Original Article

Knowledge, Attitude, and Practice about Mental Health Challenges among Healthcare Students of a Private University

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Objective: The objective of this study was to evaluate the knowledge, attitude, and practice of healthcare students (Medicine, Pharmacy, and Dentistry) in a private university about mental health challenges (MHC). Materials and Methods: A research cross-sectional observational was conducted to evaluate the knowledge, attitude, and practice of students towards MHC at a private university in Malaysia. A validated questionnaire was distributed to 284 students studying in three different selected faculties, namely the Faculty of Medicine, Pharmacy, and Dentistry. The Statistical Package for Social Science (SPSS) Version 24.0 was used to analyze the data. Results: Upon evaluation of knowledge, male students were having less-adequate knowledge than females (P = 0.006). Malay students were having adequate knowledge than other races about MHC. Faculty of Medicine was having adequate knowledge than other faculties (P ≤ 0.001). Regarding attitude, the Faculty of Pharmacy students had the highest positive attitudes (P = 0.001). Final year students were having a more positive attitude than pre-final year students. For the evaluation of practice, the Faculty of Dentistry students had the lowest practice compared with other faculties. Conclusion: In conclusion, overall, good knowledge was seen among the students of the private medical university about MHC. The medical students had adequate knowledge when compared with other faculties in the university.

Keywords: Attitude, health care students, knowledge, mental health challenges (MHC), practice

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INTRODUCTION

The university years of an individual are emotionally and intellectually more demanding than almost any other stage of education. At this stage, an individual faces a lot of pressures and challenges that pose a variety of physical, social, and emotional difficulties.[1] As a result of changing social and emotional states of university students, they become more vulnerable to developing mental health problems.[2] Mental health challenges (MHC) will not only affect the minds of university students but also affect their psychological and physiological health, which will ultimately affect their health status.[3] MHC will also bring a lot of adverse effects in daily routine, such as depression, tension, anxiety, and others.[4] Nowadays, numerous university students are facing mental health problems, no matter which course they are studying.[5] A previous study has shown that mental health problems among university students are increasing in number as well as in severity.[6]

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MHC is a disease of the brain that causes mild to severe disturbances in thought or behavior, resulting in an inability to cope with life’s ordinary demands and routines. Mental health includes one’s emotional, psychological, and social well-being. It affects how people think, feel, and act. It also helps determine how they handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood. One in four students has a diagnosable mental illness. Very few students, however, actually seek treatment for mental illness. The stigma associated with student MHC is still the biggest barrier that prevents students from getting treatment or retaining their treatment.

Two studies suggest that the onset of schizophrenia before the age of 18 years may correspond to a more chronic form of the disorder, with studies reporting an overall lower psychosocial functioning and poorer long-term outcome related to early-onset schizophrenia. Finally, among college students, the age of first alcohol use is associated with heavier use and worse alcohol-related problems.

In summary, mental health problems are prevalent in university students, with substance use, anxiety, and mood disorders being the most common. University students are in a transitional age, young adulthood, which is associated with numerous stressors and during which many mental health problems often first occur. Hence, the mental health problems of the students may become chronic. The objective of the study is to evaluate the knowledge, attitude, and practice of medical, pharmacy, and dental students (Health care students) in a private university about MHC faced by them.

**MATERIALS AND METHODS**

This study used a self-administered instrument to assess the level of knowledge, attitude, and practice of health care students in a private university about MHC. The research was carried out over a period of 9 months (September 2016 to May 2017), during which data collection and analysis were performed.

Non-probability sampling method, in the form of quota sampling, was used to obtain the desired sample from three faculties with different gender and age groups. For avoiding bias and discrimination, samples were obtained by random recruitment of Health Care Students (HCs) at a private medical university who were willing to participate in the study. Participants’ consent was obtained before the start of the study, and the questionnaire was initially prepared after days of literature reviews of various studies performed around the world. And the modified questionnaire was later validated by experienced professionals in the related field, and an improved and validated version was obtained for data collection.

