007, p. 137). In healthcare, stigma can place those who have a mental illness on the receiving end of coercive and discriminatory practices that result in treatment disparities (Stuart et al., 2011). Thus, some describe stigma as being worse than the illness itself (Thornicroft et al., 2016).

An integrative review by de Jacq and colleagues (2016) revealed that nurses' attitudes toward people who live with a mental illness vary. Both positive and negative results have been obtained. Nursing students have self-reported some of the same negative attitudes as registered nurses toward people living with a mental illness, including authoritarian attitudes (Palou et al., 2021) and an increased desire for social distance (Poreddi et al., 2015). Interventions that seek to cultivate positive attitudes toward people living with a mental illness have been either classroom based, clinically based, or both combined. Undoubtedly, the greatest opportunity to address these negative attitudes is the undergraduate mental health nursing course, wherein theoretical and clinical interventions can be synergized and optimized with every undergraduate nursing student (Happell et al., 2018).

### **Recovery in Mental Health**

Stigmatizing attitudes and attitudes toward recovery in mental health can be thought of as opposite sides of a spectrum. Stigmatizing attitudes result in fear and avoidance, whereas positive attitudes toward recovery lead to engagement and support. While the former results in

coercive, authoritarian, and reductive interventions, treating the illness and not the individual, the latter cultivates collaboration, autonomy, and personhood.

The concept of recovery did not originate from healthcare professionals but from the people experiencing a mental illness (Deegan, 1988). A systematic review by Gyamfi and colleagues (2020) showed that nurses did not endorse some of the core concepts of recovery. There is little research about undergraduate nursing students' attitudes toward recovery, and the results are inconsistent. Students' attitudes after completing a mental health clinical rotation were found to have become significantly more optimistic in some studies (Foster et al., 2019) and significantly more pessimistic others (Choi et al., 2016).

### **Gaps in the Research**

Past research on nurses' attitudes toward people living with a mental illness have made limited use of theoretical frameworks (de Jacq, 2018). Furthermore, a vast majority of the instruments used in stigma research lack psychometric validation (Fox et al., 2018). This lack can be seen in research conducted by nurses as well (Palou et al. 2019). Additionally, there is a paucity of research on the attitudes of undergraduate nursing students regarding recovery and the interventions that may develop more positive attitudes (Gyamfi et al., 2020). Consequently, this dissertation aims to address these research gaps by exploring the impact of an undergraduate mental health nursing course on students' attitudes toward people living with a mental illness as well as their attitudes toward recovery and the relationship between the two.



## Specific Aims

### **Aim 1**

To assess the impact of an undergraduate mental health nursing course on student attitudes toward people living with a general mental illness, depression, or schizophrenia.

#### ***Research Question 1***

Does an undergraduate mental health nursing course impact the stigma attached to mental illness by nursing students as measured by the Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV) scale?

#### ***Research Question 2***

Does an undergraduate mental health nursing course impact the stigma attached to depression by nursing students as measured by the Prejudice towards People with Depression, Shortened Version (PPD-SV) scale?

#### ***Research Question 3***

Does an undergraduate mental health nursing course impact the stigma attached to schizophrenia by nursing students as measured by the Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV) scale?

### **Aim 2**

To assess the impact of an undergraduate mental health nursing course on nursing student attitudes toward the recovery of people living with a mental illness.

#### ***Research Question 4***

Does an undergraduate mental nursing health course impact nursing student attitudes toward recovery as measured by the Consumer Optimism Scale?

### **Aim 3**

To examine the relationship between student attitudes toward the recovery of people living with a mental illness and the stigma attached to mental illness.

### ***Research Question 5***

Among undergraduate nursing students, what are the relationships between the attitudes toward recovery and the stigma attached to mental illness, as measured by the pretest Consumer Optimism, PPMI-SV, PPD-SV, and PPS-SV scales?

### **Changes Made Since the Proposal**

The first study, which used a quasi-experimental single-group pretest posttest design, was not originally intended to become the focal point of chapter II. However, the findings provided foundational evidence for the impact of the intervention and for the limitations of study's design. Thus, it was deemed invaluable to the dissertation warranting a stand-alone chapter. Randomization was to be utilized in allocating the sample to the intervention and control groups for the second study. However, the researcher mistakenly did not oversee this process and the students were assigned alphabetically by last name instead.

### **Organization of the Dissertation**

The dissertation has five chapters. Chapter I provides a brief background of the current topic, specific aims, changes made since the proposal, and plans for dissemination. The second through fourth chapters follow an arc by acknowledging, challenging, and diminishing stigma. Chapter II addresses Aim 1 through a quasi-experimental single-group pretest posttest study. Chapter III further explores Aim 1 through a more rigorous study that uses a quasi-experimental, pretest-posttest, nonequivalent-group design. Chapter IV addresses Aims 2 and 3 through a

quasi-experimental, pretest-posttest, nonequivalent-group design. Chapter V offers a summary of the three chapters.

### **Dissemination**

The following manuscripts will be submitted for dissemination:

1. “Acknowledging Stigma: Levels of Prejudice Among Undergraduate Nursing Students Toward People Living with a Mental Illness — A Quasi-Experimental Single-Group Study” will be submitted to *Issues in Mental Health Nursing*.
2. “Challenging Stigma: The Impact of an Undergraduate Mental Health Nursing Course on Prejudice Toward People Living with Mental Illness — A Quasi-Experimental Controlled Study” will be submitted to the *Journal of Psychiatric and Mental Health Nursing*.
3. “Diminishing Stigma: A Missed Opportunity to Cultivate Positive Attitudes About Recovery in Mental Health Among Undergraduate Nursing Students — A Quasi-Experimental Controlled Study” will be submitted to *Nurse Educator*.

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## **Chapter II**

### **Acknowledging Stigma: Levels of Prejudice Among Undergraduate Nursing Students**

#### **Toward People Living with a Mental Illness**

I hope to God I never get any serious mental health issues again, because I couldn't handle being treated like I'm nobody, and have no say in how I'm treated. — Eva, after an experience with healthcare workers (Thornicroft et al., 2007, p. 119)

#### **Mental Illness and Stigma**

The stigma attached to mental illness results in stereotypes, prejudice, and discrimination and has been described “as having worse consequences than the conditions themselves” (Thornicroft et al., 2016, p.1123). Nurses have held the same stigmatizing attitudes as the general public, to the detriment of patient care (Inan et al., 2019). Furthermore, just like professional nurses, nursing students have also shown negative attitudes toward those living with a mental illness (Foster et al., 2019). Every student nurse will come across patients living with a mental illness, no matter the specialty or setting they eventually choose. Nursing educators have the unique and invaluable opportunity of helping to shape positive attitudes among nursing students toward people living with a mental illness (Palou et al., 2019). One of the greatest opportunities can be found during the undergraduate mental health nursing course where students are systematically exposed to knowledge about mental illness, perspectives of those living with mental illness, and experiences caring for those with mental illness (Henderson et al., 2007). As poignantly stated by Moxham et al. (2016), “Stigma is learned, and concomitantly can be unlearned” (p. 171).

People who experience mental illness not only deal with the illness itself, but also the stigma attached to mental illness (Petkari et al., 2018). Stigma can be thought of as a negative mark or brand that creates distinct out-groups that are looked down upon, devalued, and dehumanized as tarnished and defective (Goffman, 1963). The stigma attached to mental illness can manifest in various ways. Structural stigma legally limits the rights of those diagnosed with mental illness. Community stigma can limit an individual's access to housing, employment, or education. Self-stigma occurs when an individual internalizes and believes the delimiting untruths of stigma, resulting in the loss of human potential (Yanos, 2018). Stigma has numerous healthcare ramifications. When individuals do seek help, they can experience the results of healthcare workers' stigmatizing attitudes, including authoritarian and coercive treatments that are dehumanizing (Thornicroft et al., 2007). Stigma transforms a person into an illness (Yanos, 2018).

### **Theoretical Framework**

This study was guided by the Mental Illness Stigma Framework (MISF) developed by Fox et al. (2018; Figure 2.1). The MISF was created to synthesize a diverse body of stigma research and diverse theoretical frameworks, including those of Corrigan and Shapiro (2010) and Thornicroft et al. (2016). The MISF states that the stigma of mental illness is established by culture and results in a "socially devalued identity" (Fox et al., 2018, p. 351). At the individual level, the framework is divided into two categories with unique stigma mechanisms, namely the perspective of the stigmatizer and the perspective of the stigmatized. This study focuses on the perspective of the stigmatizer. The three mechanisms of stigma that derive from the perspective of the stigmatizer are stereotypes, prejudice, and discrimination. Stereotypes represent cognitive responses that the stigmatizer may have to the stigmatized; prejudice represents affective

responses; and discrimination represents behavioral responses. Corresponding expressions and examples of these mechanisms are shown in Table 2.1.

Stereotypes, prejudice, and discrimination can lead to various deleterious states for those with mental illness, and it is worth repeating that the stigma of mental illness can often be worse than the mental illness itself (Thornicroft et al., 2016). Those who are stigmatized may be excluded socially, feared, pitied, coerced, thought to be incompetent, and receive inequitable health care (Fox et al., 2018). This study focuses on the mechanism of prejudice. According to Kenny et al. (2018), prejudice is defined as a “negative outgroup attitude” and is an antecedent of discrimination that “drives discriminatory behavior” (p.1). Stereotypes also give rise to prejudice; therefore, prejudice is a “central component” of stigma mechanisms and is “the avenue with the most potential to modify” (Kenny et al., 2018, p. 2).

### **Stigma in Nursing and the Nursing Knowledge Perspective**

Research has shown that professional nurses around the world report negative attitudes toward those with mental illness. This occurs to varying degrees, with more negative attitudes being associated with the severity of the illness—those most affected by mental illness are stigmatized to a greater degree (de Jacq et al., 2016). Similarly, these negative attitudes have been found in undergraduate nursing students (Palou et al., 2019; Heim et al., 2020).

One of the core principles of nursing is humanization (Travelbee, 1969; Willis et al., 2008). Ultimately, stigma is the dehumanization of those with mental illness; therefore, stigma is the antithesis of optimal nursing practice and accurate nursing knowledge. Nursing educators must not only be aware of stigma but must also seek to abolish stigma in thoughts, attitudes, and actions. Nurses can challenge and eliminate stigma by providing humanizing care to every patient.



## **Undergraduate Nursing Education Interventions**

A literature review focused on quantitative studies was conducted to measure how undergraduate nursing educational interventions impacted the stigma of mental illness. A total of 37 studies were found within the selected timeframe (2000–2022). The studies were conducted in 20 countries on five continents. Of these studies, 9 focused on the classroom (24.3%), 18 focused on clinical interventions (48.6%), and 10 focused on a combination of the two (27%). Results were mixed in terms of reducing stigma. Both Chan and Cheng (2001) and Madianos et al. (2005) found significant reductions in stigma on the Opinions about Mental Illness scale after completion of a mental health nursing course. However, Tambag (2018) found that a mental health course had no significant impact on 57 fourth-year nursing students' beliefs and attitudes toward mental illness.

## **Psychometric Limitations of Instruments**

Altogether 25 different instruments were used in these studies, with the overwhelming majority being self-report instruments using Likert-type scales. Kenny et al. (2018) note that many issues exist with the psychometrics of stigma-measuring instruments and that “2/3 of all published measures of stigma have not had any psychometric evaluations” (p. 2). Many of the instruments, including the ones most often used, contain double-barreled items that ask two questions at once, that have not been replicated by factor analysis, and that may promote response bias by having unbalanced scales with an unequal number of positive and negatively keyed items (Kenny et al., 2018).

## **Gaps in the Literature and Goals of the Current Study**

Out of 37 quantitative studies reviewed, only four (10.8%) were conducted in the United States. Eleven studies (29.7%) were conducted in Australia, even though the United States has

13 times the population. The paucity of research on stigma in the United States is not just limited to undergraduate nursing education, but extends to professional nursing as well (de Jacq et al., 2016). This study aimed to remedy this lack of data. Furthermore, this study crossed a threshold and introduced valid, reliable, sensitive, and accessible instruments in stigma research by using the shortened disorder-specific versions of the Prejudice towards People with Mental Illness (PPMI) scale for the first time in the United States and for the first time in an undergraduate nursing population. The ultimate goal of this study was to explore the impact of an undergraduate mental health nursing course on prejudice toward people with different forms of mental illness. The following research questions (RQ) were explored:

***Research Question 1***

Does an undergraduate mental health nursing course impact the stigma attached to mental illness by nursing students as measured by the Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV) scale?

***Research Question 2***

Does an undergraduate mental health nursing course impact the stigma attached to depression by nursing students as measured by the Prejudice towards People with Depression, Shortened Version (PPD-SV) scale?

***Research Question 3***

Does an undergraduate mental health nursing course impact the stigma attached to schizophrenia by nursing students as measured by the Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV) scale?

## **Methods**

### **Study Design**

This study used a single-group pretest-posttest quasi-experimental design.

### **Ethical Considerations**

The study was approved by the institutional review board at Teachers College, Columbia University. Written consent was obtained from the nursing school where the study was conducted. Informed consent was obtained from each participant. Participants who completed both the pretest and posttest were given a \$10 electronic gift card.

### **Participants and Setting**

The study used a convenience sample of nursing students in an accelerated bachelor of science in nursing (ABSN) program in New York City. The ABSN program is 15 months long, and students are required to hold a non-nursing bachelor's degree prior to enrolling. All 56 students in an undergraduate mental health nursing class, which is offered in the second term of the program, were invited to participate in the study. The inclusion criteria were students' ability to provide consent, voluntary participation, and enrollment in the mental health nursing course. Exclusion criteria were not completing either the pretest and posttest.

### **Procedure**

Students were emailed a week before the 2021 summer term to notify them of the study. On the first day of the course, after the syllabus was presented but before any course content was covered, the study purpose and methods were explained to the students. After informed consent was obtained students who wished to participate were invited to complete the pretest via a link sent through Zoom. Students then completed the course as they normally would. At the end of the course, after all content had been presented and clinical experiences completed, students

were again sent a link via Zoom to complete the posttest. Students were also sent an email with the posttest link which would remain active for two weeks after the conclusion of the course. This was to account for the possibility that students may not have had the time to complete the posttest while preparing for final exams. Data were collected via Qualtrics (<https://www.qualtrics.com>), and specific settings were used to require students to answer all questions before moving on to the next page to ensure no data were missing.

### **Intervention**

The intervention in this study was an undergraduate mental health course. Over 12 weeks, the students completed 45 classroom hours and 30 clinical hours. The classroom component was co-taught by the researcher and a colleague. The classroom hours were completed over Zoom to account for social distancing and the clinical hours were conducted in person on locked acute inpatient psychiatric units. The course objectives include the following:

- Discuss ethical and legal practices in the care of the mentally ill client.
- Discuss mental health disparities and the impact of social policies and healthcare policy on vulnerable populations.
- Demonstrate awareness of self and patient reactions in a nurse-client relationship and effectively utilize therapeutic communication strategies with patients, peers, staff, and faculty.
- Demonstrate behavior that reflects core professional values and ethical principles in the care of the mentally ill patient.

### ***Classroom Experience***

Classroom experiences have been demonstrated to impact the stigma of mental illness to varying degrees with varying instruments (Duman et al., 2017; Emrich et al., 2003; Itzhaki et al.,

2017). Due to the COVID-19 pandemic, the classroom portion of the course was held over Zoom and lasted 4 hours each week. Teaching strategies included a combination of lecture, group discussions, small group work, exploring research articles, and autobiographical videos of people with first-hand experience of a mental health condition. All chapters of the required text were covered in the classroom (Videbeck, 2020). This included the following topics:

- The causes and effects of the stigma attached to mental illness
- Biopsychosocial theories of mental illness
- Therapeutic communication, therapeutic relationships, and therapeutic environments

### ***Clinical Experience***

Clinical experiences have also been demonstrated to impact the stigma of mental illness to varying degrees with varying instruments (Chadwick & Porter, 2014; de Assunção Gil et al., 2016; Romem et al., 2008). The current clinical experiences allowed students to apply the concepts they learned in the classroom in a patient care area, with a strong focus on therapeutic patient interactions. Students had to complete critical reflection assignments that allowed them to look back upon interactions with patients and examine and develop therapeutic communication techniques. Students had the opportunity to attend and participate in patient group activities such as music therapy, art therapy, goal groups, and medication information sessions. Students were encouraged to see the perspective of the patient and establish a therapeutic relationship through empathy. A 12-item, pass/fail summative evaluation completed by the clinical instructors included the criteria that the students needed to identify major concepts in mental health as well as factors that influenced mental health.

## **Instruments**

### ***Prejudice Towards People with Mental Illness, Shortened Versions***

Three instruments were used to measure prejudice toward those living with general mental illness, depression, and schizophrenia. The Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV), Prejudice towards People with Depression, Shortened Version (PPD-SV), and Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV) were created by Bizumic et al. (2022). The three instruments are derived from the original PPMI (Kenny et al., 2018). The author granted permission to use the instruments (see Appendix A). The PPMI measures prejudice, one of the three main mechanisms of stigma, the other two being stereotypes and discrimination. The PPMI has 28 items and uses a 9-point Likert scale. The PPMI is a balanced instrument that protects against response bias by using both positively and negatively phrased items (Table 2.2).

The PPMI covers four dimensions of prejudice with four distinct subscales: fear/avoidance (belief that those impacted by mental illness are dangerous and social distance is required; eight items), unpredictability (belief that the behavior of those impacted by mental illness is unreliable and not trustworthy; six items), authoritarianism (belief that it is acceptable to control, coerce, and force those impacted by mental illness into treatment and take away their rights; six items), and malevolence (belief that those impacted by mental illness are inferior and do not deserve sympathy or aid; eight items).

The PPMI-SV, PPS-SV, and PPD-SV retain all the previously stated qualities of the original PPMI, except that they each have 16 items instead of 28—four items for each facet of prejudice measured by the original PPMI. For each shortened instrument, an automated genetic

algorithm was used to select the 16 items from the original 28 in the PPMI. This automated genetic algorithm method was used to maximize the validity of the new shortened instruments and to retain “the variance of the longer measure with minimal loss of accuracy” (Bizumic et al., 2022, p. 3).

**Reliability and Validity.** The three instruments demonstrated good reliability in the current study: PPMI-SV (pretest  $\alpha = .82$ , posttest  $\alpha = .81$ ), PPD-SV (pretest  $\alpha = .73$ , posttest  $\alpha = .79$ ), PPS-SV (pretest  $\alpha = .85$ , posttest  $\alpha = .83$ ). Regarding validity, Bizumic et al. (2022) reported that the PPMI-SV, PPD-SV, and PPS-SV demonstrate convergent validity through correlations with known antecedents of prejudice, including generalized prejudice, social dominance orientation, and ethnocentrism. Additionally, item-level confirmatory factor analysis showed that “all items loaded significantly on their corresponding factors” (Bizumic et al., 2022, p. 4). Bizumic et al. (2022) calculated very high correlations between the PPMI-SV, PPD-SV, and PPS-SV with the original PPMI ( $r = .98$  to  $.99$ ). Correlations among the shortened versions in this study were: PPMI-SV to PPD-SV (pretest  $r = .66$ , posttest  $r = .68$ ), PPMI-SV to PPS-SV (pretest  $r = .81$ , posttest  $r = .80$ ), PPD-SV to PPS-SV (pretest  $r = .68$ , posttest  $r = .68$ ). Furthermore, as shown by Kenny and colleagues (2018) the PPMI has concurrent validity with the widely used Community Attitudes Toward Mental Illness scale ( $r = .78$ ).

**Scoring Instructions.** Each of the three instruments has 16 items and each instrument is scored independently of the others. After specified items are reverse-scored, the total instrument scores are calculated by summing items 1-16 items and dividing by 16. The fear/avoidance subscale score is the sum of items 1-4 divided by 4. The unpredictability subscale score is the sum of items 5-8 divided by 4. The authoritarianism subscale score is the sum of items 9-12 divided by 4. The malevolence subscale score is the sum of items 13-16 divided by 4. Higher

scores indicate a higher level of prejudice. All subscale scores were item means with a range from 1.0 to 9.0.

### ***Demographic Questionnaire***

The survey concluded with a short demographic questionnaire (Appendix C). This questionnaire sought to provide participants autonomy and inclusivity. Therefore, wherever possible, participants were encouraged to report demographic characteristics with a fill-in-the-blank option. Also, there was the option to not disclose demographic data on every item. The questionnaire asked participants about age, gender, ethnicity, and if they had a family member or friend who has experience with mental health issues.

### **Data Analysis**

Quantitative data were analyzed with IBM SPSS Statistics (Version 26). Descriptive statistics were used to summarize the baseline demographic characteristics of the sample, including reported age, gender, ethnicity, and if the student had a family member or friend who has experienced mental health issues. Prior to analyses, pertinent items were reverse-scored and item means for each of the three instruments along with the four subscales were calculated.

Item analyses showed that two items that were part of scales had negative item-total correlations, namely item 8, a reverse-scored item, on the PPMI-SV (-.09) and item 15 on the PPD-SV (-.006). All others had positive item-total correlations. Additionally, item 15 in the PPMI-SV diminished the Cronbach's alpha of the malevolence subscale to .49. Each subscale on the three instruments has only four items. Fewer than 10 items on a given scale commonly leads to lower Cronbach's alphas (Pallant, 2020). Subsequent statistical tests were run with and without these items and other than increasing subscale alpha scores, statistical conclusions did not meaningfully change and the three items were removed from the analysis. Thereafter, all



Cronbach's alphas showed moderate to high reliability (Hinton et al., 2014; Appendix D, Table A1).

Paired-samples *t* tests were used to determine if there were statistically significant mean differences between pretest and posttest scores on the PPMI-SV, PPD-SV, and PPS-SV, as well as the subscales in each instrument. Where nonnormality and outliers existed, the Wilcoxon signed-rank test, which is a non-parametric equivalent of the paired-samples *t* test, was used as a sensitivity analysis. A sensitivity analysis is a post-hoc analysis that alters statistical assumptions to explore if statistical conclusions are in alignment or disagreement with each other (Thabane et al., 2013).

## **Results**

In total, 44 students out of the 56 students in the course completed the pretest and posttest, which represented a 79% response rate.

### **Demographic Characteristics**

The students' ages ranged from 21 to 41 ( $M = 27.3$ ,  $SD = 5.49$ ). In terms of gender, 39 (88.6%) of the students identified as female, and 5 (11.4%) identified as male. Other genders were not reported by any student. The sample was multicultural and predominantly non-White (52.3%) with five different ethnicities reported. There were three students (6.8%) who preferred not to disclose their ethnicity. A majority of the students reported having a family member who has experienced a mental health issue (54.5%) and a friend who has experienced a mental health issue (52.3%).

