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RESEARCH ARTICLE

The impact of a mental health-focused ethics lecture on pharmacy students' perceptions of patients with mental illness: An observational study

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Abstract

Background: Societal perspectives that involve negative ideation and stereotyping behaviours from health care providers, even those still in training, toward individuals diagnosed with serious mental illness can reduce the likelihood of successful outcomes. **Objective:** To examine the impact of didactic, lecture-based educational interventions on reducing the stigma of mental illness among pharmacy students. **Methods:** A survey was distributed pre- and post-lecture to all third-year pharmacy students who attended an "*Ethics of Mental Health*" lecture in 2021 and 2022. Data were collected and analysed using T-tests. Statistical significance was determined with an alpha of 0.05. **Results:** Higher affirmative post-survey responses were observed in 2022 (average 15.46%) and 2021 (average 9.5%). Respondents approved all controversial ethical rights except voting which was the only survey question with less positive responses-1.23% was allowed the right to vote. Respondents supported the rights to refuse medications and COVID-19 vaccinations, to engage in sexual relationships, to be given erectile dysfunction medications while hospitalised, and for gun ownership post-hospitalisation. **Conclusion:** Simple didactic dialogue about controversial topics, like those leading to potential discrimination, can be a productive avenue to ensure the development of non-biased clinicians.

Introduction

Persistent prejudice and discrimination associated with mental illness often result in judgmental attitudes that may impose interpersonal barriers and reinforce personal and societal disadvantages that often result in unemployment, unstable or unsafe living conditions, reluctance to seek care, increased risk of hospitalisation, and potentially even increased risk of incarceration (Nakkeeran, 2018; Stangl *et al*., 2019; Pescosolido *et al*., 2021; Shazana *et al*., 2022).

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), a mental illness that interferes with a person's life and ability to function is called a serious mental illness (SMI). Some common examples of SMI include schizophrenia, bipolar disorder and major depressive disorder (SAMHSA, 2023).

Understanding the experiences of people with mental health challenges can reduce stigma and the resulting disparities. However, research, teaching, and programming resources designed to address such remain low in priority, small in scale, and often limited to focusing only on individuals versus broader community-wide efforts (Stangl, 2019; Shahwan, 2022). Very few studies, especially in the United States (US), explore the changes in public perceptions of

mental illness over time or report any progress that has been made.

Among the studies currently available, Pescosolido and colleagues in 2021 evaluated over twenty years' record of biannual General Social Surveys (GSS), which are usually conducted by the US National Stigma Studies (US-NSSs) to provide nationwide data from non-institutionalised adults in the continental US. The survey data suggests that an increased acceptance of the scientific basis of mental health disorders has improved mental health literacy in the general population. However, this improved literacy did not correlate with trends of stigmatising behaviours and attitudes, which continually included avoidance and exclusion of individuals diagnosed with mental illness, except for those diagnosed with depression. The study reports that from 2006 to 2018, the first considerable, statistically significant decrease in the stigmatisation of major depression was observed. However, perceptions of dangerousness associated with, and the urge for social distancing away from those diagnosed with schizophrenia increased by approximately 13%, which is not statistically significant, yet, the increase was considered substantial (Pescosolido *et al*., 2021).

Public opinion shifts were not statistically associated with sociodemographic differences; however, age appears to be a conservatising factor, with older and more conservative individuals maintaining stigmatised views (Pescosolido *et al*., 2021). While the reasons for the changes observed by Pescosolido were not clearly understood, the increased rate of depression observed in the USA from 2005 to 2015 may have played a role in the reduction of stigma (Weinberger, 2017). This could be explained by the higher prevalence of depression (8%) versus schizophrenia (1%) (Weinberger, 2017; Goodwin *et al*., 2022; Johns Hopkins Medicine, 2023).

Also, due to increased prevalence, there is a higher probability that individuals have either experienced or know someone who has depression, which is a protective factor against the stigmatisation of depression, the same is not true for schizophrenia (Crisp, 2005). In addition, depression often presents with more internalising and predictable symptoms that elicit more sympathy than fear, whereas the basis of schizophrenia stigmatisation is largely fear-based (Nikstat & Riemann, 2020; McGinty, 2023). The stigmatisation of schizophrenia is further compounded by media escalation of serious mental illness (SMI), which unfairly associates these conditions with dangerous dispositions and violence. Recently, media outlets have increasingly characterised people with SMI as being responsible for mass shootings, however, this and other associated acts of violent crimes are largely biased and untrue (McGinty, 2023).

