DEPRESSION ASSOCIATED FACTORS IN SCHOOL GOINGADOLESCENTS OF JAMMU REGION

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Background: Depression is a mood disorder that can cause someone to feel sad, irritable or hopeless. It may affect your sleep, appetite or relationships with others. Depression can also cause loss of interest in hobbies or activities you once enjoyed. In severe cases, depression can lead to thoughts of suicide. It is a rising problem globally.**Aims & objectives**: This study was done to analyse depressive disorders and associated factors among school going/ adolescents in Jammu region. **Materials &Methods**: A cross-sectional study was conducted among 200 randomly selected school going adolescents. Depression was assessed using Patient Health Questionnaire-9 (PHQ-9) and associated factors by pretested semi structured interview schedule. Multivariate analysis was done to identify significant associated factors. **Results**: 30% of adolescents had depressive disorders, 3 percent major depressive disorders and 27 percent other depressive disorders. In terms of severity, 25 percent had mild depression, 10 percent had moderate depression, 5 percent had moderately severe depression and 0 percent had severe depression. Significant associated factors included studying in class 10th and 12th, physical abuse by family members, alcohol use and smoking by father, lack of supportive environment in school, spending less time in studies, less participation in cultural activities and having a boy/girlfriend. **Conclusion**: Our study showed that a significant proportion of school going adolescents suffered from depression. The presence of depression was associated with a large number of modifiable risk factors. There is a need to modify the home as well as school environment to reduce the risk of depression.

KEY WORDS- Adolescents, depression factors, patient health questionnaire

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INTRODUCTION

Adolescence is a crucial phase in one's lifetime as it acts as a bridge between childhood and adulthood[1]. Depression is rising among adolescents all over of the world. Community and school sample studies from different parts of the world have shown that depression is the most common psychiatric disorder among adolescents[2]. Depression has a multifactorial cause. Many risk and protective factors have been reported in the literature. The important factors associated with depression include lack of parental support, adolescent-parent conflict; in addition, rejection by peers, parents and teachers causes increase in depressive symptoms in children and adolescents[3]. Depression and severe suicidal ideation are also linked[4].Lifestyle especially, unhealthy is also associated with an increase in prevalence of depression[5].

Many studies from India have evaluated the risk factors for depression among adolescents[6]. There is a need to understand the risk factors associated with depression. The present study was done to analyse the prevalence of depressive disorders among schoolgoing adolescents (13-18 yr) in Jammu region and the factors associated with it.

MATERIALS AND METHODS

This cross-sectional study was conducted in Jammu. The participants were adolescents with age group (13-18 years). All participants were included after obtaining written informed consent.The study protocol was

approved by the ethics committee of the Institute.

The participants were in the age group of 13-18 years, studying in the class 9th to 12th fromdifferent senior secondary schools. The sample size required was 200. Multistage sampling was done.In the first stage, schoolswerechosen.Inthesecondstage,student swere chosen from each section of classes from 9th to 12th. Inclusion criteria- All students who appeared apparently healthy & who were in the age group of 13-18years. Exclusion criteria- No history of diabetes,hypertension, congenital disease, neurological disease or any skeletal deformity.

Data collection instruments: Two questionnaires were used in this study:

Patient Health Questionnaire (PHQ-9): A validated pretested modified patient health questionnaire (PHQ-9)[7] was used to screen the participants for depression. It is a modified, self-administered version of PRIME-MD, diagnostic instrument for common mental disorders15. PHQ-9 is the depression module which scores each of nine Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) criteria16 from '0' (not at all) to '3' (nearly every day). It has been validated for use in primary care and adolescents[7]. It is not only a screening tool but also can be used to estimate severity of depression. According to PHQ-9, major depressive disorder is diagnosed if five or more of the nine depressive symptoms are present at least for 'more than half the days' in the past two weeks, and one of the symptoms is depressed mood or anhedonia. One of the nine criteria (thoughts that you would be better off dead or of hurting yourself in some way) counts if present at all, regardless of duration. Other depressive disorder is diagnosed if two, three or four depressive symptoms are present at least 'more than half the days' in the past two weeks, and one of the symptoms is depressed mood or anhedonia.

In terms of severity, those with score of 0-4 are categorised as having no or minimal depression, score of 5-9, 10-14, 15-19 and 20-27 indicate mild, moderate, moderately severe and severe depression respectively[7].