The results are summarized in Table 2.3.

## **Paired-Samples *t* Tests for Prejudice Toward People Living with a Mental Illness, Depression, or Schizophrenia**

There was a statistically significant reduction in prejudice toward people living with a mental illness, depression, and schizophrenia after completion of the undergraduate mental health nursing course (Table 2.4). In the PPMI-SV, prejudicial attitudes toward people diagnosed with general mental illness decreased significantly from pretest ( $M = 4.07, SD = 1.03$ ) to posttest ( $M = 3.84, SD = 0.98$ ),  $t(43) = 2.25, p = .03, d = 0.23, 95\% CI [0.02, 0.43]$ . In the PPD-SV, prejudicial attitudes toward people diagnosed with depression decreased significantly from pretest ( $M = 3.73, SD = 0.79$ ) to posttest ( $M = 3.48, SD = 0.82$ ),  $t(43) = 2.68, p = .01, d = 0.31, 95\% CI [0.43, 2.68]$ . In the PPS-SV, prejudicial attitudes toward schizophrenia decreased with a statistically significant reduction in scores from pretest ( $M = 4.54, SD = 0.98$ ) to posttest ( $M = 4.21, SD = 0.94$ ),  $t(43) = 2.59, p = .013, d = 0.34, 95\% CI [0.07, 0.57]$ .

### **Subscales**

#### ***Fear/Avoidance***

The fear/avoidance subscales on the PPMI-SV and PPS-SV showed a statistically significant reduction in prejudice scores. In the PPMI-SV, attitudes of fear/avoidance toward people diagnosed with general mental illness decreased significantly from pretest ( $M = 4.62, SD = 1.57$ ) to posttest ( $M = 3.92, SD = 1.50$ ),  $t(43) = 4.45, p < .001, d = 0.46, 95\% CI [0.38, 1.02]$ . In the PPD-SV, attitudes of fear/avoidance toward people diagnosed with depression did not significantly change from pretest ( $M = 4.20, SD = 1.28$ ) to posttest ( $M = 3.98, SD = 1.14$ ),  $t(43) = 1.32, p = .193, d = 0.18, 95\% CI [-0.12, 0.57]$ . In the PPS-SV, attitudes of fear/avoidance toward people diagnosed with schizophrenia decreased significantly from pretest ( $M = 5.35, SD = 1.69$ ) to posttest ( $M = 4.44, SD = 1.68$ ),  $t(43) = 3.67, p = .001, d = 0.54, 95\% CI [0.41, 1.41]$ .

### ***Unpredictability***

The unpredictability subscales on the PPMI-SV and PPD-SV showed a statistically significant reduction in prejudice scores. In the PPMI-SV, attitudes regarding the unpredictability of those diagnosed with general mental illness decreased significantly from pretest ( $M = 5.66, SD = 1.24$ ) to posttest ( $M = 5.17, SD = 1.37$ ),  $t(43) = 2.51, p < .016, d = 0.38$ , 95% CI [0.1, 0.87]. Likewise, in the PPD-SV, attitudes regarding the unpredictability of those diagnosed with depression decreased significantly from pretest ( $M = 4.98, SD = 1.01$ ) to posttest ( $M = 4.43, SD = 1.20$ ),  $t(43) = 3.51, p = .001, d = 0.5$ , 95% CI [0.24, 0.88]. In the PPS-SV, attitudes regarding the unpredictability of those diagnosed with schizophrenia did not significantly change from pretest ( $M = 6.22, SD = 0.99$ ) to posttest ( $M = 5.84, SD = 1.13$ ),  $t(43) = 1.92, p = .062, d = 0.36$ , 95% CI [-0.02, 0.78].

### ***Authoritarianism and Malevolence***

No statistically significant differences were found on any of the authoritarianism or malevolence subscales. Many of the mean scores increased by a nonsignificant degree. The authoritarianism subscale of the PPMI-SV showed the greatest increase in prejudicial scores from pretest ( $M = 3.65, SD = 1.62$ ) to posttest ( $M = 4.01, SD = 1.65$ ) with a  $p$  value that approached statistical significance,  $t(43) = -1.99, p = .053, d = 0.22$ , 95% CI [-0.72, 0.005].

The Wilcoxon signed-rank test was used as a sensitivity analysis and was always in alignment with the significance values of the  $t$  tests, except for one test concerning the PPD-SV malevolence subscale. One extreme outlier in this subscale was defined as a boxplot value that exceeded three box lengths from the 25th or 75th percentile (Hinton et al. 2014). Here, the Wilcoxon signed-rank test resulted in a statistically significant reduction in prejudice scores, where the paired-samples  $t$  tests did not. The participant's mean pretest score of 2.33 was similar

to that of the sample's mean pretest score of 2.24. However, the participant's posttest score was 5.67, indicating increased prejudicial attitudes, while the sample's posttest score was 1.99. The items in the subscale were: "We, as a society, should be spending much more money on helping people with depression" (reverse-scored), "People who develop depression are genetically inferior to other people", and "People who develop depression are not failures in life" (reverse-scored). The participant was not an outlier in any other PPD-SV subscale. This discrepancy speaks to the impact that outliers may have on data. However, there was no justification to remove the outlier as it presented as a legitimate response. The subscale results are summarized in Table 2.5.

### **Discussion**

The research findings show that an undergraduate mental health nursing course is impactful in decreasing prejudicial attitudes toward those who experience mental illness. The overall scores of each of the three scales significantly moved in a less prejudicial direction with effect sizes between small and medium. The highest initial mean prejudice scores were found regarding schizophrenia, followed by general mental illness, and then depression, while posttest means followed the same pattern. This indicates that attitudes toward schizophrenia might have the greatest possibility for change. These findings are consistent with similar studies that measured the impact of an undergraduate mental health nursing course (Duman et al., 2017; Itzhaki et al., 2017; O'Ferrall-González et al., 2020).

Though the overall scores showed a significant and meaningful impact, the subscales showed far more mixed results. A majority of the fear/avoidance and unpredictability subscales showed significantly lower prejudice scores across all instruments at posttest. These findings are consistent with those of previous research showing that a mental health clinical rotation

significantly decreased measures of fear (Romem et al., 2008) and of desired social distance akin to fear/avoidance (Foster et al., 2019; Inan et al., 2019; Markström et al., 2009).

Conversely, all the authoritarianism and malevolence subscales showed no significant differences on the paired-samples *t* tests. It should be noted that the pretest means for authoritarianism and malevolence were lower than those of fear/avoidance and unpredictability, which suggests the possibility of floor effects that would make it difficult to show posttest changes. However, this study's posttest authoritarian and malevolence subscale means can be compared to the results of a study by Bizumic et al. (2022) that had a sample of 299 mental health professionals (MHP) and 427 members of the general population (GP) who completed the same three shortened instruments. An ANOVA (Appendix D, Table A2) showed that MHP authoritarian subscale scores were significantly lower than this study's posttest scores for all three mental health conditions ( $p < .001$ ). The MHP malevolence subscale scores were significantly lower for the condition of general mental illness ( $p < .05$ ) and schizophrenia ( $p < .001$ ). Additionally, the GP authoritarian scores were significantly lower than the nursing students in this study for the condition of general mental illness ( $p < .01$ ) and depression ( $p < .001$ ) with no significant difference found for schizophrenia. The GP malevolence subscale scores were not significantly different from the nursing students for the condition of general mental illness and schizophrenia. This shows that there is still room for prejudice scores to decrease despite authoritarian and malevolence scores currently being lower than that of the fear/avoidance and unpredictability subscales. Thus, floor effects were not present in the current study.

Nonetheless, no significant difference was found on any of the three malevolence subscales. Examples of malevolence subscale items that showed no significant change, and yet

the mean prejudice score increased, include: “People who become mentally ill are not failures in life,” and “People with schizophrenia do not deserve our sympathy.” This finding is in alignment with a study by Kenny and Bizumic (2016), in which the original 28-item PPMI was used to measure the impact of acceptance and commitment training or education about stigma and mental health. The results showed that malevolence scores increased to a statistically significant level after the interventions, while fear/avoidance, unpredictability, and authoritarianism decreased to a statistically significant level. The authors concluded that it is possible that a diminished inclination to help may result from addressing the stereotype that vast differences exist between those diagnosed with a mental illness and the general population.

No significant difference was found on any of the three authoritarian subscales. Examples of authoritarian subscale items that showed no significant change, and yet the mean prejudice score increased, include: “People who are mentally ill should be forced to have treatment,” “Those who have depression should not be allowed to have children,” and the reverse-scored item “Society does not have a right to limit the freedom of people with schizophrenia.”

These findings echo the results of Bingham and O'Brien (2018), who measured the impact of a mental health clinical rotation on stigmatizing attitudes using the Corrigan (2012) Attribution Questionnaire. Their findings showed a significant positive change in stereotypes of fear and avoidance, while coercion, akin to authoritarianism, showed a nonsignificant negative change. The authors reported that acute inpatient clinical settings “could reinforce negative stereotypes” (p. 5), which may explain the nonsignificant negative change in coercion in their study, as well as the nonsignificant negative change in authoritarianism in the current study. Similarly, Stuhlmiller and Tolchard (2019) conducted an experimental study where both groups received the same didactic classroom experience but had different clinical environments. The

students who had a clinical rotation in a recovery-oriented community setting significantly reduced self-reported authoritarianism, as measured by the Opinions about Mental Illness scale, while a clinical rotation in an acute inpatient hospital setting did not (Stuhlmiller & Tolchard, 2019). Furthermore, Moxham and colleagues (2016) found that traditional mental health clinical environments such as hospital-based psychiatric units, had no impact on measures of desire to socially distance from those diagnosed with a mental illness when compared to a recovery-oriented clinical environment.

There is no national body in the United States that oversees rates of involuntary treatment, involuntary admission, and the use of seclusion and restraint. However, a recent study used available data from 25 states to reveal that from 2011 to 2018 the mean rate of involuntary commitment “increased by three times the mean state population increase” (Lee & Cohen, 2021, p. 61). New York was not among the states that the researchers had data for. Anecdotally, the researcher of the current study has led previous clinical groups on the same units used in the present study. During the morning handoff it was not uncommon to note that the majority of the patients on the unit were there involuntarily.

It is possible that the students of the current study had authoritative attitudes reinforced as the clinical experiences occurred in authoritative environments where patient’s rights do get taken away. These are also environments where nurses, whom students may understandably emulate, at times engage in authoritative involuntary treatment that includes forced medication, seclusion, and restraint.

### **Limitations**

The limitations of the study include the lack of a control group and lack of randomization. Furthermore, the instruments used were self-report instruments, and response

bias is a possibility. Generalizability may be limited as the study was conducted in one nursing school in New York City. Replication studies are needed to corroborate findings. Despite these limitations, the results show that some facets of prejudice were more susceptible to positive change than others.

### **Implications and Future Research**

Undergraduate education is one of the most important opportunities to impact nurses' attitudes toward people experiencing a mental illness. Therefore, the nonsignificant differences on the authoritarianism and malevolence subscales are high cause for concern. As previously stated, professional nurses share some of the general public's stigmatizing attitudes, to the detriment of patient care (Inan et al., 2019). This undergraduate mental health nursing course was successful in impacting some facets of prejudice more so than others. But if these prejudicial attitudes are not addressed at the pre-licensure level, it is unlikely that they will ever be addressed.

Future mental health nursing courses may benefit from including diverse active learning strategies to reduce prejudice. One such strategy is a mental simulation called imagined contact which has been shown to reduce prejudice toward those living with a mental illness (Miles & Crisp, 2014). For example, students could be given a prompt to imagine a positive interaction with someone who lives with schizophrenia. It is necessary that this is framed as a positive interaction and not just any interaction. This is a brief active learning strategy that may possibly promote positive attitudes toward people who live with a mental illness.

Further research is needed on the current impact of undergraduate mental health courses and subsequently augmentations to the course that potentiate destigmatization including further exploration and coverage of nursing knowledge and theory, humanism, and concepts of



recovery, as well as highlighting the holistic biopsychosocial model rather than the one-dimensional biomedical model. Additionally, clinical sites beyond the traditional acute inpatient care settings, which include patients further along the journey of recovery, may be beneficial (Moxham et al., 2016). The shortened versions of the PPMI have proven to be valuable instruments in detecting the degree of prejudicial attitudes as well as specific facets of prejudice. Future development and differentiation of these instruments should be applied to different mental health disorders such as bipolar disorder, eating disorders, and substance use disorder. This may lead to specific interventions to address and diminish prejudicial attitudes. Replication studies are highly encouraged as this study occurred in the summer of 2021 in the second year of the COVID-19 pandemic. Didactic activities were held through Zoom not in person as they normally would be. Thus, replication studies that include in-person classroom experiences are needed to validate or refute the current findings. Such studies would benefit from a stronger study design that utilizes a control group and randomization. Also, a qualitative arm to future studies may elucidate malevolent attitudes.

### **Conclusion**

This study provides evidence that stigma is not immutable and is amenable to change in a more humanizing direction with less prejudice. It also shows that much more progress must be made, specifically regarding authoritarian and malevolent prejudices towards those experiencing a mental illness. The historian Howard Zinn once said, “You can’t be neutral on a moving train” (Zinn, 2018). If progress is to be made, an honest and critical look at undergraduate mental health nursing education is necessary. Eva, quoted in the epigraph to this article, felt devalued, having her very selfhood stripped away after coming into contact with healthcare workers. Her

words beckon to, motivate, and confront nursing educators to truly challenge stigma. Her words are worth reiterating until similar experiences are no longer repeated.

“I hope to God I never get any serious mental health issues again, because I couldn't handle being treated like I'm nobody, and have no say in how I'm treated.” — Eva (Thornicroft et al., 2007, p. 119)

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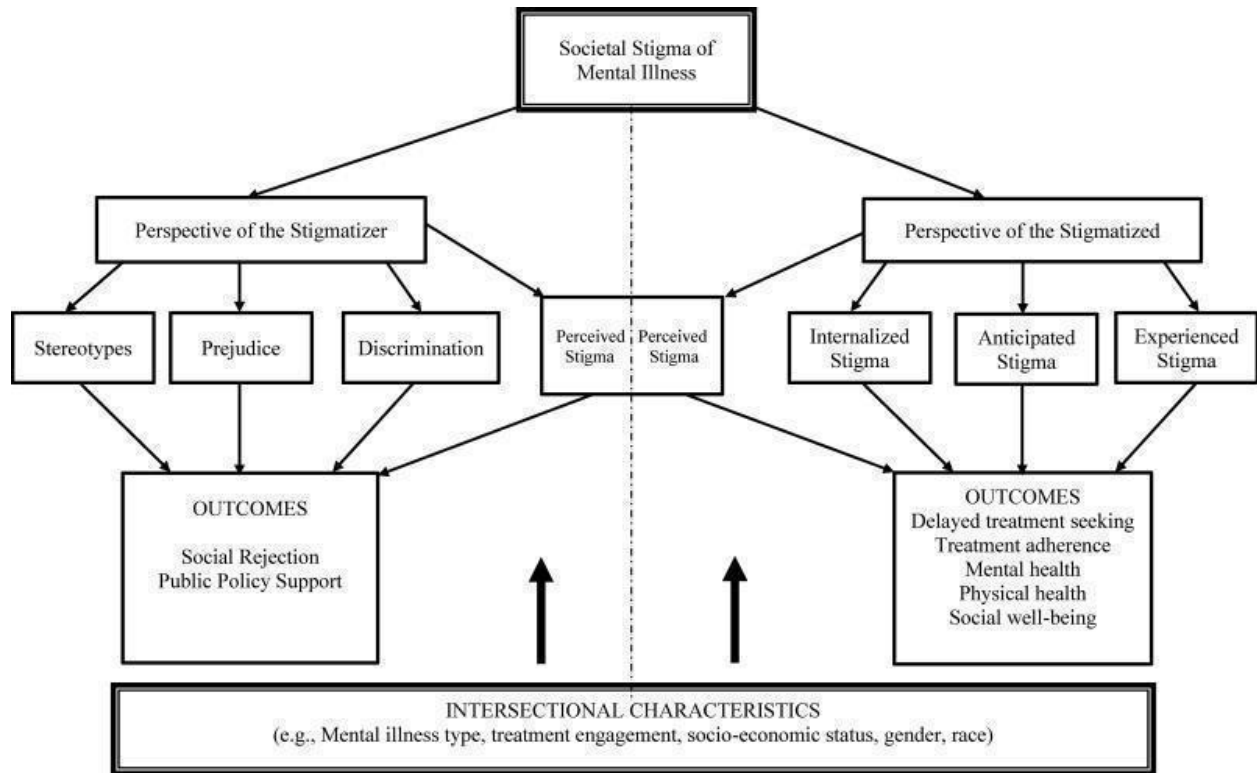
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**Figure 1**

*Mental Illness Stigma Framework*



*Note:* From “Conceptualizing and measuring mental illness stigma: The mental illness stigma framework and critical review of measures,” by Fox, A. B., Earnshaw, V. A., Taverna, E. C., & Vogt, D., 2018, *Stigma and Health*, 3(4), 348. Copyright 2018 American Psychological Association. Reprinted with permission.

**Table 2.1**

*Mechanisms of Stigma*

<b>Mechanism</b>	<b>Expression</b>	<b>Example</b>
Stereotypes	Beliefs	Spiders are dangerous
Prejudice	Attitudes	I don't like spiders
Discrimination	Behaviors	I will avoid spiders



**Table 2.2**

*Example Instrument Items Concerning Prejudice*

Instrument	Example Item
PPMI	I would find it hard to talk to someone who has a mental illness.
PPMI-SV	I would find it hard to talk to someone who has a mental illness.
PPS-SV	I would find it hard to talk to someone who has schizophrenia.
PPD-SV	I would find it hard to talk to someone who has depression.

*Note:* Prejudice towards People with Mental Illness (PPMI), Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV), Prejudice towards People with Depression, Shortened Version (PPD-SV), and Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV).

**Table 2.3***Demographic Characteristics*

Characteristic	<i>n</i>	%
Age in years		
20–29	36	81.8
30–39	5	11.4
≥ 40	3	6.8
Gender		
Female	39	88.6
Male	5	11.4
Ethnicity		
African American or Black	4	9.1
Asian, Asian American, or East Asian	8	18.2
Hispanic or Latino	10	22.7
White	18	40.9
More than one	1	2.3
Prefer not to say	3	6.8
A family member has experienced a mental health issue		
Yes	24	54.5
No	18	40.9
Prefer not to say	2	4.5
A friend has experienced a mental health issue		
Yes	23	52.3
No	20	45.5
Prefer not to say	1	2.3

*Note:* *N* = 44

**Table 2.4***Paired-Samples t Tests with Effect Sizes for Prejudice Toward People Living with a Mental**Illness, Depression, or Schizophrenia*

Variable	Pretest		Posttest		<i>t</i> (43)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
PPMI-SV	4.07	1.03	3.84	0.98	2.25	.03	0.23
PPD-SV	3.73	0.79	3.48	0.82	2.68	.01	0.31
PPS-SV	4.54	0.98	4.21	0.94	2.59	.013	0.34

*Note:* *N* = 44. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,

PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice

towards People with Schizophrenia, Shortened Version.

**Table 2.5***Paired-Samples t Tests with Effect Sizes for Prejudice Subscales*

Variable	Pretest		Posttest		<i>t</i> (43)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Fear/Avoidance							
PPMI-SV	4.62	1.57	3.92	1.50	4.45	<.001	0.46
PPD-SV	4.20	1.28	3.98	1.14	1.32	.193	0.18
PPS-SV	5.35	1.69	4.44	1.68	3.67	.001	0.54
Unpredictability							
PPMI-SV	5.66	1.24	5.17	1.37	2.52	.016	0.38
PPD-SV	4.98	1.01	4.43	1.20	3.51	.001	0.5
PPS-SV	6.22	0.99	5.84	1.13	1.92	.062	0.36
Authoritarianism							
PPMI-SV	3.65	1.62	4.01	1.65	-1.99	.053	0.22
PPD-SV	3.10	1.19	3.16	1.14	-0.36	.722	0.05
PPS-SV	4.14	1.58	4.17	1.49	-0.21	.836	0.02
Malevolence							
PPMI-SV	2.30	1.02	2.17	1.20	0.75	.460	0.17
PPD-SV	2.24	1.04	1.99	1.09	1.72	.093	0.23
PPS-SV	2.43	1.02	2.41	1.20	0.12	.908	0.02

*Note:* *N* = 44. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,

PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version.

## Chapter III

### **Challenging Stigma: The Impact of an Undergraduate Mental Health Nursing Course on Prejudice Toward People Living with Mental Illness**

Multiple orderlies would throw me down and give me shots. I genuinely thought the staff were trying to kill me when they grabbed me and injected me. I had no idea at all what they were injecting, and it absolutely terrified me each time... Sometimes they injected me in the calf, and it was very painful. One nurse said to me, 'I'm purposely hurting you so you'll cooperate next time.' — Eleanor (Miller & Hanson, 2016, p. 114)

#### **The Stigma Attached to Mental Illness**

Stigma is not inherent in mental illness but is attached to mental illness. Stigma has been considered as a disgraceful social marking, a deprecating label, and a dehumanizing theft of personhood (Yanos, 2018). Nurses have attached stigma to mental illness to varying degrees, with their attitudes at times being more negative than those of the general public and other healthcare professionals (de Jacq et al., 2016). Nursing students have also been shown to share some of these negative attitudes (Happell & Gough, 2007; Poreddi et al., 2014). Such stigma among nurses can result in discriminatory practices such as diminished quality of, and even detrimental, nursing care (Alexander et al., 2016). Given the ubiquity of mental health challenges, nurses in every specialty will meet patients who live with mental health conditions and in need of high-quality nursing care (Bingham & O'Brien, 2018). Undergraduate nursing education is an opportune time to positively impact students' attitudes toward people experiencing a mental illness (Happell et al., 2019). Rather than not acknowledging and not preventing the harmful, discriminatory, and dehumanizing practices like the one mentioned in

the epigraph, undergraduate nursing education must cultivate nurses who actively destigmatize (Ross & Goldner, 2009).

