

Research Article

Prevalence of Depressive Symptoms and Associated Socio Demographic Factors among Intermediate College Boys

Zubair UB* and Ali U

Department of Medical, University of Mujahid Force Center, Pakistan

***Corresponding author:** Zubair UB, Department of Medical, University of Mujahid Force Center, Pakistan**Received:** September 15, 2015; **Accepted:** November 12, 2015; **Published:** November 19, 2015**Abstract**

Aim: To determine the prevalence of depressive symptoms among intermediate college boys and analyze the associated socio demographic factors.

Subjects and Method: The study was carried out at Fauji Foundation College for boys New Lalazar Rawalpindi. The sample population comprised of XXX intermediate college boys. General Health Questionnaire (GHQ) 12 was used to screen for any psychiatric illness, and those with score greater than 4, were administered the Beck Depression Inventory (BDI) to record the presence and severity of depressive symptoms. Level of family income, relationship status, grade in matriculation, family history of psychiatric disorder, tobacco smoking, worrying about future and social support status was correlated with depressive symptoms to evaluate the association of these factors with depression in the study population.

Results: Out of 240 students screened with GHQ 12, 125 were found to have a score of 4 or more, as an indicator of presence of psychiatric morbidity they were administered BDI. Of these 70 students had no depressive symptoms, 29 had mild, 20 had moderate and 06 had severe depressive symptoms. With logistic regression, we found significant correlation between depressive symptoms and grade in matriculation, worrying about future and lack of social support.

Conclusion: Prevalence of depressive symptoms was high among college students. Special attention should be paid to students with low grade in matriculation and those who lack social support and worry about future.

Keywords: Depressive symptoms; College boys; Screening; Socio demographic factors

Introduction

Mental health issues are of prime importance in predicting overall health and efficiency of an individual. In the United States simply depression causes severe dysfunction, and has a general population lifetime prevalence of 12.7% for men and 21.3% for women [1].

Youth is backbone of any nation. Developing countries like ours have lot of hopes from their young population specially the students which are the investment of society for future. College life brings a lot of change in one's life." Students experience many firsts, including new lifestyle, friends, roommates, exposure to new cultures and alternate ways of thinking," said Hilary Silver, M.S.W., a licensed clinical social worker and mental health expert for Campus Calm. Stress of own future and admission in professional college or university is also there with every intermediate student. Expectations of parents and relatives especially from male child may also add to it as he is supposed to be earning source for family in our society.

A study done in Split, Croatia revealed that 9.4% of the students had significant depressive symptoms [2]. Another interesting study done by collecting data from social media showed that college students commonly display symptoms consistent with depression on Facebook [3].

In 2011, the American College Health Association–National College Health Assessment (ACHA–NCHA) nationwide survey of college students at 2- and 4-year institutions—found that about 30 percent of college students reported feeling “so depressed that it was difficult to function” at some time in the past year [4].

A study done among college students in Puerto Rico concluded that Freshmen college students present a broad range of depression symptoms and certain stressful life events are associated with an increased prevalence of depression symptoms [5].

A study done in early 90s in Pakistan involving psychiatric morbidity revealed presence of high psychiatric morbidity among the students [6].

Other studies have reported a correlation of depression with smoking [7-9], drinking [10], family structure [11,12], parent-child relationships [13], family income [14], and family history of depression [15], love relationship [16], finances, worrying about the future and inadequate social support [14].

The transition from adolescence to adulthood is associated with stressful adaptation experiences that may increase depressive symptoms in addition to all those factors which are mentioned in the beginning among the students. In our country most studies are

Table 1: Characteristics of the study group and their Beck Depression Inventory scores.

Socio demographic Factors Total	NO depressive symptoms (0-9)		Mild Depressive symptoms (10-16)		Moderate Depressive symptoms (17-29)		Severe Depressive Symptoms (30-63)		χ^2	p-value
	N	%	N	%	N	%	N	%		
	70	56	29	23.2	20	16	06	4.8		
Grade in matriculation A B or C	62 08		26 03		07 13		01 05		39.923	0.000
Relationship status Not in a relation In a relationship	60 10		24 05		16 04		03 03		4.955	0.272
Family income <Rs.30000 Rs.30000 or more	18 52		12 17		14 06		05 01		18.263	0.000
Tobacco smoking Non Smoker smoker	65 05		28 01		13 07		05 01		14.482	0.009
Family history of psychiatric disorder NO Yes	62 08		22 07		18 02		06 00		4.187	0.204
Social support In Adequate adequate	15 55		05 24		13 07		06 00		29.621	0.000
Worry about future No Yes	60 10		18 11		08 12		01 05		25.596	0.000

done on university students or students of medical colleges [17,18]. A similar study was done on intermediate students but involved only females. It showed negative impact of depression on academic progress [19]. Our study aimed to look for the prevalence and correlates of depressive symptoms among these young boys in order to establish the associations and target this group of population for any future intervention.