Questionnaire on factors associated with depression: The information on the risk and protective factors for depression was obtained using a structured pretested questionnaire. The risk and protective factors questionnaire was specifically designed for this study, based on the literature review[8]. Opinion of the experts was obtained to increase its face validity and repeatability was tested by confirming test-retest hypothesis. This questionnaire had 84 items which included questions regarding socio-demographic profile, home and school environment, career-related issues, illness in family, lifestyle, substance abuse in father and its consequence, study, academic and career-related issues, peer-related issues including bullying, support from friends and internet use. Both, PHQ-9 and the risk factor questionnaire were self-administered.

Data analysis: Data were analysed using Statistical Package of Social Sciences (SPSS) version 14. Categorical data were evaluated in terms of frequency and percentage and the continuous data were analysed in terms of mean and standard deviation.

RESULTS

A total of 200 children were studied. Of these, 80 (40%) were studying in government and120 (60%) in private schools. Most students were in class 10th followed by class 11th and 12th. Number of adolescent males were more than the number offemales. Number of participants were same from rural and urban area. In terms of body mass index (BMI), 55% participants had BMI in the normal range, 28% were underweight ,15 % overweight and 2 % were obese. In terms of parental profile significantly higher proportion

of parents of children from private schools were educated beyond matric. However, in terms of profession of father, there was no significant difference between the children from government and private schools.

Prevalence of depressive disorders: As shown in Table I, the prevalence of major depressive disorder was found to be 3 per cent and that of other depressive disorders was 27 per cent. 70 per cent children had no depression. On the basis of severity scale, 25 per cent had mild depression, 10 per cent had moderate depression, 5 per cent had moderately severe depression and 0 per cent had severe depression. There was significant difference in the prevalence of depression between adolescents studying in class 10th and 12th.

Factors causing depression: For assessing the factors, the study sample was divided into two groups, i.e., those with depression and those without depression. The two groups were compared for the socio-demographic variables, type of school, class and the factors included in the associated factor questionnaire. The prevalence of depression was significantly more in those attending the government schools, class 10th, rural background, sharing living room with siblings, beaten up by family members and who were scolded by family members. Significantly higher prevalence of depression was seen among those whose fathers consumed alcohol, presence of financial constraints and altercations , higher frequency of smoking in father and altercations/financial constraints due to smoking of father, lack of supportive environment in school, spending less hours in studying per day and also per week, lack of satisfaction of self with academic performance, lack of participations in cultural activities in school, spending less time on social sites and having a girlfriend/boyfriend.

Other factors such as age group and gender, having a separate living room, use of substance by self, level of play activity in school, support and motivation by parents and teachers, attitude of parents towards future of children, parental satisfaction with academic performance, approval of career choice by father, use of any other substance by a family member, working status of the mother, motivation by teachers, number of supportive teachers, bullying at school, peer pressure, use of internet, duration of internet use, use of social sites and involvement in sexual activity with a partner did not emerge as associated factors for depression.

Tables

Table 1. Prevalence and severity of depression as per modified Patient Health Questionnaire-9 (PHQ-9) among adolescents

Variables	Frequency (%)
Prevalence of depression	
No depression (PHQ-9 score 0-1)	140 (70)
Other depressive disorder (PHQ-9 score 2-4)	54 (27)
Major depressive disorder (PHQ-9 score >5)	6 (3)
Depression category according to severity	
No or minimal (PHQ total score 0-4)	120 (60)
Mild (PHQ total score 5-9)	50 (25)
Moderate (PHQ total score 10-14)	20 (10)
Moderately severe (PHQ total score 15-19)	10 (5)
Severe (PHQ total score 20-27)	0 (0)

Table 2. Prevalence of depression as per various demographic characteristics

Parameter	Whole sample (n=200)	Depression absent (n=140) 70%	Depression present (n=60) 30%	*P*
Schools				
Government	80	40	40	0.001
Private	120	100	20	
Area of residence				
Urban	100	90	10	0.001
Rural	100	60	40	
Room sharing				
With parents	100	70	30	0.001
With siblings	60	40	20	
With other members	40	30	10	
Class				
9th	40	35	5	0.001
10th	60	25	35	
11th	50	40	10	
12th	50	40	10	
Study h/day				
>12	30	25	5	0.03
10-12	20	15	5	
7-9	40	20	20	
4-6	35	35	0	
1-3	40	20	20	
Less than one hour	35	25	10	
Satisfaction with academic performance				
Yes	150	100	50	0.001
No	50	40	10	
Participation in cultural activities				
Yes	170	120	50	0.001

No	30	20	10	
Beating by family members				
Yes	65	10	55	0.018
No	135	130	5	
Scolding by family members				
Yes	122	55	57	0.003
No	78	75	3	
Approval of career choice by mother				
Yes	150	120	30	0.001
No	50	20	30	