The knowledge and practice part of the questionnaire consisted of 15 multiple-choice questions in a conventional format of one correct answer and three wrong answers. Participants were required to read and choose their one preference from three choices, based on their understanding and knowledge. The participants’ response was scored based on their correct and wrong answers. A score of 0 was credited to each wrong answer, while a score of 1 was credited to each correct answer. The criteria for scoring were taken from former studies by Tyler et al. and by Jerger et al.

The criteria for the scoring of participants’ knowledge were as follows:

| Score Range     | Description                  | Criteria for the scoring of participants’ knowledge |
|-----------------|------------------------------|----------------------------------------------------|
| 0–8 Right answers (<60%) | Inadequate knowledge |                                         |
| 9–15 Right answers (>60%) | Adequate knowledge          |                                         |

Criteria for the scoring of participants’ attitude

The attitude part consisted of 10 attitude-based questions to determine participants’ attitudes regarding MHC. All the statements were positively keyed, and participants were requested to read and express as to what extent they agreed or disagreed with the statements. Participants had to choose their answer from the 5-point Likert scale ranging from “strongly disagree” to “strongly agree” (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, and strongly disagree = 5). The criteria for the scoring of attitudes of the respondents were as follows:

| Score Range     | Description                  | Criteria for the scoring of participants’ attitude |
|-----------------|------------------------------|---------------------------------------------------|
| Score 0–20 (<40%) | Negative attitude             |                                                    |
| Score 21–30 (41–60%) | Neutral attitude           |                                                    |
| Score 31–50 (61 to 100%) | Positive attitude       |                                                    |

Criteria for the scoring of participant’s attitude

The practice part of the questionnaire consisted of 13 statements of which participants were to read and choose the option of either “Yes” or “No” based on their practice in preventing MHC. The same scoring procedure was employed for the practice part. A score of 0 was credited to the wrong answer and 1 to the correct answer. The criteria for evaluation were defined...
by the boom’s cut-off point. The criteria for the scoring of participant’s Knowledge were as follows: Criteria for the scoring of participant’s practices
P-value < 0.05 showed the presence of statistical significance.

Ethical approval and confidentiality
All aspects of the study protocol, including access to and the use of clinical information and demographics of participants, were authorized by the AIMST Ethical Board and Committee before this study was carried out. All the ethical aspects of the study were reviewed. The students participated out of their own will, and those who refused or were not willing to take part in the research questionnaire were not forced to participate. Distribution of consent form was done to students who were voluntarily willing to participate in the survey, and all information given by the participants was strictly confidential, protected, and was used for this particular clinical research only.

Statistical analyses
Data from the questionnaire were analyzed using Statistical Package for the Social Sciences (SPSS) version 24.0. To check the normality distribution of the data, Skewness and Kurtosis of the data were plotted. Further, normality confirmation was done by Shapiro–Wilk test and Q–Q plots in SPSS. After checking the normality of the data, the data were found parametric. Hence, parametric tests were applied on the data. Independent samples t-test/ANOVA was used to evaluate statistically different data for current study between demographics and mean scores of knowledge, attitude, and practice of respondents.

RESULTS
Table 1 represents demographics of the current study. These demographics were different, including faculty, year of education, gender, age, residence, race, and family size of the students. [Table 2] represents the total mean knowledge score of respondents from the study participants. There were 12 different questions asked to the study participants regarding MHC. [Table 3] represents the total mean attitude score of respondents from the study participants. Ten different questions were asked to the study participants regarding MHC. [Table 4] represents the total mean practice score of respondents from the study participants. There were 12 different questions asked to the study participants regarding MHC.

DISCUSSION
MHC often occur when students explore their values and identity and make important adjustments between their academic, social, and life choices, which is also the reason behind as a motivation to conduct this research. A study conducted by the American College Health Association in 2008 claims that more than one in three undergraduates reported “feeling so depressed it was difficult to function” at least once in the previous year, and nearly one in 10 reported “seriously considering attempting suicide” in the previous year. According to a study of 26,000 students from 70 colleges and universities in 2006, 6% of undergraduates and 4% of graduate students reported having considered suicide in the previous 12 months.