About 46% of Americans believe that people with SMI are far more dangerous than the general population (Swanson *et al*., 2015). However, data shows that people with mental illnesses are more likely to be victims rather than perpetrators of violent crimes (Swanson *et al*., 2015). Interestingly, data shows that only 4% of violence in the US can be attributed to persons with mental health issues, and notably, suicide inclusive (Skeem & Mulvey, 2001; Elbogen & Johnson, 2009; Swanson *et al*., 2015; McGinty, 2023). Other contributing factors that may widen the gap of stigmatisation between depression and schizophrenia are likely consequential to the major shift of psychiatric care for patients diagnosed with schizophrenia from inpatient settings into the community where psychiatric provider shortages lead to exacerbation of illness deepening public perception of disability associated with uncontrolled symptoms of that diagnosis which can include public display of agitation, paranoid ideation and responding to internal stimuli.

These obstacles and manifestations of structural oppression for psychiatric patients result in sub-optimally treated psychiatric disorders, of which, between depression and schizophrenia, sub-optimally treated schizophrenia has more severe negative consequences which further contribute to cyclical negative perceptions and stigma rationale (Weittenhiller, 2021; McGinty, 2023).

The prejudicial beliefs and associated stigmatising behaviours toward serious mental illness (SMI) are not limited to community members; they are also present among healthcare professionals and students, particularly when compared to more socially accepted disorders like depression (Paananen *et al*., 2020; Sideli, 2021).

Surprisingly, mental health professionals engage in stigmatising behaviours at higher rates than the general population, and this can increase prognostic pessimism, decrease confidence in medication efficacy, and negatively affect willingness to prescribe medications (Paananen *et al*., 2020; Sideli, 2021; Shahwan, 2022). Ultimately, this contributes to patient hesitancy to seek psychiatric care and further exacerbates health disparities within the patient population (Rössler, 2016; Javed *et al*., 2021).

Moreover, the stigma of SMI may continue to translate into societal unwillingness to invest resources to resolve mental health challenges and may exacerbate existing mental health professional shortages, further decreasing access to care (Stangl, 2019; Pescosolido *et al*., 2021). Therefore, it is important to explore and understand the underlying factors contributing to the stigmatisation of SMI in developing healthcare professionals (Douglass, 2019; Sideli, 2021).

A study published by Harris and colleagues in 2018 sought to identify student perceptions and stigma surrounding mental illness. The students included in this study were members of the American Association of Psychiatric Pharmacists (AAPP), formerly known as the College of Psychiatric and Neurologic Pharmacists (CPNP), a mental health-focused organisation for pharmacists and pharmacy students that encourages mental illness stigma reduction (Elbogen & Johnson, 2009; Cate & Jackson, 2022; Dopheide *et al*., 2022). Although the student members of AAPP were likely passionate about mental health, the survey conducted by Harris and colleagues in 2018 showed that, although they rarely stigmatise others diagnosed with mental illness, they had negative views about being personally diagnosed. Although the applicability of the study by Harris and colleagues in 2018 may be limited, as it focused on students who voluntarily joined a mental health-focused collegiate organisation and may therefore be more empathetically inclined, Douglas and colleagues' work published by Douglass and colleagues in 2019 addressed a broader student demographic.

Douglas and Moy (2019) examined the impact of the social media-focused intervention on reducing mental illness stigmatisation among pharmacy students enrolled in a comprehensive disease management course; students had previously taken a behavioural, educational intervention course in their first professional year but had not completed the psychiatric disorders lecture series. The participants were engaged in a 90-minute learning module with case scenarios and class discussions, and then changes in stigma were measured using the Opening Minds Stigma Scale for Health Care Providers (OMS-HC), which is a tool validated to assess pre- and post-educational interventions. The data derived from T-tests revealed that of the 93 pre- and post-survey scores, stigma was significantly reduced by 4.6% ($p < 0.0001$).

There are important implications for anti-stigmatisation programs and policy changes since public stigmatisation may change with time. However, efforts must be consistent and persistent, with sustainable results, accelerating progress and reversing stagnation or regression. These efforts must also address prejudicial beliefs and behaviours as early as possible, perhaps even by integrating content into educational curriculum for students, particularly healthcare professional students.

This study examines the flexibility of pharmacy students' perspectives on mental illness. It explores whether the views reflect the stigmatised attitudes toward individuals diagnosed with mental health disorders commonly observed in the general population. The primary objective of this study is to assess whether pharmacy students' baseline attitudes towards select ethical rights of individuals diagnosed with mental illness, including those that might be considered controversial and centred on stereotyped differences leading to potential discrimination, would change following a didactic lecture. It was hypothesised that this simple educational intervention strategy that facilitates reflection and dialogue about controversial and stigmatised topics could be a practical and productive avenue to ensure the development of non-biased clinicians.