Parameter	**Whole sample (n=200)**	**Depression absent (n=140) 70%**	**Depression present (n=60) 30%**	***P***
Drinking status of father				
Yes	75	20	55	0.001
No	125	120	5	
Frequency of drinking alcohol				
Everyday	50	10	40	0.001
Occasionally	100	90	10	
Rarely	50	40	10	
Altercations/financial constraints due to alcohol				
Yes	40	5	35	0.001
No	160	135	25	
Smoking status of father				
Yes	80	20	60	0.001
No	120	120	0	
Frequency of smoking				
Everyday	75	20	55	0.004
Occasionally	100	95	5	
Rarely	25	25	0	

Altercations/financial constraints due to smoking				
Yes	68	25	43	0.032
No	132	115	17	
Supportive environment ofschool				
Yes	159	132	27	0.01
No	41	8	33	

Parameter	**Whole sample (n=200)**	**Depression absent (n=140) 70%**	**Depression present (n=60) 30%**	***P***
Visiting religious places				
Yes	150	100	50	0.02
No	50	40	10	
Hours spend/day on social sites				
Greater than 5 hours a day	85	68	27	0.005
Upto 5 hours a day	115	72	33	
Have girlfriend/boyfriend				
Yes	60	12	48	0.005
No	140	128	12	

DISCUSSION

This study included 200 students with no. of males more than the females and those from urban area were same in no. as that of rural area of the study sample. No. of students from rural area (50%) can be explained by proportion of rural population of Jammu as per 2011 census.

A meta-analysis estimated the prevalence of major depressive disorder among adolescents aged 13-18 years to be 5.6 per cent[9].

Results of this study showed that 30 per cent of the schoolgoing adolescents suffered from depressive disorders, with 3 per cent children having major depressive disorders and 27 per cent having other depressive disorders. Other such types of studies conducted in the past have shown mixed results. Many studies from different parts of the India have evaluated the prevalence of depression among adolescents using different screening instruments such as centre for epidemiological studies-depression

scale, Beck Depression Inventory, in sample sizes varying from 64 to 1120 students of different classes. These studies have reported that the prevalence rates of depression vary from 18.4 to 65.6 per cent[10-11].

The prevalence rate of 30 per cent observed in the present study suggests that depression is an important psychological morbidity among the adolescents. The present study showed several risk factors for depression among adolescents. Most of these findings are in consonance with some of the previous studies from India and other countries[12-14].

The present study showed that depression was more prevalent among students from rural area. This finding was similar to a previous study conducted in China, among college students[15].

Beating and scolding by parents or other family members were found to be significantly associated with depression as also shown earlier.[16]

There was dose-dependent relationship of depression with higher frequency of alcohol use and smoking associated with higher risk of depression. This finding of the present study was also supported by the existing literature which suggested positive association of depression with the use of alcohol and substance abuse by father[17].

Having a boyfriend/ girlfriend was also associated with depression among schoolgoing adolescents. A previous study also suggested the same[18].

Limitations

We used a validated study tool but the validity of this study tool has not been tested on this study population.Secondly, online mode was used to disseminate the questionnaire, hence non responsive rate could not be calculated. The study employed a purposive sampling method as we did not have a complete sampling frame of all adolescents in the study area.

CONCLUSION

This study has provided information regarding the magnitude of problem of depression in Jammu region and many modifiable risk factors for depression among schoolgoing adolescents. There is a need for multisectoral response to this public health problem. Parents should be aware that maltreatment of adolescents by parents or family members, alcohol use and smoking in father are the factors for depression among adolescents and emphasis should be laid on sharing of problems of adolescents with parents by making the home environment more comfortable. Regularity in studies for the students is important to prevent depression. School counsellors should be involved in screening adolescents with depressive disorders and appropriate referral to be provided. Community health workers should identify the depressive disorders among school adolescents so that they can gettreatment at the earliest.'The real fear of depression is not of dying; it of living with yourself forever'

ACKNOWLEDGEMENT

I would like to express my deepest love and gratitude to my parents Prof (Dr.) RK Gupta and Mrs Anju Gupta and my mentorDr. Gurmeet Kaur. A special thanks to my elder sister Dr.Youshita Mahajan and brother Ishaan Mahajanwho inspired and cooperated with me to work on this topic at all levels.Above all, I would like to offer my humble gratitude to the Almighty for all the blessing he has showered upon me and will continue to do so throughout my life.

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Disclosure: No conflict of Interest