

Assessment of the Attitudes of Applied Medical Science Students toward Mental Health Problems: A Cross-sectional Study in Saudi Arabia

Dr. Atallah Alenezi Ph.D.RN.¹, Dr. Isabelita N. Pandaan Ed.D.RN.², Dr. Ramon Perley M. Pandaan JD.Ph.D.RN³

¹Associate Professor, Head of Nursing Department, College of Applied Medical Sciences, Shaqra University, Riyadh

²Assistant Professor, College of Nursing, King Saud University, Riyadh, KSA.

³Faculty, Applied Medical Science, Department of Nursing, Riyadh, KSA.

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INTRODUCTION

Over the last decade, most populations have been reported to harbor negative perceptions toward individuals who have been diagnosed with a mental health problem (MHP; Prins et al., 2011; Sansone & Sansone, 2013). Likewise, individuals with MHP are often at the receiving end of negative reactions and stigmatization from the public (Sansone & Sansone, 2013). These negative attitudes manifest from ordinary persons and even from healthcare professionals (Hansson, Jormfeldt, Svedberg, & Svensson, 2013). Thus, these attitudes can affect the recruitment of future healthcare professionals specializing in mental healthcare, as well as the quality of care that healthcare professionals provide to these patients (Koinis et al., 2015).

The shortage in the healthcare workforce specializing in mental health is partly attributed to negative attitudes toward MHP (Koinis et al., 2015). Accordingly, fostering a positive attitude toward MHP requires changes in the attitude of future healthcare professionals and the implementation of educational programs focusing on deep understanding and awareness about MHP (Bennett & Stennett, 2015). Improved attitudes toward MHP can be achieved if baseline data pertaining to students' attitudes are available (Bennett & Stennett, 2015; Murthy, 2017). The results of the present study can provide understanding and help establish a certain approach to facilitating acceptable behavior toward mental health, especially among health-related students and how they create an impact on society and the population they serve. Therefore, this study was implemented to assess the attitudes of students with health-related courses toward MPS in Saudi Arabia.

Background of the Study

Mental and behavioral disorders are universal. The World Health Organization (2008) reported that MHP contributes to 14% of the world's premature deaths and years lived with disability. In spite of the magnitude of people suffering from mental illnesses, people do not receive the adequate care they need, leading to an increased overall burden to society. Previous studies found that the barriers in providing essential mental healthcare were financial burden in mental health services (Knickman, Krishnan, & Pincus, 2016),

ineffective treatment (Prins et al., 2011), and stigma (Shoesmith et al., 2018). Considering the MHP burden, efforts should be undertaken to develop positive attitudes toward MHP in clinical and classroom settings.

Healthcare professionals' attitude is the main factor affecting treatment access and positive MHP clinical outcomes, wherein a negative attitude can compromise the healthcare professionals' ability to identify and manage psychological problems irrespective of their familiarity with psychiatry concepts (Hansson et al., 2013). Knaak, Mantler, and Szeto, (2017) further elaborated that the most discerning experience with people with MHP was interaction with healthcare professionals. Moreover, similar to any profession, nurses are primary providers for individuals, families, and groups aiming for health promotion and disease prevention (Alshehry, Alquwez, Almazan, Namis, & Cruz, 2019). However, recent evidence suggests the negative attitudes of nurses toward people with MHP (Al-Awadhi et al., 2017; Hansson et al., 2013). Sansone and Sansone (2013) stated that nurses generally perceive individuals with MHP as intimidating and challenging to care for. A similar situation has been observed with other members of the healthcare team. For example, previous studies have reported stigmatization toward patients having MHP by Australian paramedics (McCann et al., 2018), whereas moderate attitudes toward MHP were reported among Flemish physiotherapy students (Probst & Peuskens, 2010). Negative attitudes toward people with MHP are prevalent. For example, in one study in Malaysia, a high self-stigma is associated with negative attitudes among students and can be a barrier when seeking care (Ibrahim et al., 2019). Another study in India had shown that social stigma and negative attitude can affect the quality of life of people with MHP (Murthy, 2017).