Methods

Data, previously collected and analysed retrospectively was used in this study. The UB School of Pharmacy and Pharmaceutical Sciences (SPPS) PharmD program is a four-year program with about 120 students per class (Thander, 2023). The study subjects were eligible to participate if they attended a lecture on mental health-focused ethics lecture within a comprehensive ethics course required in the third professional year (P3) of the UB PharmD curriculum. The study analysed anonymous pre- and post-lecture surveys distributed to two sequential P3 cohorts in 2021 (n=100) and 2022 (n=114). The 2021 surveys were administered as paper surveys, and the 2022 surveys were administered electronically through Qualtrics.

Both the 2021 and 2022 ethics of mental health lectures were taught by pharmacy residents (though different each year), a pharmacy residency program director who also taught psychiatric pharmacotherapeutics and a medical physician (MD) who was also a licensed pharmacist; all lecturers were employed by an inpatient psychiatric hospital in Buffalo, New York. The topics presented in the lectures were selected based on current consequential controversies and were not intended to politicise the discussion. Topics included, but were not limited to, rights "*to refuse medications and COVID vaccinations", "to engage in sexual relationships*", "*to be given erectile dysfunction medications while hospitalised*", and "*for gun ownership post-hospitalisation*". The presenters offered no opinions about these topics during the lectures or writing this paper. The didactic material covered 17 key messages common to the 2021 and 2022 classes (Table I).

Table I: Common topics for the ethics in mental health lecture for 2021 and 2022 P3 cohort

S/N	Topics
1	**Protected classes in research**
2	**Patient protective services**
3	**Reporting abuse and neglect**
4	**Mandatory reporting**
5	**Treatment over objection (TOO)**
6	**Restraints and seclusion**
7	**Do not resuscitate (DNR) orders**
8	**Health Care Proxy**
9	**Guardianships**
10	**Relationships and boundaries**
11	**Sexual relationships**
12	**Use of medications to counteract drug-induced erectile dysfunction**
13	**Mental health conditions include:** • Anxiety disorders • Attention Deficit Hyperactivity Disorder (ADHD) • Personality disorders • Bipolar disorder • Depression • Dissociative disorders • Eating disorders • Posttraumatic stress disorder • Obsessive-compulsive disorder • Psychosis • Schizoaffective disorder • Schizophrenia
14	**Mass violence, mental health, and increased stigma with a slide depicting: How the media portrays mass violence and mental health, and how that has led to increased stigma.** • 60% of Americans believe that individuals with schizophrenia are likely dangerous to others • 68% of Americans believe that individuals with alcohol dependence are dangerous to others • 30% of Americans believe that individuals with major depression are likely dangerous to others • 20% of Americans believe that individuals with non-clinical daily troubles are likely dangerous to others • However, those with mental illness are more likely to be the victims of violence than to inflict it
15	**Perceptions of mental illness** • 46% of Americans believed that persons with serious mental illness were "*far more dangerous than the general population*" • 60% of respondents said they viewed a person with schizophrenia as likely/very likely to be dangerous towards others
16	**Violence and mental illness statistics** • In 2012, the National Rifle Association claimed gun violence was due to untreated mental illness • If people believe that mental illnesses lead to violence, they are more likely to support policies and laws that restrict their liberties • 4% of violence is associated with serious mental illness alone, 12% is associated with any mental illness, 7% in those without substance abuse • Younger, male, lower socioeconomic status, and alcohol or illicit drug use were statistically predictive of violence in people with or without mental illness
17	**Mental Health and COVID-19** • COVID-19 has increased the risk of being diagnosed with a mental health condition • Vulnerable populations and vaccination mistrust

The 2021 lecture included three unique slides regarding gun violence, which were not presented in the 2022 lecture. The slides described important facts and statistics about mental illnesses and violence in the US and depicted media representations of sensationalised gun violence. The 2021 pharmacy resident lecturer discussed the inaccurate media portrayals of violence inflicted by people with mental illness and the consequential negative implications that prevent health-seeking behaviours in this population. Following this, a case scenario was presented to emphasise how stigmatisation and judgment from healthcare professionals could further contribute to this trend. The 2021 pre- and post-surveys consisted of the following six questions:

Should a person with a mental health diagnosis be allowed the right to refuse medication?

Should a person with a mental health diagnosis be allowed to vote?

Should a person with a mental health diagnosis be offered the opportunity to have erectile dysfunction medications prescribed during hospitalisation?

Should a person with a mental health diagnosis be allowed to have sexually active relationships during hospitalisation?

Should a person with a mental health diagnosis be allowed to decline a COVID vaccination?

