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Research Article

Knowledge and Attitudes Towards Mental Health Conditions among Pharmacy Interns of Specialized Hospital

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ABSTRACT

The purpose of this study is to determine the knowledge and attitudes toward mental health conditions of Pharmacy Interns in Specialized Hospital, and the role of demographic characteristics needs to be considered when investigating stigma and its relationship to mental health knowledge. Finally, align and formulate programs for Pharmacy Internship in Specialized Hospital to strengthen the positive attitudes and mitigate the negative attitudes toward mental health further.

The Mental Illness: Clinician's Attitudes Scale (Medical Student Version MICA-2) and the Mental Health Knowledge Schedule (MAKS) were completed by 25 Pharmacy Interns of Specialized Hospitals. Descriptive statistics were done to describe differences in demographic characteristics. Parametric Test Pearson R was used to assess the relationship between the knowledge and attitudes of Pharmacy Interns. The Analysis of Variance (ANOVA) was the test used to compare the variations in total scores between MICA and MAKS based on various demographic factors. This study revealed that pharmacy interns of specialized hospitals have a generally positive attitude and are knowledgeable about mental health conditions. In this study, having more mental health knowledge correlates with a less stigmatizing attitude.

There was a significant difference in the attitude of Pharmacy Interns when grouped according to their educational attainment. As a recommendation, evaluation after the Pharmacy Internship through MICA and MAKS can be done. Also, Specialized Hospitals should consider implementing intervention programs to advance mental health knowledge and positive attitudes among Pharmacy Interns.

Keywords: *Mental health; Mental health conditions; Stigma; Knowledge; Attitude; Pharmacy Interns; Pharmacy Internship Program*

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Introduction

The World Health Organization's concept of health emphasizes the importance of mental health. To recognize mental health as a critical component of overall health, the WHO describes it as a state of well-being in which people can understand their strengths and potentials, cope with and respond to daily difficulties, perform productively, and contribute their fair share to society (World Health Organization, 2013).

Mental, neurological, and alcohol use disorders are among the most common primary health conditions in the world, afflicting a large number of people in various countries. Mental health problems account for about 10% of disability-adjusted life years and about 2% of missing years of life globally. They are still the leading source of years spent disabled, accounting for around 29% of all years spent disabled. Mental disorders are one of the top 20 causes of disabilities globally, according to the WHO, with depression ranking eighth. Depression is expected to rate first among the leading causes of disease incidence worldwide by 2030. Around 322 million people suffer from depression, 264 million from anxiety disorders, 23.3 million from schizophrenia, 63.5 million have alcohol use disorders, and 46.4 million suffer from drug abuse (Murray et al., 2016).

With the prevalence of mental disorders, mental health has recently captured the world's attention. However, negative attitudes, stigmatization, and injustice associated with mental illness are also severe health concerns that have a negative effect on people and their families (Björkman et al., 2008; Kakuma et al., 2011). People with mental illnesses face detrimental consequences because of public stigma, which prevents them from achieving employment and healthcare aspirations, as well as deterring them from receiving services and lowering the quality of care provided (Linz et al., 2013; Henderson et al., 2013).

Stigma, as described by the United Nations Convention on the Rights of Persons with Disabilities (PWD), is a type of social injustice that prevents people with mental illnesses from participating in social activities due to discrimination, isolation, and deprivation of human and social rights. Mentally disabled people are also stereotyped as being guilty, erratic, and abusive in today's society. Observational findings show that healthcare workers, such as doctors, nurses, and other health care workers, are often included in the stigma. Such an occurrence trivializes the needs of individuals needing mental health treatment (Cremonini et al., 2018). Stigmatizing practices are common not only among the general population but also among mental health care professionals (Henderson et al., 2014; Thornicroft et al., 2016). Many individuals with mental illnesses report that mental health care professionals, who work on both mental and physical health systems, are important causes of stigma and inequality in many countries around the world (O'Reilly et al., 2010; Rong et al., 2011).