MHP is also widespread in Saudi Arabia, although current literature on this topic suggests insufficient accurate estimation of MHP at a national level (Almutairi, 2015). Despite several interventions of the Saudi government, challenges surrounding MHP still persist in the country. Hence, proper knowledge and a positive attitude toward MHP should be integrated into health-related educational institutions in the country. Likewise, education in the country has an important role in educating students with health-related courses, such as nursing, physiotherapy, and medical laboratory to equip them with the right attitude in rendering quality patient care in a healthcare facility (Jradi, Zaidan, & Shehri, 2013). Consequently, when nursing students have completed their clinical training in mental health, most of them reported positive experiences and attitudes toward persons with MHP (Bennett, J., & Stennett, R. (2015). A similar improvement in attitudes toward MPH was recorded among physiotherapy students after completion of a psychiatry course (Probst & Peuskens, 2010). These findings may imply that good clinical exposure, as well as the integration of courses related to MHP, may positively affect students' attitudes. However, some empirical data reported barriers affecting students' attitudes toward MHP, one of which is the lack of MHP understanding, thereby creating stigma toward mental illness (Bennett & Stennett, 2015). Desai and Chavda (2018) mentioned that although most students reported that they were trained in mental health, they still acknowledged to having negative stereotypes toward MHP.

Given the burden of mental illnesses, efforts should be exerted in developing a positive attitude toward mental illnesses and psychiatry among undergraduate students with health-related courses. Building a good foundational knowledge and proper attitudes toward MHP may prepare these students to become better and effective mental healthcare workers in the future. Although several studies have been conducted on this topic, limited investigations were done in Saudi Arabia that focus on different students with health-related courses. Therefore, this study explored Saudi health-related students' attitudes toward MHP.

METHODS

Design

This study utilized a quantitative and comparative approach by using survey questionnaires in determining

the attitudes of Saudi students with health-related courses toward MHPs.

Samples and Setting

The study was conducted in a Saudi university in the central region of Saudi Arabia. The university is run by the government and provides a collegiate level of education to Saudi and non-Saudi students. The university has 23 different colleges in different campuses located in the central region of the country. The university also offers health-related programs, such as nursing, physiotherapy, and medical laboratory science, which are 4-year programs, with classroom, laboratory, and clinical courses. The first year of the program is considered as the preparatory year where students are required to enroll in basic courses. Professional courses are distributed from the second through the fourth year of the programs.

A universal sample of 168 students with health-related courses was surveyed in the study. The criteria for inclusion in the study were: (1) Saudi national, (2) enrolled in the programs under the College of Applied Medical Sciences, namely, nursing, physiotherapy, or medical laboratory science during the conduct of the study, and (3) second through fourth-year students. Students in the first year were not considered because of their lack of professional courses and because they are still in the preparatory level. During the conduct of the study, 278 students met the inclusion criteria. A total of 235 agreed to participate and were given the survey. Only 168 students returned the completed survey that was analyzed (response rate = 71.5%).

Ethical Consideration

The study proposal was submitted and was approved by the Deanship of Scientific Research (DSR) of the university because of the absence of a research ethics committee. The main function of the DSR in the university is to ensure that faculty research studies are carried out following the Rules Governing the Ethics of Scientific Research of the university. Administrative approval was also granted by the office of the dean and the head of the research committee of the College of Applied Medical Sciences. The researchers ensured that the rights of the respondents in terms of research participation were protected. Participation in the study was voluntary, and the privacy and confidentiality of the respondents were protected. An informed consent form was collected from the respondents. Adequate information regarding the study was made available to the respondents before inviting them to participate. Data collection was performed by a member of the research team who was not supervising or handling any course of the students to avoid potential coercion and undue influence.

Measurement

The researchers performed a survey with two sections as a data gathering tool. The first section of the survey was developed to obtain the respondents' demographic variables, which included: (1) department, (2) age, (3) gender, (4) marital status, (5) year level, and (6) years in the college.

The second section of the survey was Attitudes Towards Mental Health Problems (ATMHP) developed by Gilbert et al. (2007). This instrument is divided into five parts. Part 1 is divided into two sub-parts: (1) a person's perception of how his/her community sees MHPs (items 1–4) and (2) a person's perception of how his/her family perceives MHP (items 5–8). Part 2 is also divided into two sub-parts (1) a person's perception of how his/her community would see him/her if he/she had an MHP (items 9–13) and (2) a person's perception of how his/her family would see him/her if he/she had an MHP (items 14–18). Part 3 focuses on internal shame and the negative self-evaluation of having an MHP (items 19–23). Part 4 focuses on the reflected shame and beliefs about how one's family would be seen if one had an MHP (items 24–30). Part 5 looks at fears of reflected shame on self, associated with a close relative having an MHP (items 31–35). Hence, the scale has seven subscales, namely, community attitudes, family attitudes, external shame community, external shame family, internal shame, family-related shame, and self-reflected shame.