Should a person with a mental health diagnosis be allowed to own a gun, even if they have not been associated with violence during their lifetime?

The 2022 lecture content differed with the following items: the slides were modified to discuss general violence in mental health instead of gun violence specifically, and additional slides highlighting ethnic and racial disparities in psychiatric disorders were added. The 2022 pharmacy resident lecturer described racial misconceptions, factors that contribute to inequalities, and the importance of understanding ethnic disparities in mental health. The 2022 survey consisted of the following seven questions:

Should a person with a mental health diagnosis be allowed to refuse medication?

Should a person with a mental health diagnosis be allowed the right to vote?

Should a person with a mental health diagnosis be offered the opportunity to have erectile dysfunction medications prescribed during hospitalisation?

Should a person with a mental health diagnosis be allowed to have sexually active relationships during hospitalisation?

Should a person with a poor mental health diagnosis be allowed to decline a COVID vaccination?

Should a person with a mental health diagnosis be allowed to own a gun?

Should a person with a mental health diagnosis be allowed to have their ethnic background considered when receiving a diagnosis?

Changes in opinion, as measured by the survey rubric for pre- and post-lecture, were the data collected and analysed to determine whether there was a reduction of stigma and the magnitude of that change. The data was analysed using percentage change of affirmative votes in the post-lecture compared to pre-lecture surveys, and statistical significance was determined using T-tests with an alpha of 0.05. The comparative analysis excluded the seventh question from the 2022 survey (i.e. should a person with a mental health diagnosis be allowed to have their ethnic background considered when receiving a diagnosis?), to compare the six common questions.

Results

The 2021 P3 cohort included 100 responders, and the 2022 cohort included 114. Observed results were higher across all domains for both cohorts, except for the right to vote (-1.23%) in the 2022 cohort (Table II & III). Results were higher across all domains for both cohorts, with 15% higher "*yes*" observed in the post-survey (35% during pre-survey; 50% during post-survey) for gun ownership, 14% higher for allowing sexual relationships during hospitalisation (60%; 74%), 12% higher for declining a COVID vaccination (68%; 80%), 12% higher for offering ED medication during hospitalisation (72%; 84%), 3% higher for allowing patients to vote (87%; 90%), and finally 1% higher for allowing the right to refuse medication (83%; 84%) in the 2021 cohort.

Table II: 2021 Pre- and post-class survey results

Survey questions	**2021**				
Should a person with a mental health diagnosis…	**Pre-survey (n=100)**		**Post-survey (n=100)**		**Δ pre- vs post-survey "yes" votes (n=100)**
	Yes	**No**	**Yes**	**No**	
be allowed the right to refuse medication?	83 (83.00%)	17 (17.00%)	84 (84.00%)	16 (16.00%)	1.00%
be allowed to vote?	87 (87.00%)	13 (13.00%)	90 (90.00%)	10 (10.00%)	3.00%
be offered the opportunity to have ED medications prescribed during hospitalisation?	72 (72.00%)	28 (28.00%)	84 (84.00%)	16 (16.00%)	12.00%
be allowed to have sexually active relationships during hospitalisation?	60 (60.00%)	40 (40.00%)	74 (74.00%)	26 (26.00%)	14.00%
be allowed to decline a COVID vaccination?	68 (68.00%)	32 (32.00%)	80 (80.00%)	20 (20.00%)	12.00%
be allowed to own a gun, even if they have not been associated with violence during their lifetime?	35 (35.00%)	65 (65.00%)	50 (50.00%)	50 (50.00%)	15.00%

Table III: 2022 Pre- and post-class survey results

Survey questions	**2022**				
Should a person with a mental health diagnosis…	**Pre-survey (n=114)**		**Post-survey (n=110)**		**Δ pre- vs post-survey "yes" votes (n=114 pre-survey; n=110 post-survey)**
	Yes	**No**	**Yes**	**No**	
be allowed to refuse a medication?	93 (81.58%)	21 (18.42%)	101 (91.82%)	9 (8.18%)	10.24%
be allowed the right to vote?	104 (91.23%)	10 (8.77%)	99 (90.00%)	11 (10.00%)	-1.23%
be offered the opportunity to have erectile dysfunction medications prescribed during hospitalisation?	71 (62.28%)	43 (37.72%)	98 (89.09%)	12 (10.91%)	26.81%
be allowed to have sexually active relationships during hospitalisation?	54 (47.37%)	60 (52.63%)	80 (72.73%)	30 (27.27%)	25.36%
be allowed to decline a COVID vaccination?	90 (78.95%)	24 (21.05%)	98 (89.09%)	12 (10.91%)	10.14%
be allowed to own a gun?	14 (12.28%)	100 (87.72%)	42 (38.18%)	68 (61.82%)	25.90%
Has their ethnic background been considered when receiving a diagnosis?	60 (52.63%)	54 (47.37%)	70 (63.64%)	40 (36.36%)	11.00%