There is growing concern about attitudes toward people with mental health conditions and their effect on their treatment and social lives. The levels of knowledge and attitudes of students at colleges, including Pharmacy students, towards mental health conditions are of paramount importance, as they will be future healthcare professionals. The awareness and knowledge of these future healthcare professionals about mental health conditions will help the community to better deal with negative attitudes toward mental health conditions. Consequently, the study aimed to assess the attitude toward people with mental health conditions, attitudes toward seeking help for mental health, and the knowledge about causes of mental health conditions among Pharmacy interns at Specialized Hospital.

Methods

The research study on the knowledge and attitudes of pharmacy interns in specialized hospitals toward mental health conditions is described in this chapter, along with the methodology employed. It presents the research design, Population and sampling, study respondents, research instrument, ethical considerations, data gathering, and statistical data treatment.

The study on the knowledge and attitude of Pharmacy Interns in Specialized Hospital towards mental health conditions used a quantitative research method. The study used a descriptive cross-sectional method using

questionnaires through Google Forms as the primary data source. This method was utilized to gain a general understanding of Pharmacy interns' views of mental health disorders and the variables that may influence these perceptions.

The descriptive cross-sectional study describes the study question, methodology, and data analysis to assess pharmacy interns' knowledge and attitude in specialized hospitals. The approach required to finish an accurate assessment of the subject at hand will ultimately depend on the type of question posed. To gather the needed information, Google form was used.

The population of interest for this study was given to all Pharmacy interns at specialized hospitals from January 2022 to October 2023. It resulted in a total of 25 participants. This approach ensured a focused and manageable sample.

All pharmacy interns who took their Pharmacy Internship at Specialized Hospitals from January 2022 to October 2023 were included in the study's interest population. Privacy measures were put in place to secure the protection of the data assembled. Measures were taken to ensure the secrecy of the participants, and all information was kept confidential to preserve protection.

The data gathering instrument used was a questionnaire consisting of three parts. Part I of the questionnaire was the demographic profile. Part II was the Mental Illness: Clinician's Attitudes (Medical Student Version MICA-2) Scale and Part III was the Mental Health Knowledge Schedule (MAKS).

1. Questionnaire: used to collect demographic information and measure the knowledge and attitudes of Pharmacy interns toward mental health conditions.
2. Mental Illness: Clinician's Attitudes (Medical Student Version MICA-2) Scale: a 16-question scale used to measure the attitudes of Pharmacy Interns toward mental health conditions. A single overall score, ranging from 16 to 96, was calculated by adding the scores for each item. A higher score denoted a more negative (stigmatizing) attitude.
3. Mental Health Knowledge Schedule (MAKS): a 12-item scale used to measure the knowledge of Pharmacy Interns regarding mental health conditions and stigma. The sum of the response values for each item was used to determine the participant's overall score, with higher scores indicating more excellent knowledge.

The total scores for each item were added up to create a single score ranging from 16 to 96. Higher scores indicated a more pessimistic (stigmatizing) mindset. The MAKS is another validated instrument used to measure healthcare professionals' knowledge of mental health.

The Mental Illness: Clinicians' Attitudes Scale MICA-2 © 2010 was developed by Aliya Kassam and Health Service and Professor Graham Thornicroft and was conducted in the Population Research Department, Institute of Psychiatry, King's College London. The likert scale used for MICA- 2 are strongly agree, Agree, somewhat agree, somewhat disagree, disagree and strongly disagree.

Also, the Mental Health Knowledge schedule MAKS 10 © 2009 was developed by Professor Graham Thornicroft in the Health Service and Population Research Department, Institute of Psychiatry, King's College London. Likert scales used for MAKS are scales of agree strongly, agree slightly, neither agree or nor disagree, disagree slightly and don't know. Both questionnaires were acquired by asking for permission through email to Professor Graham Thornicroft.

Throughout the research procedure, ethical issues were given priority in the study. All participants consented, and stringent confidentiality and anonymity rules were upheld. Data security and privacy were guaranteed using Google Forms during the data collection process. Ethical standards and principles were maintained to protect the participants' rights and welfare.