ATMHP comprises 35 items scored on a 4-point Likert scale ranging from “Do not agree at all”=0 to “Completely agree”=3. The subscale scores were obtained by summing the item scores in each subscale. A high subscale score implies poor attitude. The computed Cronbach’s alpha of the subscales of the ATMHP ranged from 0.85 to 0.97 (Gilbert et al., 2007).

Data Collection

Data were collected from the first week of April to second week of May 2019. The researchers planned the collection of data after they secured the schedules of the target sample. The researchers recruited the participants during break time. After explaining the study to the target respondent, the researchers asked them to sign an informed consent. The students who signed the form were handed the survey questionnaire. The respondents were told to put the answered questionnaire in sealed drop boxes. The researchers emptied the boxes at the end of each day, and the filled-up questionnaires were stored in the locked cabinet of the principal investigator.

Analysis of Data

Data were checked for completeness before analyses were done. Cases with substantial missing data were removed. Descriptive statistics were used to analyze the demographic variables of the respondents. The mean and standard deviation were computed for the attitudes toward MHP variable. Inferential statistics, including independent samples t-test and one-way ANOVA, was used to examine the differences in the attitudes of nursing students toward MHPs. Tukey HSD test was utilized as a post-hoc test for ANOVA. Statistical significance was observed with a p value less than 0.05.

RESULTS

Demographic Characteristics

Table 1 shows that the average age of the respondents was 21.15 (SD = 1.33) years. Majority of the respondents were males (58.9%) and singles (96.4%). More than half of the respondents were from the nursing department (n = 124, 73.8%), whereas 32 (19.0%) and 12 (7.1%) were physiotherapy and clinical laboratory science students, respectively. The respondents were distributed across different academic levels, with 64 (38.1%), 44 (26.2%), and 60 (35.7%) from the second, third, and fourth-year levels, respectively.

Results of the Descriptive Analyses on the Attitudes toward Mental Health Problems

The item means of the scale are presented in Table 2. The mean ranged from 0.95 to 1.57, indicating that most of the students did not agree at all or slightly agreed on the items of the questionnaire. The items 16 “I think my family would see me as inadequate” (M = 0.95, SD = 0.96) and 19 “I would see myself as inferior” (M = 0.95, SD = 1.04) were the most disagreed upon items in the questionnaire, whereas the item 1 “My community sees mental health problems as something to keep secret” was the most agreed upon item (M = 1.57, SD = 1.07).

In terms of the scale subscales (Table 3), the mean scores of the different subscales were as follows: community attitudes = 5.96 (SD = 3.18, possible range = 0–12), family attitudes = 4.88 (SD = 3.43, possible range = 0–12), external shame community = 6.21 (SD = 3.88, possible range = 0–15), external shame family = 5.15 (SD = 4.43, possible range = 0–15), internal shame = 5.66 (SD = 4.34, possible range = 0–15), family-related shame = 7.92 (SD = 5.81, possible range = 0–21), self-reflected shame = 5.91, (SD = 4.20, possible range 0–15). These findings indicate that the students have positive attitudes toward MHPs as revealed by the mean scores of the seven subscales lower than the midpoint of the possible range of scores.

Results of Inferential Analyses on the Attitudes toward Mental health problems and Students' Demographic Data

Analyses revealed significant differences in terms of students' attitudes toward MHPs when they were grouped in accordance with genders and departments. As shown in Table 4, female students ($M = 6.59$, $SD = 3.05$) reported significantly higher scores in terms of community attitude subscale compared with male students ($M = 5.53$, $SD = 3.22$, $t = -2.16$, $p = .032$). This finding indicates that female students perceived that their community sees mental health problems negatively compared with male nurses.