For the 2022 results we observed 26.81% higher "*yes*" responses for offering erectile dysfunction medications during hospitalisation post-survey compared to the pre-survey (98 versus 71% respectively), 25% higher "*yes*" allowing gun ownership post-survey compared to pre-survey (42 versus 14%), 25.36% higher "*yes*" for allowed to have sexually active relationships during hospitalisation (80 versus 54%), 10.24% higher "*yes*" allowed to refuse medication (101 versus 93%) and 10.14% higher "*yes*" allowed to decline a COVID vaccination (98 versus 90%). The only slight loss of yes and gain of no at -1.23% was being allowed the right to vote (pre-survey 104 "*yes*" versus 10 "*no*" and post-survey 99 "*yes*" versus 11 "*no*"). The four post-survey responses that were not submitted had the potential to increase this margin but not sufficiently to achieve the same magnitude of positive affirmation as observed in the other domains. The overall average increase for affirmative responses post-survey was observed in 2022 (15.46%) compared to 9.5% observed in 2021.

Except for the question centred on voting and "*whether people with mental illness diagnoses should be able to decline a COVID vaccination*", all other questions in the 2022 P3 cohort had a higher magnitude of change compared to the 2021 P3 cohort (Table IV).

Table IV: Differences (change in per cent) between 2022 and 2021 affirmative post-survey votes

Survey questions	**% Δ pre- vs post-survey "yes" votes**		**% Δ**
Should a person with a mental health diagnosis be allowed to:	**2022**	**2021**	**2022 vs 2021**
refuse a medication?	1	10.24	9.24
vote?	3	-1.23	**-4.23**
erectile dysfunction medications prescribed during hospitalisation?	26.81 (was 12)	12 (was 26.81)	14.81
sexually active relationships during hospitalisation?	14	25.36	11.36
decline a COVID vaccination?	12	10.14	**-1.86**
own a gun?	15	25.90	10.90

Both cohorts demonstrated affirmative votes for the "*right to own a gun*": the 2022 cohort had 15% votes while the 2021 cohort had 25.90% votes. Both cohorts also reported high percentage support for the right to have sexual relationships (2021: 14%, 2022: 25.36%) and the right to erectile dysfunction medications (2021: 12.00%, 2022: 25.36%). The ethical rights with the largest level of positive change between the two P3 cohorts were the rights to be prescribed erectile dysfunction medications during hospitalisation (14.81%), have sexually active relationships during hospitalisation (11.36%), and own a gun (10.90%). The per cent change observed in pre-lecture and post-lecture survey supportive answers were statistically significant in the 2022 and the 2021 cohorts ($p = 0.009$; $p = 0.01$, respectively). However, there was no significant difference when the two classes were compared against each other ($p = 0.09$).

Discussion

The main findings of our study revealed that, following implementing a didactic shift to promote focused reflection and dialogue about controversial topics related to stereotypes and discrimination linked to mental illness, students responded favourably to supporting all controversial ethical rights, except the "*right to vote*". Respondents showed high support for the rights to refuse medications and COVID vaccinations, to engage in sexual relationships, to be given erectile dysfunction medications while hospitalised, and for gun ownership post-hospitalisation.

It is inferred that the mental health ethics lecture positively impacted the perspectives that P3 students held towards the ethical rights of people experiencing mental health conditions. Both 2022 and 2021 P3 cohorts had higher votes in the post-lecture survey questions, except for the question of whether a person with a mental health diagnosis should have the right to vote, which was 1.23% short of the supportive votes in the 2022 cohort. Notably, the only discussion about voting during the 2021 and 2022 lectures was a brief mention that hospitalised psychiatric inpatients were allowed to vote in elections. However, no slides directly discussed voting or elections. Additionally, the inclusion of the word "*right*" in 2022 may have influenced the variation in the responses recorded by the two cohorts.

In 2022: Should a person with a mental health diagnosis be "*allowed the right to vote"*?

In 2021: Should a person with a mental health diagnosis be "*allowed to vote"*?

Additionally, the wording of the question relating to gun ownership also differed each year:

In 2022: Should a person with a mental health diagnosis be allowed to own a gun?

In 2021: Should a person with a mental health diagnosis be allowed to own a gun, even if they have not been associated with violence during their lifetime?