An online survey tool, Google Forms, was used to gather the data. The study's goals and the procedure for collecting data were thoroughly and lucidly explained to the participants. Their replies to a structured question-

naire about their knowledge and attitudes toward mental health conditions were elicited by guiding them through it.

The collected data were examined using the following statistical instruments: frequency and percentage, mean, and standard deviation. The data were coded and tabulated before the statistical analysis was carried out. Descriptive statistics were done to describe differences in demographic characteristics. Parametric Test Pearson R was used to assess the relationship between the knowledge and attitudes of Pharmacy Interns. The ANOVA test was utilized to compare the variations in MICA and MAKS total scores based on various demographic attributes. The statistical significance level was set at 0.05.

Results and Discussions

SOP 1. What is the demographic profile of the respondents in terms of Age, Sex, Religion, Nationality, Educational Attainment, and Family Monthly Income?

Table 1 shows the Demographic Characteristics of the participants. The frequency and percentage of the results of the survey are presented in the table.

Table 1. Demographic Characteristics of the participants (n=25)

Characteristics	Frequency	Percentage (%)
Age		
Below 25 years old	21	84.0%
25 and above years old	4	16.0%
Gender		
Male	3	12.0%
Female	22	88.0%
Civil Status		
Married	1	4.0%
Single	24	96.0%
Religion		
Christian	5	20.0%
Roman Catholic	20	80.0%
Nationality		
Filipino	24	96.0%
Foreigner	1	4.0%
Educational Attainment		
BS Pharmacy, Fourth Year	23	92.0%
Post Graduate, MS Pharmacy	2	8.0%
Family Monthly Income		
Between Php 10,957 to Php 21,914	1	4.0%
Between Php 21,914 to Php 43,828	9	36.0%
Between Php 43,828 to Php 76,699	5	20.0%
Between Php 76,699 to Php 131,484	5	20.0%
Between Php 131,484 to Php 219,140	1	4.0%
At least Php 219,140	4	16.0%

Table 1 shows the Demographic Characteristics of the participants. A total of 25 respondents were included in the study, mostly below 25 years old (84%), while 96% are still single. Around 80% of them belong to the Roman Catholic religion, while almost all of them are Filipino (96%). On educational attainment, 8% reach Post-graduate or M.S. Pharmacy while 36% have family monthly income from 21,914 to 43,828Php.

SOP 2. In what aspects can respondents assess mental health conditions in terms of:

2.1 Knowledge

2.2 Attitude

Table 2 presents the Mental health conditions in terms of Knowledge. The Total Mean Scores of MAKS Scale, Standard Deviation, and Interpretation of data are shown in the table.

Table 2. Mental health conditions in terms of Knowledge

MAKS Scale	Mean	Std. Deviation	Interpretation
1. Most people with mental health problems want to have paid employment.	3.96	1.27	Slightly agree
2. If a friend had a mental health problem, I know what advice to give them to get professional help.	4.00	1.29	Slightly agree
3. Medication can be effective treatment for people with mental health problems.	4.84	0.37	Strongly agree
4. Psychotherapy (such as counseling or talking therapy) can be an effective treatment for people with mental health problems.	4.88	0.33	Strongly agree
5. People with severe mental health problems can fully recover.	4.16	0.69	Slightly agree
6. Most people with mental health problems go to a healthcare professional to get help.	3.56	1.58	Slightly agree
7. Whether each condition is a Type of Mental illness			
7.1 Depression	4.80	0.50	Strongly agree
7.2 Stress	3.48	1.71	Slightly agree
7.3 Schizophrenia	4.80	0.58	Strongly agree
7.4 Bipolar Disorder (Manic Depression)	4.88	0.44	Strongly agree
7.5 Drug Addiction	4.04	1.37	Slightly agree
7.6 Grief	3.44	1.69	Slightly agree
Overall mean	**4.24**		**Very High Knowledge**