When the students were grouped in accordance with their departments (Table 5), significant differences were observed in the community attitude subscale ($F = 9.27$, $p < .001$) and external shame family subscale ($F = 3.46$, $p = .034$). The results of the Tukey honest significance difference (HSD) tests revealed that students from the physiotherapy department ($M = 2.42$, $SD = 2.68$) reported significantly lower scores on community attitudes subscale than nursing ($M = 6.35$, $SD = 3.07$, $p < .001$) and clinical laboratory science ($M = 5.78$, $SD = 3.05$, $p = .004$) students. This finding suggests that physiotherapy students thought that their community perceives MHPs positively, whereas nursing and clinical laboratory department students had a negative perception as to how their community views MHP. Furthermore, Tukey HSD test revealed that the p value between nursing and clinical laboratory students in external shame family subscales was on the borderline value (.054). Nursing students ($M = 5.68$, $SD = 4.66$) scored higher on this subscale compared with students from the clinical laboratory science department ($M = 3.66$, $SD = 3.61$), indicating that nursing students believed that their family would see them negatively when they have MHPs. By contrast, students in the clinical laboratory science believed that their family's perception would be positive if they develop MHPs

No significant relationship was seen between age and attitudes toward MHPs. The differences in students' attitudes toward mental health between year levels were not significant.

DISCUSSION

This present investigation determined the attitudes of Saudi students with health-related courses toward MHP. This work also examined the significant differences in their attitudes toward MHP between demographic characteristics.

The present study found that students have a positive attitude toward MHP. This finding is contrary to the result of a previous study conducted in Saudi Arabia indicating that most Arab people's attitude toward MHP is limited because of the poor understanding despite the high literacy rate toward mental health; social distance yearning from people with MHP is also significantly increased (Dardas & Simmons, 2015). Moreover, the attitudes toward MHP in the country usually develop from a prior belief system that is nurtured by the society's past and current experiences in which patients with MHP are described by the public as hopeless, expensive, laborious, and even risky. However, caution should be observed in interpreting this previous study as the respondents were the general population and not students, and the attitudes of different respondents might be different. The present finding may be associated with the learnings the students acquired in their baccalaureate studies. Positive attitudes can result from increased understanding and awareness of the problem, as well as the challenges that these patients encounter in their daily living. However, the curricular contents of the students' programs were not investigated in this study. Therefore, further studies should explore the mental health-related concepts incorporated with the curriculum of these programs. Nevertheless, increased knowledge and attitude toward patients with MHP might result in caring approaches that can improve quality patient care.

The item statement "I think my family would see me as inadequate" and "I would see myself as inferior"

received the highest disagreement among mental health attitude statements. Arab countries have a distinctive sociocultural and religious milieu related to family closeness (Dardas & Simmons, 2015). The family members' closeness is helpful as it plays a crucial role when the family faces a problem. When Saudi parents raised their children, they make sure that their children stay "good" Muslims and receive the best nurture and care (Abu-Shaheen et al., 2018). Likewise, a personality or behavior generally depends on family upbringing. If a person is perceived to be dishonorable, the whole family shares the shame (Dardas & Simmons, 2015). This line of thought demonstrated in a previous study reporting that around one-fifth of the respondents said that they feel ashamed if one of their family members become mentally ill (Abolfotouh et al., 2019).

Meanwhile, the item statement "my community sees mental health problems as something to keep secret" was the most agreed upon item. Empirical data reported that the stigma accompanying MHP occurring in the Arab regions has substantial undesirable effects on patients' and families' health and well-being (Dardas & Simmons, 2015). Gearing et al. (2014) stated that stigma accompanying MHP is one of the key concerns that should be kept secret. A recent study discovered that when a family member displays MHP symptoms, they initially reach out to family members before consulting healthcare professionals because of fear (Gilat, Ezer, & Sagee, 2010). Thus, it takes time for a family member to seek out psychiatric care, which usually happens when the symptoms are severe (Dardas & Simmons, 2015). When a patient seeks treatment, family members feel discriminated and might experience undesirable feedbacks from healthcare professionals and the public (Gilat et al. 2010).

Significant differences in the students' attitudes toward MHP were observed when the students were grouped in accordance with their demographic characteristics. Specifically, female students perceived that their community sees MHP negatively than male students. Cultural influences may explain this finding. The probable explanation for this finding is that women are exposed to issues concerning the risk of MHP because of their social role and status (Aldosari, 2017). Likewise, the traditional role of Saudi women was focused on caring for the family and parents. However, excessive care affects the overall mental health of individuals (Moghadam, 2015). Similarly, given that most women live at home, they are prone to lack of awareness toward people with MHP and might negatively affect their attitudes (Aldosari, 2017). Contrary results were reported in previous studies conducted in Italy, Lithuania, Ireland, and Finland, suggesting that women had better attitudes toward persons with MHP compared with males (Chambers et al., 2010). The present findings may also be explained by the gender segregation of colleges in the country. Male and female students attend different classes with different professors. The methods through which knowledge regarding mental health is communicated to the students may vary on the basis of the strategies used by the professors. Nevertheless, the study results emphasize the importance of information in changing women's attitude toward MHP.