The stigma attached to mental illness is an encompassing lens through which those experiencing a mental illness are devalued and discredited (Goffman, 1963). Such individuals are viewed as “dangerous, unpredictable, incompetent, and unable to function in society” (Yanos, 2018, p. 4). Stigma creates many deleterious avenues for those who experience a mental illness. It results in decreased employment and housing opportunities (Corrigan & Kleinlein, 2005). Further, those who have been diagnosed with a mental illness receive inferior healthcare for various issues such as cardiovascular disease (Solmi et al., 2021), diabetes (Frayne et al., 2005), and cancer screening (Mitchell et al., 2014). When such individuals do receive treatment, it can be involuntary, authoritarian, and widely coercive in nature, limiting the patients’ rights and freedoms (Sugiura et al., 2020). The stigma attached to mental illness has been considered worse than the symptoms of the mental illness itself (Thornicroft et al., 2016).

### **Theoretical Framework**

Fox and colleagues (2018) synthesized decades’ worth of stigma research to create the Mental Illness Stigma Framework (MISF). The MISF clearly outlines how stigma operates from the perspective of the stigmatizer and the stigmatized. The MISF, from the stigmatizers’ perspective, defines the mechanisms of stigma as stereotypes, prejudice, and discrimination, which can be thought of as cognitive, affective, and behavioral responses. Examples of each would be endorsing the following statements: “The behavior of a person with schizophrenia is unpredictable” (stereotype), “I’m afraid of how a person with schizophrenia may act” (prejudice), and “people with schizophrenia should be forced into treatment” (discrimination). Furthermore, prejudice can be understood as negative attitudes, such as fear, avoidance,

authoritarian ideals, and malevolence toward an outgroup (Kenny & Bizumic, 2016) and has been theorized to be a stronger predictor of discrimination, even more than stereotypes (Thornicroft et al., 2007b). Therefore, this study focuses on the stigmatizers' perspective and prejudice as the mechanism of stigma, because the centrality of prejudice makes it suitable for measurement and modification (Kenny et al., 2018).

### **Stigmatizing Attitudes among Nurses and Nursing Students**

Willis and colleagues (2008) stated that nursing is a process of humanization. Humanization is defined in the context of nursing as, “an open-minded, caring, intentional, thoughtful, and responsible unconditional acceptance and awareness of human beings as they are” (Willis et al., 2008, p. E33-E34). If stigma is dehumanization (Yanos, 2018), stigmatization can be considered the antithesis of nursing.

However, negative attitudes exist among nurses to the detriment of care (Thornicroft et al., 2007a; Stuart et al., 2011). In an integrative review of 14 studies, de Jacq and colleagues (2016) found that nurses' attitudes toward people with mental illness were variable. Among those studies, four found mostly positive attitudes, four found mostly negative, and six obtained mixed results. Furthermore, Ordan and colleagues (2018) found that negative nursing attitudes about those living with a mental illness led to decreased postpartum interventions and, ultimately, diminished care. Nursing students have also been shown to harbor some of the same stigmatizing attitudes as registered nurses, including authoritarian and socially restrictive attitudes (Palou et al., 2021). In a cross-sectional study, Poreddi and colleagues (2015) found that students self-reported harmful stereotypes of, an increased desire for social distance from, and pessimistic predictions about those living with a mental illness. Finally, Ewalds-Kvist and colleagues (2013)

found that Swedish nursing students' attitudes toward people living with a mental illness were more pessimistic than those of the general public.

### **Undergraduate Nursing Education Interventions**

A review of the past research of studies measuring the impact of undergraduate nursing education interventions on the stigma attached to mental illness from 2000 to 2022 was conducted in preparation for the current study. Of the 37 studies found, 9 included classroom interventions (24.3%), 18 included clinical interventions (48.6%), and 10 included both classroom and clinical interventions (27%). Since the interventions were diverse and 25 different instruments were used to measure stigma levels, results were varied and difficult to compare. One study found a positive impact of curricula developed by collaborating with those who had experienced a mental illness (Happell et al., 2019). Semester-long interventions such as problem-based learning were also effective (Duman et al., 2017). Some clinical interventions, including traditional clinical rotations on acute hospital-based psychiatric units, were found to decrease stigmatizing attitudes (Bingham & O'Brien, 2018; Chadwick & Porter, J., 2014; Foster et al., 2019; Romem et al., 2008).

However, not all the results were positive. Some traditional clinical rotations in psychiatric settings had no measurable impact on stigma (Çingöl et al., 2020; Moxham et al., 2016; Stuhlmiller & Tolchard, 2019). Happell (2009) showed that increased clinical or classroom hours in undergraduate mental health nursing courses did not clearly correlate with decreased stigma. Martin et al. (2020) and Tambag (2018) found no significant change in stigmatizing attitudes with interventions that had classroom and clinical components. Specifically, Tambag (2018) found that attitudes did not significantly change after interventions as measured by the Beliefs Toward Mental Illness Scale. Examples of items include: “Most people would not



knowingly be friends with a mentally-ill person,” “It may be a good idea to stay away from people who have [a] psychological disorder because their behavior is dangerous,” and “Mentally ill people are unlikely to be able to live by themselves because they are unable to assume responsibilities.” Likewise, Martin and colleagues (2020) as well as O’Ferrall-González and colleagues (2020) found no significant change in the scores on the Attitudes to Mental Illness Scale, which includes items such as “Depression occurs in people with a weak personality,” “Violence mostly results from mental illness,” and “Psychiatric patients, generally speaking, are difficult to like.”

### **Gaps in the Research and Goals of the Current Study**

In a systematic review of studies that used interventions to decrease stigma of mental illness in nursing students, Palou and colleagues (2019) found that out of 12 quantitative studies, five did not report the validity and four did not report the reliability of the instruments used. This is mirrored in the larger field of stigma research, as noted by Fox and colleagues (2018), as a vast majority of stigma-measuring instruments have not undergone any psychometric validation.

In the 37 studies mentioned earlier, only 10 utilized a control group (27%) and 4 were conducted in the United States (10.8%). Such lack in research is echoed in the field of professional nursing as evidenced by the integrative review by de Jacq and colleagues (2016). Only one study was specifically designed to measure prejudice against people with mental illness (Choi et al., 2016). Finally, there was a profound lack of conceptual frameworks, which could be remedied by one such as the MISF (de Jacq, 2018).

The current study aimed to address these gaps by utilizing a clear conceptual framework, reliable and valid instruments, a control group, and a sample located in a large metropolitan city in the United States. This study served as an attempt to explore the impact of an undergraduate

mental health nursing course on students' prejudice toward people living with a mental illness. More specifically, the following research questions were explored:

***Research Question 1***

Does an undergraduate mental health nursing course impact the stigma attached to mental illness by nursing students as measured by the Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV) scale?

**Research Question 2**

Does an undergraduate mental health nursing course impact the stigma attached to depression by nursing students as measured by the Prejudice towards People with Depression, Shortened Version (PPD-SV) scale?

***Research Question 3***

Does an undergraduate mental health nursing course impact the stigma attached to schizophrenia by nursing students as measured by the Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV) scale?

**Methods**

**Study Design**

This study used a quasi-experimental, pretest-posttest, nonequivalent-groups design.

**Ethical Considerations**

The Institutional Review Board of Teachers College, Columbia University granted approval for this study. The dean of the nursing school where the study took place provided written consent to seek participation from the students. Students provided consent after being informed that participation in the study was voluntary and would not impact the quality of their courses. They were also informed that their personal information would be deidentified and they

could withdraw from the study without penalty at any time. Those who completed both the pretest and the posttest were given a \$10 electronic gift card.

### **Sample Size**

A power analysis was conducted using G\*Power (Faul et al., 2007). For the two-way mixed analysis of variance (ANOVA), a power of .80, a small effect size of 0.15 and alpha level of .05 set the sample size at 90. Considering a dropout rate of 20%, the total sample size was increased to 108. Therefore, the sample size was set at 54 for the intervention group (mental health nursing course) and 54 for the control group (pediatric/maternal health nursing course).

### **Participants and Setting**

This study used a convenience sample of undergraduate nursing students. The students attended an accelerated bachelor of science in nursing (ABSN) program in New York City. The ABSN program requires that enrolled students have an earned bachelor's degree in a non-nursing field and lasts for 15 months. The sample consisted of two different cohorts of second semester students who were recruited in fall 2021 and spring 2022. To account for a manageable classroom and clinical group size, the nursing school enrolls students in either a mental health nursing course or a pediatric/maternal health nursing course alphabetically, using their last name. Students in the former course were assigned to the intervention group and those in the latter course to the control group.

All 163 second ABSN students in the second term of the program were invited to participate in the study. The inclusion criteria were the ability to provide legal consent, voluntary participation, and enrollment in either the mental health nursing course or pediatric/maternal health nursing course of the ABSN program. Exclusion criteria included students who were absent from 30% or more of classroom lectures and students who missed clinical experiences

without making them up at another time. These criteria was only applied to the intervention group as it cannot be said that absent students received the intervention as intended.

## **Procedure**

A week before the first day of the courses in the fall 2021 and spring 2022 terms, students were informed of the study via email. On the first day of each course, after the syllabus was presented but before any course content was covered, the study purpose and method were explained to the students by the researcher. After informed consent was obtained, those who wished to participate were asked to complete the pretest via a link sent through Zoom before being provided with any course content. These students attended their course, including the lecture and clinical practice, as they normally would. On the last day of their course, after the clinical rotation and lecture material had been concluded, the students were requested to complete the posttest via a link sent through Zoom, which was the same as the pretest minus the demographic questions. An email with the posttest link was also sent to students. This link would remain active for two weeks after the conclusion of the course. This was to account for the possibility that students were preparing for final exams and may not have had the time to complete the posttest until afterward. Qualtrics (<https://www.qualtrics.com>) online survey software was used to collect the data.

## **Interventions**

Both 14-week courses had a classroom component held on Zoom and a clinical component held in person at a large metropolitan hospital system. The pediatric/maternal health nursing course was chosen for the control group as it occurs at the same point in the ABSN program as the mental health nursing course (intervention group). Up until that time, students in both groups had completed the exact same nursing courses. Additionally, both courses had a

didactic component and a hospital-based clinical rotation on hospital-based units. However, the pediatric/maternal health nursing course required a total of 60 classroom hours and 60 clinical hours versus the mental health course, which required 45 classroom and 30 clinical hours, respectively. The intervention group classroom component was co-taught by the researcher and a colleague with the clinical rotations taught by adjunct faculty. The control group classroom and clinical experiences were taught by a different group of faculty.

### ***Intervention Group Experience***

The classroom experience covered all chapters of the required text (Videbeck, 2020), over 45 hours. The concept of stigma attached to mental illness was introduced in the first class and repeated throughout the course as the topic arose. Students were periodically asked to examine their own attitudes toward those who live with a mental illness. Individuals with a lived experience of a mental illness were always discussed using person-first language. Signs and symptoms of mental illnesses were approached with the utmost sensitivity and respect. Additionally, the idea of nursing as a process of humanization (Travelbee, 1969; Willis et al., 2008) with unconditional positive regard (Rogers, 1995) and radical acceptance (Linehan, 2021) was discussed at length and periodically. Videos of individuals with a lived experience of a mental illness were utilized as a form of indirect contact; evidence has shown this is an effective way of reducing stigma (Clement et al., 2012). Breakout rooms were routinely utilized to facilitate small group discussions where students could share their clinical experiences.

Biomedical and psychosocial perspectives were presented for the etiology of each disorder studied in the course. The *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (American Psychiatric Association, 2013), was used to explore diagnostic criteria. Pharmacological and psychotherapeutic interventions were presented in tandem as treatment

options. Though both biomedical and psychosocial perspectives were provided, it can be said that the biomedical model was the dominant model presented in the course. Professional nurses need to be aware of numerous psychotropic medications, medication classes, mechanisms of action, intended effects, side effects, and pertinent interventions surrounding medication administration. This was reflected in the course.

The students completed 30 hours of clinical practice in hospital-based, locked, acute inpatient psychiatric units. Pre-clinical conferences were utilized to set daily goals such as communicating therapeutically, attempting to adopt others' perspectives, and providing compassionate nursing care. The students were given the opportunity to go on patient rounds and attend group therapy and were encouraged to engage with patients throughout their time on the unit. These patient interactions were examined by students through critical reflection exercises that sought to examine and develop the therapeutic communication techniques used by the student. Students also shadowed psychiatric nurses and took part in patients' nursing care. Post-clinical conferences were used to debrief, share experiences, and address concerns that may have arisen during the clinical experience.

The clinical experience was supplemented by two psychiatric virtual simulations where students are presented with a scenario that is designed to mirror real life experiences that may happen in professional practice. Each simulation focuses on one patient experiencing a mental health condition. The student assesses the digital patient, interacts with them through text-based questions and response options, performs nursing interventions, and evaluates their interventions.

### ***Control Group Experience***

The classroom component of the pediatric/maternal health nursing course covered “concepts essential to meeting the health care needs of childbearing women, infants, children,

families and the LGBTQIA community” (Santos & Sessler Branden, 2022, p. 2). Similar to the mental health nursing course, diverse teaching strategies were used through the use of Zoom including lectures, case studies, research publications, and group discussions. There was very little overlap in the classroom content taught in both courses. However, postpartum depression was primarily covered in the pediatric/maternal health nursing course and was only discussed as a related disorder within the broader category of mood disorders in the mental health nursing course. However, mood disorders were covered in far more depth in the mental health nursing course. Both courses included a discussion on child abuse and intimate partner violence. Neurodevelopmental differences such as autism and attention deficit/hyperactivity are mentioned in the pediatric/maternal health nursing course but are covered more fully in the mental health nursing course. Lastly, the concept of stigma was not covered in depth, though emergence and support of non-traditional family structures was covered.

Clinical placements occurred within a large metropolitan health system that included hospital-based pediatric, neonatal, and labor and delivery units. In these clinical placements students had the opportunity to interact, assess, perform nursing interventions, and evaluate the effectiveness of the interventions under the guidance of clinical instructors and in collaboration with unit staff nurses. Additionally, the students were required to attend an in-person pediatric-specific skills day before the start of the clinical rotation that had a strong focus on assessment. The clinical component of the course also included two virtual simulations with corresponding nursing care plans completed by the student. The virtual simulations were from the same program as the intervention group simulations but instead of having patients with mental health conditions, the control group simulations concerned pediatric or maternity scenarios.

## **Instruments**

### ***Prejudice Towards People with Mental Illness, Shortened Versions***

Three shortened versions of the Prejudice towards People with Mental Illness (PPMI; Kenny et al., 2018) scale were utilized as created by Bizumic et al. (2022): Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV); Prejudice towards People with Depression, Shortened Version (PPD-SV); and Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV). Each instrument contains 16 items rated on a 9-point Likert scale, with higher scores indicating more self-reported prejudice. The instruments contain an almost equal number of positively phrased and negatively phrased items. Positively phrased items were reverse-scored.

Each instrument contains four subscales: fear/avoidance, unpredictability, authoritarianism, and malevolence. Fear/avoidance addresses the desire to socially distance and limit interaction because of a false belief in the dangerousness of those experiencing a mental illness. A PPS-SV example item is, “I would feel unsafe being around someone who has schizophrenia.” Unpredictability measures the attitudes of uncertainty regarding the behavior of those living with a mental illness that limits desired interaction and perceived trustworthiness. A reverse-scored PPMI-SV example item is, “The behavior of people with mental illness is just as predictable as that of people who are mentally healthy.” Authoritarianism comprises attitudes about coercive control and the limitation of rights of those experiencing a mental illness. A PPD-SV example item is, “People who have depression should be forced to have treatment.” Finally, malevolence explores the beliefs of inferiority of those who experience a mental illness as well as a lack of compassion toward them. A PPMI-SV example of a reverse-scored item is, “People



who become mentally ill are not failures in life.” Permission to use the PPMI instruments was granted (see Appendix A).

**Reliability and Validity.** Bizumic et al. (2022) demonstrated the convergent validity of the three instruments with moderate to strong correlations to known antecedents of prejudice: social dominance orientation ( $r = .36$  to  $.52$ ), right-wing authoritarianism ( $r = .30$  to  $.44$ ), and ethnocentrism ( $r = .40$  to  $.53$ ). The shortened PPMI versions showed good reliability in an unpublished study (Richards, 2022): PPMI-SV (pretest  $\alpha = .80$ , posttest  $\alpha = .81$ ), PPD-SV (pretest  $\alpha = .73$ , posttest  $\alpha = .78$ ), and PPS-SV (pretest  $\alpha = .85$ , posttest  $\alpha = .83$ ). They also showed very good for the current study: PPMI-SV (pretest  $\alpha = .85$ , posttest  $\alpha = .85$ ), PPD-SV (pretest  $\alpha = .85$ , posttest  $\alpha = .85$ ), and PPS-SV (pretest  $\alpha = .85$ , posttest  $\alpha = .89$ ). The Cronbach’s alpha coefficients for the subscales can be found in Appendix E, Table A3.

**Scoring Instructions.** Each of the three instruments has 16 items and each instrument is scored independent of the others. After specified items are reverse-scored, the total instrument scores are calculated by summing items 1-16 items and dividing by 16. The fear/avoidance subscale score is the sum of items 1-4 divided by 4. The unpredictability subscale score is the sum of items 5-8 divided by 4. The authoritarianism subscale score is the sum of items 9-12 divided by 4. The malevolence subscale score is the sum of items 13-16 divided by 4. Higher scores indicate a higher level of prejudice. All subscale scores were item means with a range of 1.0 to 9.0.

### ***Demographic Questionnaire***

At the end of the survey, three demographic items were included (Appendix C). This questionnaire sought to support individualized expressions of identity so it used a fill-in-the-blank option when possible. There was also the option to withhold information on every

demographic item to respect participant privacy. Demographic items included questions regarding age, gender, ethnicity, and if a family member or friend had experience with mental health issues.

### **Data Analysis**

IBM SPSS Statistics (Version 26) was used to analyze the data. Descriptive statistics were used to summarize the demographic variables. Chi-square tests of independence and an independent-samples *t* test were used to assess if differences existed between the groups on demographic characteristics. Some participants chose not to share certain demographic characteristics. This lack of specified data was treated as missing data for the inferential statistical tests.

Pertinent items on the PPMI-SV, PPD-SV, and PPS-SV were reverse-scored and means were calculated for each of the three instruments along with means for subscales. Finally, using the general linear model approach, two-way mixed ANOVAs were used to assess the differences in the PPMI-SV, PPD-SV, and PPS-SV scores and subscale scores between the control and intervention groups over time (RQ 1-3).

### **Results**

Of the 163 students from the fall 2021 and spring 2022 terms, 137 students (84%) completed both the pretest and posttest. There were 11 students in the intervention group who were excluded from the main analysis as they missed 30% or more of the classroom lectures. As a result, 54 of 66 students (81.8%) in the control group and 72 out 97 students (74.2%) in the intervention were included in the analysis.

## Demographic Characteristics

Ages ranged from 20 to 45 ( $M = 26.2$ ,  $SD = 4.86$ ). One participant in the control group chose not to disclose their age. The mean age was higher in the control group ( $M = 26.56$ ,  $SD = 4.72$ ) than the intervention group ( $M = 25.99$ ,  $SD = 4.97$ ), a difference that was not statistically significant,  $t(123) = .648$ ,  $p = .681$ , 95% CI [-1.17, 2.31]. Most students in the control group identified as female (83.3%) followed by those who identified as male (14.8%), one individual preferred not to state their gender. Similarly, most of the students in the intervention group identified as female (90.3%) followed by those who identified as male (9.7%). There was not a statistically significant difference between the genders reported by both groups,  $\chi^2(1) = .834$ ,  $p = .361$ .

The sample was multicultural and predominantly non-White (43.7%) with seven different ethnicities reported. There were 26 students (20.6%) who preferred not to disclose their ethnicity. A chi-squared test of independence requires that cell counts must be greater than five. To meet this assumption, the following participant responses regarding ethnicity, fewest in count, had to be collapsed into a shared category for both groups: Jewish, Middle Eastern, More than one, Hispanic or Latino. There were no statistically significant differences between both groups regarding reported ethnicity,  $\chi^2(3) = 3.374$ ,  $p = .338$ .

A majority of the total sample had a family member who has experienced a mental health issue (58.7%) or a friend who has experienced a mental health issue (64.3%). There were no differences between both groups regarding if participants had a family member who has experienced a mental health issue,  $\chi^2(1) = .480$ ,  $p = .489$ ; or a friend who has experienced a mental health issue,  $\chi^2(1) = .035$ ,  $p = .852$ .

The demographic characteristics are summarized in Table 3.1.

### **Preliminary Assumptions Checks**

No extreme outliers were found in the data. For outliers that were found, there was no evidence suggesting that they were not earnest responses. The two-way mixed ANOVA was run with and without the presence of the outliers and the statistical conclusions remained unchanged. Normality was assessed using the Shapiro-Wilk test; when the result was significant ( $p < .05$ ), a visual inspection of histograms and Q-Q plots was used to assess the approximations of normality. When the visual inspection revealed a non-normal distribution, a square root transformation was applied; however, the statistical conclusions obtained from the two-way mixed ANOVA remained unchanged. When the Shapiro-Wilk test result was significant after a square root transformation, a log transformation was applied, and the statistical conclusions remained unchanged. The assumption of homogeneity of variances was supported through Levene's tests ( $p > .05$ ). The assumption of homogeneity of covariances was supported through Box's tests of equality of covariance matrices ( $p > .001$ ).

### **Protocol for Reporting Mixed ANOVAs**

If a statistically significant two-way interaction between group and time was found, the simple main effect of group at both pretest and posttest were reported. This was followed by an evaluation of the simple main effect of time for both the control and intervention groups. If a nonsignificant two-way interaction between group and time was found, only the main effect of time and main effect of group were reported.

## **Two-Way Mixed ANOVAs for Prejudice Toward People Living with a Mental Illness, Depression, or Schizophrenia**

### ***Mental Illness***

For the PPMI-SV scores (Figure 3.1), a statistically significant interaction was found between group and time in the self-reported attitudes toward people diagnosed with a general mental illness,  $F(1, 124) = 4.97, p = .028$ , partial  $\eta^2 = .038$ . No significant differences were found between the intervention and control groups at either pretest or posttest,  $F(1, 124) = 0.06, p = .808$ , partial  $\eta^2 = .000$ ;  $F(1, 124) = 1.12, p = .285$ , partial  $\eta^2 = .009$ . No significant change was observed in the control group over time,  $F(1, 53) = 1.08, p = .304$ , partial  $\eta^2 = .020$ . However, a statistically significant decrease in the intervention group scores was noted over time,  $F(1, 71) = 4.72, p = .033$ , partial  $\eta^2 = .062$ . Therefore, the intervention succeeded in reducing prejudicial attitudes toward the condition of general mental illness.