Strongly Agree 4.20 to 5.00, Slightly agree 3.41 to 4.20, Neither 2.61 to 3.40, Slightly disagree 1.81 to 2.60, Strongly disagree 1.00 to 1.80

Table 2 shows the resulting overall mean of 4.24, which implies that the respondents' mental health knowledge is very high. Specifically, among the 12 attributes, five are rated to be strongly agreed. Specifically, they strongly agree that psychotherapy (such as counseling or talking therapy) can be an effective treatment for people with mental health problems (4.88). At the same time, they also strongly agree that medication can be an effective treatment for people with mental health problems (4.84). Moreover, they firmly believe that schizophrenia (4.80), bipolar (4.88) and depression (4.80) are forms of mental illness. On the other hand, the lowest mean is 3.44, which implies that they only slightly agree that grief is a form of mental illness, as well as stress (3.48). In a cross- sectional study by Li et al. on mental health related knowledge and attitudes among care assistant workers in Guangzhou, China, in 2021, the mean total score of the participants was 22.72 (SD = 2.56) for the MAKS. This shows that the Pharmacy interns have a higher knowledge of mental health conditions than the previous studies.

Table 3 shows the respondents' Mental health conditions in terms of Attitude. The Total Mean Scores of the MAKS Scale, Standard Deviation, and Interpretation of data are indicated in the table.

Table 3. Mental health conditions in terms of Attitude

MICA Scale	Mean	SD	Interpretation
1. I just learned about Psychiatry because it is in the exam and would not bother reading additional material on it.	2.480	1.53	Disagree
2. People with a severe mental illness can never recover enough to have a good quality of life.	2.000	1.32	Disagree
3. Psychiatry is just as scientific as other fields of medicine.	4.040	1.59	Somewhat agree
4. If I had a mental illness, I would never admit this to any of my friends because I would fear being treated differently.	2.720	1.28	Somewhat disagree
5. People with a severe mental illness are dangerous more often than not.	2.960	1.27	Somewhat disagree
6. Psychiatrists know more about the lives of people treated for a mental illness than do family members or friends.	4.520	1.36	Agree
7. Being a psychiatrist is not like being a real doctor.	1.720	0.98	Strongly disagree
8. If a consultant psychiatrist instructed me to treat people with a mental illness in a disrespectful manner, I would not follow their instructions.	4.720	1.70	Agree
9. I feel as comfortable talking to a person with a mental illness as I do talk to a person with a physical illness.	3.960	1.27	Somewhat agree
10. It is important that any doctor supporting a person with a mental illness also assesses their physical health.	5.640	0.86	Strongly agree
11. The public does not need to be protected from people with a severe mental illness.	3.080	1.50	Somewhat disagree
12. If a person with mental illness complained of physical symptoms (such as chest pain), I would attribute it to their mental illness.	3.120	1.67	Somewhat disagree
13. General practitioners should not be expected to complete a thorough assessment for people with psychiatric symptoms because they can be referred to a psychiatrist.	3.560	1.45	Somewhat agree
14. I would use the terms 'crazy', 'nutter', 'mad' etc. to describe people with mental illness who I have seen in my work.	1.360	0.70	Strongly disagree
15. If a colleague told me they had a mental illness, I would still want to work with them.	5.200	1.00	Strongly agree
Overall mean	**2.490**		**Disagree – Positive Attitude**

Strongly disagree 1.00 to 1.833, somewhat disagree 1.834 to 2.667, somewhat disagree 2.668 to 3.501, somewhat agree 3.502 to 4.335, agree 4.336 to 5.169, strongly agree 5.17 to 6.00 Item Q3, Q6, Q9, Q10, Q11, Q14, Q16 are positive statements, overall mean was computed by reversing these items first, higher overall mean suggest more negative attitude.