Physiotherapy students had more positive attitudes than nursing and clinical laboratory students regarding how the community views MHP. Similar positive attitudes toward MHP were reported by physiotherapy students in Australia (Connaughton & Gibson, 2016). The study discussed that having positive attitudes among physiotherapy students is critical considering their future roles in providing physiotherapy to patients with physical problems with MHP as a comorbid (Connaughton & Gibson, 2016). Although most physiotherapy curricula only embed mental health topics in some courses, students are eager to learn information about MHP (Connaughton & Gibson, 2016). The present finding is also promising to physiotherapy education in Saudi Arabia. Although the physiotherapy students surveyed in this study do not have separate course for mental health, their attitudes toward MHP were more positive compared with those of nursing students who have a separate course on mental health nursing. Better educational strategies may be necessary to ensure that nursing students develop a positive attitude toward MHP.

Nursing students believed that their family would see them negatively when they have MHP. In line with

this idea, Gilat et al. (2010) discovered that when an Arab family member exhibited MHP signs and symptoms, other family members see them negatively. It takes time for some family members to accept a person with MHP who needs professional psychiatric treatment (Gilat et al. 2010). In the Arabian region, a family member with MHP is considered to bring social shame to the entire family (Dardas & Simmons, 2015), which can be due to fear and lack of education (Mannarini & Rossi, 2019). Discrimination and fear of MHP among the public also play an important role; for example, if the public knows that someone has MHP, family members may hide them from public life, delay seeking treatment, or even reject professional psychiatric help (Dardas & Simmons, 2015; Mannarini & Rossi, 2019). Considering that the nursing curricula integrate mental health courses, this present finding raises a red flag on the inadequacy of mental health education received by student nurses. Therefore, the course contents and the strategies on teaching mental health nursing must be revisited and improved to ensure positive attitudes among nursing students.

Finally, clinical laboratory science students believed that their family's perception would be positive if they develop MHP. This finding may imply that clinical laboratory students have a clear understanding and awareness about MHP. This result may also indicate that this group of students may have well-informed family members who they believe will understand their situation and who will accept them if they develop MHP. This result is worth considering given that family is the main care resource and support (Thomas, Liu, & Umberson, 2017). Family members should be the main source of support and care for people experiencing MHP. Awareness and understanding of MHP among family members may result in positive response when a family member faces MHP. Research shows that family members who are aware of the illness and who are cooperative in developing coping and problem-solving skills contribute to improved outcomes among patients with MHP (Smith, Saunders, Stuckhardt, & McGinnis 2013). The more people are informed about MHPs, the more they will value and appreciate this health problem. However, according to Sapin, Widmer, and Iglesias (2016), having MHP can be tremendously time consuming and can be a burden to family members and may incite countless negative health responses, such as somatic, cognitive, and emotional problems and behavioral troubles among members of the family.

LIMITATIONS

This study has several limitations, such as the use of convenience sampling, thereby limiting the generalizability of the results. The study conducted in one university may not be a representative of all Saudi health-related students. Finally, the study used self-reported measures, which might hinder in making inferences about causal relationships between attitudes toward MHP and students' demographic data.

CONCLUSIONS

This investigation determined the attitudes of Saudi students with health-related courses toward MHP. Saudi students exhibited a positive attitude toward MHP. Female students perceived that their community sees MHPs more negatively compared with male students. Physiotherapy students thought that their community perceives MHPs positively, whereas nursing and clinical laboratory department students had a negative perception as to how their community views MHP. Nursing students believed that their family would see them negatively when they have MHP, whereas students in the clinical laboratory science believed that their family's perception would be positive if they develop MHP.