### ***Depression***

For the PPD-SV scores (Figure 3.2), no statistically significant interaction was found between group and time in the self-reported attitudes toward people diagnosed with depression,  $F(1, 124) = 0.38, p = .54$ , partial  $\eta^2 = .003$ . The main effect of time showed a statistically significant decrease in the scores of both groups from pretest to posttest,  $F(1, 124) = 7.29, p = .008$ , partial  $\eta^2 = .056$ . The main effect of group showed no statistically significant difference between the intervention and control groups,  $F(1, 124) = 0.11, p = .738$ , partial  $\eta^2 = .001$ . Therefore, both groups showed a significant reduction in prejudice scores for depression, and no significant difference was found between the groups.

## ***Schizophrenia***

For the PPS-SV scores (Figure 3.3), no statistically significant interaction was found between group and time in the self-reported attitudes toward people diagnosed with schizophrenia,  $F(1, 124) = 2.27, p = .135, \text{partial } \eta^2 = .018$ . The main effect of time did not show a statistically significant difference from pretest to posttest,  $F(1, 124) = 1.66, p = .200, \text{partial } \eta^2 = .013$ . Furthermore, the main effect of group showed no statistically significant difference between the intervention and control groups,  $F(1, 124) = 0.00, p = .992, \text{partial } \eta^2 = .000$ .

The two-way mixed ANOVA results are summarized in Table 3.2.

## **Subscales**

### ***Fear/Avoidance***

For the PPMI-SV fear/avoidance subscale scores (Figure 3.4), a statistically significant interaction was found between group and time regarding the fear/avoidance of those diagnosed with a general mental illness,  $F(1, 124) = 9.68, p = .002, \text{partial } \eta^2 = .072$ . No statistically significant difference was found between the intervention and control groups at either pretest or posttest,  $F(1, 124) = 0.72, p = .398, \text{partial } \eta^2 = .006$ ;  $F(1, 124) = 2.53, p = .114, \text{partial } \eta^2 = .020$ . A statistically significant increase of the control group scores was found over time,  $F(1, 53) = 5.91, p = .018, \text{partial } \eta^2 = .10$ . A statistically significant decrease of the intervention group scores was found over time,  $F(1, 71) = 4.36, p = .040, \text{partial } \eta^2 = .058$ . As a result, a crossover effect was found where the control group scores became significantly higher and the intervention group scores showed a significant reduction in attitudes of fear and avoidance toward the condition of general mental illness.

For the PPD-SV fear/avoidance subscale scores (Figure 3.5), no statistically significant interaction was found between group and time regarding the fear/avoidance of those diagnosed

with depression,  $F(1, 124) = 0.27, p = .608$ , partial  $\eta^2 = .002$ . The main effect of time showed a statistically significant difference in the scores from pretest to posttest,  $F(1, 124) = 9.37, p = .003$ , partial  $\eta^2 = .070$ . However, the main effect of group showed no statistically significant difference between the intervention and control groups,  $F(1, 124) = 1.72, p = .192$ , partial  $\eta^2 = .014$ . Consequently, while both groups showed a reduction in prejudice scores, there was no significant difference between the two groups.

For the PPS-SV fear/avoidance subscale scores (Figure 3.6), a statistically significant interaction was found between group and time regarding the fear/avoidance of those diagnosed with schizophrenia,  $F(1, 124) = 9.16, p = .003$ , partial  $\eta^2 = .069$ . No statistically significant difference was found between the intervention and control groups at either pretest or posttest,  $F(1, 124) = 0.58, p = .447$ , partial  $\eta^2 = .005$ ;  $F(1, 124) = 2.00, p = .160$ , partial  $\eta^2 = .016$ . No significant change was observed in the control group over time,  $F(1, 53) = 5.91, p = 0.38$ , partial  $\eta^2 = .007$ . However, a statistically significant decrease in the intervention group scores was noted over time,  $F(1, 71) = 13.94, p < .001$ , partial  $\eta^2 = .164$ . The intervention was successful in significantly decreasing attitudes of fear and avoidance toward the condition of schizophrenia.

The fear/avoidance subscale results are summarized in Table 3.3.

### ***Unpredictability***

For the PPMI-SV unpredictability subscale scores, no statistically significant interaction was found between group and time regarding unpredictability in those diagnosed with a general mental illness,  $F(1, 124) = 0.01, p = .932$ , partial  $\eta^2 = .000$ . The main effect of time showed a statistically significant difference in the scores from pretest to posttest,  $F(1, 124) = 6.84, p = .010$ , partial  $\eta^2 = .052$ . The main effect of group showed no statistically significant difference between the intervention and control groups,  $F(1, 124) = 0.03, p = .865$ , partial  $\eta^2 = .000$ . Thus,

the sample as a whole showed a significant reduction in prejudice scores, but there was no difference between the two groups.

For the PPD-SV unpredictability subscale scores, no statistically significant interaction was found between group and time regarding unpredictability in those diagnosed with depression,  $F(1, 124) = 1.60, p = .208$ , partial  $\eta^2 = .013$ . The main effect of time showed a statistically significant difference from pretest to posttest,  $F(1, 124) = 12.41, p = .001$ , partial  $\eta^2 = .091$ . The main effect of group showed no statistically significant difference between the intervention and control groups,  $F(1, 124) = 0.06, p = .810$ , partial  $\eta^2 = .000$ . For the second time in a subscale concerning the condition of depression, both groups had a significant reduction in scores but were not different from each other.

For the PPS-SV unpredictability subscale scores, no statistically significant interaction was found between group and time regarding unpredictability in those diagnosed with schizophrenia,  $F(1, 124) = 0.09, p = .737$ , partial  $\eta^2 = .001$ . The main effect of time showed no statistically significant difference from pretest to posttest,  $F(1, 124) = 3.81, p = .053$ , partial  $\eta^2 = .030$ . Similarly, the main effect of group also showed no statistically significant difference between the groups,  $F(1, 124) = 0.02, p = .877$ , partial  $\eta^2 = .000$ .

The unpredictability subscale results are summarized in Table 3.4.

### ***Authoritarianism and Malevolence***

Finally, no statistically significant interaction effect, main effect of time, or main effect of group was found for the authoritarianism or malevolence subscales in the PPMI-SV, PPD-SV, and PPS-SV. The authoritarianism and malevolence subscale results are summarized in Table 3.5 and Table 3.6. A summary of all subscale results can be found in Table 3.7.



## Intention-to-Treat Analysis

An intention-to-treat analysis was conducted that included the 11 intervention group participants that met the exclusion criteria for missing 30% or more of the classroom lectures. Attendance was expected but not mandated. The per-protocol analysis included a total of 15 different two-way mixed ANOVAs. All but two of these statistical conclusions were unchanged in the intention-to-treat analysis. The two impacted measures were the PPMI-SV total instrument scores and the PPS-SV malevolence subscale scores.

Regarding the PPMI-SV total instrument scores, no statistically significant interaction was found between group and time in the self-reported attitudes toward people diagnosed with schizophrenia,  $F(1, 135) = 3.67, p = .058$ , partial  $\eta^2 = .026$ . The main effect of time did not show a statistically significant difference from pretest to posttest,  $F(1, 135) = 0.34, p = .561$ , partial  $\eta^2 = .003$ . Further, the main effect of group showed no statistically significant difference between the intervention and control groups,  $F(1, 135) = 0.11, p = .744$ , partial  $\eta^2 = .001$ . Thus, the statistically significant interaction found in the per-protocol analysis was not statistically significant in the intention-to-treat analysis.

In the PPS-SV malevolence subscale scores, no statistically significant interaction was found between group and time regarding malevolence toward people diagnosed with schizophrenia,  $F(1, 135) = 0.03, p = .789$ , partial  $\eta^2 = .001$ . The main effect of time showed a statistically significant increase in the scores from pretest to posttest,  $F(1, 135) = 4.02, p = .047$ , partial  $\eta^2 = .029$ . However, the main effect of group showed no statistically significant difference between the intervention and control groups,  $F(1, 135) = 0.49, p = .484$ , partial  $\eta^2 = .004$ . Consequently, when considered as one group the sample showed an increase in prejudice scores,

yet there was no significant difference between the two groups. This result not found in the per-protocol analysis.

## **Discussion**

### **Attitudes Toward People Diagnosed with General Mental Illness, Depression, or Schizophrenia**

The study results show that an undergraduate mental health nursing course had a positive impact on nursing students' attitudes toward people living with a general mental illness, no specific impact on attitudes toward people living with depression as both control and intervention prejudice scores significantly decreased over time, and no significant impact on attitudes toward people living with schizophrenia. Where the intervention of the undergraduate mental health nursing course was impactful, the reasons may be due to the students' exposure to new knowledge including the concepts, mechanisms, and results of stigma. In the classroom, the students heard first-person accounts from individuals who had experienced a mental illness by way of video or vignette. The individuals often shared the impact that the stigma attached to mental illness had on their lives and the resultant discrimination they experienced, which was sometimes from nurses. Humanizing concepts such as person-first language, that an individual is a person and not a diagnosis, unconditional positive regard (Rogers, 1995) and radical acceptance (Linehan, 2021) were thoroughly explored and utilized throughout the course.

In the clinical rotations, opportunities to interact with individuals living with a mental health condition may have decreased unsubstantiated prejudicial attitudes in the nursing students. Each day of the clinical placement the students interacted with those who were acutely experiencing a mental health condition with the goal of using therapeutic communication to help that individual be seen, heard, and empathized with. Experiencing this may have dispelled some

of the pejorative ideas such as those with mental illness being dangerous and deserving of fear and avoidance. It is possible that these one on one interactions also deepened the nursing students' compassion for others.

In a previous study (Richards, 2022), a significant decrease in student prejudice attitudes after they completed the same mental health nursing course was found for all three conditions (general mental illness, depression, and schizophrenia). In the current study, that included a non-equivalent control group, the significant decrease was limited to the general mental illness condition. However, similar to the first study's results, paired-samples *t* tests of the current intervention group revealed a significant decrease between pretest and posttest scores for all three mental health conditions (Appendix E, Table A5). Prejudice toward people living with depression decreased but only by the factor of time, and cannot be attributed solely to the mental health nursing course. Furthermore, the highest degree of negative attitudes was found toward people living with schizophrenia, which did decrease after the intervention although not in a statistically significant manner.

The control group received 15 more hours of classroom time and 30 more hours of clinical experience compared to the intervention group. Paired-samples *t* tests of the control group pretest and posttest scores revealed no statistically significant decreases in prejudice for general mental illness, depression, or schizophrenia (Appendix E, Table A7). However, two statistically significant decreases were found in control group subscale scores (Appendix E, Table A8). A statistically significant decrease was found in the PPD-SV subscale of fear/avoidance for the control group prejudice scores ( $p = .047$ ,  $d = 0.16$ ). This may be due to the concept of postpartum depression being taught in the maternity portion of the pediatric/maternal health nursing course. The only other statistically significant decrease in control group prejudice

scores was found in the PPMI-SV subscale of unpredictability ( $p = .036$ ,  $d = 0.17$ ). This may be due to the increased classroom time and clinical experiences. It is also possible that these statistically significant decreases may be due to the threat of testing or the maturation of nursing students.

This study's findings are not consistent with those of studies that found a largely positive impact of undergraduate mental health nursing courses on students' attitudes toward people living with a mental illness (Arbanas et al., 2018; Chan & Cheng, 2001; Ciydem & Avci, 2022; Palou et al., 2021; İnan et al., 2019; Madianos et al., 2005; Markström et al., 2009). However, none of those studies used a control group. This study's findings are in partial agreement with three similar studies that had a limited or no impact on attitudes toward people living with a mental illness (Martin et al., 2020; O'Ferrall-González et al., 2020; Tambag, 2018). The significant decrease in prejudicial attitudes of the intervention group regarding the condition of general mental illness can largely be attributed to the subscale of fear/avoidance as discussed below.

As O'Ferrall-González and colleagues (2020) suggested, it is possible that registered nurses teach stigmatizing ideas, passively or actively, to students in clinical settings. Nurses who work in acute inpatient psychiatric settings, like those in the current study, frequently had more stigmatizing attitudes than those who worked in community health settings (de Jacq et al., 2016). Furthermore, non-traditional clinical sites outside of acute inpatient units have been shown to decrease stigmatizing attitudes more so than the traditional ones utilized in the present study (Moxham et al., 2016). These community settings could expose students to professional nurses who have more positive attitudes than their inpatient counterparts. To understand these results, a closer look at the subscales is needed.

## **Fear/Avoidance**

Undergraduate mental health nursing courses have been found to decrease the fear of and desire for social distance from those living with a mental illness (Foster et al., 2019; Markström et al., 2009). This is reflected in the current study as well, as two out three scores, that is, for general mental illness and schizophrenia, were statistically significantly lower in the intervention group. In the didactic portion of the mental health nursing course videos were shown of almost every mental health condition that was discussed throughout the term. The videos were curated with the intent to give students an opportunity to hear first-hand accounts of those with lived experience of a mental health condition. Additionally, the videos served to describe the signs and symptoms that the individual experienced, the treatment they received, and the individual's unique process of recovery. These videos served as a form of indirect contact that has been shown to decrease the desire for avoiding individuals living with a mental health condition (Corrigan et al., 2007). Furthermore, the indirect contact was paired with the direct contact on the acute inpatient psychiatric units for the clinical experiences of the intervention group. This too has specifically been shown to decrease fear in nursing students (Bingham & O'Brien, 2018).

The PPD-SV had a significant result only in terms of the factor of time and was not attributable to the interventions. It is possible that decrease in the prejudice scores of both groups may be attributed to the students being taught about postpartum depression. Additionally, when the intervention group is analyzed separately from the control group, paired-samples *t* tests reveal significant reductions in prejudice scores for all three conditions concerning the subscale of fear/avoidance (Appendix E, Table A6).

## **Unpredictability**

Unpredictability scores were the highest of all the subscales, yet there was no decrease in prejudice specific to the intervention group. There was a significant reduction in scores over time for the general mental illness and depression conditions. It is possible that the increased classroom and clinical experiences of the control group had an impact here. Unpredictability has been linked to impressions of dangerousness of those living with a mental illness (Read et al., 2006). Registered nurses have been shown to report beliefs in the unpredictability of those who have a mental illness (de Jacq et al., 2016; Stuart et al., 2011). Furthermore, it is possible that in this study, clinical experiences only in acute inpatient units may not have positively impacted students' attitudes as much as a community setting. In a community setting students would interact with patients who are further along in their recovery (Stuhlmiller & Tolchard, 2019) while being exposed to the more positive attitudes of registered nurses in community settings.

## **Authoritarianism and Malevolence**

The intervention had no measurable impact on attitudes of authoritarianism or malevolence. This is in alignment with a previous study, where the same course had no measurable impact on a cohort of nursing students from the same nursing school (Richards, 2022). However, this study's findings are in direct contradiction to that of previous research, none of which used a control group, that showed that students' authoritarian attitudes decreased after a mental health nursing course (Chan & Cheng, 2001; Palou et al., 2021; Madianos et al., 2005).

It should be noted that in all three instruments, the malevolence scores were the lowest at every time point for both groups. In order to explore if the current authoritarian and malevolence scores were exhibiting a floor effect, the current results can be compared to previous research.

Bizumic et al. (2022) conducted a study with a sample of 299 mental health professionals (MHP) and 427 members of the general population (GP) who also completed the PPMI-SV, PPD-SV, and PPS-SV. An ANOVA (Appendix E, Table A4) revealed that the MHP scores were significantly lower for all three mental health conditions ( $p < .001$ ) when compared to the posttest intervention group malevolence scores in the current study. The GP malevolence scores were found to be significantly lower when compared to the posttest intervention group scores for the condition of schizophrenia ( $p = .005$ ) and nonsignificant differences were found for the conditions of general mental illness and depression.

Similarly, MHPs' authoritarian scores were significantly lower than this study's posttest intervention group scores for all three conditions (general mental illness,  $p < .01$ ; depression,  $p < .001$ ; schizophrenia,  $p < .001$ ). The GP authoritarian scores were significantly lower when compared to the posttest intervention group scores for the condition of depression ( $p < .001$ ) and nonsignificant differences were found for the conditions of general mental illness and schizophrenia. Thus, there seems to be room for a further decrease in authoritarian and malevolence scores as MHPs were significantly and consistently lower than the intervention group. Even the scores of the general population were at times significantly lower than the scores of students who took the mental health course in this study. At best there was a nonsignificant difference between the intervention group and those who have no formal education in the realm of mental health. This is of great importance as almost every fear/avoidance and unpredictability subscale had a significant reduction in prejudice scores for all three conditions that was due specifically to the intervention or the main effect of time, yet there was no significant change in any authoritarian or malevolence subscale for any of the three conditions. Comparison with the MHP and GP data shows that there is further room to reduce prejudice but as it currently stands

this undergraduate mental health nursing course, which is an opportune time to address attitudes of authoritarianism and malevolence, failed to do so. Thus, failure to decrease the authoritarian and malevolence scores was not due to floor effects.

It is possible that students in the intervention group may have adopted some of the authoritarian attitudes of professional nurses in the acute inpatient mental health clinical environment. Professional nurses have self-reported having authoritarian attitudes, and nurses in acute inpatient psychiatric settings have reported higher levels of stigmatizing attitudes than nurses who worked in community settings (de Jacq et al., 2016). Of the data available from 25 states in the period of 2011 to 2018, involuntary commitment has increased at three times the rate of the population's increase (Lee & Cohen, 2021). There is no national oversight or governing body that records the prevalence of authoritarian measures used in psychiatric services such as involuntary commitment, involuntary treatment such as forced medication, seclusion, and restraint. Additionally, New York was not one of the states included in the Lee and Cohen (2021) study as no data was available. However, anecdotally, the current researcher has led clinical groups on the acute inpatient psychiatric units that were also used in the current study. It was not a rare occasion for the unit census to majorly consist of involuntary committed patients. It is possible that the authoritarian attitudes of the intervention group remained unchallenged as the clinical settings reinforced them through the use of authoritative interventions.

In this study, although the classroom portion of the course included psychosocial perspectives and treatments for mental illnesses, biomedical explanations and biomedical treatments were thoroughly explained. Scholars have criticized biomedical-oriented education for being ineffectual in addressing stigmatizing attitudes but also promoting stigmatizing attitudes while decreasing belief in recovery (Lebowitz & Appelbaum, 2019; Stuart et al.,



2011). It has also been suggested that the stigmatizing attitudes of professional nurses are fueled by the nursing field's adoption of the biomedical model (O'Ferrall-González et al., 2020).

Lakeman and Cutcliffe (2009) proposed that nursing education must provide students with different forms of knowledge without relying solely on a biomedical-centric curriculum. A balanced and holistic nursing education begets balanced and holistic nursing care. Promoting autonomy and humanization while rejecting authoritarian and coercive nursing practices is largely “an appeal to values and ethics” (Lakeman & Cutcliffe, 2009, p. 203). Barbara Carper (1978) posited that there are four forms of nursing knowledge: empirics, aesthetics, personal knowledge, and ethics. Nursing schools, despite being aware of the shortcomings of empirical biomedical-oriented education, still teach students it with “insufficient levels of criticality” (Grant, 2015, p. e52). Though it is challenging to precisely gauge, it is possible that an over-representation of empirical biomedical knowledge in the current undergraduate mental health nursing course may have crowded out other forms of knowing and allowed the stigmatizing authoritarian and malevolent ideals to remain unchallenged.

### **Intention-to-Treat**

Two statistical conclusions differed in the intention-to-treat analysis. Both resulted in higher levels of prejudice when those who did not receive the complete intervention were included. The per-protocol analysis showed a statistically significant interaction effect with a reduction in the intervention group prejudice scores. Yet what was statistically significant in the per-protocol analysis was not with the intention-to-treat analysis. This provides evidence that receiving the intervention as intended resulted in a statistically significant reduction in prejudice. Furthermore, this supports the meaningful impact of the intervention on reducing prejudice toward people with a general mental illness. Additionally, the PPS-SV malevolence subscale

scores in the intention-to-treat analysis showed a statistically significant increase in prejudice for the main effect of time while the per-protocol analysis did not. This also suggests a meaningful impact of the intervention as the intervention group posttest scores were lower in the per-protocol analysis where there was no statistically significant main effect of time regarding malevolence toward people diagnosed with schizophrenia.

### **Limitations**

First, this study did not use randomization, which would have elevated the research to the status of a true experiment. Second, all the study instruments were self-report measures and could be impacted by a response bias. Third, the convenience sample of undergraduate nursing students in New York City limits the generalizability of the results. Fourth, the students were older and already had degrees, which may have contributed to them being less malleable in their attitudes than first degree students.

### **Implications and Future Research**

The current study has provided evidence that prejudicial attitudes are not immutable and positive attitudes may be cultivated through education. The undergraduate mental health nursing course used in this study decreased self-reported prejudice toward people living with a mental illness but not specifically depression or schizophrenia. Distinct components of prejudice that are amenable to change including fear/avoidance have been identified as well as others that are presently resistant including authoritarian and malevolent attitudes. A qualitative study of students' attitudes may shed some much-needed light on the authoritarian and malevolent perceptions and the potential interventions that can address them. Curricular changes and substitutions must include non-traditional (Moxham et al., 2016), recovery-oriented clinical rotations; the involvement of those with experience of a mental illness in curriculum design

(Happell et al., 2019); and a balanced curriculum that presents the biomedical model with sufficient criticality (Grant, 2015).

Nursing educators may want to include active learning strategies such as the use of debate as a means to decrease prejudice in future mental health nursing courses. The use of debate has been shown to improve moral judgment in undergraduate nursing students (Cariñanos-Ayala et al., 2021). There are a wide range of possible debate topics that include authoritarian concepts such as involuntary commitment, involuntary treatment, and the use of seclusion and restraint. Using debate as a learning strategy allows students to critically examine a topic from numerous viewpoints and may possibly be of use in addressing prejudicial attitudes.

This study provided evidence that the shortened versions of the PPMI are psychometrically sound and comprehensively unique in assessing self-reported levels of prejudice in this undergraduate nursing population. Their brevity is also a strong suit, allowing them to be used concurrently. These shortened versions may further be applied to other issues such as eating and substance use disorders to identify the levels of prejudice and subsequent interventions that may have a positive impact.

