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PERSONALITY TYPES AND DEPRESSION AMONG MEDICAL STUDENTS IN UniKL RCMP.

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Abstract

Background: The prevalence of depression among medical students is not uncommon. It usually happens because of the transition from a normal school environment to the medical college environment, where, the students need to be independent in taking care of themselves in terms of daily living and their studies. The aim of the study was to find out the association between the personality type and depression among medical students.
Methodology: The study was a cross-sectional study among 186 respondents, chosen based on convenience. A set of questionnaires consisting of three parts to assess their sociodemographic input, degree of depression and types of personality were prepared and distributed in the campus among the clinical year medical students only (Year 3, 4 and 5). The study was conducted over a period of 1 week in March 2017 in RCMP in Ipoh.
Results: Most of the students were found to be having the personality of openness to experience with the mean score of 32.98 and have normal degree of depression with the percentage of 73.7%. Female students were relatively more depressed than males. More students in Year 3 were depressed compared to the Year 4 and Year 5 and more Malay respondents were positive for depression compared to the other races. Overall, there was no significant association between these sociodemographic factors and the degree of depression and also between the gender and type of personality. Finally, it was found that the association between the types of personality and the degree of depression was statistically significant.
Conclusion: This study found that the type of personality of an individual would influence the degree of depression. However, more such studies should be conducted to explore more about the types of personality, the reaction towards stressor and development of depression as the type of personality is an important aspect in determining how they adapt to the stress, which, if they fail to handle, they may develop the symptoms of depression.
Keywords: Personality, Depression, Prevalence, Medical students.

Introduction

The prevalence of depression among medical students is not uncommon. It usually happens because of the transition from a normal school environment to the medical college environment where the students need to be independent in taking care of themselves in terms of daily living and their studies. On top of that, the subjects learned are also very different and new compared to the school syllabus and as the time goes by, the subjects get harder and need to be learnt in detail. These circumstances can lead to certain degrees of depression among students and each individual would usually have different type of adaptation to encounter the depression. As stated in one article entitled "correlates of depression, anxiety and stress among Malaysian university students", university students face not only challenges related with independent living, but also academic challenges. This predisposes them to depression, anxiety and stress, which are fairly common [1].

Another study which was done to determine the depression among medical students entitled Changes in life-style characteristics, health, and mood of freshman medical students by Wolf, T M and Kissling, G E stated that "Medical students are expected to learn and master a huge amount of knowledge and skills. The personal and social sacrifice they have to make in order to maintain good academic results in a highly competitive environment puts them under a lot of stress" [2] .

The study of the association between personality and depression is not new. In one study conducted by Roget T Mulder, Personality and Depression: A commentary (2008) stated that "ancient classifications focused on temperament with depression largely considered an epiphenomenon. Melancholic temperament was associated with individuals who were moody, pessimistic, and vulnerable to episodic depression"[3] . Another study had been done by the Black Dog Institution (2013), stated that "at the Institute we believe that personality and temperament contribute to depression, particularly *non-melancholic* depression. Certain personality types are more at risk of developing depression than others" [4]. It is believed that the personality of an individual may influenced their reaction and adaptation towards the stressors which could lead to the development of depression.

In this research, we are going to study the types of personality and the degree of depression of the medical students and whether their personalities have any relationship with the development of depression among themselves. We are going to use the Big Five Inventory and Beck Depression Inventory to achieve the objectives of our study. The Beck Depression Inventory (BDI, BDI-1A, BDI-II), created by Aaron T. Beck, is a 21-question multiple-choice self-report inventory, one of the most widely used psychometric tests for measuring the severity of depression. Its development marked a shift among mental health professionals, who had until then, viewed depression from a psychodynamic perspective, instead of it being rooted in the patient's own thoughts [5].

Materials and Methods

This was a cross-sectional study among the clinical year MBBS students in Universiti Kuala Lumpur Royal College of Medicine Perak (UniKL RCMP). The study was conducted over a period of 1 week in March 2017. The total number of participants was 186. Samples were chosen based on convenient sampling in which the research group approached the students whoever was available from year 3 to year 5 at the time study. The study was conducted for few days till the total number of the proposed sample size was achieved. Inclusion criteria involved medical students in year 3 to year 5 (clinical years) and those who gave written consent to participate in the study.