Materials and Methods

Subjects

After a formal ethical approval from the Principal of Fauji Foundation College for boys New Lalazar Rawalpindi and a written consent of all potential participants, an observational study was planned. All boys studying in college in intermediate class were included in the study. All individuals who did not give consent and had a past or current history of any psychiatric illness were excluded from the study. Students unable to understand/complete the required questionnaires were excluded. After the application of inclusion and exclusion criteria, xxx subjects were included in the analyses.

Instruments

Different cultures use various methods for screening questionnaires for depression or assessment of mental disorder.

General Health Questionnaire 12 (GHQ-12): It is a standardized psychometric test for assessing the general health status of individuals and is used as a screening test. It is 12-item rating screening instrument. The cut off score is 4 or greater than 4 by Likert scoring. Beck Depression Inventory (BDI) was used to assess the depressive symptoms among the subjects. The BDI-II (Beck, Steer, & Brown, 1996) is a standardized self-report measure that consists of 21 items assessing the presence and severity of affective, cognitive, motivational, vegetative, and psychomotor aspects of depression. All 21-items are rated on a 4-point scale (0 to 3).

Procedure

All consenting students were gathered in a quiet field with complete reassurance of confidentiality. No representative of the college was present at the time of data collection to avoid any bias. The subjects were provided with a detailed description of the study. Inclusion was strictly based on informed written consent. The confounding variables were taken care of by detailed history taking about any current or previous psychiatric illness. Those students with confounding variables were excluded from the study. General Health Questionnaire 12 (GHQ-12) was applied to all students for initial screening of any psychiatric illness. Students with score greater than 4 on GHQ were then administered Beck's Depression Inventory (BDI). The BDI scores were interpreted as follows:

For assessing the severity of depressive symptoms [20].

Normal 0-9

Mild depressive symptoms 10-16

Moderate depressive symptoms 17-29

Severe depressive symptoms 30-63

For Binary logistic regression 17 was taken as cut off score above which study participants were thought to have definite depressive symptoms [21] and socio demographic factors were correlated with their presence.

The socio demographic data of students who were found positive on GHQ-12 and administered BDI was entered in a structured form; keeping in mind the wish of some students for anonymity only initials of their names were kept as record.

Descriptive statistics were used to describe the characteristics of participants (found positive on GHQ 12) and the distribution of BDI score. Samples were identified under the categories of No depressive

Table 2: The correlated factors relating to depressive symptoms: the binary logistic regression.

	B	p-value	Odds ratio	Confidence interval	
				lower	upper
Grade in matriculation(reference is A grade)	2.175	0.002	8.799	2.273	35.047
Relationship status (reference is "in a relationship")	-0.582	0.457	0.559	0.121	2.588
Family income (reference is Rs.30000 or more)	1.254	0.064	3.505	0.930	13.213
Smoking (reference is nonsmoker)	1.228	0.167	3.415	0.597	19.524
Family history of psychiatric disorder (Reference is negative history)	-0.935	0.490	0.392	0.028	5.576
Worry about future (reference is not worried)	1.400	0.041	4.056	1.058	15.556
Social support (reference is adequate support)	1.982	0.003	7.256	1.993	26.419

symptoms group, mild depressive symptoms group, moderate depressive symptoms group and severe depressive symptoms group based on the BDI score. Variables in this study included level of family income, relationship status, grade in matriculation, family history of psychiatric disorder, tobacco smoking, worrying about future and social support status. Between-group variances in categorical correlates were determined using chi-square. Binary logistic regression analysis was done to evaluate factors related to depressive symptoms. For regression analysis 17 was taken as cut off BDI score above which study participants were taken as high depressive symptom group.

All statistical analysis was performed using Statistics Package for Social Sciences version 20.0. Differences between groups were considered significant if *p*-values were less than 0.05.

