Assessing Stress among Undergraduate Pharmacy Students in University of Malaya

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ABSTRACT

Healthcare students, particularly pharmacy students, are believed to experience a higher level of stress compared to their age-matched peers. This cross-sectional study determined the sources and predictors of stress among 273 undergraduate pharmacy students at a Malaysian public university using the Caring Stress Profile Instrument. The response rate was 100%. Pearson's correlation was used to examine the association between Grade Point Average (GPA) and stress levels. Paired and Independent t-tests as well as ANOVAs were used to compare the mean stress scores on various variables. Our findings showed that these students indeed demonstrate significantly higher levels of stress than the general population, even though their perceived stress level was a significant higher mean =53.55 ± 7.87, p < 0.0001. The most frequently reported stress was related to academic matters. Additionally, there was a weak, statistically significant negative correlation between stress level and GPA r = 0.195, p = 0.009 indicating that as stress levels increase, students’ GPA decreases. Second year students were found to be the most stressed although stress levels were not statistically different among students across the various academic years. Thus, targeted interventions such as regrading the curricula may be an effective way of alleviating stress to provide a favourable learning environment for pharmacy students.

Keywords: Derogatis Stress Profile, perceived stress, pharmacy undergraduates, stress levels, healthcare.

METHODS

Study design

Undergraduate pharmacy education in all Malaysian public universities is a four-year study programme. All students (in the four classes of 273 students) in the University of Malaya were invited to complete the questionnaire. The University Medical Research Committee gave approval to conduct this cross-sectional study. Data were collected from all participants on two different occasions (12 weeks apart (Tims, Tima), where Tima, was in the middle of the semester 1 while Tima 2 was at the beginning of semester 2 of the same academic year). One week prior to the first administration of the questionnaire, participants were briefed about the purpose of the study and their consent was obtained. Responses to the self-completed questionnaires were anonymous and confidentiality was strictly maintained.

Instrument

The survey questionnaire consisted of two sections: the first section collected socio-demographic data, such as ethnicity, current place of study, students' grade point average (GPA) as well as their sources of stress. The second section assessed stress with the Derogatis Stress Profile (DSP) instrument. DSP is a validated 77-item self-administered questionnaire measuring psychological stress based on the theory of Lazarus. This self-report instrument took around 15 minutes to complete.

RESULTS

All 273 students completed the questionnaire at two-time points (Tima and Tima 2). The students mean age was 20.72 ± 1.26 and their ages ranged from 19 to 24 years. (Table 1) shows slightly more than three quarters of the respondents were female and half of the students were on a scholarship. The majority of the students walked to classes.

Sources of stress

Figure 1 shows the percentage of stress from various sources. In the questionnaire, students were allowed to indicate more than one source of their stress. The most frequently reported source of stress was related to academic issues followed by personal life issues, environmental factors and financial issues. The results also showed that 2.2% of the reported sources of stress was related to other out of class activities such as residences and politics sources. Sources of stress were similar between Tima and Tima 2.

Students stress level compared to the general population

One sample t-test conducted to compare the TSS and SSS of the students with the normalized mean of the general population (0.66) reported by Derogatis and...