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PREVALENCE OF OBSESSIVE-COMPULSIVE DISORDER (OCD) AMONG UNIVERSITY STUDENTS AND ASSESSMENT OF GENDER DIFFERENCES: A CROSS-SECTIONAL STUDY

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ABSTRACT :

Aim: This study was aimed to determine the prevalence rate of obsessive-compulsive disorder among University Tunku Abdul Rahman, Malaysia, students and assessment of gender differences. Methods: This study was carried out in all the four campus of University Tunku Abdul Rahman which was located at Sungai Long, Kampar, Petaling Jaya and Setapak, Malaysia. The data were collected through an online survey by using a random stratified method. The questionnaire was generated through google drive and asks the participants to fill up. The survey form was consisting of demographic data and a valid questionnaire named obsessive compulsive inventory revised (OCI-R). This questionnaire was a highly reliable and valid instrument tool to detect the rate of prevalence of OCD. Result: Among 428 respondents, 25.7% subjects were suspected to have OCD. The odds ratio of male to female was 1: 1006.The p value of the gender differences was found to be 0.980. Conclusion: This study demonstrates that there was a higher prevalence of OCD among UTAR students. Besides, there were no significant differences between the genders in prevalence of OCD.

KEYWORDS : *Prevalence; Obsessive-Compulsive Disorder, Gender Differences; Obsessive-Compulsive Inventory.*

INTRODUCTION

In our everyday life, we tend to double check or repeat things sometimes. However, there are some group of people who feel the need to check things repeatedly or have thoughts to perform certain rituals over and over again. These thoughts and rituals are associated with a psychological disorder known as Obsessive Compulsive Disorder (OCD) (Robinson et al., 2014). "Obsessive compulsive disorder is a complex condition characterized by recurrent, unwanted ideas, intrusive, thoughts or impulses and attempts to reduce or neutralise the anxiety to prevent a dreaded outcome associated with the obsession through carrying out repetitive ritualistic behavioural and mental actions" (American Psychiatric Association, 2017) In simpler words, it is a type of anxiety disorder where the individual have an unreasonable thoughts and fear that makes them to do repetitive action. It is one of the most common anxiety disorders, with a prevalence rate around 1-4% (Julio,2011). Furthermore, OCD is the fourth most prevalent psychiatric disorder in the United States (Mathis et al., 2011). Beinga disorder which amplifies the obsessions and compulsions in individuals, OCD was first identified by Sigmund Freud in the early 1910s to be a disorder which strikes a person due to the conflicts of unconscious mental and physical. (Aardema& O'Connor, 2007)."Obsession is defined as an unwanted, intrusive, improper, recurrent, and continual thought, impulse, and/or mental image" (Yoldascan et al.,2009). Compulsion refers to repetitious behavioural

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and/or mental activities. Obsessive compulsive events usually consume at least an hour of the sufferer's daytime period and cause embarrassment, especially in social, occupational, and other daily situations.

Obsessive-Compulsive Disorder is classified differently in two major classification systems. In ICD-10 (International Classification of Disease), OCD has a separate group from anxiety disorder whereas in DSM-IV (Diagnostic and Statistical Manual). Some considered OCD to be a neurosis with unknown etiology (Cowen, Harrison & Burns, 2012). Obsessive-Compulsive Disorder is a heterogeneous disorder where it can affect both men and women. There are gender related differences in OCD regarding specific OCD symptoms (Aahish, K, 2009). ZamZam et al. (2009) carried out a study on the prevalence of Malaysian adults who are affected by psychiatric illness. Sample of 267 participants completed the Patient Health Questionnaire (PHQ). Result was 24% were found to have positive diagnosis of psychiatric disorder and 6.5% of them were suffering from panic and anxiety disorder. Mathis et al. (2011) conducted a conventional review to find out the gender differences of Obsessive-Compulsive Disorder (OCD).In conclusion, gender is one of the factors that need to be considering when evaluating OCD patients. An article on The Prevalence of Clinically Recognised Obsessive-Compulsive Disorder in a Large Health Maintenance Organisation (Fireman et al., 2001) stated that there are many individuals who are affected with OCD are not receiving the appropriate treatments due to under recognition. Certain theories posed the causes of OCD included psychoanalytical theory, learning theory and cognitive theory. In Malaysia, there is limited published data on OCD, though most of them, if available, cover comorbidity. As such, there is a demand for more OCD studies in Malaysia. So, we think that it is a good effort to study the rate of prevalence of OCD among UniversitiTunku Abdul Rahman (UTAR) student.