IMPLICATIONS

Developing positive attitudes toward mental health and mental illness among health-related students during their baccalaureate study is critical given that they are future healthcare workers. Students must be prepared to provide quality care to patients with MHP or to patients with comorbid MHP with no prejudices and

discrimination. The current findings provide vital information on attitudes toward MHP among nursing, physiotherapy, and clinical laboratory students, who come from a strict and religious society, such as Saudi Arabia. Although the findings showed positive attitudes among the students, a wide array of challenges must be addressed to ensure future healthcare workers who have positive attitudes toward caring for patients with MHP. For example, the physiotherapy and clinical laboratory sciences programs in the country should integrate the topic of mental health on their curriculum and create a separate course focusing on this topic. For the nursing program, the findings revealed the poor attitudes of nursing students than those of physiotherapy and clinical laboratory students and should be addressed by authorities in the nursing education in the country. Considering that a separate course on mental health nursing is already present in the curricula, the poor attitudes of nursing students serve as a sign that a prompt curricular review is needed to suit the needs of nursing students. Furthermore, the findings may also have an implication on creating an interprofessional learning on mental health and illnesses to strengthen the roles of each member of the healthcare team and encourage collaborative care. With this strategy, students from different fields may learn from one another and improve their awareness and knowledge of each other's roles, thereby improving their attitudes. Last, the gender differences in attitudes can provide implication on creating a mental health-related course with uniform resources and strategies that can be implemented in a country, where gender segregation in universities exists.

REFERENCES

1. Abolfotouh, M. A., Almutairi, A. F., Almutairi, Z., Salam, M., Alhashem, A., Adlan, A. A., & Modayfer, O. (2019). Attitudes toward mental illness, mentally ill persons, and help-seeking among the Saudi public and sociodemographic correlates. *Psychology Research and Behavior Management*, *12*, 45.
2. Abu-Shaheen, A., AlFayyad, I., Nofal, A., Al-Tannir, M., AlMadaney, M., & Heena, H. (2018). Perceptions and Practices in Parents of Saudi Children with Asthma: A Cross-Sectional Survey. *Cureus*, *10*(2).
3. Al-Awadhi, A., Atawneh, F., Alalyan, M. Z. Y., Shahid, A. A., Al-Alkhadhari, S., & Zahid, M. A. (2017). Nurses' attitude towards patients with mental illness in a general hospital in Kuwait. *Saudi Journal of Medicine & Medical Sciences*, *5*(1), 31.
4. Aldosari, H. (2017). The effect of gender norms on women's health in Saudi Arabia. The Arab Gulf States Institute in Washington, <http://www.agsiw.org/effect-gender-norms-womens-health-saudi-arabia/> (accessed 15 October 2019).
5. Almutairi, A. F. (2015). Mental illness in Saudi Arabia: an overview. *Psychology Research and Behavior Management*, *8*, 47.
6. Alshehry, A. S., Alquwez, N., Almazan, J., Namis, I. M., & Cruz, J. P. (2019). Influence of Workplace Incivility on the Quality of Nursing Care. *Journal of Clinical Nursing*.
7. Bennett, J., & Stennett, R. (2015). Attitudes towards mental illness of nursing students in a Baccalaureate programme in Jamaica: a questionnaire survey. *Journal of Psychiatric and Mental Health Nursing*, *22*(8), 599-605.
8. Chambers, M., Guise, V., Välimäki, M., Botelho, M. A. R., Scott, A., Staniulienė, V., & Zanotti, R. (2010). Nurses' attitudes to mental illness: A comparison of a sample of nurses from five European countries. *International Journal of Nursing Studies*, *47*(3), 350-362.
9. Connaughton, J., & Gibson, W. (2016). Physiotherapy Students' attitudes toward psychiatry and mental health: a cross-sectional study. *Physiotherapy Canada*, *68*(2), 172-178.
10. Dardas, L. A., & Simmons, L. A. (2015). The stigma of mental illness in Arab families: a concept analysis. *Journal of Psychiatric and Mental Health Nursing*, *22*(9), 668-679.
11. Desai, N. D., & Chavda, P. D. (2018). Attitudes of undergraduate medical students toward mental illnesses and psychiatry. *Journal of Education and Health Promotion*, *7*.
12. Gearing, R. E., MacKenzie, M. J., Ibrahim, R. W., Brewer, K. B., Batayneh, J. S., & Schwalbe, C. S.

