ORIGINAL ARTICLE

Assessment of depression and its correlates among college students in Rishikesh Uttarakhand

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[Abstract](#)	[Introduction](#)	[Methodology](#)	[Results](#)	[Conclusion](#)	[References](#)	[Citation](#)	[Tables](#) / [Figures](#)

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Citation

Article Cycle

Abstract

Background: Depression is a major contributor to the overall global burden of disease and is the leading cause of disability worldwide. **Objective**: To assess the levels of depression and its correlate among college students in Rishikesh, Uttarakhand. **Methodology:** Community based cross sectional study was conducted from February 2018 to April 2018 among 126 students of a Government PG College Rishikesh belonging to age 18 -26 years. A pre-validated semi- structured pretested Physical Health Questionnaire (PHQ-9) was applied for this purpose. **Results:** Mean age of the participants was 22.84±1.5 years. Overall prevalence of depression among study population was 74.60% among them 4% were severely depressed. 58% of females and 40% males had suicidal ideations. Majority of participants were stressed with the undue peer pressure followed by career pressure. Physical activity for atleast 30 minutes a day for 5 days in a week was found to be significantly (p<0.02, odds ratio 0.20 (0.06-0.7 at 95%CI) beneficial for depression. **Conclusion**: Depression is prevalent among college going population. Peer pressure, academic stress, career pressure, financial stress in home, undue parental expectations on students are associated with depression among college going students.

Keywords

Introduction

Stressful life style due to unusual routine and academic overburden resulting into sadness or unhappiness for a significant length of time may lead to emotional and psychological turmoil among college going students. Protracted state of sadness and stressed routine may withdrawn individual from social, emotional and personal activity considered to be depressive disorder.(1) According to World Health Report in 1998 Disability adjusted life year (DALY) due to neuropsychiatric disorder is 10 % in low and middle income country. (2)Transitional from home state to post-secondary school itself a cause of depression among college students. Academic stress, peer pressure, parental over expectation during college duration becomes an integral part of

their daily routine life. (3) Major depressive disorder is a disabling condition that is associated with long-term complications such as engagement in risky behaviors such as substance use (eg, alcohol, illicit drugs, tobacco), and also leads to suicide. Early - onset depression increases the risk of suicide attempt by fivefold (4,5). Feeling of self-doubt and questioning one's own capabilities aggravates the condition. (6) Positive and productive intervention may prevent and avoid unwanted consequences from mental health among students, Studied by Tapas Karmakar et al. (7)

Today depression is a devastating problem among college going students affecting their motivation, concentration and fanatics possibilities of upcoming life.

Aims & Objectives

To assess the degree of depression among college students and determining association with factors identified.

Material & Methods

Study settings and duration: Community based cross-sectional study was conducted from February 2018 to April 2018 among 126 students of a Government PG College, Rishikesh belonging to age 18 – 26 year under field practice area of Department of Community and Family Medicine All India Institute of Medical Sciences Rishikesh. Sample size was calculated using Open Epi

Total number of students in college (for finite population correction factor or fpc)(N):	5000
Hypothesized % frequency of outcome factor in the population (p):	59.2%
(Absolute +/- %)(d):	10%
Design effect:	1
Confidence Level (%)	95%
Sample Size	92

Assuming 20% non response rate estimated sample size was 115. We included 126 study participants. A sampling frame comprising of all such discipline was prepared and using lottery technique one batch of the professional course was randomly selected by simple random sampling. All participants were first informed and then written consent was obtained to participate in this study. A pre-validated, semi structured, pretested questionnaire Patient Health

questionnaire (PHQ-9) was applied for this purpose. All the participants were explained about PHQ 9 Questionnaire individually. Respondents were asked to mention only gender and age. Any personal identifiers like name was avoided to encouraged honest answer and maintain the confidentiality among them. A PHQ-9 score >= 11 had a sensitivity of 89.5% and specificity of 77.5% for detecting youth meeting same score was applied to quantify grade of depression in this study by Richardson et al. (8) Institutional ethical clearance was obtained Vide IEC code.141/IEC/IM/NF/2017. Permission from the Head of the Institute was obtained prior to enrollment of study participants.

Results

Mean age of the subjects was 22.84±1.5 years. Out of all studied participants 40% were male and 60% were female. All the subjects were unmarried. Among them 72% were from rural area and 28% were from urban area, Majority of them students were Hindu (90%) by religion , 58% belong to nuclear family and 42% belong to joint family. (Figure 1). Overall prevalence of depression in our study was 74.6%. Among the study participants 10.30% had minimal depression, 37.30% have mild depression, 14.30% had moderate severe depression and 4% had severe depression as per PHQ-9 screening for depression. Prevalence of depression was found to be higher among female students than male students. Among the female participants Majority (40%) had mild depression, 26% had moderate depression and 5 % had severe depression, 58% of female participants had suicidal ideation which was one of the components of PHQ-9 questionnaire. (Figure 2).

