Determinants Affecting Knowledge of Healthcare Students towards Mental Health Challenges

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ABSTRACT

Objectives: The objective of the study was to evaluate the determinants affecting knowledge of healthcare students towards mental health challenges (MHCs) in a private medical university. Methods: A cross-sectional observational study was conducted to correlates the different determinants of university students with their knowledge towards MHCs in a private university in Malaysia. Validated questionnaires were distributed using a convenient stratified sampling technique among students studying in the different healthcare faculties, namely medicine, pharmacy and dentistry. The Statistical Package for Social Science (SPSS) Version 24.0 was used to analyze the data. Results: Among 284 study participants, male students had less adequate knowledge than females. The majority of the students from the studied faculties had adequate knowledge of MHCs. Students of the age group of 25-30 years had adequate knowledge of MHCs. Multiple logistic regression revealed that statistically significant differences ($p<0.05$) were present among the three studied variables i.e., faculty, year of education and healthcare professionals in the family. Conclusion: Overall good knowledge of MHCs was observed among the studied cohort of the healthcare students of the private medical university. The present study concluded that faculty, year of education and healthcare professionals in the family were the observed determinants of knowledge about MHCs among the study participants.

Key words: Determinants, Knowledge, Mental health challenges, MHCs, Healthcare students.

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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 many pressures and challenges that pose a variety of physical, social and emotional difficulties.1-3 The mental health of university students is of increasing concern globally and the most important group that must have a wider knowledge about mental health challenges (MHCs) are the healthcare students i.e., medical, dental and pharmacy students.2,4

In the past, a few studies had been done about MHCs and according to the literature they were mainly focused on the prevalence rate and of mental health problems and their challenges.3,4 The knowledge about the MHCs including the treatment or strategies to resolve them are still less among the students even the public.2,4 Most MHCs have their peak onset during young adulthood. Kessler et al. observed that by the age of 25 years, 75% of those who will have MHCs have had their first onset.1 Among traditional students, the significant disruptions associated with attending university may exacerbate current psychopathology that first manifested in childhood and/or trigger its first onset.4 Similarly, non-traditional students who may have to attend to the demands of their numerous roles (work and family) may experience an exacerbation of their symptoms or a relapse.1-3,7

MHCs also bring a lot of dangerous effects in daily routines like depression, tension, anxiety and numerous psychic problems.2,4 Nowadays, several university students are facing mental health problems no matter what study in which university.4,9 Studies have also shown that mental health problems among university students are increasing in number as well as in severity.7,9 Since the mental health of university students is of increasing concern so they must have a wider knowledge about this problem.4,10 They should also be aware of all the symptoms and their treatments to treat MHCs.10 Furthermore, university students from healthcare faculties should have more knowledge as compared to the other non-healthcare students because after graduation they will be directly involved in the healthcare system to treat the patients. This study aimed to evaluate different determinants of healthcare students’ knowledge towards the MHCs in a private university in Malaysia.

MATERIALS AND METHODS

This study used a validated instrument to assess the effect of different detainments of knowledge regarding MHCs among healthcare students. The research was carried out over nine months using a convenient stratified sampling to obtain the desired sample from three healthcare faculties with different gender and age groups. Participants’ consent was obtained from those who were willing to participate before the start of the study. The initial questionnaire was initially prepared after an extensive literature review and the modified questionnaire was later validated by experienced professionals in the field and an improved and validated version was obtained for data collection.

The knowledge and practice part of the questionnaire consisted of fifteen 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 incorrect answers. The scoring criterion was adapted from former studies and a score of 1 was credited to each correct answer and...
0 for incorrect answers. Correct answers 0-8 were categorized as inadequate knowledge and 9-15 correct answers as adequate knowledge. All aspects of the study protocol as per the concerned committee were followed before and during the study. Those students who refused to take part were not forced to participate. The distribution of consent form was only done to the participants who were voluntarily willing to participate. All of the information was strictly confidential, protected and was used for the research only.

**Statistical Analyses**

Means and standard deviations were calculated for continuous variables, whereas the categorical variables were presented as frequencies and percentages. The Chi-square test was used to observe the significance between categorical variables and a p-value of < 0.05 was considered statistically significant. A multivariate logistic regression model with the Wald statistical criteria was used to obtain determinants (predictors). The variables that had a p-value < 0.05 in the univariate analysis were included in the multivariate analysis. The fit of the model was assessed by Hosmer Lemeshow and the overall classification percentage.