Future researchers must strongly consider the inclusion of CGs in their study designs. Out of the 37 studies reviewed for the current study, 10 included clinical and classroom interventions, eight of which obtained largely positive results. However, none of these used a CG. Thus, it is not possible to demonstrate that the positive results of these studies were because of the intervention or the natural maturation of nursing students, threat of testing, or response bias. Future research must include control groups as to not look through rose-colored glasses. Additionally, replication studies are required to validate the current findings and longitudinal studies are needed to verify the lasting impacts of the intervention. Replication studies are also

needed as this study occurred during the COVID-19 pandemic and the classroom portions of each course was held over Zoom and not in person as they normally would be and will be again in the future.

Future research on the possible causal relationship between biomedical explanations of a mental illness and increased prejudice could provide an explanation for the nonsignificant findings in the current study. Additionally, studies need to explore the degree to which prejudice translates to discrimination in nursing. This could be accomplished using vignettes or simulation to protect human subjects.

### **Conclusions**

The current study demonstrates that attitudes toward people living with a mental illness were amenable to undergraduate nursing education interventions as prejudice scores decreased. Prejudice toward people living with depression did decrease over time for both groups but there was no statistical difference between groups. Attitudes toward people living with schizophrenia, which was viewed most negatively, did not decrease at all. The intervention had the most positive impact on the fear/avoidance facet of prejudice and no effect on authoritarian and malevolent attitudes, possibly because of biomedical-oriented education. The current study has also shown the importance of stronger study design compared to what has been used historically. Further, the shortened PPMI instruments proved to be valid, reliable measures of prejudice and its facets. These instruments will be valuable for future stigma research.

Hinshaw and Stier (2008) poignantly stated, “Even a small amount of stigma among professionals will translate into many thousands of negative social interactions” (p. 384). Therefore, undergraduate nursing education has the great opportunity to create many thousands

of positive interactions, to promote wellbeing, facilitate humanization, and challenge the stigma attached to mental illness.

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**Table 3.1***Demographic Characteristics*

Baseline characteristic	Control Group		Intervention Group		Total Sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Gender</b>						
Female	45	83.3	65	90.3	110	87.3
Male	8	14.8	7	9.7	15	11.9
Prefer not to say	1	1.9	0	0	1	0.8
<b>Age in years</b>						
20-29	43	79.6	58	80.6	101	80.2
30-39	10	18.6	10	14	20	15.9
≥ 40	1	1.9	3	4.2	4	3.2
Prefer not to say	0	0	1	1.4	1	0.8
<b>Ethnicity</b>						
African American or Black	9	16.7	5	6.9	14	11.1
Asian, Asian American, or East Asian	7	13	14	19.4	21	16.7
Hispanic or Latino	6	11.1	6	8.3	12	9.5
Jewish	0	0	3	4.2	3	2.4
Middle Eastern	1	1.9	0	0	1	0.8
White	19	35.2	26	36.1	45	35.7
More than one	2	3.7	2	2.8	4	3.2
Prefer not to say	10	18.5	16	22.2	26	20.6
<b>A family member has experienced a mental health issue</b>						
Yes	34	63	40	55.6	74	58.7
No	19	35.2	29	40.3	48	38.1
Prefer not to say	1	1.9	3	4.2	4	3.2
<b>A friend has experienced a mental health issue</b>						
Yes	35	64.8	46	63.9	81	64.3
No	18	33.3	22	30.6	40	31.7
Prefer not to say	4	5.6	4	5.6	5	4

Note: *N* = 126

**Table 3.2**

*Two-Way Mixed ANOVAs for Prejudice Toward People Living with Mental Illness, Depression, or Schizophrenia*

Variable	Control ( <i>n</i> = 54)		Intervention ( <i>n</i> = 72)		ANOVA				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Effect	<i>F</i> ratio	<i>df</i>	<i>p</i>	$\eta^2$
<b>PPMI-SV</b>									
Interaction					G x T	4.97	1,124	.028	.038
Pretest	3.84	.99	3.88	.97	G	0.06	1,124	.808	.000
Posttest	3.91	1.06	3.72	.94	G	1.16	1,124	.285	.009
Difference	0.07				T	1.08	1,53	.304	.020
Difference			-0.16		T	4.72	1,71	.033	.062
<b>PPD-SV</b>									
Interaction					G x T	0.38	1,124	.540	.003
Pretest	3.51	.94	3.60	.98					
Posttest	3.42	.98	3.44	.96					
Difference	-0.09		-0.16						
Time					T	7.29	1,124	.008	.056
Group					G	0.11	1,124	.738	.001
<b>PPS-SV</b>									
Interaction					G x T	2.27	1,124	.135	.018
Pretest	4.29	1.01	4.38	.98					
Posttest	4.30	1.24	4.21	1.05					
Difference	0.01		-0.17						
Time					T	1.66	1,124	.2	.130
Group					G	0.00	1,124	.992	.000

*Note:* *N* = 126. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,

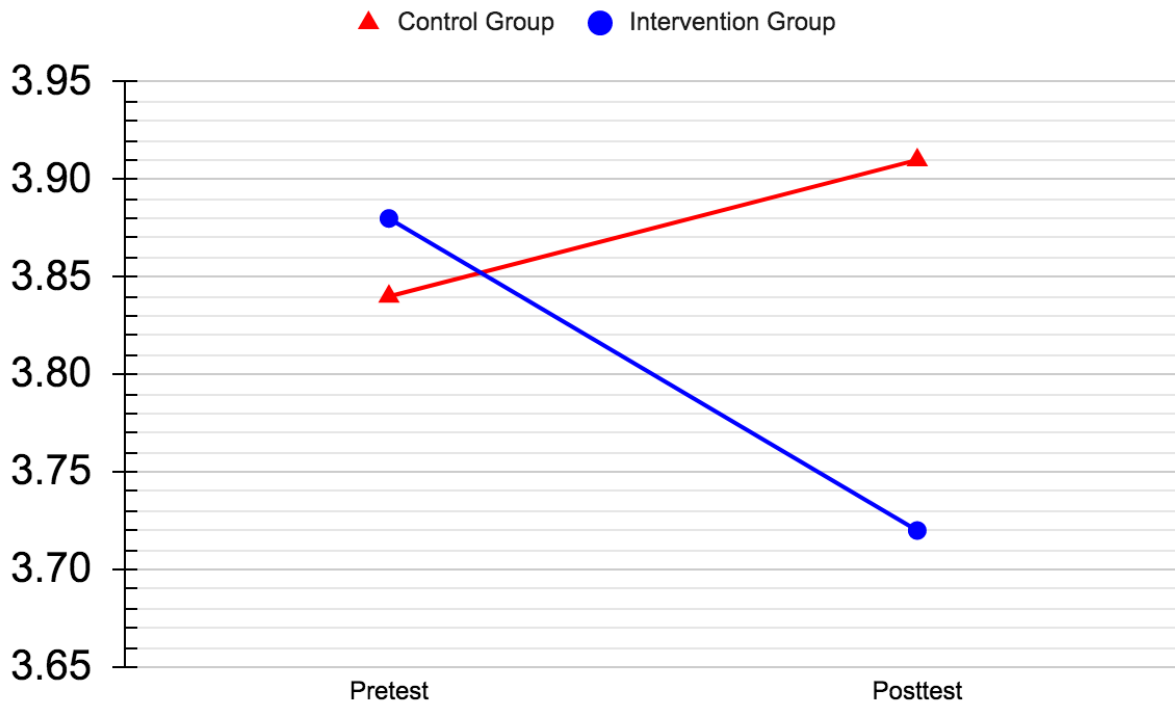
PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice

towards People with Schizophrenia, Shortened Version; G = Group (Control/Intervention); T =

Time of testing (Pretest/Posttest; ANOVA = analysis of variance.

**Figure 3.1**

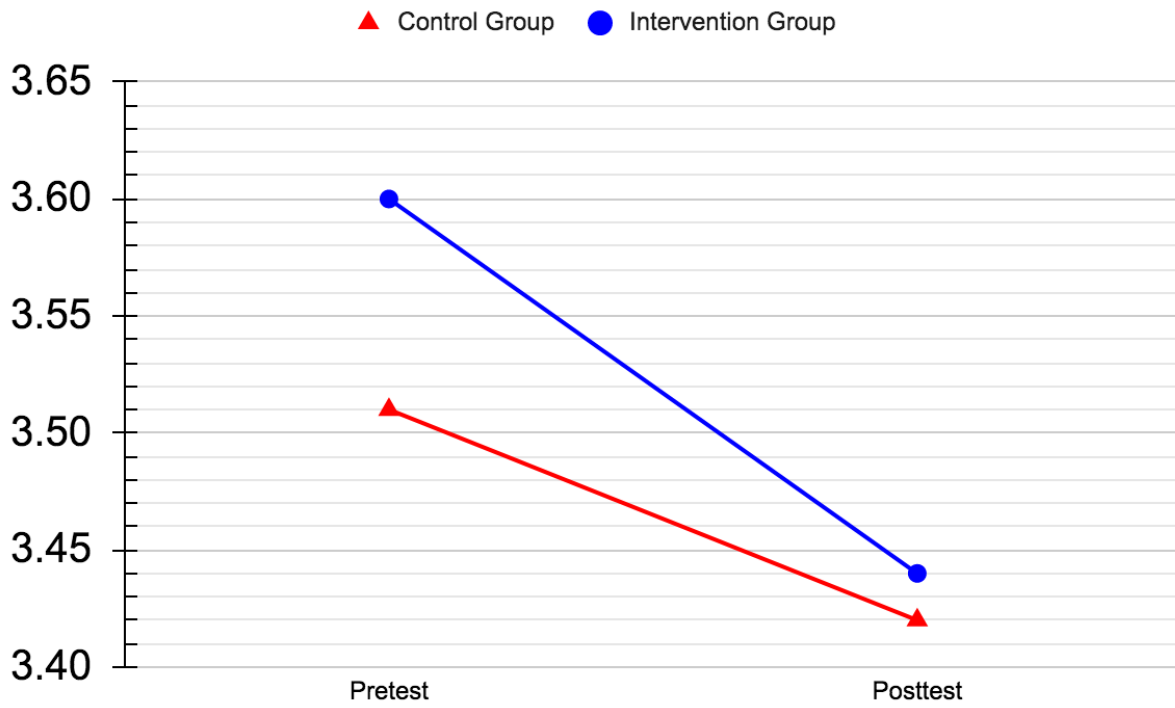
*Interaction of Group and Time for Prejudice Toward People Living with Mental Illness*



*Note: N = 126.*

**Figure 3.2**

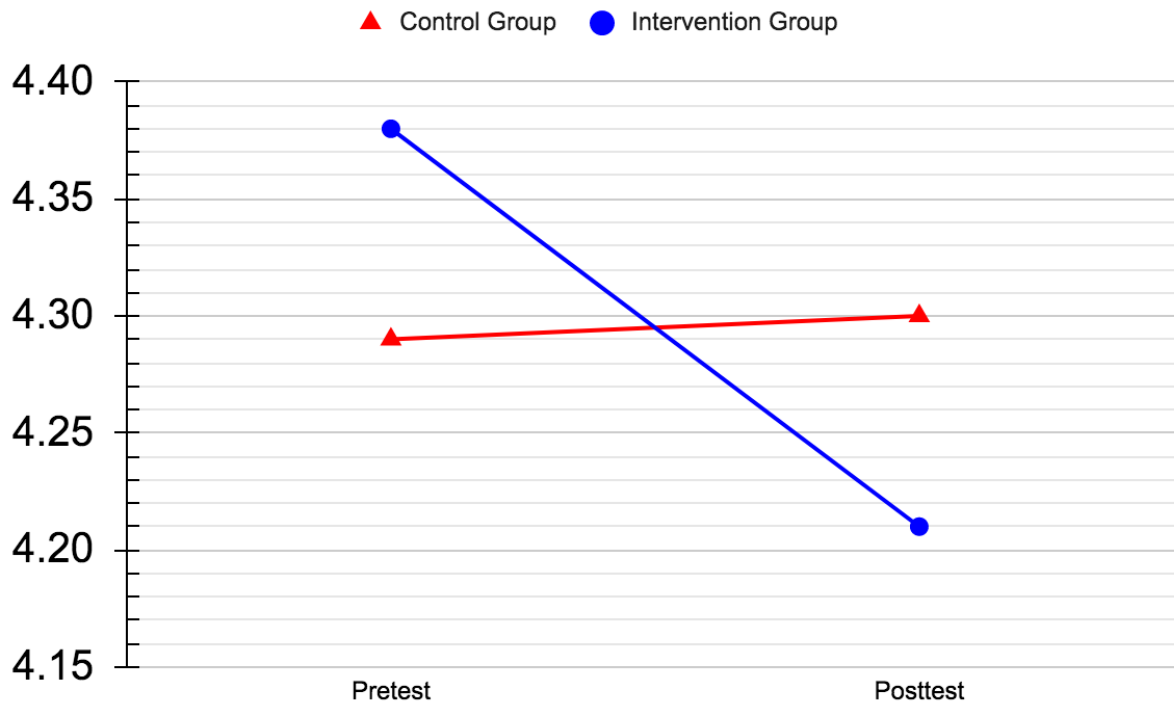
*Interaction of Group and Time for Prejudice Toward People Living with Depression*



*Note: N = 126.*

**Figure 3.3**

*Interaction of Group and Time for Prejudice Toward People Living with Schizophrenia*



*Note: N = 126.*



**Table 3.3**

*Two-Way Mixed ANOVAs for Prejudice Toward People Living with Mental Illness, Depression, or Schizophrenia: Fear/Avoidance*

Variable	Control ( <i>n</i> = 54)		Intervention ( <i>n</i> = 72)		ANOVA				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Effect	<i>F</i> ratio	<i>df</i>	<i>p</i>	$\eta^2$
<b>PPMI-SV</b>									
Interaction					G x T	9.6	1,124	.002	.072
Pretest	3.95	1.3	4.16	1.43	G	0.72	1,124	.398	.006
Posttest	4.27	1.49	3.88	1.31	G	2.53	1,124	.114	.020
Difference	0.32				T	5.91	1,53	.018	.100
Difference			-0.28		T	4.36	1,71	.04	.058
<b>PPD-SV</b>									
Interaction					G x T	0.27	1,124	.608	.002
Pretest	3.76	1.34	4.13	1.54					
Posttest	3.54	1.45	3.82	1.47					
Difference	-0.22		-0.31						
Time					T	9.37	1,124	.003	.070
Group					G	1.72	1,124	.192	.014
<b>PPS-SV</b>									
Interaction					G x T	9.16	1,124	.003	.069
Pretest	4.72	1.64	4.95	1.64	G	0.58	1,124	.447	.005
Posttest	4.82	1.89	4.35	1.81	G	2.00	1,124	.16	.016
Difference	0.10				T	0.38	1,53	.539	.007
Difference			-0.60		T	13.94	1,71	<.001	.164

*Note:* *N* = 126. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,

PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice

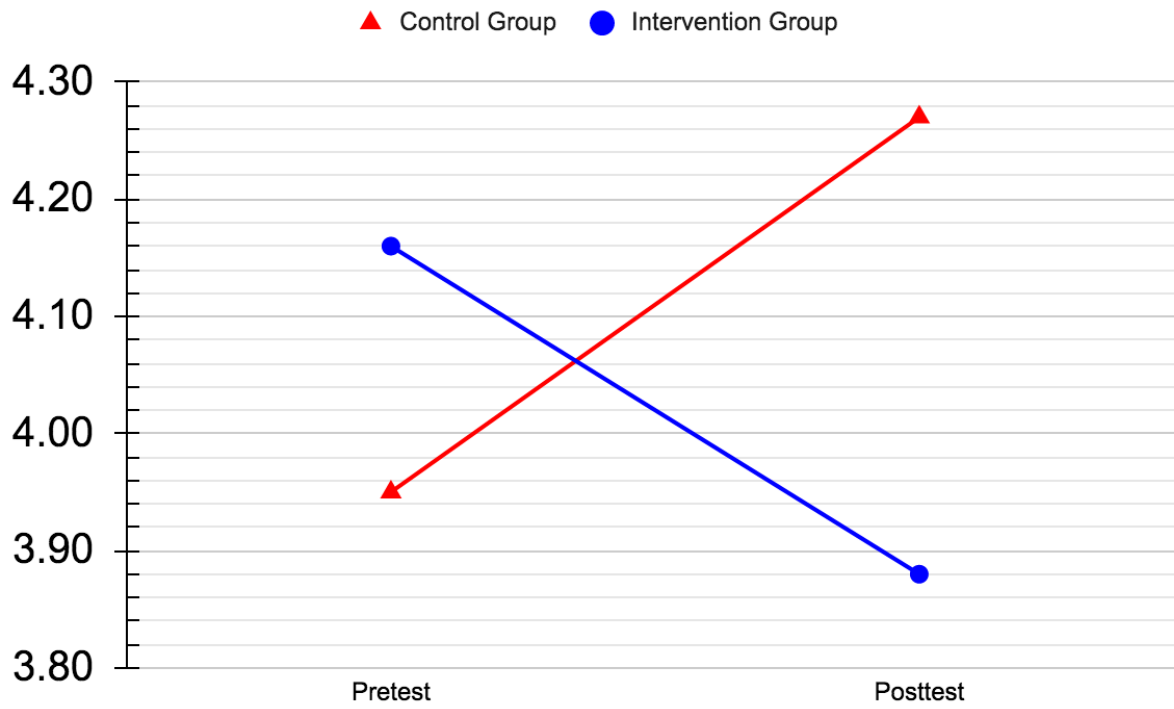
towards People with Schizophrenia, Shortened Version; G = Group (Control/Intervention); T =

Time of testing (Pretest/Posttest); ANOVA = analysis of variance.

**Figure 3.4**

*Interaction of Group and Time for Prejudice Toward People Living with Mental Illness:*

*Fear/Avoidance*

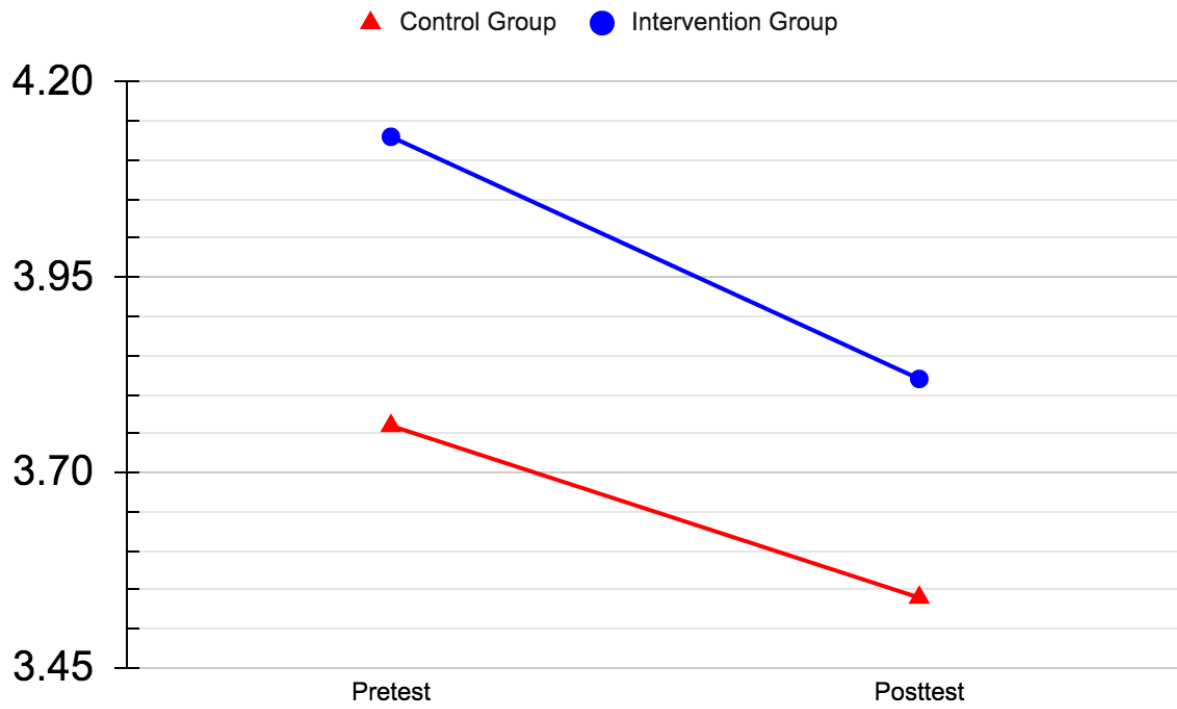


*Note: N = 126.*

**Figure 3.5**

*Interaction of Group and Time for Prejudice Toward People Living with Depression:*

*Fear/Avoidance*

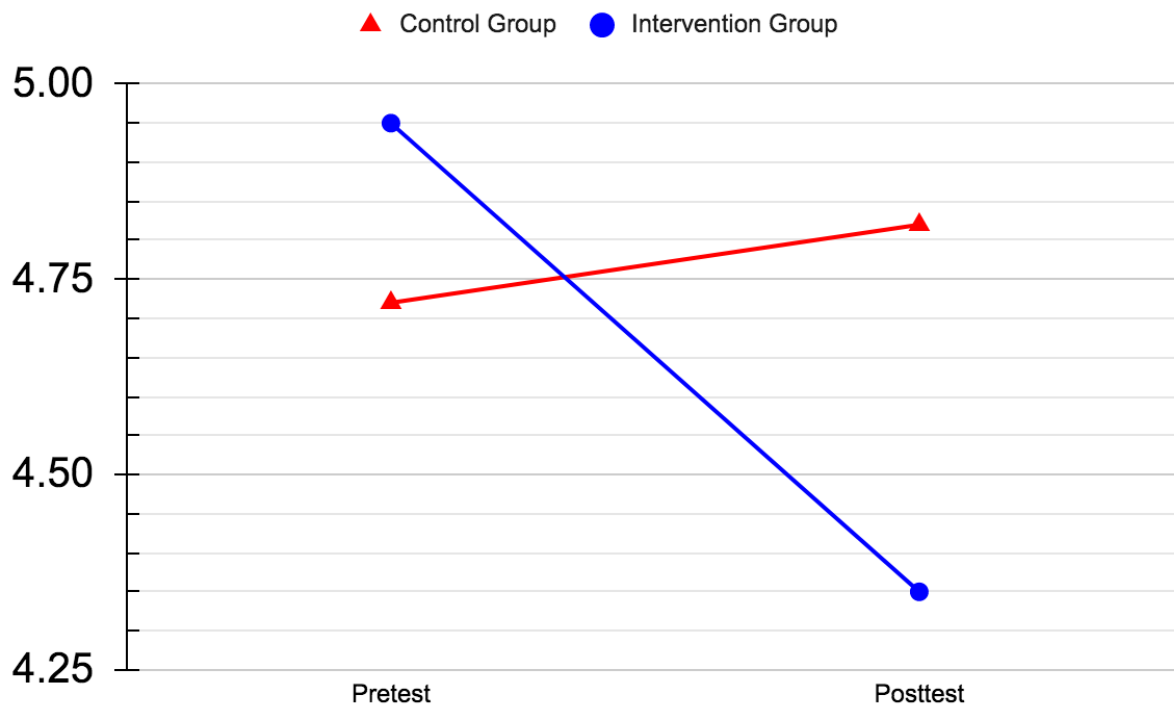


*Note: N = 126.*

**Figure 3.6**

*Interaction of Group and Time for Prejudice Toward People Living with Schizophrenia:*

*Fear/Avoidance*



*Note: N = 126.*

**Table 3.4**

*Two-Way Mixed ANOVAs for Prejudice Toward People Living with Mental Illness, Depression, or Schizophrenia: Unpredictability*

Variable	Control ( <i>n</i> = 54)		Intervention ( <i>n</i> = 72)		ANOVA				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Effect	<i>F</i> ratio	<i>df</i>	<i>p</i>	$\eta^2$
<b>PPMI-SV</b>									
Interaction					G x T	0.01	1,124	.932	.000
Pretest	5.34	1.36	5.31	1.31					
Posttest	5.10	1.44	5.06	1.33					
Difference	-0.24		-0.25						
Time					T	6.84	1,124	.01	.052
Group					G	0.03	1,124	.865	.000
<b>PPD-SV</b>									
Interaction					G x T	1.60	1,124	.208	.013
Pretest	4.62	1.04	4.77	1.19					
Posttest	4.43	1.28	4.37	1.23					
Difference	-0.19		-0.40						
Time					T	12.41	1,124	.001	.091
Group					G	0.06	1,124	.81	.000
<b>PPS-SV</b>									
Interaction					G x T	0.11	1,124	.737	.001
Pretest	6.05	1.31	6.05	1.11					
Posttest	5.81	1.45	5.88	1.33					
Difference	-0.24		-0.17						
Time					T	3.81	1,124	.053	.030
Group					G	0.02	1,124	.877	.000

*Note:* *N* = 126. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,

PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice

towards People with Schizophrenia, Shortened Version; G = Group (Control/Intervention); T =

Time of testing (Pretest/Posttest); ANOVA = analysis of variance.