The sociodemographic of the respondents were collected through part A of the questionnaire.

Whereas, part B of the questionnaire was concerned about the Beck Depression inventory where the respondents have to circle the score of 0 to 3 for the statements that, they think, suit what they feel about themselves. Part C of the questionnaire was about the Big Five Inventory which was basically used to determine personality types of the participants. The participants were required to score of 1 to 5 based on the Likert scale for each of the given statement. The raw data collected form the questionnaire was immediately processed and entered into the SPSS software (SPSS version 19.0). Descriptive statistics were used to describe the variables and the association between variables was tested by chi-square test. The association was primarily set to be statistically significant at the p-value < 0.05. Ethical approval was obtained from the Ethical committee of UniKL Royal College of Medicine Perak before conducting the study.

Results

This study included 186 respondents. Most of the respondents were females (69.9%). The highest percentage of respondents were studying in Year 4 (43.5%) followed by Year 3 students (32.8%) and only 23.7% of respondents, were year 5 students. There were 81.2% of respondents who were staying in Ipoh while the rest 18.8% were staying outside Ipoh area. Most of the respondents were not married (93.5%). Majority of the respondents were predominantly Malay (88.2%) followed by Indians (7.0%), other races (3.2%) and 1.6% were Chinese (Table 1).

In table 2, the means and standard deviations for the types of personality were shown. There were five major personalities which were listed in the Big Five Inventory: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. Based on the results obtained, most of the students have a personality type of openness to experience with the mean score of 32.98 followed by agreeableness (31.37), conscientiousness (28.06), extraversion (25.07) and neuroticism (24.34).

The degree of depression of the medical students in UniKL RCMP was explored. Basically, there are six classes for the level of depression: Normal, Mild, Borderline, Moderate, Severe and Extreme. Based on figure 1 below, most of the respondents have normal degree of depression with the percentage of 73.7% followed by mild depression (12.4%), moderate depression (7.5%), borderline depression (4.3%), severe depression (1.6%) and extreme depression (0.5%). The mean was 1.53 and the standard deviation was 1.05.

However when the categorical levels of depression among medical students were tested against the sociodemographic factors by Chi square test, no significant association could be observed. The P value was set at a level of 0.05. On the other hand, when the association between the type of personality and the degree of depression was examined, it revealed a significant finding with a P value of 0.029. (Table 3)

Discussion

Most of the respondents scored high in the personality of openness to experience and the lowest was in neuroticism type. The personality domain of openness to experience is made up of six sub-traits: Imagination, Fantasy, Aesthetics, Actions, Feelings and Values. This means, the respondents who scored high in openness to experience type of personality have high level of curiosity, imagination, creativity, interests, excitation and flexibility. Medicine is a very broad subject to be learned and without curiosity, interest and excitement, one would feel burdened and bored to keep studying in this field. A good imagination and creativity are also important especially for the subjects which the students need to memorize the graphics and at the same time understand what they are learning such as

anatomy and pathology. They are also important for the medical students when they use their own notes for better understanding. We all know that notes which, involve only words without any mind maps or pictures, will be less interesting to be compared to the notes which involve brainstorms, pictures and different colours. Flexibility is also essential as medical course takes a very long time to be completed compared to the other courses. Moreover, the learning aspects would never stop after the students are graduated. It is a lifelong course where the learning process continues even when they have reached the highest level of their medical career. The medical students have to know how to manage their time properly so that they have enough time to be spent for their studies, families, and friends as well as enough time for themselves.