**RESULTS**

Table 1 shows the demographic details of the study participants. According to the results of this study, the demographics characteristics were varied among the participants. A total of 284 samples were obtained consisted of 104 (36.6%) males and 180 (63.4%) females. Filled-up responses were evenly collected from the three selected student faculties, namely the faculty of medicine 95 (33.5%), pharmacy 94 (33.1%) and dentistry 95 (33.5%).

Table 2 denotes the knowledge score with the percentage from the study participants as adequate and inadequate knowledge. There were a total of 15 different knowledge questions were asked regarding MHCs from the study participants.

Table 3 shows the determinants of knowledge with univariate analysis and multivariate regression model analysis. According to the univariate analysis, five variables were statistically significant. In multivariate logistic regression analysis, three variables, faculty, year of education and healthcare professionals in the family were statistically significant.
DISCUSSION

The knowledge evaluation showed that the majority of the students from each faculty had adequate knowledge about MHCs. A total of 92 (96.8%) medicine, 90 (95.7%) pharmacy and 83 (87.4%) dentistry students had adequate knowledge. In comparison, dentistry students had the least knowledge as compared to medical and pharmacy students. Similar to the current study findings, another study showed that the dentistry students had higher levels of stress and lower grades for clinical competencies and contextual understandings. Furthermore, it also reported that dentistry students had less knowledge about mental health problems as evident in our study.

Though there was not more than 1% difference between pre-final and final students for adequate knowledge, yet pre-final students considered adequate knowledge than final students. Only 9 (6.3%) out of 143 pre-final students and 10 (7.1%) out of 141 final students had inadequate knowledge. In contrast to the current study, a study was conducted in the United States had shown that education had positive effects on reducing stigma among the students. The higher levels of education were more effective in reducing stigma regarding MHCs.

In univariate analysis, our study found significant differences (p<0.05) in gender, faculty, year of education, parents’ education and healthcare professionals in family. In gender (COR 2.562; p = 0.041) where only 11 (10.6%) male and 8 (4.4%) female students scored as inadequate knowledge. The result showed that more female students had adequate knowledge as compared with male students. Moreover, another study also reported similar outcomes that female students had more adequate knowledge than the males. In faculty, the dentistry students had more inadequate knowledge of MHCs than the other two faculties. The pharmacy students had better knowledge with (COR 1.823; p = 0.049) than the dentistry students (COR 5.463; p = 0.003). Our study results were similar to another study conducted by Al-Mamun et al.

In univariate analysis findings, parents’ education was also found as statistically significant between primary or low-level education and secondary and university levels. For pre-university education (COR 1.352; p = 0.039) whereas for university-level education (COR 2.318; p = 0.047) were observed which clearly showed that statistically significant differences were present among them.

In our study, pure determinants of adequate knowledge were obtained by adjusting or controlling confounders through the multivariate logistic

<table>
<thead>
<tr>
<th>Variables</th>
<th>Univariate analysis</th>
<th>Multivariate analysis</th>
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<tbody>
<tr>
<td></td>
<td>COR (95% CI)</td>
<td>P-value</td>
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<tr>
<td>Female</td>
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<tr>
<td>&gt; 25 years</td>
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<tr>
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<td>1.823 (0.94–6.39)</td>
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<td>Dentistry</td>
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<td>Final</td>
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<td>University</td>
<td>2.318 (1.94–4.62)</td>
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<td>Referent</td>
</tr>
<tr>
<td>No</td>
<td>2.253 (1.61–6.47)</td>
<td>0.001</td>
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SD=Standard Deviation, COD=Crude Odds Ratio, AOD=Adjusted Odds Ratio, CI=Confidence Interval
The authors declare no conflict of interest.

**CONCLUSION**

The present study reported that faculty, year of education and healthcare professionals in the family were the determinants (predictors) of knowledge about MHCs among university students in Malaysia. This study was novel among its type as there was no earlier study reported to determine predictors of knowledge about MHCs among healthcare university students in Malaysia.

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**CONFLICT OF INTEREST**

The authors declare no conflict of interest.