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PREVALENCE OF DEPRESSION AND ITS ASSOCIATED FACTORS AMONG UNDERGRADUATE STUDENTS OF COLLEGES

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Abstract

Undergraduate students are more prevalent to depression due to young age, stress of study and independent life. The present study is conducted to estimate the incidence of depression among undergraduate students of colleges in district Lower Dir, Khyber Pakhtunkhwa, Pakistan, and the factors affecting the incident of depression. The study consist of 540 students from various colleges of district Lower Dir. Depression was assessed using the Centre for Epidemiological Studies Short Depression Scale (CESD -10). The data is analysis using Minitab software. The study estimates 20% depression prevalent among undergraduate students. Out of these 2.4% students have severe depression. Risk factors of depression was assessed by using binary logistic regression model which shows the following risk factors; low income, family background, sleeping problem, post-traumatic stress disorder (PTSD).

Keywords; depression, undergraduate students, binary logistic regression model, low income, family background, sleeping problem, post-traumatic stress disorder (PTSD).

Introduction

Depression is high prevalent mental disorder worldwide. Chronic mental health problem, difficult treatment and recovery makes the depression significant among the mental disorders (Melo-Carrillo et al., 2012). It is among the top four major illness (Sarokhani et al., 2013), due to the utmost burden for individuals, families, and society (WHO, 2002). Depression leads to other diseases such as cancer, diabetes, heart disease, and Parkinson's disease (Buchanan, 2012). Depression makes more deaths which increases the morbidity and mortality (D'alisa, 2006; Nuyen et al., 2005).

Undergraduate students are more prevalent to depression due to independent living, academic stress, as well as planning for their future careers (Uehara et al., 2010; Shamsuddin et al., 2013). Students then emotionally weak and going toward risk such as increased levels of smoking (Cranford et al., 2009), increased alcohol consumption

(Weitzman, 2004), increased self-injurious behaviors (Serras et al., 2010). Furthermore, depression can also affect their physical and mental health as it has been associated with acute infectious illness (Adams et al., 2008), suicidal ideation and suicide (Buchanan, 2012; Arria et al., 2009).

There are some factors which affects the prevalence of depression among students. Some of them are; higher study year (Chen et al., 2013; Simić-Vukomanović et al., 2016), lower socioeconomic status (Ibrahim et al., 2013; Simić-Vukomanović et al., 2016), poor academic performance and life satisfaction (Yusoff, 2013), high level of alcohol consumption, smoking (Adewuya, 2006; Adewuya et al., 2006), gambling (Moodie and Finnigan, 2006), social support (Kim, 2001), life stressors (Reyes-Rodríguez et al., 2013), post-traumatic stress disorder (Peltzer, 1998), physical inactivity (Taliaferro, 2009), overweight or obesity (Wilson et al., 2012) and sleeping problems (Angelone et al., 2011).

Rab, Mamdou and Nasir (2008) studied the incidence of anxiety and depression among students. Their study showed that prevalence of anxiety and depression were 43.7%, and 19.5% respectively. The significant factors affecting the incidence of depression were boarder student, history of negative life events in recent past, and early years of university.

Nisar et al. (2019) highlighted the causes of depression which were increased stress (72.2%) and physical/ emotional trauma (51.3%). The study showed that the most prevalent symptoms of depression were sadness (53.3%), irritability (53.3%), inability to perform daily tasks (52.8%), and changes in sleeping patterns (52%). Moreover, the participants in the study believed depression to be best treated by talking to someone trustworthy (59.5%), praying to God (56.5%) and consulting a psychologist/psychiatrist (52.3%). Their study found significant risk factors of depression which were; participants' level of education and their perception of clinical depression.

Gul et al. (2020) conducted study on depression in some universities of Pakistan. Their study reveals that 85% had some degree of depression, while 15% were normal. The significant associate factors of depression are gender and academic grades.

Rehman et al (2021) found prevalence of depression (12.5%) in university students. In their study, dissatisfaction with life, social isolation, insomnia, and gender were found significant factors influencing prevalence of depression among university students.

Asif et al., (2022) estimated the frequency of depression, anxiety and stress among university students, which were 75%, 88.4% and 84.4% respectively. The study reveals that that prevalence of Depression within the range of normal (25%), mild (16%), moderate (35.8%), severe (14.6%) and extremely severe (8.6%). The study showed alarming situation regarding prevalence of depression.

Ijaz et al., (2023) investigated the prevalence of depression, anxiety and stress symptoms. Their study shows prevalence of depression, anxiety and stress 48.5%, 41.1% and 31.2% respectively. The risk factors of Depression and stress were gender, academic satisfaction, economic satisfaction and job worry.

Undergraduate students are in critical transition from adolescence to adulthood and one of the most stressful moments in a person's life. These students affect their family, and they contribute to the country's workforce in the near future in a given country. To look at their role in the family, society and country, it is necessary to conduct a study to assess their depression and to find out their risk factors. Therefore, the purpose of this study is to determine the prevalence of depression and its associated risk factors among underrate colleges students at district Lower Dir. Some studies on incidence of various diseases are conducted in the District Dir Lower, Khyber Pakhtunkhwa (Khan et al, 2022; Haq et al., 2024; Haq, Ullah and Khan, 2022; Akhtar et al., 2016; Khan et al, 2022a).