Table 3 shows the overall mean of 2.490, implying that the respondents' attitude can be described as positive. Of the nine negatively stated attributes, all disagreed (2 disagree, 2 strongly disagree, 5 somewhat disagree). Specifically, they strongly disagree that they would use the terms 'crazy', 'nutter', 'mad' etc. to describe people with mental illness who they have seen in my work. Of the seven positive attributes, all agreed (2 agree, 3 somewhat agree, and 2 strongly agree) where they strongly agree that If a colleague told them they had a mental illness, they would still want to work with them, as well as strongly agreeing that It is important that any doctor supporting a person with a mental illness also assesses their physical health. In another cross-sectional study by Li, et al. on the levels of stigma among mental health staff in Guangzhou, China, in 2014, the mean total score of the participants for MICA was 51.69 (SD = 6.94). This shows that the Pharmacy interns have a more positive attitude toward mental health conditions than in the previous study.

SOP 3. Is there a significant difference between the assessment of respondents on mental health conditions across demographic profiles?

Table 4 presents the Significant Difference Between the Assessment of the Knowledge of the Respondents on Mental Health Conditions across Demographic Profile.

Table 4. Significant Difference Between the Assessment of the Knowledge of the Respondents on Mental Health Conditions across Demographic Profile

Demographic	F Value	P value	Decision	Interpretation
Age	0.181	0.674	Accept null	Not significant
Marital Status	0.554	0.464	Accept null	Not significant
Nationality	0.111	0.742	Accept null	Not significant
Religion	0.680	0.418	Accept null	Not significant
Educational Attainment	0.907	0.351	Accept null	Not significant
Monthly Family Income	1.022	0.433	Accept null	Not significant

Table 4 shows the resulting p-value suggests that the mean attitude of the respondents is not significantly different when grouped according to age (p = 0.674), marital status (p = 0.464), nationality (p = 0.742), religion (p = 0.418) educational attainment (p = 0.351) and monthly family income (p = 0.433). Other studies show that they have a significant difference in terms of educational attainment, as an increase in educational attainment corresponded to an increase in the MAKS score. This result concurred with that of Doumit et al. in 2019 on the knowledge, attitude and behaviors towards patients with mental illness in Lebanon. It was found that there was a significantly higher mean MAKS score in those with a university level of education compared to a primary one.

Table 5 presents the Significant Difference Between the Assessment of the Attitude of the Respondents on Mental Health Conditions across Demographic Profiles. The F value, P value, Decision, and Interpretation of data are shown in the table.

Table 5. Significant Difference Between the Assessment of the Attitude of the Respondents on Mental Health Conditions across Demographic Profile

Demographic Profile	F Value	P value	Decision	Interpretation
Age	4.123	0.054	Accept null	Not significant
Marital Status	1.209	0.283	Accept null	Not significant
Nationality	1.431	0.244	Accept null	Not significant
Religion	0.404	0.531	Accept null	Not significant
Educational Attainment	10.514	0.004	Reject null	**Significant**
Monthly Family Income	0.742	0.602	Accept null	Not significant

Table 5 shows the resulting p-value suggests that the mean attitude of the respondents is not significantly different when grouped according to age (p=0.054), marital status (p=0.283), nationality (p=0.244), religion (p=0.531) and monthly family income (p=0.602). On the other hand, it is significant on educational attainment (p=0.004) where those who reach a postgraduate degree have higher mean implying that they have a more negative attitude than a Bachelor's degree. While, in a study conducted by Girma et al., in 2013, there was a significant inverse relationship between respondents' education level and stigma.

SOP 4. Is there any significant relationship between Knowledge and Attitudes toward Mental Health Conditions of Pharmacy Interns in Specialized Hospital?

Table 6 presents the Significant Difference Between the Assessment of the Attitude of the Respondents on Mental Health Conditions across Demographic Profile. The F value, P value, Decision, and Interpretation of data are shown in the table.

Table 6. Test of Significant Relationship between Knowledge and Attitude

Pearson r	p value	Decision	Interpretation
-0.0184	0.9303	Accept null	Not significant

Table 6 shows the resulting p value of 0.9303 denotes that the relationship between their mental health knowledge is not significant with their attitude. In a 2014 study on the levels of stigma among community mental health personnel in Guangzhou, China, Li et al. discovered that MICA scores exhibited negative relationships with MAKS. According to the findings of the study, community mental health personnel in Guangzhou have limited knowledge of mental health conditions and have a negative attitude toward them. Furthermore, several studies have discovered a link between high stigma and a lack of mental health information (Li et al., 2018). In this study, there is no significant negative correlation between the two. In other words, mental health knowledge increases as the positive attitude decreases.