Despite the regarding the right to vote in the 2022 cohort, the overall difference of affirmative post-survey votes was significant in both 2022 and 2021 cohorts individually ($p = 0.009$, $p = 0.01$, respectively), suggesting that the lectures positively influenced the students to favour the ethical rights. Since the percentage change of affirmative votes between the two cohorts did not reach statistical significance ($p= 0.09$), this indicates that despite the difference in resident instructors and slight variation in lecture materials between the two years, there was no significant difference in the influence of the lectures i.e., the didactic lectures effectively reduced the acceptance of prejudicial restrictions and stigmatising attitudes towards individuals with mental health conditions among both cohorts of P3 students.

By emphasising the frequency with which mental health conditions occur, students may have newly considered that there was a greater likelihood that family, friends, and classmates may have a mental illness diagnosis than previously thought. Further noted, although the percentage of increased favourability of gun ownership may have stemmed in part from the higher baseline approval rating in the pre-class survey for the 2021 cohort (35% compared to 12.28% in 2022), many factors could have contributed to these differences, including current gun violence incidents, personal experiences, or trauma that may have negatively triggered the respondents. A possible reason for the greater change in 2021 vs 2022 concerning the right to decline a COVID vaccination may have been influenced by the higher distressing level of the COVID-19 pandemic in 2021 than in 2022.

The student subjects in this study were unique from those described by Harris and colleagues (2018) in that the class demographic was not solely comprised of mental health advocates but a variety of students, favourably contributing to the generalisability of the outcome. Unlike the participants in the study by Douglass & Moy (2019), the students in this current study previously completed a psychiatric disorder pharmacotherapeutic lecture series. It was theorised that the lecture series established some insights into the intricacies of serious mental health conditions at the didactic textbook level; however, the lecture-discussion sessions transformed the students' baseline discriminatory and dissociative views of mental illness into community-based realities of coexistence in part by considering the pervasiveness, heterogeneity, and complexities of mental illness and associated disparities.

This study demonstrates that personal opinions and unconscious biases can prevent individuals diagnosed with mental illness from accessing certain personal freedoms. The negative outcomes resulting from the stigma are undeniably harmful when they arise in interpersonal relationships, but they may be even more damaging when they occur within patient-healthcare provider relationships. Consequently, many people experiencing mental conditions avoid seeking diagnosis due to fear of stigma, do not receive care for their symptoms, and struggle to address the realities of their illnesses.

According to a worldwide survey conducted by the INDIGO study, while seeking care, 38% of patients with schizophrenia felt disrespected by mental health staff and 17% experienced discrimination (Sideli, 2021). In the US, 25% of individuals who do not seek mental health treatment cite concerns about others finding out about their condition and report feeling ashamed to discuss their symptoms (MHFA, 2022). If adequately treated with early interventions, people with mental illnesses can and do recover and function well in the community. Therefore, it is important to address stigmatised views of mental illness among healthcare students at the early stage of their education since provider-based stigmatisation is a preventable yet concerning public health emergency (Jauch, 2023).

Research has demonstrated that people experiencing mental health conditions desire more support from healthcare practitioners, and specifically, support from pharmacists in medication decision-making; however, many pharmacy students have expressed feeling unprepared to communicate with patients experiencing mental health conditions (Douglass and Moy, 2019). To prevent provider-based stigmatisation, more insight into the underlying reasons, magnitude and dimensions of exhibited stigmatising behaviours is requisite (Javed *et al*, 2021; Jauch, 2023).

Further, research should aim to understand how this stigma impedes ethical rights among the vulnerable population, especially concerning rights within healthcare. Instilling anti-stigma initiatives within healthcare provider education curriculums may help to interrupt the negative cycle of consequences and outcomes that stem from these beliefs and behaviours.

Educational interventions should aim for long-term sustainability to support the recovery of individuals experiencing serious mental illness (Sreeram, 2023).

Educators must be aware of their ethical obligations, self-biases, stigmatising attitudes, and moral oversights. Additionally, all academicians must be equally sensitive to the fact that their communication skills may either erode stigma or exacerbate it. Since language can influence how people think and act, it is suggested that educators utilise "*person-first language*", which focuses on the person rather than the condition they are diagnosed with (Table V).