METHODOLOGY

This was a cross sectional study. Study locations were UTAR Sungai Long Campus, UTAR Petaling Jaya Campus, UTAR Setapak Campus and UTAR Kampar Campus. The calculated representative sample size was 438 students. The participants were recruited through the www.facebook.com. Questionnaire generated from https://www.google.com/drive/was sent to the participants to fill up. Information regarding study and purpose of study was given in brief at the beginning of the questionnaire followed by the consent form section. The questionnaire consisted of 2 sections, namely A and B. Prior to section A. In section A, participants were required to enter their demographic data. This included the age, gender, nationality, campus of UTAR which they were studying in. In section B, participants were required to answer a screening test, Obsessive-compulsive inventory revised (OCI-R). Results of OCI-R were e-mailed to the participants. This came along with a self-help advice for the benefit of the participants. Obsessive-compulsive Inventory (OCI) is a scale which was designed by Foa and colleagues in the year of 1998 which measures the OCD symptoms. OCI-R was revised by Foa et al. in the year of 2002 and is a shortened version of OCI. It is a self-report scale which is a widely used and validity proven scale (Jonathan S. Abramowitz 2005) in assessing the presence of OCD. OCI-R basically contains 18 statements regarding their daily lives, with a 5-point Likert scale. Under every statement, participants would have to choose and circle one grade among 0 which signifies "Not at all", 1 "A little", 2"Moderately", 3"A lot" and 4"Extremely". The possible range of scores is 0-72. An individual who scores 21 and above indicates the likely presence of OCD. The recommended time for participants to complete the survey was 15 minutes. Quantitative data were collected from https://www.google.com/drive/ and analysed by through computer software. Descriptive statistics was used for analysing the distribution of age, genders and campuses of participants. In the age category, participants' age ranged from 18 to 32. Therefore, the descriptive statistics aimed to find out the frequency of respondents in each of the age year. Descriptive frequency of presence of OCD in UTAR students was analysed. Along with frequency, percentage of prevalence of OCD had also been calculated. Chi-square test was used to analyse the significance of gender assessment in prevalence of OCD. P-value was calculated. The difference between genders in OCD was then further confirmed by obtaining the prevalence odds ratio under risk estimates. Apart from that, the data of age and presence of OCD were further tabulated to

determine whether there was any relation between the two variables. In addition, relationship between campuses of respondents and OCD had also been analysed.

RESULTS AND DISCUSSION

A total amount of 800 survey links with demographic data and OCI-R had been distributed to UTAR students at various campuses. In total 438(54.75%) responses were received. However, out of the 438 responses, 10 surveys (2.28%) were not completely filled and were excluded from the study. Subsequently, only 428 responses were taken into account. In 428 responses, 92 (21.5%) were from Sungai Long campus, 229 (53.5%) from Kampar campus, 66 (15.4%) from Setapak campus and 41 (9.6%) from Petaling Jaya campus. This sample size was calculated using Kish Formula. The sample recruited in each campus fulfilled the target set in each campus using random stratified sampling technique and thus the result represent the population will be more valid. In the 428 respondents, 128 were males while 300 were females. This indicates a higher percentage of females (70.1%) compared to males (29.9%) who took part in the study whereas in age, most of the respondents are in the study are in the age from 18 to 23. There was only 1 respondent in the age group of 25 and 32 in years respectively. Among the respondents, highest numbers of participants were in the age of 20 and 21 with the percentage of 20.3%. Among the 426 respondents, 318 participants scored below 21 in OCI-R and therefore were found to have no OCD. The rest of 110 participants were found to be positive in OCD. Therefore, this indicates a prevalence of 25.7% of OCD in UniversitiTunku Abdul Rahman students (Table 1).On further analysis, based on the score of OCI-R, it is reported that 33 (25.8%) of 128 male participants were found to be positive in OCD. While for female, 77 (27.7%) of 300 participants obtained positive scores on OCI-R. (Table 3) This showed an equal chance of getting OCD in both genders. According to risk estimates implemented by SPSS, the prevalence odds ratio of male to female in the prevalence of OCD was found to be 1: 1.006 (Table 4). Besides, by analysing using Chi-square test, P-value was found to be 0.980. These analyses indicate no difference between the genders in the prevalence of OCD among UTAR students. Our result suggests that prevalence of OCD in UTAR students is comparatively higher as compared to other university from other countries. However, it is found to be no difference between the genders in the prevalence of OCD.