- (2015). Stigma and mental health treatment of adolescents with depression in Jordan. *Community Mental Health Journal*, 51(1), 111-117.
13. Gilat, I., Ezer, H., & Sagee, R. (2010). Help-seeking attitudes among Arab and Jewish adolescents in Israel. *British Journal of Guidance & Counselling*, 38(2), 205-218.
 14. Gilbert, P., Bhundia, R., Mitra, R., McEwan, K., Irons, C., & Sanghera, J. (2007). Cultural differences in shame-focused attitudes towards mental health problems in Asian and non-Asian student women. *Mental Health, Religion & Culture*, 10(2), 127-141.
 15. Hansson, L., Jormfeldt, H., Svedberg, P., & Svensson, B. (2013). Mental health professionals' attitudes towards people with mental illness: Do they differ from attitudes held by people with mental illness?. *International Journal of Social Psychiatry*, 59(1), 48-54.
 16. Ibrahim, N., Amit, N., Shahr, S., Wee, L. H., Ismail, R., Khairuddin, R., ... & Safien, A. M. (2019). Do depression literacy, mental illness beliefs and stigma influence mental health help-seeking attitude? A cross-sectional study of secondary school and university students from B40 households in Malaysia. *BMC Public Health*, 19(4), 544.
 17. Knaak, S., Mantler, E., & Szeto, A. (2017, March). Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. In *Healthcare management forum* (Vol. 30, No. 2, pp. 111-116). Sage CA: Los Angeles, CA: SAGE Publications.
 18. Knickman, J., Krishnan, R., & Pincus, H. (2016). Improving access to effective care for people with mental health and substance use disorders. *Jama*, 316(16), 1647-1648.
 19. Koinis, A., Giannou, V., Drantaki, V., Angelaina, S., Stratou, E., & Saridi, M. (2015). The impact of healthcare workers job environment on their mental-emotional health. Coping strategies: the case of a local general hospital. *Health Psychology Research*, 3(1).
 20. Mannarini, S., & Rossi, A. (2019). Assessing mental illness stigma: A complex issue. *Frontiers in Psychology*, 9, 2722.
 21. McCann, T. V., Savic, M., Ferguson, N., Cheetham, A., Witt, K., Emond, K., ... & Lubman, D. I. (2018). Recognition of, and attitudes towards, people with depression and psychosis with/without alcohol and other drug problems: results from a national survey of Australian paramedics. *BMJ Open*, 8(12), e023860.
 22. Murthy, R. S. (2017). National mental health survey of India 2015–2016. *Indian Journal of Psychiatry*, 59(1), 21.
 23. Prins, M., Meadows, G., Bobevski, I., Graham, A., Verhaak, P., van der Meer, K., ... & Bensing, J. (2011). Perceived need for mental health care and barriers to care in the Netherlands and Australia. *Social Psychiatry and Psychiatric Epidemiology*, 46(10), 1033-1044.
 24. Probst, M., & Peuskens, J. (2010). Attitudes of Flemish physiotherapy students towards mental health and psychiatry. *Physiotherapy*, 96(1), 44-51.
 25. Sansone, R. A., & Sansone, L. A. (2013). Responses of mental health clinicians to patients with borderline personality disorder. *Innovations in Clinical Neuroscience*, 10(5-6), 39.
 26. Sapin, M., Widmer, E. D., & Iglesias, K. (2016). From support to overload: Patterns of positive and negative family relationships of adults with mental illness over time. *Social Networks*, 47, 59-72.
 27. Smith, M., Saunders, R., Stuckhardt, L., & McGinnis, J. M. (2013). *Best care at lower cost: The path to continuously learning health care in America*. Washington, DC: National Academies Press.
 28. Shoosmith, W. D., Borhanuddin, A. F. B. A., Yong Pau Lin, P., Abdullah, A. F., Nordin, N., Giridharan, B., ... & Fyfe, S. (2018). Reactions to symptoms of mental disorder and help seeking in Sabah, Malaysia. *International Journal of Social Psychiatry*, 64(1), 49-55.
 29. Thomas, P. A., Liu, H., & Umberson, D. (2017). Family relationships and well-being. *Innovation in Aging*, 1(3), igx025.
 30. World Health Organization. (2008). *The global burden of disease: 2004 update*. Geneva: World Health Organization.