**Table 3.5**

*Two-Way Mixed ANOVAs for Prejudice Toward People Living with Mental Illness, Depression, or Schizophrenia: Authoritarianism*

Variable	Control ( <i>n</i> = 54)		Intervention ( <i>n</i> = 72)		ANOVA				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Effect	<i>F</i> ratio	<i>df</i>	<i>p</i>	$\eta^2$
<b>PPMI-SV</b>									
Interaction					G x T	0.66	1,124	.419	.005
Pretest	3.68	1.37	3.57	1.47					
Posttest	3.75	1.42	3.48	1.45					
Difference	0.07		-0.09						
Time					T	0.01	1,124	.936	.000
Group					G	0.61	1,124	.436	.005
<b>PPD-SV</b>									
Interaction					G x T	0.66	1,124	.42	.005
Pretest	2.95	1.29	3.00	1.29					
Posttest	3.11	1.19	3.01	1.36					
Difference	0.16		0.01						
Time					T	0.86	1,124	.357	.007
Group					G	0.01	1,124	.912	.000
<b>PPS-SV</b>									
Interaction					G x T	0.09	1,124	.765	.001
Pretest	4.15	1.56	4.16	1.57					
Posttest	4.16	1.62	4.11	1.57					
Difference	0.01		-0.05						
Time					T	0.04	1,124	.835	.000
Group					G	0.01	1,124	.929	.000

*Note:* *N* = 126. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,

PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice

towards People with Schizophrenia, Shortened Version; G = Group (Control/Intervention); T =

Time of testing (Pretest/Posttest; ANOVA = analysis of variance).

**Table 3.6**

*Two-Way Mixed ANOVAs for Prejudice Toward People Living with Mental Illness, Depression, or Schizophrenia: Malevolence*

Variable	Control ( <i>n</i> = 54)		Intervention ( <i>n</i> = 72)		ANOVA				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Effect	<i>F</i> ratio	<i>df</i>	<i>p</i>	$\eta^2$
<b>PPMI-SV</b>									
Interaction					G x T	0.90	1,124	.346	.007
Pretest	2.38	1.11	2.48	1.03					
Posttest	2.52	1.13	2.46	1.09					
Difference	0.14		-0.02						
Time					T	0.53	1,124	.467	.004
Group					G	0.01	1,124	.915	.000
<b>PPD-SV</b>									
Interaction					G x T	1.80	1,124	.183	.014
Pretest	2.72	1.22	2.49	1.11					
Posttest	2.58	1.15	2.56	1.23					
Difference	-0.14		0.07						
Time					T	0.19	1,124	.663	.002
Group					G	0.41	1,124	.526	.003
<b>PPS-SV</b>									
Interaction					G x T	0.22	1,124	.638	.002
Pretest	2.22	1.00	2.38	1.08					
Posttest	2.40	1.16	2.48	1.20					
Difference	0.18		0.10						
Time					T	2.84	1,124	.094	.022
Group					G	0.44	1,124	.508	.004

*Note:* *N* = 126. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,

PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice

towards People with Schizophrenia, Shortened Version; G = Group (Control/Intervention); T =

Time of testing (Pretest/Posttest; ANOVA = analysis of variance.

**Table 3.7***Summary of the Prejudice Subscale Analysis*

Instrument	Subscale			
	Fear/Avoidance	Unpredictability	Authoritarianism	Malevolence
PPMI-SV	*Significant interaction effect.  *Significant simple main effect of time for IG (less prejudice) and CG (more prejudice).	*Nonsignificant interaction effect.  *Significant main effect of time (less prejudice).	*Nonsignificant	*Nonsignificant
PPD-SV	*Nonsignificant interaction effect.  *Significant main effect of time (less prejudice).	*Nonsignificant interaction effect.  *Significant main effect of time (less prejudice).	*Nonsignificant	*Nonsignificant
PPS-SV	*Significant interaction effect.  *Significant simple main effect of time for IG (less prejudice).	*Nonsignificant	*Nonsignificant	*Nonsignificant

*Note:* PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version, PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version, IG = Intervention group, CG = Control group.



## Chapter IV

### **Diminishing Stigma: A Missed Opportunity to Cultivate Positive Attitudes About Recovery in Mental Health Among Undergraduate Nursing Students**

People learn to say what professionals say; “I am a schizophrenic, a bi-polar, a borderline, etc.” Yet instead of weeping at such a capitulation of personhood, most professionals applaud these rote utterances as “insight.” Of course the great danger of reducing a person to an illness is that there is no one left to do the work of recovery. (Deegan, 2002, p. 6)

#### **Perspectives on Recovery**

There are two predominant perspectives on recovery in mental health: clinical recovery and personal recovery. The concept of clinical recovery was developed by mental health professionals and uses a strictly biomedical viewpoint. This perspective largely focuses on symptom reduction and psychopharmacological treatment (Davidson & Roe, 2007; Slade et al., 2008).

The concept of personal recovery was developed by those who have experienced mental health challenges themselves and focuses on the holism, uniqueness, and autonomy of the individual (Anthony, 1993; Slade et al., 2014). Dr. Patricia Deegan, who was quoted in the epigraph and who herself was diagnosed with schizophrenia as a teenager, is thought to be the first to put words to the concept of personal recovery (Stacey & Stickley, 2012). According to Deegan, personal recovery is a unique journey that is defined and directed by the individual (Deegan, 1988). It is person centered and rooted in empowerment and autonomy, optimism and possibility. Personal recovery is non-linear, can occur despite the presence of symptoms, and is

“a way of living a satisfying, hopeful, and contributing life even with limitations caused by illness” (Anthony, 1993, p. 17).

### **Rates of Recovery**

Clinical recovery rates vary according to the specific disorder. For example, Mattisson et al. (2007) examined the clinical recovery of those with depression and related disorders in a longitudinal cohort study that included 344 Swedish individuals who were followed for up to 49 years. The researchers found that 60% of the sample completely recovered from their symptoms and 40% had at least one recurrence of a depressive episode (Mattisson et al., 2007). Revier et al. (2015) conducted a 10-year follow up of 557 individuals who had a first episode of psychosis in the United Kingdom. Psychosis is not synonymous with schizophrenia, though it is a criterion for diagnosis. At the time of follow-up, the researchers found that 46% had been symptom free for at least 2 years and 65% were not currently experiencing psychotic symptoms (Revier et al., 2015).

Rates of personal recovery are currently more difficult to determine as it is highly individualized and defined by those who experience it. Prominent researchers of personal recovery have stated that there is no quantitative measure that comprehensively represents personal recovery (Shanks et al., 2013). According to Andresen and colleagues (2010), there is little relationship between measures of clinical recovery and measures of personal recovery. Clinical recovery can occur without personal recovery and personal recovery can occur without clinical recovery (Slade et al., 2014). Clinical recovery focuses on the reduction of symptoms as an outcome while personal recovery focuses on the promotion of health as a process (van Weeghel et al., 2019). Clinical recovery is concerned with limitations and personal recovery is concerned with possibilities (Slade & Longden, 2015). Clinical recovery is an absence, personal recovery is a presence.

## **Conceptual Framework**

This study was guided by the CHIME-D framework created through systematic reviews by Leamy et al. (2011) and Stuart et al. (2017). The researchers revealed six characteristics of personal recovery (henceforth referred to as recovery unless stated otherwise) that form the acronym CHIME-D: connectedness, hope, identity, meaning in life, empowerment, and difficulties. Recovery requires connection, through the support of either loved ones, peer advocates, a community, or professional help. Hope inspires optimism and cultivates positivity, aspirations, possibility, and the motivation to change. In the recovery process, identity can be positively redefined in the face of an illness through a transformative process that overcomes challenges and stigma (Deegan, 2002). Meaning in life occurs through myriad ways as the individual develops a deeper understanding of past experiences as well as purpose for the future. Recovery requires empowerment, which focuses on an individual's strengths, responsibility, and autonomy (Leamy et al., 2011). Finally, the characteristic of difficulties refers to the non-linear nature of recovery where challenges may occur that can include interpersonal struggles, financial instability, and the resurgence of psychiatric symptoms (Stuart et al., 2017). This framework was taught to students in the intervention group and also guided the instrument choice for measurement of recovery attitudes.

## **Nurses' Attitudes Toward Mental Illness Recovery**

There is a paucity of quantitative research concerning the knowledge and attitudes of nurses toward personal recovery. In the literature that does exist, Cleary and Dowling (2009) found that mental health nurses' scores regarding attitudes about recovery were significantly lower than that of other mental health professionals such as social workers and psychologists. More specifically, the study revealed that the nurses in the sample had significantly lower mean

scores regarding knowledge of the non-linearity of the recovery process. Non-linearity means that recovery does not always follow a straightforward trajectory and that “a person does not necessarily need to be free from illness and symptoms to be in recovery” (Bedregal et al., 2006, p. 101). A replication study conducted by Gaffey et al. (2016) revealed that the significant disparity between nurses and mental health professionals regarding knowledge of the non-linearity of the recovery process was still existent and had widened in a span of 5 years.

### **Students’ Attitudes Toward Recovery**

Foster et al. (2019) conducted one of the few experimental studies using a sample of undergraduate nursing students that included a quantitative instrument specifically concerning recovery: the Recovery Attitudes Questionnaire (RAQ-7). The pretest results showed recovery scores on the higher end of the scale with the mean score being 4.0 out of 5. The authors attributed this to the possibility of recovery concepts being covered theoretically in the mental health course conducted before the students’ clinical placement. Furthermore, they also found that student attitudes toward recovery were more positive after clinical placement as indicated by a statistically significant increase in total RAQ-7 scores from 4.0 to 4.1 ( $p < .01$ ,  $d = 0.28$ ). The study did not have a control group. Choi and colleagues (2016) conducted a study on the impact of a mental health clinical practicum on mental illness prejudice in undergraduate nursing students. They used the Social Stigma Scale of Mental Illness Patients (Kim & Seo, 2004), an instrument that includes an 8-item subscale concerning the impossibility of recovering from a mental illness. The clinical practicum included 3 weeks of clinical placement on hospital-based psychiatric units and 1 week in a community mental health center. The students also completed two simulations with standardized patients focusing on therapeutic communication and two clinical group seminars focusing on personal knowledge and presenting clinical cases. It found

that nursing student attitudes about recovery were significantly more pessimistic after completing the practicum ( $p = .013$ ,  $d = 0.32$ ). The authors did not use a control group in this analysis.

In a qualitative study involving pre-registration nursing students in the United Kingdom, Watson and Reimann (2021) found that personal recovery was a “problematic concept for students” (p. 6). Even though the students had completed the didactic and clinical components of a mental health course that specifically taught personal recovery, they had an incomplete understanding of the concept, with 38% mistaking clinical recovery for personal recovery. An undergraduate mental health nursing course could be instrumental in correcting these misconceptions and cultivating positive attitudes toward recovery in mental health conditions.

### **Gaps in the Literature and Goals of the Current Study**

There is a great lack of research on the attitudes of undergraduate nursing students toward recovery (Gyamfi et al., 2020) and the interventions that can impact such attitudes. Although certain stigma instruments cover recovery concepts in individual items, few studies, or the instruments used, have focused wholly on recovery. Furthermore, Foster and colleagues (2019) agree that there is scant research on the impact of traditional mental health clinical placements on nursing students' attitudes toward recovery.

Therefore, the current study's purpose was to address the above-mentioned research gaps and assess the impact of an undergraduate mental health nursing course on nursing students' attitudes toward the recovery of those living with a mental illness. It also explored the relationships between the stigma attached to mental illness and attitudes toward recovery. The following research questions were explored:

### ***Research Question 1***

Does an undergraduate mental nursing health course impact nursing student attitudes toward recovery as measured by the Consumer Optimism Scale?

### ***Research Question 2***

Among undergraduate nursing students, what are the relationships between the attitudes toward recovery and the stigma attached to mental illness, as measured by the pretest Consumer Optimism, PPMI-SV, PPD-SV, and PPS-SV scales?

## **Methods**

### **Study Design**

This study used a quasi-experimental, control group, pretest posttest design.

### **Ethical Considerations**

Approval was obtained from the Institutional Review Board of Teachers College, Columbia University. The study site's dean granted the necessary permission and the participants provided informed consent. All students were made aware that participation was voluntary, it would not impact their education or grade, and they could cease participation at any time. A \$10 electronic gift card was given to those who completed both the pretest and the posttest.

### **Sample Size**

G\*Power (Faul et al., 2007) was used to conduct a power analysis for two statistical tests: Pearson correlation analysis (two-tailed) and a two-way mixed analysis of variance (ANOVA). Both analyses used a power of .8, alpha level of .05, a small effect size of 0.15 for the two-way mixed ANOVA, and a medium effect size of 0.3 for the Pearson correlations. The largest of the

two resultant samples sizes was 90. Considering the possibility of a 20% attrition, the total sample size was increased to 108.

### **Participants and Setting**

A convenience sample of nursing students from an undergraduate nursing program in New York City was recruited. This accelerated baccalaureate program lasts 15 months and requires students to already have a bachelor's degree in a non-nursing field. For this study, participation was sought from two student cohorts in fall 2021 and spring 2022. All 163 of the students were in the second term of the program, when they took a mental health nursing course or a pediatric/maternal health nursing course. Considering the class size and clinical site availability, students were assigned to one of the courses by alphabetical order using their last names. Those in the mental health nursing course were assigned to the intervention group and those in the pediatric/maternal health nursing course were assigned to the control group.

The inclusion criteria were students' ability to provide consent, voluntary participation, and enrollment in the second term of the program. The exclusion criteria were students in the intervention group who were absent for 30% or more of the classroom lectures or who had clinical absences that were not made up. This was only applied to the intervention group as such students would not have sufficiently participated in the intervention as intended.

### **Procedure**

Students were informed of the study via email one week before the first day of their class. On the first day, over Zoom, the students were invited to participate after providing informed consent. The participants in each group completed the pretest before being presented with any course content. After the completion of their respective courses at the end of the term, those who had completed the pretest were invited to complete the posttest. The only difference between the

two tests was that the posttest did not contain demographic questions. Students were also emailed a link for the posttest that would stay active for two weeks. This was to allow students to focus on preparing for final exams and participate in the posttest afterward. All the data were collected using Qualtrics (<https://www.qualtrics.com>).

## **Interventions**

Both 14-week courses had a classroom and the clinical component. The intervention group received 45 hours of classroom time and 30 hours of clinical experience. The control group received 60 hours of classroom time and 60 hours of clinical experience as the course included both pediatric and maternity nursing. The two courses were taught by completely different nursing faculty. The researcher co-taught the classroom component of the intervention group. All classroom activities were held over Zoom because of the COVID-19 pandemic and all clinical activities were conducted in person through a large New York City hospital network. The control group was chosen because they were at the same point in the program as the intervention group. The clinical activities were undertaken in traditional clinical sites; they were on acute hospital-based psychiatric units for the intervention group or on acute pediatric/maternity units for the control group.

The intervention group covered all chapters of the required text which includes the concept of recovery (Videbeck, 2020). Both biomedical and psychosocial explanations for mental illness were covered, though there undoubtedly was a biomedical predominance due to its more reliable framework for testing (Chua et al., 2021). The CHIME-D framework was introduced as a foundational concept early in the course and highlighted throughout. The work of Dr. Patricia Deegan was used to explore the meaning of recovery (Deegan, 1988). Two short



videos of Dr. Deegan sharing her own personal journey of recovery and perspective of how those in the health services can aid in the recovery of others were shown.

Indirect contact with those who experience a mental health condition can include videos or vignettes of individuals sharing their mental health experiences and can be a viable method of decreasing negative attitudes (Corrigan et al., 2012; Lee & Seo, 2018). Therefore, videos of first-person narratives covering most of the disorders discussed in the course were shown to students in the intervention group as a teaching strategy. This was followed by group discussions and Socratic dialogue. The videos were always of a person who had been diagnosed with a specific disorder and was also on the path of recovery. Students were always asked to reflect and share the characteristics of CHIME-D that they saw in these stories of recovery. These videos allowed those with experience of mental illness the right to speak for themselves, share their signs and symptoms in their own words, describe the treatments that did and did not work, and humanize their experience of mental illness. The videos embodied the CHIME-D framework and showed that the individuals needed connections with others, hope in times of difficulties, a positive reframing of their identities, a new meaning in their lives, empowerment, and the non-linearity of recovery. For instance, the students watched a video of Elyn Saks, a law professor and author diagnosed with schizophrenia (Saks, 2012). Elyn eloquently shares her story of recovery and exemplifies many of the CHIME-D characteristics including connectedness, empowerment, and the difficulties she has faced in the non-linearity of her recovery. She powerfully states, “the humanity we all share is more important than the mental illness we may not” (Saks, 2012, 14:19).

## **Instruments**

### ***Consumer Optimism Scale***

Salyers et al. (2007) developed the Consumer Optimism Scale to measure attitudes and expectations regarding the recovery of those impacted by a mental illness. Happel et al. (2011) define a consumer as “a person who is currently using or in the past has used mental health services as either an in-patient or out-patient” (p. 110). The scale consists of 16 items (4 of which are reverse-scored) measured on a 5-point Likert scale (1 = none, 5 = almost all). Respondents are asked how many of those with mental illness would “expect to have recovery-related outcomes” (Salyers et al., 2013a, p.4). Example items are as follows: “will remain in the mental health system for the rest of their lives,” “will be able to function very well in the community,” and “will find work that enables them to be economically self-sufficient.” The CHIME-D framework did not have any influence on the content of the Consumer Optimism Scale as the Consumer Optimism Scale was created before the conception of the CHIME-D framework. However, an analysis of the items revealed that every CHIME-D characteristic was represented within the instrument. Additionally, every item on the Consumer Optimism Scale maps on to at least one CHIME-D characteristic. The authors’ permission was obtained for the use of the instrument (see Appendix B).

**Reliability and Validity.** The Consumer Optimism Scale has shown excellent test-retest reliability with an intraclass correlation coefficient score of .92 and Cronbach's alpha of .91 (Salyers et al., 2007). The scale has also exhibited convergent validity with the provider version of the Recovery Self-Assessment instrument (Salyers et al., 2007) and “correlates with related constructs” (Salyers et al., 2013b, p. 71). For the current study, the Cronbach's alpha was .91 at pretest and .94 at posttest.

**Scoring Instructions.** After reverse-scoring specified items, the final score is calculated by summing the 16 items and dividing by 16. Higher scores indicate higher levels of optimism. Scores are item means with a range of 1.0 to 5.0

***Prejudice Towards People with Mental Illness, Shortened Versions***

The Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV); Prejudice towards People with Depression, Shortened Version (PPD-SV); and Prejudice towards People with Schizophrenia, Shortened Version (PPS-SV) are disorder-specific instruments created by Bizumic et al. (2022) and derived from the original Prejudice towards People with Mental Illness (PPMI) scale (Kenny et al., 2018). The PPMI contains 28 items, and each of the three derived instruments contains 16 items from the original PPMI, modified to cover either general mental illness, depression, or schizophrenia. All three derived instruments measure four facets of prejudice (fear/avoidance, unpredictability, authoritarianism, and malevolence) on a 9-point Likert scale using positively and negatively phrased items. Permissions for use of the three shortened instruments were obtained from the author (Appendix A).

**Reliability and Validity.** The original PPMI has strong concurrent validity with the commonly used Community Attitudes Toward Mental Illness scale ( $r = .78$ ), as shown by Kenny and colleagues (2018). Furthermore, these authors also provided evidence that the PPMI has a strong correlation to the established antecedents of prejudice, including social dominance orientation ( $r = .52$ ), and a moderate correlation to right-wing authoritarianism ( $r = .39$ ). The shortened versions maintain the qualities of the PPMI and correlate almost perfectly with the original version (PPMI-SV,  $r = .98$ ; PPMI-SV,  $r = .98$ ; PPMI-SV,  $r = .99$ ; Bizumic et al., 2022).

In addition, the three instruments demonstrated good reliability in an unpublished study (Richards, 2022): PPMI-SV ( $\alpha = .80$  to  $.81$ ), PPD-SV ( $\alpha = .73$  to  $.78$ ), and PPS-SV ( $\alpha = .83$  to

.85). In the current study, Cronbach's alpha values showed good reliability: PPMI-SV ( $\alpha = .85$ ), PPD-SV ( $\alpha = .85$ ), and PPS-SV ( $\alpha = .85$ ).