Results

240 students were screened through GHQ 12. 125 were having GHQ score more than 4 so they were evaluated with BDI for presence of depressive symptoms. Among these 70 students had no depressive symptoms, 29 had mild, 20 had moderate and 06 had severe depressive symptoms. As shown in (Table 1) grade in matriculation, family income, social support, smoking and worry about future had significant association with depressive symptoms when chi-square is applied. For regression analysis 17 was taken as cut off BDI score above which study participants were taken as high depressive symptom group. (Table 2) shows that only grade in matriculation, worrying about future and lack of social support were found significantly associated with presence of depressive symptoms after the regression analysis.

Discussion

To our knowledge this is the first ever study on male young pre university students of Pakistan who are about to enter a new, challenging, stressful and competitive part of their life. The study is an attempt to record presence of depressive symptoms among the individuals that appears healthy and apparently free of responsibilities of life, in an attempt to identify socio demographic factors common amongst those who have these symptoms. Male children in our society are brought up and educated in a better way as compared to females. Yet expectations too are high from them as they are thought to be earning hand of family and they are pressurized from high school level that they have to work hard to achieve good grades

for subsequent admission in a professional college. A factor that sets our study apart from similar works is the use of a standardized screening tool of psychiatric morbidity i.e. shorter version of General Health Questionnaire (GHQ-12). The study population that scored 4 or more on GHQ 12 went on to undergo Beck's Depressive Inventory (BDI). This was done to bring into fold a wider range of psychiatric symptoms while specifically looking for responses on BDI. 125 students of the initial sample were GHQ positive and were administered BDI. Rest 115 who showed no psychiatric morbidity on GHQ was not explored further for mental health issues. Using BDI we found that 44% of our students showed depressive symptoms most of whom had mild but 16% had moderate and 4.8% had severe. Other similar Studies done in west [2,4] also showed similar results but number is lower. The presence of depressive symptoms among students of western countries and higher prevalence in our study may reflect problems in adapting to the stress of entering a new phase of life. Leaving behind the carefree life of a child and working hard to survive in a tough competitive environment must be associated with certain amount of psychiatric morbidity. In our study being part of a developing country with fewer opportunities and more expectations from family may be an additional factor. In general population also depression has almost taken first position among the all psychiatric conditions in our country [22].

Various studies in past concluded that family income, not being in a relationship, family history of psychiatric disorder and smoking are consistent correlates with depressive symptoms. Results in our study were different as mostly in our society even low income families cut down their other expenses but spend their best on upbringing and education of male child. Relationship status was also found non-significant. Reason may be social as it is not considered good to have a physical or emotional relationship with opposite gender before marriage. The use of smoking was found as a protective factor for presence of depressive symptoms on descriptive analysis. However on binary logistic regression we could not establish a correlation. The higher use of smoking could cause relieve stress temporarily, and may serve to 'alleviate' depressive symptoms, at least temporarily. The students could be using it as self-medication, as was the case with recruits in a Taiwanese study [23]. A larger study would be required to have a deeper understanding of this aspect of the study.

Worrying about future and inadequate social support were found significantly correlated with the presence and severity of depressive symptoms in our study in accordance with the international literature

[14,23]. The worry about one's future prospects as a young adult male in a low-income country like Pakistan is an expected finding. These worrying thoughts could be on account of admission in a professional college and to fulfill the expectations of parents. Leaving the school and joining a college departs individuals from their old friends and they had to adjust in a new competitive environment which might be cause of association of lack of social support and presence of depressive symptoms.

The major limitation of our study is the use of screening tools of psychiatric morbidity, and depressive symptoms without having baseline results of the study population prior to their admission in the college. We cannot therefore hypothesize that the depressive symptoms were a consequence of college life. The sample size, and use of self-administered questionnaires pose methodological issues as well. The findings cannot be generalized as our study population was not selected from a randomized sample of all students studying at various colleges of Pakistan. Another limitation is the chance that the students may under or over report symptoms on self-administered questionnaires like GHQ and BDI. We suggest further studies on a broader based and a more representative sample size using locally developed and standardized psychometric tools in subsequent studies on the subject.

Conclusion

Prevalence of depressive symptoms was high among intermediate college boys. Special attention should be paid on students with low grade in matriculation and those who lack social support and worry about future.

Acknowledgement

We thank whole staff of Fauji Foundation College for boys New Lalazar Rawalpindi especially the Principal for kind approval, help and data collection.

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