Table -1: The prevalence of OCD in UTAR students

Presence of OCD	Frequency	Percentage
Negative	318	74.3
Positive	110	25.7
Total	428	100.0

Table -2: Gender differences in prevalence of OCD

Variables		Absence of OCD	Presence of OCD	Total
Gender	Male	95	33	128
		74.2%	25.8%	100.0%
	Female	223	77	300
		74.3%	27.7%	100.0%
	Total	318	110	428
		74.3%	25.7%	100.0%

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Table - 3: Risk estimates of gender differences in prevalence of OCD

Variables	Value	Lower (95% CI)	Upper (95% CI)
Odds Ratio for Gender (male / female)	1.006	0.627	1.615
For cohort Presence of OCD = no	1.004	0.707	1.427
For cohort Presence of OCD = yes	0.998	0.884	1.128
N of Valid Cases	0.428		

Obsessive - Compulsive Disorder is a disorder which could lead to a variety of physical and emotional health problems and it often goes unnoticed in a person's life due to under-recognition or having less awareness on symptoms of OCD (Fireman et al.,2001). Therefore, this study was conducted to assess the prevalence of OCD in Malaysian students of UTAR with the goal of increasing the awareness of the students about OCD and the symptoms. In the study, demographic profile data were not given by the 10 respondents in the correct form. The reason for this was believed to be due to misunderstanding of the wording of question. 10 of them filled in the year of which they did the survey, eg: 2014 instead of filling their age in years, e.g. 21, 25 etc. A result of the study is that 25.7% of the participants were found to be positive in OCD. This shows a very large difference between UTAR and other university from another country such as Turkish university (4.2%) (Yoldascan et al., 2009).In the year of 2009, study conducted by Zam Zam et al., 2009 on the prevalence of psychiatric morbidity observed a prevalence of 6.5% anxiety disorder among Malaysian adult aged 18 to 70. Based the findings of our study, it was shown that there was no difference between the genders in the prevalence of OCD in UTAR students. Besides, previous study in a Turkish university showed a higher ratio of female to male in the prevalence of OCD (Yoldascan et al., 2009). However, in our study, the prevalence odds ratio was found to be 1 : 1.006. With a P-value of 0.98, there was no significant difference when both genders were compared. Besides, among the respondents, it was found that highest prevalence was in the age of 24 followed by 20 and 19 years of age. Even though the age of 25 and 26 has 100 percent of prevalence of OCD, it was not taken into consideration because the number of respondents in those groups of age was only one. From other aspect, it was also found that there was no correlation between the venue of campus and prevalence of OCD. Physiotherapy indeed plays an important role in improving mental health of general population. Physiotherapists have the knowledge to deal with physical co-morbid in mental health disorder patients. They are the ones who can provide the physical needs for every patient, and promoting physical wellbeing can indirectly improve the mental health in individuals. Prevention of the development of physical complications that are caused by mental health conditions is one of the issues that physiotherapist should work on. Self-help advices were emailed to every subject who was suspected to have OCD. The self-help tips were arranged in an easy to understand manner by using simple and clear language so that they could comprehend it. Self-help programme was conducted in the form of e-mail. The self-help programme was adopted from trustable e-book by Schwartz & Beyette in 1996. The main purpose of this programme is to provide them with extra knowledge on the management of OCD, learning the basic facts about OCD and understand that it is a disorder that responds to treatment so that they can overcome those symptoms of OCD.

CONCLUSION

As shown in the result, 110 subjects scored more than 21 on OCI-R and suspected to have OCD. The rate of prevalence of OCD among UTAR students was 25.7%. Most of the people did not realise that fearing contamination and washing hands repeatedly could be a disorder that could worsen over days without any treatment. OCD can affect the quality of a person's life and ability to carry out activities of daily living.

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