**Scoring Instructions.** Each of the three instruments has 16 items and each instrument is scored independent of the others. After specified items are reverse-scored, the total instrument scores are calculated by summing items 1-16 items and dividing by 16. The fear/avoidance subscale score is the sum of items 1-4 divided by 4. The unpredictability subscale score is the sum of items 5-8 divided by 4. The authoritarianism subscale score is the sum of items 9-12 divided by 4. The malevolence subscale score is the sum of items 13-16 divided by 4. Higher scores indicate a higher level of prejudice. Scale scores and subscale scores are item means with a possible range of 1.0 to 9.0.

### ***Demographic Questionnaire***

A demographic questionnaire was included at the end of the pretest survey (Appendix C). The questionnaire aimed to support individualized expressions of demographic characteristics by providing fill in the blank options. Participants were also given the option to not disclose data on every item in the questionnaire. The items concerned age, gender, ethnicity, and if participants had a family member or friend who had experience with mental health issues.

### **Data Analysis**

IBM SPSS Statistics (Version 26) was used to analyze the quantitative data, and descriptive statistics were used to examine the demographic characteristics. An independent-samples *t* test and chi-square tests of independence were to assess differences in demographic characteristics between the groups demographic characteristics. Where students preferred not to disclose certain demographic characteristics, the absence was treated as missing data for the inferential statistical tests.

Pertinent items on the Consumer Optimism Scale were reverse-scored and the mean was calculated. Using the general linear model approach, a two-way mixed ANOVA was used to assess the differences in the Consumer Optimism Scale scores between the groups over time. Finally, Pearson product-moment correlation analyses were used to assess the relationships among the Consumer Optimism Scale, PPMI-SV, PPD-SV, and PPS-SV for the total sample at pretest.

## **Results**

In total, 163 students from the Fall 2021 and Spring 2022 terms were assessed for eligibility. There were 137 students (84%) who completed both the pretest and posttest. There were 11 students in the intervention group who were excluded from the main data analysis as they did not attend 30% or more of the classroom lectures. As a result, 72 students in the intervention group (74.2%) and 54 students in the control group (81.8%) were included in the analysis.

### **Demographic Characteristics**

The students' age range was 20 to 45 years ( $M = 26.2$ ,  $SD = 4.86$ ). The mean age of the intervention group ( $M = 25.99$ ,  $SD = 4.97$ ) was lower than the control group ( $M = 26.56$ ,  $SD = 4.72$ ), a difference that was not statistically significant,  $t(123) = .648$ ,  $p = .681$ , 95% CI [-1.17, 2.31]. A majority of the intervention group identified as female (90.3%; male: 9.7%), and none identified with any other gender. Likewise, a majority of the control group identified as female (83.3%; male: 14.8%), and one participant preferred not to state their gender. There was no statistically significant difference between the genders reported by the groups,  $\chi^2(1) = .834$ ,  $p = .361$ .

The sample was multicultural and primarily non-White (43.7%) with seven different ethnicities reported. There were 26 students (20.6%) who preferred not to disclose their ethnicity. In order to meet the assumptions of the chi-squared test of independence, some student responses for ethnicity had to be collapsed into shared categories for both the groups. The following responses for reported ethnicity had the fewest responses and were collapsed into one shared group: Jewish, Middle Eastern, More than one, Hispanic or Latino. There were no statistically significant differences in reported ethnicity between the groups,  $\chi^2(3) = 3.374, p = .338$ .

A majority of the total sample reported having a family member who has experienced a mental health issue (58.7%) or a friend who has experienced a mental health issue (64.3%). There were no differences between the intervention and control groups regarding if participants had a family member who has experienced a mental health issue,  $\chi^2(1) = .480, p = .489$ ; or a friend who has experienced a mental health issue,  $\chi^2(1) = .035, p = .852$ .

The demographic characteristics are summarized in Table 4.1.

### **Attitudes Toward Recovery**

A two-way mixed ANOVA was used to assess the differences in the Consumer Optimism scores between the groups over time (Table 4.2). Following procedure, the control and intervention groups data were analyzed separately and there were no outliers in the Consumer Optimism data at pretest or posttest. Data were found to be normally distributed, as assessed by Shapiro-Wilk ( $p > 0.05$ ). Levene's test of homogeneity ( $p > .05$ ) and Box's test of equality of covariance matrices ( $p > .001$ ) confirmed the homogeneity of variances and covariances.

There was no statistically significant interaction between group and time in the Consumer Optimism scores,  $F(1, 124) = 1.65, p = .201$ , partial  $\eta^2 = .013$ . The main effect of time did not show a statistically significant difference in scores from pretest to posttest,  $F(1, 124) = 0.49, p =$

.483, partial  $\eta^2 = .004$ . The main effect of group showed that there was no statistically significant difference in the scores between groups,  $F(1, 124) = 1.75, p = .188$ , partial  $\eta^2 = .014$ .

### **Relationship between Recovery Attitudes and Stigma**

Pearson product-moment correlations were used to assess the relationship between the Consumer Optimism Scale, PPMI-SV, PPD-SV, and PPS-SV of the total sample at pretest (Table 4.3). Outliers were found in the Consumer Optimism Scale as the total sample was analyzed and not the control and intervention groups separately. Outliers were also found in the PPS-SV data but not in the PPMI-SV or PPD-SV data. However, no extreme outliers were found. The Pearson correlations run with and without the inclusion of outliers found no appreciable differences. All data were found to be normally distributed as assessed by Shapiro-Wilk ( $p > 0.05$ ), except for the PPS-SV. However, upon visual inspection of the Q-Q plot and histogram, the data appeared approximately normally distributed. A visual inspection of the scatterplots was used to verify that there were linear relationships among all variables.

There was a statistically significant, strong negative correlation between attitudes toward recovery and prejudice toward people experiencing a general mental illness,  $r(124) = -.54, p < .001$ , with the Consumer Optimism levels explaining 29% of the variation in the PPMI-SV scores. There was a statistically significant, strong negative correlation between attitudes toward recovery and prejudice toward people experiencing depression,  $r(124) = -.60, p < .001$ , with the Consumer Optimism levels explaining 36% of the variation in the PPD-SV scores. There was a statistically significant, moderate negative correlation between attitudes toward recovery and prejudice toward people experiencing schizophrenia,  $r(124) = -.43, p < .001$ , with the Consumer Optimism levels explaining 18% of the variation in the PPS-SV scores.

Moreover, there was a statistically significant, strong positive correlation between prejudice toward people experiencing a general mental illness and prejudice toward those experiencing depression,  $r(124) = .87, p < .001$ , with the PPMI-SV levels explaining 75% of the variation in the PPD-SV scores. There was a statistically significant, strong positive correlation between prejudice toward people experiencing a general mental illness and those experiencing schizophrenia,  $r(124) = .79, p < .001$ , with the PPMI-SV levels explaining 62% of the variation in the PPS-SV scores. There was a statistically significant, strong positive correlation between prejudice toward people experiencing depression and prejudice toward those experiencing schizophrenia,  $r(124) = .71, p < .001$ , with the PPD-SV levels explaining 51% of the variation in the PPS-SV scores.

### **Discussion**

This study is one of the very few to provide new quantitative evidence on the attitudes of nursing students toward recovery in mental health and the impact of undergraduate nursing education on those attitudes. The findings show that the intervention of an undergraduate mental health nursing course had no measurable impact on attitudes toward recovery in mental health.

This finding is not consistent with that of Foster and colleagues (2019), whose mixed-method study showed that the attitudes toward recovery were quantitatively and qualitatively more positive after a mental health nursing clinical experience. The authors used the RAQ-7, which was developed to measure beliefs that those living with a mental health condition can recover. The students had already completed the classroom portion of the course before their study began. However, the authors did not include a control group and there was no significant change in one of the RAQ-7 subscales: “Recovery is difficult and differs among people.” This subscale includes three items concerning the nonlinearity of recovery, its individual and personal



nature, and the negative impact stigma can have on the recovery journey. Unlike the Consumer Optimism Scale, the RAQ-7 does not cover all of the CHIME-D characteristics and heavily focuses on hope and difficulties. Most notably, there is a lack of items that cover the characteristics of connectedness and meaning. Moreover, identity and empowerment are also not covered. Additionally, the RAQ-7 contains no reverse-coded items.

The students in the intervention group only had clinical rotations in hospital-based acute psychiatric units. These clinical sites may offer very limited recovery perspectives as patients are experiencing the height of their symptomatology and are just beginning the recovery process. These hospital-based units were all locked units where patient autonomy, and therefore to some degree empowerment, is more limited than in a home or community setting. This lack of exposure to recovery experiences in the community settings may have resulted in a lack of increased optimism in students' attitudes toward recovery.

The intervention group was introduced to the CHIME-D model and it was highlighted throughout the course, and first person narratives of those in recovery were used for a majority of the mental health disorders; the intervention still had no effect on students' attitudes toward recovery. There are numerous possible reasons why the intervention had no effect. Stacey and Stickley (2012) posited that recovery is a challenging concept for students to accept because, among other reasons, recovery may occur without the help of healthcare professionals such as registered nurses, the profession they are pursuing. The recovery concepts may also come into direct conflict with students' past experiences with people with mental health issues and their preconceived ideas about the possibilities of recovery (Stacey & Stickley, 2012). Additionally, students often expect nursing education to be in complete alignment with the medical model and can be critical of educational content that includes holism, social determinants of health, and

therapeutic communication skills that are the cornerstone of a recovery-oriented practice (Stacey & Stickley, 2012, p. 536).

Consequently, there is a need for curriculum reform. In a qualitative study, Chua et al. (2021) found that nursing students' understanding of recovery was “predominantly reflective of the biomedical model” (p. 6). However, they suggested that nursing curricula need not remove the biomedical model but include a more “holistic approach” (Chua et al., 2021, p. 1). A balanced way of knowing and presenting knowledge would align with Carper’s vision of nursing epistemology (Carper, 1978). The prevailing biomedical model of mental illness hinders the cultivation of positive attitudes toward recovery as it disallows perspectives that differ from clinical recovery (Chua et al., 2021, p. 2). Carper's four ways of knowing in nursing are empirics, the science of nursing; esthetics, the art of nursing; personal knowing, the self-awareness of nursing; and ethics, the heart of nursing. All ways of knowing should be valued to ensure a more holistic nursing curriculum. In a systematic literature review, Hawsawi et al. (2021) found that critiquing the biomedical perspective of recovery increased healthcare providers' knowledge and positive attitudes toward recovery in mental health.

Using qualitative methods, Watson and Reimann (2021) found that nursing students had a partial understanding of recovery and often mistook the biomedical perspective of clinical recovery for personal recovery. They suggested that acknowledging these deficits in knowledge is a step toward further elucidation of the concept and that students' uncertainties about recovery should be supported and explored to promote learning. Similarly, Stacey and Stickley (2012) advised educators to “listen for student understanding and sympathetically engage with their expressions of uncertainty” (p. 537).

The moderate to strong negative correlations found between attitudes toward recovery and prejudice toward people living with a mental health conditions in undergraduate nursing students may be the first of its kind demonstrated in the literature. These findings suggest that educational interventions that target prejudice reduction may have a positive impact on recovery attitudes. Conversely, interventions that seek to increase optimistic recovery attitudes may reduce prejudice toward people living with mental health conditions. It is possible that the attitude that people with mental health conditions cannot recover is in itself prejudicial, hence the moderate to strong negative relationship.

An intention-to-treat analysis using all the same aforementioned statistical tests included the 11 students in the intervention group who were removed for meeting exclusion criteria for being absent for 30% or more of the classroom lectures. Attendance was expected though not enforced. The analysis revealed no appreciable differences in any statistical conclusions.

According to Anthony (1993), a pioneer in the development of the concept of recovery, nursing needs to consider not where we are as a profession but where we want to be. Though challenging, it is neither unrealistic nor romantic to expect nurses and nurse educators to wholeheartedly adopt the ideals of recovery in mental health nursing and nursing education. It is not an indication of false hope but of a reality in dire need of change. As opposed to the biomedical reductionist ideals, nursing should adopt the ideas of personal recovery focusing on encouraging connection, hope, identity, meaning, and empowerment. Through advocacy, partnership, and unconditional positive regard, nurses put patients, who are people, not the illness, at the center of treatment. That is, they provide person-centered care, not illness-centered care.

## **Limitations**

This quasi-experimental study's results would have been strengthened with randomization. Generalization of the findings may be limited because of the use of a convenience sample. The instruments used in this study were all self-report measures covering socially sensitive topics and may have been impacted by a response bias due to the social desirability of participants (Van de Mortel, 2008). It is possible that participants may have altered responses to present themselves as individuals with high levels of optimism toward recovery and low levels of prejudice toward people with mental health conditions.

## **Implications and Future Research**

Unfortunately, the current study found no positive impact on the students' attitudes toward recovery of those diagnosed with a mental illness. The traditional clinical groups in the hospital-based acute psychiatric units exposed the students to individuals in the most acute stages of symptomatology, not those further along in the recovery process. Therefore, non-traditional clinical sites need to be integrated into the course as there is evidence that they decrease the desire for social distance from those impacted by a mental illness (Moxham et al., 2016).

There also may be a way of addressing this shortcoming by way of collaboration with other courses within a nursing program. For example, there is a community nursing course in the ABSN program used for the current study that includes both classroom and clinical experiences. Partnering with this course may provide a unique opportunity to revisit the concepts of recovery and apply them in the community nursing context. Additionally, the community nursing clinical experiences may provide the chance to highlight and support recovery outside of the acute inpatient psychiatric units.

As well intentioned and rigorous as the classroom interventions were designed to be, they undoubtedly were not enough to transform well entrenched attitudes. The indirect contact by way of videos of individuals sharing their recovery journey seemingly had no measurable impact on the recovery attitudes of the students. Revisions that holistically integrate the concepts of recovery further into the curriculum need to be made. Critical reflection, a brief and low-cost teaching strategy, has been qualitatively shown to reduce stigma and can be easily implemented in the curriculum (Carroll, 2018). Moreover, curricula that have been created and presented in collaboration between undergraduate nurse educators and those who have lived experience of a mental illness have been shown to quantitatively decrease stigma (Byrne et al., 2014; Happell et al., 2011) and may also translate into more optimistic student attitudes toward recovery. However, only one of the two aforementioned studies to include such collaborations had a control group (Byrne et al., 2014). No matter the intervention that is chosen for future research, the inclusion of a control group is of the utmost importance to strengthen study design and examine the possible threats of maturation and testing.

This study also demonstrated that a moderate to strong negative relationship exists between prejudice toward people experiencing a mental illness and attitudes toward recovery. Consequently, educational interventions that aim to decrease prejudice may increase positive attitudes toward recovery, and vice versa. Further research should explore this possible causative relationship in depth.

An instrument created with the CHIME-D framework in mind currently does not exist and would be invaluable. This future instrument would need more items to accurately represent each of the six CHIME-D characteristics thoroughly. Though the content of items may map on to more than one CHIME-D characteristic, this would need to be done in a mindful manner in order

to create distinguishable subscales. Future studies would need to develop this in tandem with those with a lived experience of a mental illness. A brief instrument is desirable as it could be used with other measures of prejudice without incurring survey fatigue among respondents. As this was the first time the shortened versions of the PPMI instruments were used in an undergraduate nursing population, replication studies are needed to support the current results. This is especially true as the study was conducted during the COVID-19 pandemic and the didactic portion of each course did not occur in person. Replication studies would be able to explore if in-person classroom experiences may have a more positive impact.

### **Conclusions**

This study has provided evidence that an undergraduate nursing course had no measurable impact on student attitudes toward recovery in mental health. It also demonstrates a moderate to strong negative relationship between prejudice toward people who experience a mental illness and attitudes toward recovery. Since it is a critical component of mental health, professional nurses require a deeper understanding of and a positive attitude toward recovery (Cleary et al., 2013). As students have reported that most of their understanding of recovery in mental health comes from their undergraduate education, that is the best time to make a positive impact (Chua et al., 2021).

Just as challenging setbacks are part of the recovery process, failing to make an impact on the attitudes about recovery is also perhaps a necessary step back and a humble realization. The path of recovery is not always linear, and neither are the educational interventions that seek to cultivate more positive attitudes toward recovery.

Dr. Patricia Deegan, a pioneer of recovery advocacy, stated the following after being diagnosed with schizophrenia:

Neither the paralyzed man nor I could remember a specific moment when the small and fragile flame of hope and courage illuminated the darkness of our despair. We do remember that even when we had given up, there were those who loved us and did not give up. They did not abandon us...they remained hopeful despite the odds. Their love for us was like a constant invitation, calling us forth... (Deegan, 1988, p. 14)

Nursing is the process of humanization and not the “capitulation of personhood” (Deegan, 2002, p.6). It is not a profession of devaluation, reducible stigmatization, and pessimism. It is about advocacy, not abandonment. Therefore, those in the nursing profession and undergraduate nursing education must seek to understand, engage with, and support the work of recovery, to be an unrelenting “flame of hope” (Deegan, 1988, p. 14). As Anthony (1993) states, “Recovery is a deeply human experience, facilitated by the deeply human responses of others. Recovery can be facilitated by any one person. Recovery can be everybody's business” (p. 18).

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**Table 4.1***Demographic Characteristics*

Baseline characteristic	Control Group		Intervention Group		Total Sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Gender</b>						
Female	45	83.3	65	90.3	110	87.3
Male	8	14.8	7	9.7	15	11.9
Prefer not to say	1	1.9	0	0	1	0.8
<b>Age in years</b>						
20-29	43	79.6	58	80.6	101	80.2
30-39	10	18.6	10	14	20	15.9
≥ 40	1	1.9	3	4.2	4	3.2
Prefer not to say	0	0	1	1.4	1	0.8
<b>Ethnicity</b>						
African American or Black	9	16.7	5	6.9	14	11.1
Asian, Asian American, or East Asian	7	13	14	19.4	21	16.7
Hispanic or Latino	6	11.1	6	8.3	12	9.5
Jewish	0	0	3	4.2	3	2.4
Middle Eastern	1	1.9	0	0	1	0.8
White	19	35.2	26	36.1	45	35.7
More than one	2	3.7	2	2.8	4	3.2
Prefer not to say	10	18.5	16	22.2	26	20.6
<b>A family member has experienced a mental health issue</b>						
Yes	34	63	40	55.6	74	58.7
No	19	35.2	29	40.3	48	38.1
Prefer not to say	1	1.9	3	4.2	4	3.2
<b>A friend has experienced a mental health issue</b>						
Yes	35	64.8	46	63.9	81	64.3
No	18	33.3	22	30.6	40	31.7
Prefer not to say	4	5.6	4	5.6	5	4

*Note: N = 126*

**Table 4.2***Two-Way Mixed ANOVA for Attitudes Toward Recovery*

Variable	Control ( <i>n</i> = 54)		Intervention ( <i>n</i> = 72)		ANOVA				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Effect	<i>F</i> ratio	<i>df</i>	<i>p</i>	$\eta^2$
Consumer Optimism Scale									
Interaction					G x T	1.65	1,124	.201	.013
Pretest	3.43	.53	3.36	.47					
Posttest	3.5	.55	3.34	.57					
Difference	0.07		-0.02						
Time					T	0.49	1,124	.483	.004
Group					G	1.75	1,124	.188	.014

*Note:* *N* = 126. G = Group (Control/Intervention); T = Time of testing (Pretest/Posttest);

ANOVA = analysis of variance.

**Table 4.3***Correlations Among Consumer Optimism and Prejudice Variables*

Variable	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. Consumer Optimism Scale	3.39	.49	—			
2. PPMI-SV	3.86	.97	-.54*	—		
3. PPD-SV	3.56	.96	-.60*	.87*	—	
4. PPS-SV	4.34	.99	-.43*	.79*	.71*	—

*Note:*  $N = 126$ . Prejudice towards People with Mental Illness, Shortened Version (PPMI-SV),

Prejudice towards People with Depression, Shortened Version (PPD-SV), and Prejudice towards

People with Schizophrenia, Shortened Version (PPS-SV).

\* $p < .001$ , two-tailed.

## **Chapter V**

### **Conclusion**

This dissertation's purpose was to determine the impact of an undergraduate mental health nursing course on students' attitudes toward people living with a general mental illness, depression, and schizophrenia; the impact on their attitudes toward recovery; and the relationship between the student attitudes toward recovery and the stigma attached to mental illness.

### **Key Findings**

Chapter II provided the findings from the first study, which used a quasi-experimental single-group pretest posttest design ( $N = 44$ ). The prejudice toward general mental illness, depression, and schizophrenia each reduced to a statistically significant degree with small-to-medium effect sizes ( $d = 0.23$  to  $0.34$ ). The subscale analysis showed that, among the facets of prejudice, fear/avoidance decreased the most for general mental illness and schizophrenia, unpredictability decreased for general mental illness and depression, and authoritarianism and malevolence remained unchanged for all conditions. These findings suggest that the mental health nursing course was successful in decreasing prejudicial attitudes toward people living with a mental illness, with more impact on some facets of prejudice than the others.

Chapter III reported the findings from the second study ( $N = 126$ ), which was similar to the first but with two new cohorts of students and an added nonequivalent control group in the pediatric/maternal health nursing course. Here, significant reductions in prejudice were found only for the general mental illness condition. Prejudice toward people living with depression reduced over time in both groups, but attitudes toward people living with schizophrenia, which consistently showed the highest scores of prejudice out of the three conditions, saw no significant change. Furthermore, the significance was also limited in terms of the subscales, with

a significant decrease in only fear/avoidance for general mental illness and schizophrenia in the intervention group. One of the pressing similarities between the two studies' results was the absence of a significant change in the authoritarian and malevolence subscales.

Chapter IV provided the findings regarding the impact of an undergraduate mental health nursing course on students' attitudes about recovery and its relationship with the attitudes toward a mental illness. The intervention had no significant impact on attitudes toward recovery. However, a moderate-to-strong negative relationship was found between the recovery attitudes and prejudice toward people experiencing a mental illness ( $r = -.43$  to  $-.60$ ).