The knowledge and practice of MHC in the general population among the three selected faculties are

| Table 1: Demographic information of the respondents |
| Variables | N | % |
| --- | --- | --- |
| Faculty | | |
| Medicine | 95 | 33.5 |
| Pharmacy | 94 | 33.1 |
| Dentistry | 95 | 33.5 |
| Year of education | | |
| Pre-final | 143 | 50.4 |
| Final | 141 | 49.6 |
| Gender | | |
| Male | 104 | 36.6 |
| Female | 180 | 63.4 |
| Age, years | | |
| 20–25 | 277 | 97.5 |
| 26–30 | 7 | 2.5 |
| Residence | | |
| Hostellers | 174 | 61.3 |
| Non-hostellers | 110 | 38.7 |
| Race | | |
| Malay | 3 | 1.1 |
| Chinese | 231 | 81.3 |
| Indian | 46 | 16.2 |
| Others | 4 | 1.4 |
| Family size | | |
| Less than 4 | 42 | 14.8 |
| 4–6 | 209 | 73.6 |
| More than 6 | 33 | 11.6 |

A total of 284 samples were randomly recruited, of which 104 (36.6%) were males and 180 (63.4%) were females. Filled-up survey forms were evenly collected from the three selected student faculties, namely Faculty of Medicine 95 (33.5%), Pharmacy 94 (33.1%), and Dentistry 95 (33.5%).
discussed. Mental health among university students was a growing public health concern for which epidemiological data are needed. Knowledge and practice of the mental health of the population are important. If there is no improvement in the mental health literacy of the public, it may hinder public acceptance of evidence-based mental health care as many students with common mental disorders may not receive any effective self-help or appropriate support from others in the community. Hence students are prone to face MHC if they do not have a knowledge on mental health.

There was a relevant survey in which a random sample was selected at a large public university with a demographic profile. The demographic profile was the same as the national student population. Depressive and anxiety disorders were assessed with the patient health. The result showed that the prevalence of depressive or anxiety disorders was 15.6% for undergraduates and 13.0% for graduate students, and the suicidal ideation was reported by 2% of students within 2 weeks. Students who reported financial problems were at higher risk for mental health problems. These findings highlight the necessity of mental health education in young adult populations, especially for those of lower socioeconomic status. University communities have mostly young adults and thus it is suitable to address mental health issues among them. This research survey on MHC is not a substitute for treatment, but will create awareness and, hopefully, help motivate some resources that could lead students to happier and healthier university life.

The current study shows that there is a significant association between different student faculties and their attitudes towards MHC. Similar results were found in a study conducted in Nepal to compare first- and third-year pharmacy students during the period of April 2008 to February 2009, which showed that students with a positive attitude make good academic performance. Hence students are prone to face MHC if they do not have a knowledge on mental health.

| Variables                  | N (%)  | Mean±SD     | P-value |
|----------------------------|--------|-------------|---------|
| Faculty                    |        |             |         |
| Medicine                   | 95 (33.5) | 12.02 ± 1.58 | 0.001** |
| Pharmacy                   | 94 (33.1) | 11.47 ± 1.89 |         |
| Dentistry                  | 95 (33.5) | 11.06 ± 1.99 |         |
| Year of education          |        |             |         |
| Pre-final                  | 143 (50.4) | 11.52±1.77    | 0.725*  |
| Final                      | 141 (49.6) | 11.51±1.96    |         |
| Gender                     |        |             |         |
| Male                       | 104 (36.6) | 11.12±2.01    | 0.006*  |
| Female                     | 180 (63.4) | 11.75±1.74    |         |
| Age, years                 |        |             |         |
| 20–25                      | 277 (97.5) | 11.51±1.88    | 0.717*  |
| 26–30                      | 7 (2.5) | 11.86±0.90 |         |
| Residence                  |        |             |         |
| Hostellers                 | 174 (61.3) | 11.45±1.85    | 0.337*  |
| Non-hostellers             | 110 (38.7) | 11.63±1.88    |         |
| Race                       |        |             |         |
| Malay                      | 3 (1.1) | 12.33±0.58   | 0.463** |
| Chinese                    | 231 (81.3) | 11.42±1.94   |         |
| Indian                     | 46 (16.2) | 11.93±1.47   |         |
| Others                     | 4 (1.4) | 11.50±1.73   |         |
| Family size                |        |             |         |
| Less than 4                | 42 (14.8) | 11.05±2.21   | 0.043** |
| 4-6                        | 209 (73.6) | 11.69±1.77   |         |
| More than 6                | 33 (11.6) | 11.03±1.79   |         |