Table 1 Demographic characteristics of the respondents (n = 168)

Variable	Mean (SD)	Range
Age (years)	21.15 (1.33)	19-26
Years in college	3.20 (1.08)	3-8
	n	%
Gender		
Male	99	58.9
Female	69	41.1
Marital status		
Single	162	96.4
Married	6	3.6
Department		
Nursing Department	124	73.8
Physiotherapy Department	12	7.1
Medical Laboratory Science Department	32	19.0
Academic level		
2nd Year	64	38.1
3rd Year	44	26.2
4th Year	60	35.7

Table 2 Result of the descriptive analysis on the students' responses on the items of Attitudes towards Mental Health Problems questionnaire (n = 168)

Scale item	Mean	SD
My community sees mental health problems as something to keep secret	1.57	1.07
My community sees mental health problems as a personal weakness	1.33	0.99
My community would tend to look down on somebody with mental health problems	1.55	1.03
My community would want to keep their distance from someone with mental health problems	1.52	1.07
My family see mental health problems as something to keep secret	1.40	1.13
My family see mental health problems as personal weakness	1.21	1.09
My family would tend to look down on somebody with mental health problems	1.14	1.06
My family would want to keep their distance from someone with mental health problems	1.13	1.03
I think my community would look down on me	1.23	1.03
I think my community would see me as inferior	1.30	0.96
I think my community would see me as inadequate	1.34	1.03
I think my community would see me as weak	1.10	0.91
I think my community would see me as not measuring up to their standards	1.25	1.00
I think my family would look down on me	1.14	1.10
I think my family would see me as inferior	1.08	1.07
I think my family would see me as inadequate	0.95	0.96
I think my family would see me as weak	1.01	1.09
I think my family would see me as not measuring up to their standards	0.97	0.99

I would see myself as inferior	0.95	1.04
I would see myself as inadequate	1.11	1.03
I would blame myself for my problems	1.27	1.10
I would see myself as a weak person	1.21	1.08
I would see myself as a failure	1.11	1.07
My family would be seen as inferior	0.98	1.07
My family would be seen as inadequate	1.08	1.02
My family would be blamed for my problems	1.18	1.02
My family would lose status in the community	1.05	1.06
I would worry about the effect on my family	1.27	1.06
I would worry that I would be letting my family's honour down	1.18	1.11
I would worry that my mental health problems could damage my family's reputation	1.19	1.08
I would worry that others will look down on me	1.10	1.10
I would worry that others would not wish to associated with me	1.18	0.96
I would worry that my own reputation and honour might be harmed	1.17	1.05
I would worry that if this were known I would lose status the community	1.16	1.02
I would worry that others might think I might also have a mental health problem	1.30	1.08

Table 3 Results of the comparison on attitudes toward mental health problem between genders (n = 168)

Subscale	Male		Female		t	p
	Mean	SD	Mean	SD		
Community attitudes	5.53	3.22	6.59	3.05	-2.16	.032*
Family attitudes	5.03	3.38	4.65	3.52	0.70	.484
External shame community	5.79	3.69	6.81	4.08	-1.69	.092
External shame family	5.63	4.47	4.46	4.32	1.68	.095
Internal shame	5.86	4.11	5.38	4.66	0.71	.480
Family-related shame	8.27	5.77	7.42	5.86	0.94	.351
Self-reflected shame	5.98	4.19	5.81	4.25	0.26	.799

Note. *Significant at .05 level

Table 4 Results of the comparison on attitudes toward mental health problem between students from different departments (n = 168)

Subscale	Nursing	Physiotherapy	Clinical Laboratory Science	F	p
	Mean (SD)	Mean (SD)	Mean (SD)		
Community attitudes	6.35 (3.07)	2.42 (2.68)	5.78 (3.05)	9.27	<.001***
Family attitudes	4.99 (3.42)	4.17 (3.43)	4.69 (3.56)	0.37	.690
External shame community	6.45 (3.86)	3.75 (3.49)	6.19 (3.85)	2.71	.069
External shame family	5.68 (4.66)	3.67 (2.67)	3.66 (3.61)	3.46	.034*

Internal shame	5.66 (4.20)	5.83 (4.76)	5.59 (4.83)	0.01	.987
Family-related shame	8.33 (5.74)	6.17 (4.86)	7.00 (6.30)	1.26	.285
Self-reflected shame	6.04 (4.19)	4.25 (4.49)	6.03 (4.13)	1.01	.366

Note. *Significant at .05 level, ***Significant at .001 level