As for the degree of depression, most of the respondents were having a normal degree of depression in which, their scores, were between 0-10. The normal degree of depression means they do have some ups and downs of emotional distress but they are still under control and considered as normal for them to continue daily activities smoothly. It is followed by mild and moderate degree of depression. One study by Sherina MS, which was addressing the prevalence of depression among medical students in Malaysia found that the prevalence of depression among medical students of University Putra Malaysia (UPM) at the Faculty of Medicine and Health Sciences was high (35.9%) and it was associated with the psychological pressure, they were exposed to, prior to the examination [2] . This was contrary to our study, where we found that most of the respondents have normal degree of depression which might be explained by the less pressure they were having as the examination was not approaching yet. On top of that, they might have certain ways to cope with the pressure they had such as hanging out with their friends after the class or doing some physical activities in the evening to release the pressure. However, there were still few of them who were having severe and extreme degree of depression. These few respondents with severe depression scores might be having some problems such as study difficulties or relationship issues with their family members or friends at the moment when the data was collected thus, influencing their degree of response.

If we consider any respondent who scored 11 and above for their degree of depression to be positive for depression, we could see that females are more depressed than males. Although the association between the gender factor and degree of depression was not statistically significant (p= 0.875), there was an evidence which suggested that early traumatic experiences may be partly responsible for a female preponderance in depression rates, since female are at greater risks of certain events and seem to be more sensitive to their depressogenic effects. Another study stated that the hypothalamic-pituitary-adrenal axis (a major neuroendocrine system that controls reactions to stress and regulates many body processes) seems to be more reactive to stress in females than in males, possibly due to a modulating role of gonadal hormones[6] . This means females' reactions towards the stressors are greater than the males making them more likely to get depressed in comparison to males.
Newly faced social and intellectual challenges may cause emotional pressure, which may lead to an increased risk for depression, anxiety and stress. In the literature, many studies point to the elevated risk of depression, anxiety and stress among first-year undergraduates [7]. As for this current study, we only focused on the clinical year students (Year 3, 4 and 5) and it is found that the students in Year 3 were relatively more depressed compared to the Year 4 and Year 5 students. This might be due to the transition from the pre-clinical phase (Year 1 and 2) to the clinical phase which requires a very different approach of study, and more load in terms of the daily academic tasks. The pre-clinical phase only involve the theories and practical on simulated patients while in the clinical phase, the students are needed to go to the

hospitals in order to apply and practice their knowledge skills on real patients under the supervision of their lectures and doctors. This transition might, one way or another, create a certain level of pressure on the clinical students especially to the Year 3 students because they need to adapt to their new environment. Apparently Year 4 and Year 5 students would presumably be more familiar and have already been adapted to the situation, which puts them under less pressure.

One study which was done at the same place of the current study but many years back found a substantial number of medical students (46.2%) in the study sample with high GHQ scores, indicating emotional disorders. The prevalence of emotional disorders were found to be significantly higher among Phase 1 students, students who faced severe pressure due to examinations and those who were not involved in a romantic relationship [8].

It was observed in the current study that, more Malay respondents were positive for depression compared to the other races. However, the association between the race factor and degree of depression was not statistically significant (p=0.054). This might be due to the imbalance number of respondents in terms of race as 88.2% of the respondents were Malay and if we wanted to compare the degree of depression based on their race, we should have the same number of respondents for each race.

The gender differences in personality traits can be detected in early childhood. In one of the studies done, researchers stated that women reported higher levels of neuroticism, extraversion, agreeableness, and conscientiousness than did men across most nations [9]. As for this study, we focused on the personality of openness to experience because most of the respondents scored highest in this personality type. There was a study showed that the gender differences in openness to experience were decidedly mixed across cultures. In 37 cultures, men scored higher than women in BFI Openness to Experience (in 8 cultures this difference was statistically significant), but in 18 cultures, women's self-reported openness to experience was higher than men's (in 4 cultures this difference was statistically significant). These conflicting results were not entirely unexpected as women have been found to be more open than men to feelings, whereas men tend to be more open to new ideas [9]. However, for this study it was found that the association between gender factor and the personality type was not statistically significant (p=0.08).

There is solid evidence at the individual level that personality traits are predisposing factors for a wide variety of psychiatric disorders. Several studies have shown that normal personality traits are systematically related to the development of Axis I disorders, such as mood, anxiety and substance abuse. Even stronger are the conceptual and empirical links between the Axis II personality disorders (PDs) and the broad factors and specific facets of the FFM [10]. It is also reflected in this study where the association between the type of personality and the degree of depression among the respondents is statistically significant with the p-value of 0.029. It is believed that individuals with high openness to experience personality have low risk of developing depression as they are very flexible towards any circumstances thus, they have better way of adaptation. Besides, the high level of curiosity and interest could influence the way of their thinking towards the stressors as they might take them as a challenge of life.