SOP 5. What intervention should be proposed to the Pharmacy Department of Specialized Hospital to improve the Pharmacy Internship Program?

Based on the results of Knowledge and Attitudes of Pharmacy Interns in Specialized hospital, the researchers proposed a Development Training Table for Pharmacy internship program as seen in Table 7. This table outlines various areas of development and corresponding training topics for pharmacy interns.

Table 7. Development Training Program for Pharmacy Internship Program

Development Area	Learning Objectives	Training Methods	Training Resources	Training Duration	Evaluation and Assessment	Training Schedule
Mental Health Basics	Understand common mental health disorders	Lectures	Textbooks, online resources	2 weeks	Quizzes, case studies	Week 1: Mon-Fri, 9 AM - 12 PM
	Learn about psychotropic medications	Group discussions	Clinical guidelines			Week 2: Mon-Fri, 9 AM - 12 PM
Pharmacy Operations	Familiarize with pharmacy workflow	Hands-on practice	Standard operating procedures	4 weeks	Practical assessments	Week 1-4: Mon-Fri, 1 PM - 5 PM

Development Area	Learning Objectives	Training Methods	Training Resources	Training Duration	Evaluation and Assessment	Training Schedule
	Understand medication storage and labeling	Shadowing experienced staff	Hospital policies			
Clinical Pharmacy	Gain knowledge of pharmacotherapy in mental health disorders	Case discussions	Clinical guidelines, research articles	3 weeks	Case presentations, quizzes	Week 5-7: Mon-Fri, 9 AM - 12 PM
	Learn to monitor and evaluate treatment response	Patient counseling simulations	Patient education materials			
Psychiatric Disorders	Understand schizophrenia and its treatment	Lectures	Textbooks, research articles	2 weeks	Case studies, exams	Week 8-9: Mon-Fri, 9 AM - 12 PM
	Learn about mood disorders and medication options	Group discussions	Clinical guidelines			
Ethical Considerations	Understand patient confidentiality and privacy	Case discussions	Ethical guidelines	1 week	Ethical scenarios, discussions	Week 13: Mon-Fri, 9 AM - 12 PM
	Learn about cultural competence in mental health	Diversity training	Cultural competence resources			
Interprofessional Skills	Collaborate with mental health professionals	Interdisciplinary case reviews	Patient case files	2 weeks	Teamwork assessments	Week 14-15: Mon-Fri, 1 PM - 5 PM

Table 7 shows the Development Training Program Proposal for the Pharmacy Internship Program. This is a sample table that the Internship Coordinator in a Special Hospital can adapt and customize based on the specific requirements and duration of the pharmacy internship program. The training schedule can also be adjusted to accommodate the availability of resources and preceptors.

Conclusion

The purpose of this study is to determine the knowledge and attitudes of Pharmacy Interns of Specialized Hospital toward mental health conditions, the correlation between knowledge and attitudes on mental health conditions, the demographic factors that affect the knowledge and attitudes, and the differences in knowledge and attitude of mental health service providers in terms of their demographic characteristics.

This study revealed that Pharmacy Interns of Specialized Hospital have a generally positive attitude towards mental illness and are knowledgeable about mental health. In this study, there was no significant negative correlation between the attitude and knowledge of mental health. In addition, the knowledge of the respondents is not significantly different when grouped according to age, marital status, nationality, religion, educational attainment, and monthly family income. Furthermore, the attitude of the respondents is similar when grouped according to age, marital status, nationality, religion, and monthly family income. On the other hand, it is significant on educational attainment where those who reach post graduate degree have higher mean implying that they have a more negative score as compared to Bachelor's degree.

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