Methods and Materials

A stratified random sampling method was used to identify the sample from population. A random sample of 540 undergraduate students from colleges were interviewed using a pre-tested validated questionnaire by self-reported methods. Besides depression; data on socio-demographic, lifestyle and health characteristics were obtained.

Prevalence of depression among undergraduate students is the dependent variable. The Center for Epidemiological Studies Short Depression Scale (CESD -10) was used to detect presence of depressive symptoms (Andresen et al., 1994) (Cronbach alpha=0.87). For binary regression model, depression was classified into two categories: 1. depression (CED \geq 10) = 1 as a reference case and, 2. no depression (CED<10) = 0 as non- reference case for the

binary model. The logistic regression model is effective when the response variable is categorical (Khan, Haq and Ali, 2022; Khan, Hussain and Ijaz, 2022; Khan et al., 2022b; Khan, Haq and Amin, 2022).

Descriptive statistics was performed by using tables and prevalence rate of depression. In order to assess the significant factors affecting the incident of depression, binary logistic regression model is used. This model is used when the response variable is categorical in nature.

Result and Discussion

Total of 540 under graduate student from colleges of district Lower Dir is selected. The prevalence rate among these students is found to 20% out of which 2.4% have severe depression (Figure 1). This is high prevalence, that is, one in each five students have depression disorder.

Figure 1 Prevalence of Depression among Undergraduate Students

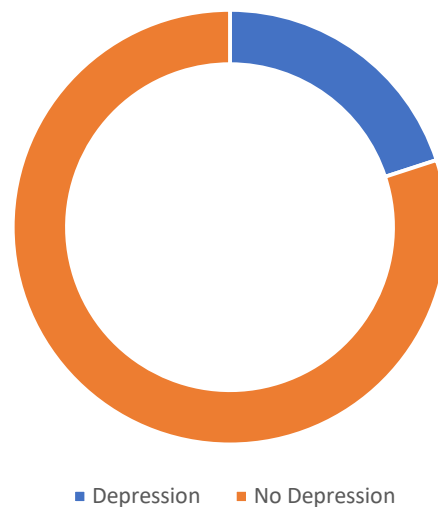


Table 1 shows some characteristic of undergraduate students. The Table further shows that the students come from low background are 430(79.63%), while those who belong to standard family background are 110(20.37%). According to the Table, 140(25.93%) students have sleeping problem, while 400(74.07) students sleep easily. Moreover, 203(37.59%) students have post-traumatic stress disorder, while 337(62.41%) have no such disorder.

Table 1 Some Characteristic of Undergraduate Students

	Level	Number of students	Percentage
Family Background	Low	430	79.63
	Standard	110	20.37
Sleeping Problem	Yes	140	25.93
	No	400	74.07
Post-traumatic stress disorder	Yes	203	37.59

The Figure 1 reveals the family income of the respondents. According to the Figure, 48(8.89%) students have family income from Rs. 30000 to Rs. 40000, 184(34.07%) have Rs. 40001 to Rs. 50000, 228(42.22%) have Rs. 50001 to Rs. 60000.

Figure 1 Family Income of the Respondents

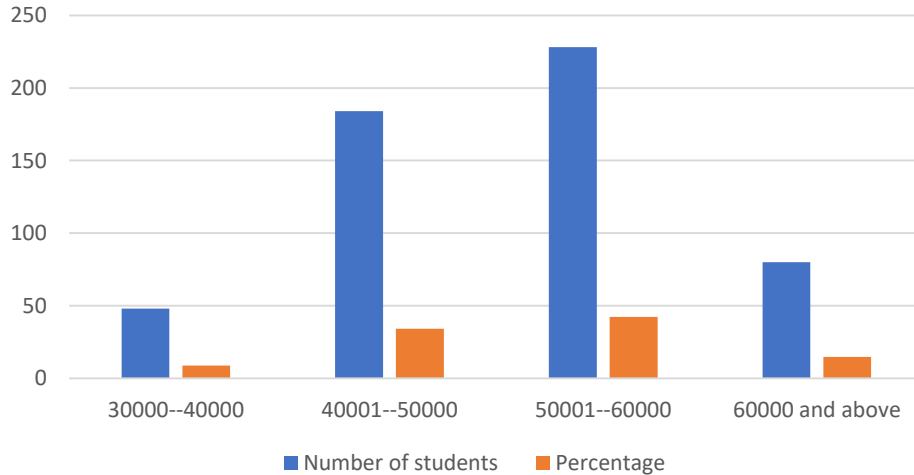


Table 2 shows the result of binary logistic regression model. The model shows that low income, family background, sleeping disorder and post-traumatic disorder are significantly associated with prevalence of depression among undergraduate students of colleges of Lower Dir.

Table 2 Fitted parameter estimates using ordinal logistics regression model

	Coefficient	P value
Constant	-2.640	0.010
Low Income	-1.344	0.002
Family Background	-0.980	0.004
Sleeping Problem	3.002	0.032
Post-traumatic stress disorder	0.087	0.045

Conclusion

The prevalence of depression among undergraduate students of colleges of Lower Dir is 20% out of which 2.4% have higher level of depression. Moreover, the significant risk factors of prevalence of depression are assess by binary logistic regression model which are; that low income, family background, sleeping disorder and post-traumatic disorder. The current study can be extended to more colleges of the province as well to the country.

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