Conclusion

Depression among Medical students are getting more common as the pressure on them is getting higher. Having a flexible and open personality will be protecting you if you are studying Medicine. Coping with the pressure of a Medical study is essentially one way to prevent depression. However, medical students with a personality character of openness are those who will be more likely to stay away from depression.

Table 1: Distribution of sociodemographic factors

Sociodemographic factors	n	Percentage (%)
Gender		
Male	56	30.1
Female	130	69.9
Year of Study		
Year 3	61	32.8
Year 4	81	43.5
Year 5	44	23.7
Address		
Inside Ipoh	151	81.2
Outside Ipoh	35	18.8
Marital status		
Married	12	6.5
Not married	174	93.5
Race		
Malay	164	88.2
Chinese	3	1.6
Indian	13	7.0
Others	6	3.2

Table 2. Types of personality

Type of Personality	Mean	Standard Deviation
Extraversion	25.07	3.89
Agreeableness	31.37	4.63
Conscientiousness	28.06	3.99
Neuroticism	24.34	5.01
Openness	32.98	4.28

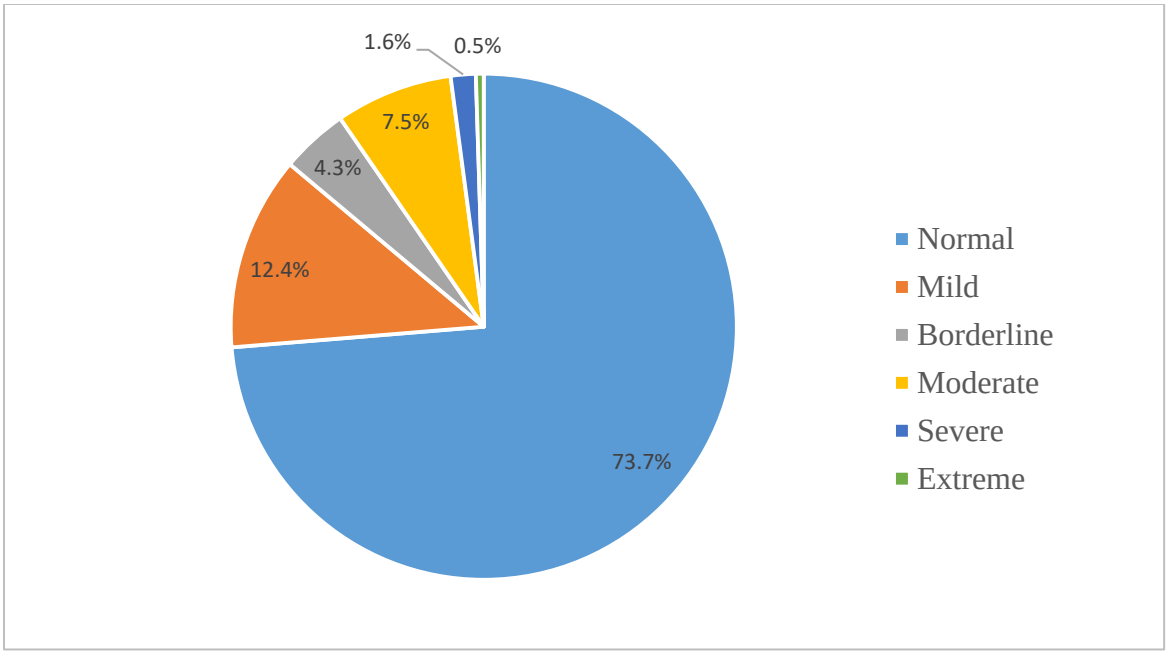

Figure 1. Degree of depression

Table 3. The Association between Sociodemographic Factors and Depression. Chi square test was used and the level of significance was set at level of 0.05.

Sociodemographic factors	**p value**
Gender	0.875
Year of Study	0.096
Address	0.704
Marital status	0.390
Race	0.054
Type of personality	0.029

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