Table V: Examples using person-first & non-stigmatising language

Instead of this	Use this instead
Mental illness	Mental health challenge or crisis
Mentally ill/Crazy/Insane/Disturbed	A person living with a mental health challenge (*or use the diagnosis if a person prefers that language, e.g., a person diagnosed with schizophrenia*)
Depressed/Schizophrenic	A person living with depression or schizophrenia
Manic-depressive	A person living with bipolar disorder
Alcohol abuse	Alcohol use challenge or crisis
Substance abuse	Substance use
Addict/Junkie/Druggie	A person with a substance-use challenge or disorder
Alcoholic	A person with an alcohol use challenge or disorder
Ex-addict/Clean	A person in recovery
Committed suicide	Died by suicide or lost to suicide
Failed suicide	Attempted suicide

This communication technique validates individuals with lived experience. It is imperative for professors, preceptors, mentors, and anyone working in healthcare to manage unconscious bias and eliminate stigma by role-modelling stigma-free communication and behaviours. Since pharmacists are among the most accessible healthcare professionals to the public, they are well-positioned to offer first-line assistance even without special training in psychiatric medication management. As such, they need to be cognizant of their word choices, biases, and actions, especially relating to delivering patient care, since this can influence the effectiveness and acceptance of care (Crocker, 2019; MHFA, 2022).

Limitations

Since students could elect not to participate in the study at any time, four non-responders were in the 2022 post-class survey (n=114 pre-survey, n=110 post-survey). As such, there is a possibility that the missing data could affect the generalizability of the results, however, this small difference in sample size likely did not lead to a meaningful adverse impact on the study's conclusion.

Investigation of whether students who chose to take the Swedish test obtained different assessment scores for oral communication, compared to those who did not take the test. There were no statistically significant differences between test-takers and non-test-takers (adjusted p = 0.10, Mann-Whitney U).

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Conflict of Interests

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References:

Cates, M. E., & Jackson, C. W. (2022). Ambitious AAPP vision necessitates bold actions. *The Mental Health Clinician*, **12**(2), 86–88. https://doi.org/10.9740/mhc.2022.04.086

Crisp, A., Gelder, M., Goddard, E., & Meltzer, H. (2005). Stigmatisation of people with mental illnesses: A follow-up study within the Changing Minds campaign of the Royal College of Psychiatrists. *World Psychiatry: Official Journal of The World Psychiatric Association (WPA),* **4**(2), 106–113.

Crocker, A. F., & Smith, S. N. (2019). Person-first language: Are we practising what we preach? *Journal of multidisciplinary healthcare*, **12**, 125–129. https://doi.org/10.2147/JMDH.S140067

Dopheide, J. A., Werremeyer, A., Haight, R. J., Gutierrez, C. A., & Williams, A. M. (2022). Positioning psychiatric pharmacists to improve mental health care. *The mental Health Clinician*, **12**(2), 77–85. https://doi.org/10.9740/mhc.2022.04.077

Douglass, M., & Moy, B. (2019). Evaluation of the impact of a social media-focused intervention on reducing mental health stigma among pharmacy students. *The Mental Health Clinician*, **9**(3), 110–115. https://doi.org/10.9740/mhc.2019.05.110

Elbogen, E. B., & Johnson, S. C. (2009). The intricate link between violence and mental disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Archives Of General Psychiatry*, **66**(2), 152–161. https://doi.org/10.1001/archgenpsychiatry.2008.537

Goodwin, R. D., Dierker, L. C., Wu, M., Galea, S., Hoven, C. W., & Weinberger, A. H. (2022). Trends in U.S. depression prevalence from 2015 to 2020: The widening treatment gap. *American Journal of Preventive Medicine*, **63**(5), 726–733. https://doi.org/10.1016/j.amepre.2022.05.014

Harris, S. C., Yates, D., Patel, M., & Patel, K. (2018). Student engagement and perceptions of stigmatizing views in a mental health-focused collegiate organisation. *The Mental Health Clinician*, **7**(5), 187–193. https://doi.org/10.9740/mhc.2017.09.187

Jauch, M., Occhipinti, S., & O'Donovan, A. (2023). The stigmatization of mental illness by mental health professionals: Scoping review and bibliometric analysis. *PloS one*, **18**(1), e0280739. https://doi.org/10.1371/journal.pone.0280739

Javed, A., Lee, C., Zakaria, H., Buenaventura, R. D., Cetkovich-Bakmas, M., Duailibi, K., Ng, B., Ramy, H., Saha, G., Arifeen, S., Elorza, P. M., Ratnasingham, P., & Azeem, M. W. (2021). Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. *Asian Journal of Psychiatry*, **58**, 102601. https://doi.org/10.1016/j.ajp.2021.102601

Johns Hopkins Medicine. (2023). Mental health disorder statistics. https://www.hopkinsmedicine.org/health/wellness-and-prevention/mental-health-disorder-statistics

McGinty B. (2023). The future of public mental health: Challenges and opportunities. *The Milbank Quarterly*, **101**(S1), 532–551. https://doi.org/10.1111/1468-0009.12622