### **Contributions to the Literature**

This study has made several important contributions to the literature. First, it demonstrated that the shortened versions of the PPMI are valid, reliable, practical in their brevity, and unique in identifying specific facets of prejudice. This was the first time the instruments were used in the United States and in an undergraduate nursing student population. Second, it showed that the Mental Illness Stigma Framework (MISF) is a strong theoretical framework that has strengthened the study design. Third, it demonstrated the importance of using a stronger study design with a non-equivalent control group in stigma research as it precludes the threats of maturation and testing. Fourth, this is one of the few studies measuring the impact of an undergraduate mental health nursing course on attitudes toward people living with a mental illness to have taken place in the United States. Finally, and most importantly, this study showed that prejudicial attitudes are not immutable but responsive to undergraduate nursing education interventions. However, some facets of prejudice such as authoritarian and malevolent attitudes are currently not being addressed satisfactorily to warrant significant change. This



acknowledgment is the first step toward challenging and ultimately diminishing these deleterious prejudices.

### **Implications for Undergraduate Nursing Education**

To address the stigma attached to mental illness, its presence within the curriculum must first be acknowledged through deep collaborative discussion, exploration, and contemplation with students. To challenge the stigma, a balanced curricular epistemology that relies less on the biomedical explanations of and treatment for mental illness may be necessary. Furthermore, to diminish the stigma, clinical placements beyond the confines of acute inpatient psychiatric wards must be employed. In inpatient units, students get to observe patients in the height of their symptomatology and not further along in the process of recovery. Therefore, a synergy of both inpatient and community clinical placements may show the true healing process is possible.

### **Implications for Future Research**

Additional, future research is undoubtedly needed and should consider the following:

- These studies should be replicated in order to verify or refute findings.
- Longitudinal studies should determine if the significant changes observed in these studies persist over time. Qualitative studies may provide explanations as to why some facets of prejudice remained unaffected by the intervention.
- Randomization of treatment conditions should always be sought where possible, though it is not always feasible as students may follow a fixed track through a nursing program.
- Future stigma research in undergraduate nursing education should utilize control groups, which is lacking in a majority of the past research.
- The MISF theoretical framework can be used to effectively strengthen future stigma research.

- An instrument specific to the CHIME-D framework needs to be developed by collaborating with those who have a lived experience of a mental illness.
- The shortened versions of the PPMI should be applied to other conditions such as bipolar and substance-use disorders to identify the different prejudices and avenues for intervention.
- Given the moderate-to-strong negative relationship between attitudes toward people living with a mental illness and attitudes toward recovery, interventions that cultivate positive attitudes toward recovery may decrease attitudes of prejudice. Future research should investigate this relationship further.
- Causal studies that examine the relationship between the biomedical explanations of mental illness and prejudice are required to explore the impact of biomedical-centric curricula.

### **Conclusion: Nursing as the Process of Humanization**

The ultimate goal of undergraduate mental health nursing courses is simple: to teach students to care for those experiencing mental health challenges. Nurses cannot effectively care for individuals with mental health struggles if they have stereotypical ideas and prejudicial attitudes about such patients. Knowingly or unknowingly, this can lead to discriminatory practices.

I am the co-instructor for each mental health course included in these studies. Early in each term, I show the students a crisp \$20 bill and ask them, “How much is this worth?” They obligingly answer “twenty dollars.” I then proceed to crumple up the bill while telling them, “Individuals experience a mental illness for different reasons. Some have adverse childhood experiences, for some the stress in their lives has outweighed their resilience, some don’t have

families or support of any kind, some experience numerous traumas in short succession...” After the bill is crumpled into a little ball, I ask them again, “How much is this worth?” And the class knowingly answers “twenty dollars.” As I begin to unfold the bill, in the process of recovering its form, I tell them, “As nurses we can never forget that the worth never changed. But the sad reality is that for many, many people, they have experienced that it has, that they have been devalued, dehumanized, and at times, because of action or inaction, this has been at the hand of nurses. Stigma creates an outgroup, an “other”, but everyone we take care of is just as human as we are. As nurses we have the great opportunity to meet people where they have their hand out. To be an advocate, to be a resource to and provide care for those in need. To that end we must not only actively reject stigmatization but become anti-stigmatizers, because nursing is the process of humanization.”

## Appendix A

### Prejudice Towards People with Mental Illness Shortened Versions and Author Permissions

The following three instruments have 16 items each. Each item used a Likert scale with the following response options:

- 1: Very strongly disagree
- 2: Strongly disagree
- 3: Disagree
- 4: Slightly disagree
- 5: Unsure/neutral
- 6: Slightly agree
- 7: Agree
- 8: Strongly agree
- 9: Very strongly agree

#### PPMI-SV

Here we are interested in your views and beliefs about people with mental illness in general.

1. I would be just as happy to invite a person with mental illness into my home as I would anyone else.\*
2. I would feel relaxed if I had to talk to someone who was mentally ill.\*
3. I would be less likely to become romantically involved with someone if I knew they were mentally ill.
4. I would feel unsafe being around someone who is mentally ill.
5. The behavior of people with mental illness is unpredictable.
6. The behavior of people with mental illness is just as predictable as that of people who are mentally healthy.\*
7. In general you cannot predict how people with mental illness will behave.
8. I usually find people with mental illness to be consistent in their behavior.\*
9. People who are mentally ill should be forced to have treatment.
10. Those who have serious mental illness should not be allowed to have children.
11. People who are mentally ill should be allowed to live their life any way they want.\*
12. Society does not have a right to limit the freedom of people with mental illness.\*
13. We, as a society, should be spending much more money on helping people with mental illness.\*
14. People who develop mental illness are genetically inferior to other people.
15. People with mental illness should support themselves and not expect handouts.
16. People who become mentally ill are not failures in life.\*

#### PPD-SV

Here we are interested in your views and beliefs about people with depression.

1. I would find it hard to talk to someone who has depression.
2. I would be just as happy to invite a person with depression into my home as I would anyone else.\*

3. In general it is easy to interact with someone who has depression.\*
4. I would be less likely to become romantically involved with someone if I knew they had depression.
5. The behavior of people with depression is unpredictable.
6. The behavior of people with depression is just as predictable as that of people who are mentally healthy.\*
7. People with depression often do unexpected things.
8. People with depression behave in ways that are foreseeable.\*
9. People who have depression should be forced to have treatment.
10. Those who have depression should not be allowed to have children.
11. People who have depression should be allowed to live their life any way they want.\*
12. Society does not have a right to limit the freedom of people with depression.\*
13. We, as a society, should be spending much more money on helping people with depression.\*
14. People who develop depression are genetically inferior to other people.
15. People with depression should support themselves and not expect handouts.
16. People who develop depression are not failures in life.\*

#### **PPS-SV**

Here we are interested in your views and beliefs about people with schizophrenia.

1. I would find it hard to talk to someone who has schizophrenia.
2. I would be just as happy to invite a person with schizophrenia into my home as I would anyone else.\*
3. I am not scared of people with schizophrenia.\*
4. I would feel unsafe being around someone who has schizophrenia.
5. The behavior of people with schizophrenia is just as predictable as that of people who are mentally healthy.\*
6. In general, you cannot predict how people with schizophrenia will behave.
7. People with schizophrenia often do unexpected things.
8. People with schizophrenia behave in ways that are foreseeable.\*
9. People who have schizophrenia should be free to make their own decisions.\*
10. People who have schizophrenia should be forced to have treatment.
11. Those who have schizophrenia should not be allowed to have children.
12. Society does not have a right to limit the freedom of people with schizophrenia.\*
13. People who develop schizophrenia are genetically inferior to other people.
14. People with schizophrenia do not deserve our sympathy.
15. People with schizophrenia should support themselves and not expect handouts.
16. People who have schizophrenia are not failures in life.\*

#### **Scoring Instructions**

All items marked with an asterisk are reverse-scored.

## Author Permissions



Richards, Stephen <sr2995@tc.columbia.edu>

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### Future PPMI Research

6 messages

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**Richards, Stephen** <sr2995@tc.columbia.edu>  
To: boris.bizumic@anu.edu.au

Wed, Jan 20, 2021 at 10:08 PM

Dear Dr. Bizumic,

My name is Stephen Richards and I am a doctoral student seeking my EdD at Teachers College, Columbia University. Thank you for your thorough research on the stigma of mental illness. I am writing to receive your permission to use the PPMI in dissertational research. The study would include nursing students and would measure the impact of a mental health nursing course and clinical rotation on the stigma of mental illness.

I am more specifically interested in applying your instrument to specific illnesses, as you wrote: "Changing the wording from 'mental illness' to 'schizophrenia' or 'eating disorders' could enable use of the measure for attitude toward individuals with specific mental illnesses." It is true that "a high tide raises all ships" and addressing stigma as a whole would be beneficial, but I think it is of the utmost importance that we identify specific areas of stigma and shape interventions tailored to those results. I think your instrument is perfect to reveal this data.

If you approve, could you please send me a copy of the instrument as you have used it?

All the best,  
Stephen

Stephen Richards, MSN, RN-BC  
Doctoral Candidate, Teachers College Columbia University  
Clinical Nurse III, NewYork-Presbyterian Morgan Stanley Children's Hospital  
Clinical Adjunct, Phillips School of Nursing at Mount Sinai/Beth Israel  
617-230-6192

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**Boris Bizumic** <boris.bizumic@anu.edu.au>  
To: "Richards, Stephen" <sr2995@tc.columbia.edu>

Thu, Jan 21, 2021 at 2:53 AM

Dear Stephen,

Thank you for your email. Yes, feel free to use the scale. The full scale—including the scoring key and instructions—is also available at:

[https://www.researchgate.net/publication/329574103\\_The\\_PPMI\\_Scalepdf](https://www.researchgate.net/publication/329574103_The_PPMI_Scalepdf)

## **Appendix B**

### **Consumer Optimism Scale and Author Permissions**

The Consumer Optimism scale has 16 items. Each item used a Likert scale with the following response options:

- 1: None
- 2: Few
- 3: Some
- 4: Most
- 5: Almost All

Considering those with mental illness, how many are described by the following statements?

1. Will remain in the mental health system for the rest of their lives.\*
2. Will be able to greatly increase their involvement in the community.
3. Will be able to function very well in the community.
4. Will need to be hospitalized again in the future.\*
5. Will remain pretty much as they are now.\*
6. Will find work that enables them to be economically self-sufficient.
7. Will be able to have satisfying intimate relationships.
8. Will be able to have satisfying friendships.
9. Will be able to achieve personal goals.
10. Will be able to work in a competitive job (in the community for real wages).
11. Will be able to cope successfully with persistent symptoms.
12. Will be able to take medications independently.
13. Will be able to participate in leisure, hobbies, and recreational activities.
14. Will be able to pursue spiritual/religious activities.
15. Will continue to be dependent on alcohol or drugs.\*
16. Will be able to live in their own apartment or home.

#### **Scoring Instructions**

All items marked with an asterisk are reverse-scored. Total score is the sum of all items divided by 16.

## Author Permissions



Richards, Stephen <sr2995@tc.columbia.edu>

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### Future Consumer Optimism Research

3 messages

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**Richards, Stephen** <sr2995@tc.columbia.edu>  
To: mpsalyer@iupui.edu

Thu, Feb 18, 2021 at 10:30 PM

Dear Dr. Salyers,

My name is Stephen Richards and I am a doctoral student seeking my EdD at Teachers College, Columbia University. Thank you for your thorough research on the optimism about recovery. I am writing to receive your permission to use the Consumer Optimism scale in dissertational research. The study would include nursing students and would measure the impact of a mental health nursing course and clinical rotation on consumer optimism as well as the stigma of mental illness.

If you approve, could you please tell me the specific Likert response options as well as any scoring guidelines beyond your 2013 article titled, "Provider Expectations for Recovery Scale: Refining a Measure of Provider Attitudes".

All the best,  
Stephen

Stephen Richards, MSN, RN-BC  
Doctoral Candidate, Teachers College Columbia University  
Clinical Nurse III, NewYork-Presbyterian Morgan Stanley Children's Hospital  
Clinical Adjunct, Phillips School of Nursing at Mount Sinai/Beth Israel  
617-230-6192

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**Salyers, Michelle Pensec** <mpsalyer@iupui.edu>  
To: "Richards, Stephen" <sr2995@tc.columbia.edu>

Fri, Feb 19, 2021 at 4:41 PM

Here you go. We take the mean score.

Good luck with your work!  
Michelle



**Appendix C**  
**Demographic Questionnaire**

1. My age is \_\_\_\_\_(Fill in the blank)
2. My gender is
  - a. Female
  - b. Male
  - c. I identify as \_\_\_\_\_(Please specify)
  - d. Prefer not to say
3. My ethnicity is
  - a. \_\_\_\_\_(Fill in the blank)
  - b. Prefer not to say
4. I have a family member who has experienced mental health issues
  - a. Yes
  - b. No
  - c. Prefer not to say
5. I have a friend who has experienced mental health issues
  - a. Yes
  - b. No
  - c. Prefer not to say

**Appendix D**  
**Ancillary Data for the First Study**

**Table A1**

*Cronbach's Alpha Reliability Coefficients for Prejudice Instruments in First Study*

	Pretest	Posttest
PPMI-SV	.82	.81
Fear/Avoidance	.71	.84
Unpredictability	.64	.76
Authoritarianism	.78	.76
Malevolence	.53	.72
PPD-SV	.73	.79
Fear/Avoidance	.67	.51
Unpredictability	.64	.74
Authoritarianism	.52	.59
Malevolence	.54	.80
PPS-SV	.85	.83
Fear/Avoidance	.83	.85
Unpredictability	.70	.75
Authoritarianism	.76	.74
Malevolence	.66	.72

*Note:*  $N = 44$ . PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version, PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version.

**Table A2***Comparison of Mean Prejudice Scores from the General Population, Mental Health**Professionals, and the Intervention Group at Posttest for the First Study*

Variable	GP	MHP	IG	GP and MHP $\Delta$	IG and MHP $\Delta$	IG and GP $\Delta$	<i>F</i> ratio (2, 767)	$\eta^2$
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )					
Fear/Avoidance								
PPMI-SV	3.48 (1.62)	2.87 (1.11)	3.92 (1.5)	0.61***	1.05***	0.44	20.67	.05
PPD-SV	3.11 (1.46)	3.01 (1.16)	3.98 (1.14)	0.1	0.97***	0.87***	10.17	.03
PPS-SV	4.12 (1.91)	2.81 (1.29)	4.44 (1.68)	1.31***	1.63***	0.32	58.71	.13
Unpredictability								
PPMI-SV	4.64 (1.52)	3.94 (1.33)	5.17 (1.37)	0.7***	1.23***	0.53*	27.45	.07
PPD-SV	3.86 (1.51)	3.39 (1.38)	4.43 (1.2)	0.47***	1.04***	0.57*	15.10	.04
PPS-SV	5.84 (1.43)	4.83 (1.40)	5.84 (1.13)	1.01***	1.01***	0	47.38	.11
Authoritarianism								
PPMI-SV	3.26 (1.62)	2.93 (1.30)	4.01 (1.65)	0.33**	1.08***	0.75**	11.41	.03
PPD-SV	2.45 (1.32)	2.37 (1.18)	3.16 (1.14)	0.08	0.79***	0.71***	7.60	.02
PPS-SV	3.77 (1.77)	3.14 (1.34)	4.17 (1.49)	0.63***	1.03***	0.4	17.14	.04
Malevolence								
PPMI-SV	2.29 (1.15)	1.8 (.86)	2.17 (1.2)	0.49***	0.37*	0.12	19.27	.05
PPD-SV	2.36 (1.18)	1.92 (.94)	1.99 (1.09)	0.44***	0.07	0.37*	15.01	.04
PPS-SV	2.11 (1.09)	1.82 (.92)	2.41 (1.2)	0.29***	0.59***	0.3	10.33	.03

*Note:* GP = general population;  $N = 427$ . MHP = mental health professionals;  $N = 299$ . IG = intervention group;  $N = 72$ .  $\Delta$  = difference. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version, PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

**Appendix E**  
**Ancillary Data for the Second Study**

**Table A3**

*Cronbach's Alpha Reliability Coefficients for Prejudice Instruments in Second Study*

	Pretest	Posttest
PPMI-SV	.85	.85
Fear/Avoidance	.68	.72
Unpredictability	.78	.82
Authoritarianism	.75	.77
Malevolence	.65	.61
PPD-SV	.85	.85
Fear/Avoidance	.72	.76
Unpredictability	.75	.80
Authoritarianism	.76	.72
Malevolence	.64	.67
PPS-SV	.85	.89
Fear/Avoidance	.84	.91
Unpredictability	.79	.82
Authoritarianism	.84	.82
Malevolence	.55	.62

*Note:*  $N = 126$ . PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version, PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version.

**Table A4***Comparison of Mean Prejudice Scores from the General Population, Mental Health**Professionals, and the Intervention Group at Posttest for the Second Study*

Variable	GP	MHP	IG	GP and MHP $\Delta$	IG and MHP $\Delta$	IG and GP $\Delta$	<i>F</i> ratio (2, 795)	$\eta^2$
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>					
Fear/Avoidance								
PPMI-SV	3.48 (1.62)	2.87 (1.11)	3.88 (1.31)	0.61***	1.01***	0.4*	23.06	.05
PPD-SV	3.11 (1.46)	3.01 (1.16)	3.82 (1.47)	0.1	0.81***	0.71***	10.52	.03
PPS-SV	4.12 (1.91)	2.81 (1.29)	4.35 (1.81)	1.31***	1.54***	0.23	59.31	.13
Unpredictability								
PPMI-SV	4.64 (1.52)	3.94 (1.33)	5.06 (1.33)	0.7***	1.12***	0.42*	28.9	.07
PPD-SV	3.86 (1.51)	3.39 (1.38)	4.37 (1.23)	0.47***	0.98***	0.51**	17.21	.04
PPS-SV	5.84 (1.43)	4.83 (1.40)	5.88 (1.33)	1.01***	1.05***	0.04	48.53	.11
Authoritarianism								
PPMI-SV	3.26 (1.62)	2.93 (1.30)	3.48 (1.45)	0.33**	0.55**	0.22	6.16	.02
PPD-SV	2.45 (1.32)	2.37 (1.18)	3.01 (1.36)	0.08	0.64***	0.56***	7.45	.02
PPS-SV	3.77 (1.77)	3.14 (1.34)	4.11 (1.57)	0.63***	0.97***	0.34	18.15	.04
Malevolence								
PPMI-SV	2.29 (1.15)	1.8 (.86)	2.46 (1.09)	0.49***	0.66***	0.17	23.48	.06
PPD-SV	2.36 (1.18)	1.92 (.94)	2.56 (1.23)	0.44***	0.64***	0.2	17.97	.04
PPS-SV	2.11 (1.09)	1.82 (.92)	2.48 (1.2)	0.29***	0.66***	0.37**	14.08	.03

*Note:* GP = general population;  $N = 427$ . MHP = mental health professionals;  $N = 299$ . IG = intervention group;  $N = 72$ .  $\Delta$  = difference. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version, PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

**Table A5***Paired-Samples t Tests with Effect Sizes for the Intervention Group of the Second Study*

Variable	Pretest		Posttest		<i>t</i> (71)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
PPMI-SV	3.88	.97	3.72	0.94	2.17	.033	0.17
PPD-SV	3.6	0.98	3.44	0.96	2.48	.016	0.16
PPS-SV	4.38	0.98	4.21	1.05	2.06	.043	0.17

*Note:* *N* = 72. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version, PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version.



**Table A6***Paired-Samples t Tests with Effect Sizes for the Intervention Group of the Second Study:**Prejudice Subscales*

Variable	Pretest		Posttest		<i>t</i> (71)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Fear/Avoidance							
PPMI-SV	4.16	1.43	3.88	1.31	2.09	.04	0.2
PPD-SV	4.13	1.54	3.82	1.47	2.46	.016	0.21
PPS-SV	4.95	1.64	4.35	1.81	3.73	< .001	0.35
Unpredictability							
PPMI-SV	5.31	1.31	5.06	1.33	1.82	.074	0.19
PPD-SV	4.77	1.19	4.37	1.23	3.85	< .001	0.33
PPS-SV	6.05	1.11	5.88	1.33	1.13	.26	0.14
Authoritarianism							
PPMI-SV	3.57	1.47	3.48	1.45	0.67	.51	0.06
PPD-SV	3.00	1.29	3.01	1.36	-0.09	.93	0.01
PPS-SV	4.16	1.57	4.11	1.57	0.43	.67	0.03
Malevolence							
PPMI-SV	2.48	1.03	2.46	1.09	0.16	.88	0.02
PPD-SV	2.49	1.11	2.56	1.23	-0.67	.51	0.06
PPS-SV	2.38	1.08	2.48	1.2	-0.88	.38	0.09

*Note:*  $N = 72$ . PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,  
PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice  
towards People with Schizophrenia, Shortened Version.

**Table A7***Paired-Samples t Tests with Effect Sizes for the Control Group of the Second Study*

Variable	Pretest		Posttest		<i>t</i> (53)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
PPMI-SV	3.84	.99	3.91	1.06	-1.04	.304	0.07
PPD-SV	3.51	.94	3.42	.98	1.42	.161	0.09
PPS-SV	4.29	1.01	4.30	1.24	-0.15	.881	0.01

*Note:* *N* = 54. PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version, PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice towards People with Schizophrenia, Shortened Version.

**Table A8***Paired-Samples t Tests with Effect Sizes for the Control Group of the Second Study: Prejudice**Subscales*

Variable	Pretest		Posttest		<i>t</i> (53)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Fear/Avoidance							
PPMI-SV	3.95	1.3	4.27	1.49	-2.43	.018	0.23
PPD-SV	3.76	1.34	3.54	1.45	2.03	.047	0.16
PPS-SV	4.72	1.64	4.82	1.89	-0.62	.539	0.6
Unpredictability							
PPMI-SV	5.34	1.36	5.10	1.44	2.15	.036	0.17
PPD-SV	4.62	1.04	4.43	1.28	1.41	.166	0.16
PPS-SV	6.05	1.31	5.81	1.45	1.75	.085	0.17
Authoritarianism							
PPMI-SV	3.68	1.37	3.75	1.42	-0.5	.619	0.05
PPD-SV	2.95	1.29	3.11	1.19	-1.14	.261	0.13
PPS-SV	4.15	1.56	4.16	1.62	-0.05	.957	0.01
Malevolence							
PPMI-SV	2.38	1.11	2.52	1.13	-1.2	.236	0.12
PPD-SV	2.72	1.22	2.58	1.15	1.23	.223	0.12
PPS-SV	2.22	1.00	2.40	1.16	-1.55	.126	0.17

*Note:*  $N = 54$ . PPMI-SV = Prejudice towards People with Mental Illness, Shortened Version,  
PPD-SV = Prejudice towards People with Depression, Shortened Version, PPS-SV = Prejudice  
towards People with Schizophrenia, Shortened Version.