*Paired t-test/ANOVA was used to find the P-values.
Statistically significant difference was seen in the students’ faculty (P = 0.001), gender (P = 0.006), and family size (P = 0.043).
that 36.4% of university students experienced some level of depression, which resulted in student’s drop-out from the university, and if left unattended, could lead to more complicated symptoms. Even a major life transition, such as moving away from home to college, can aggravate existing MHC or triggered new ones.\[26\] According to one pilot study, 75% of lifetime cases of diagnosable mental disorders began by the age of 24.\[27\] This research survey on MHC is not a substitute for treatment but will create awareness. Hopefully, it will help to motivate some resources that could lead students to happier and healthier university lives.

**Conclusion**

In conclusion, the medical and pharmacy students were having better knowledge on MHC than the dentistry students as most of the medical and pharmacy students had a high degree of mental health literacy, while dentistry students reporting higher levels of stress and their courses taken were less involved in their studies. Both pre-final and final year students had adequate knowledge. No one from pre-final year showed a negative attitude, and only one student from the final year showed a negative attitude in this study. Final year students were reported better practice than pre-final year students. Overall, most of the students showed poor practice.

**Limitations and implications of the study**

This study was done only in selected medical universities and is a single-centre study, so the results cannot be projected to the entire country. A detailed follow-up study in all medical universities of Malaysia should be conducted to evaluate the knowledge, attitude, and practice about MHC among students by considering some specific factors to predict particular variables affecting their knowledge, attitude, and practice.

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Conflicts of interest
There are no conflicts of interest.

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Table 4: Practice score regarding MHC

| Variables          | N (%) | Mean ± SD | p-value |
|--------------------|-------|-----------|---------|
| Faculty            |       |           |         |
| Medicine           | 95 (33.5) | 7.24 ± 2.50 | <0.001** |
| Pharmacy           | 94 (33.1) | 7.43 ± 2.22 |         |
| Dentistry          | 95 (33.5) | 5.74 ± 2.55 |         |
| Year of Education  |       |           |         |
| Prelinal           | 143 (50.4) | 6.55 ± 2.37 | 0.100* |
| Final              | 141 (49.6) | 7.06 ± 2.68 |         |
| Gender             |       |           |         |
| Male               | 104 (36.6) | 6.66 ± 2.57 | 0.377* |
| Female             | 180 (63.4) | 6.88 ± 2.52 |         |
| Age                |       |           |         |
| 20–25              | 277 (97.5) | 6.80 ± 2.55 | 0.993* |
| 26–30              | 7 (2.5) | 6.71 ± 2.14 |         |
| Residence          |       |           |         |
| Hostellers         | 174 (61.3) | 6.74 ± 2.49 | 0.851* |
| Non-hostellers     | 110 (38.7) | 6.90 ± 2.61 |         |
| Race               |       |           |         |
| Malay              | 3 (1.1) | 5.33 ± 2.08 | 0.200** |
| Chinese            | 231 (81.3) | 6.93 ± 2.61 |         |
| Indian             | 46 (16.2) | 6.30 ± 2.21 |         |
| Others             | 4 (1.4) | 6.00 ± 0.82 |         |
| Family size        |       |           |         |
| Less than 4        | 42 (14.8) | 6.64 ± 2.55 | 0.633** |
| 4–6                | 209 (73.6) | 6.80 ± 2.57 |         |
| More than 6        | 33 (11.6) | 7.00 ± 2.35 |         |

*Paired t-test/ANOVA was used to find the P-values.
Statistically significant difference was seen in faculty (P ≤ 0.001) medicine faculty students had more good practice when compared with others.
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