MHFA. (2022). *Use person-first language to reduce stigma. National Council for Mental Wellbeing*. Mental Health First Aid. https://www.mentalhealthfirstaid.org/2022/04/use-person-first-language-to-reduce-stigma/

Nakkeeran, N., & Nakkeeran, B. (2018). Disability, mental health, sexual orientation and gender identity: understanding health inequity through experience and difference. *Health Research Policy and Systems*, **16**(1), 97. https://doi.org/10.1186/s12961-018-0366-1

Nikstat, A., & Riemann, R. (2020). On the aetiology of internalizing and externalising problem behaviour: A twin-family study. *PloS one*, **15**(3), e0230626. https://doi.org/10.1371/journal.pone.0230626

Paananen, J., Lindholm, C., Stevanovic, M., & Weiste, E. (2020). Tensions and paradoxes of stigma: Discussing stigma in mental health rehabilitation. *International Journal of Environmental Research and Public Health*, **17**(16), 5943. https://doi.org/10.3390/ijerph17165943

Pescosolido, B. A., Halpern-Manners, A., Luo, L., & Perry, B. (2021). Trends in public stigma of mental illness in the US, 1996-2018. *JAMA Network Open*, **4**(12), e2140202. https://doi.org/10.1001/jamanetworkopen.2021.40202

Rössler W. (2016). The stigma of mental disorders: A millennia-long history of social exclusion and prejudices. *EMBO Reports*, **17**(9), 1250–1253. https://doi.org/10.15252/embr.201643041

SAMHSA. (2023). *What are serious mental illnesses?* Substance Abuse and Mental Health Services Administration https://www.samhsa.gov/serious-mental-illness

Shahwan, S., Goh, C. M. J., Tan, G. T. H., Ong, W. J., Chong, S. A., & Subramaniam, M. (2022). Strategies to Reduce Mental Illness Stigma: Perspectives of People with Lived Experience and Caregivers. *International Journal of Environmental Research and Public Health*, **19**(3), 1632. https://doi.org/10.3390/ijerph19031632

Sideli, L., Sartorio, C., Ferraro, L., Mannino, G., Giunta, S., Giannone, F., Seminerio, F., Barone, M. V., Maniaci, G., Montana, S., Marchese, F., La Barbera, D., & La Cascia, C. (2021). Views of schizophrenia among future healthcare professionals: Differences in relation to diagnostic labelling, causal explanations, and type of academic degree program. *Clinical Neuropsychiatry*, **18**(5), 260–269. https://doi.org/10.36131/cnfioritieditore20210504

Skeem, J. L., & Mulvey, E. P. (2001). Psychopathy and community violence among civil psychiatric patients: Results from the MacArthur Violence Risk Assessment Study. *Journal of Consulting and Clinical Psychology*, **69**(3), 358–374.

Sreeram, A., Cross, W. M., & Townsin, L. (2022). Anti-stigma initiatives for mental health professionals-A systematic literature review. *Journal of Psychiatric and Mental Health Nursing*, **29**(4), 512–528. https://doi.org/10.1111/jpm.12840

Stangl, A. L., Earnshaw, V. A., Logie, C. H., van Brakel, W., C Simbayi, L., Barré, I., & Dovidio, J. F. (2019). The health stigma and discrimination framework: A global, crosscutting framework to inform research, intervention development, and policy on health-related stigmas. *BMC Medicine*, **17**(1), 31. https://doi.org/10.1186/s12916-019-1271-3

Swanson, J., Mcginty, E., Fazel, S., & Mays, V. (2015). Mental illness and reduction of gun violence and suicide: bringing epidemiologic research to policy. *Annals of Epidemiology*, **25**(5), 366–376. https://doi.org/10.1016/j.annepidem.2014.03.004

Thandar, M., Prescott, G. M., Maerten-Rivera, J., Prescott Jr., W. A., Fiebelkorn, K. D., & Fusco, N. M. (2023). Evaluation of student-pharmacists' experiences in COVID-19 vaccination clinics. *Pharmacy Education*, **23**(1), 208–215. https://doi.org/10.46542/pe.2023.231.208215

Weinberger, A. H., Gbedemah, M., Martinez, A. M., Nash, D., Galea, S., & Goodwin, R. D. (2018). Trends in depression prevalence in the USA from 2005 to 2015: widening disparities in vulnerable groups. *Psychological Medicine*, **48**(8), 1308–1315. https://doi.org/10.1017/S0033291717002781

Weittenhiller, L. P., Mikhail, M. E., Mote, J., Campellone, T. R., & Kring, A. M. (2021). What gets in the way of social engagement in schizophrenia? *World Journal of Psychiatry*, **11**(1), 13–26. https://doi.org/10.5498/wjp.v11.i1.13