Majority (92%) of participants were stressed with the undue peer pressure followed by career pressure (85%). Total 71% of participants used to feel sad when they were away from the internet. Parental over expectations, financial issue at home, relationship problem among them found to be significantly (p<0.05) associated factor with depression (Figure 3) & (Table 1).

To nullify the effect of confounder over output variable multivariate logistic regression model was used where relationship problem(p value 0.03 , odds ratio 6.38 (1.8-2.1) at 95% CI), peer pressure (odds ratio 4.73 (0.065-2.0) at 95% CI), financial issues at home (odds ratio 1.9(0.84-8.32) at 95% CI and

parental issues at home (odds ratio 1.8(0.38-9.14) at 95% CI among participants came out be significantly associated with depression among study participants (Table 2) Physical activity for 30 minutes in a day for at least 5 days in a week was found to be significantly (p<0.02, odds ratio 0.20 (0.06-0.7 at 95%CI) beneficial for depression.

Discussion

The mean age of study population in our study was 22 ± 1.5 years. The overall prevalence of depression in our study was 74.6%. This was comparable to various studies previously done were 59%, 16.5%, 26% in Chandigarh by Singh M et al (9), in district Amritsar India (2014) by Kaur et al (10) and in Mangalore city by Sarah Nausad et al (11) respectively. Severe depression (5%) was found among female students which was similar to the study by Ashraful Islam et al. (12) among University students in Malaysia. This difference in prevalence could be attributed to cultural and socio-demographic profile of study population. Prevalence of depression among female students was found higher in our study. This observation was well supported by study of prevalence of depression in a university population by Mkize LP et al. (13) Increasing emotional and sociocultural issue may contribute to high prevalence of depression among female population.

Parental conflict in home was significantly associated with depression among study participants and this observation was in concordance with the finding of Zhang Y et al (14) in 2011 where parental care was directly associated with decrease level of depression. According to Greenberg et al (15) in 2000 strong parental support and bonding decrease the symptoms of depression. Financial issue at home (33%) was came out be stronger issue for depression at home in our study and this finding of our study was comparable to study conducted among students of Punjab university by Manjot singh et al in 2017 found 25% of participants having low economy had symptoms of depression (9) while Andrew Steptoe et al (16) in his study stated that poorer socioeconomic status was associated with depression .Low economy may lead to interpersonal conflict among family members and may not be able to full fill desired requirement of youth in family which may contribute as a strong predictor of mental health problem.

Majority (85%) of the students were having academic pressure. Heavy and hectic schedule of classes, unrealistic expectations and demands of parents and teachers contribute to academic stress among study population. Career and academic stress found to be a risk factor for depression among college students in a brief review study done by Bhujade et al (17) among college students. In our present study 71% of students got symptoms of depression when they are away from the internet and this observation was well supported by the previous study by Kaur S et al (10) in 2014 where 57% of college students feel depressed if get away for internet. Present study depicts that peer pressure is one of the major associate factor for depression. Interpersonal relationship among peer, academic rivalry and desire and demand contention contribute to stress among youth now days. A previous study conducted by Insira sarbeen et al (18) showed social stress such as relationship with peer groups and hostel friends had potential psychological influence. Various previous studies done by Nikita Margaret John et al (19) and Flona Moir et al (20) showed peer support acted as better resilience for depression among college students.

In our study physical activity found to be a protective factor (p<0.05, OR- 0.2) for depression. Evidence from the previous studies done by Pilu A et al (21) and Craft et al (22) suggested that physical activity have a significant role to alleviate the symptoms of depression even in major depressive disorder. Although recent studies have shown that physical activity have a significant role in decreasing depressive symptoms, there are still many questions and limitations to extrapolate these finding since literature claim limited role of physical activity in depression, we need further study to workout in this concept thoroughly. Present study showed all possible associated factors for depression among college going students. Relationship problem, family issue and parental over expectation on students found to be more significant among all. Workshops on well-being programme for students need to be started on regular basis. Student centred programmes individual consultations, personal issue should be addressed out of classroom activities. A youth club comprises of yoga classes, exercise, meditation and stress management workshop should be made a part of college curriculum.

Conclusion

Depression was found to be highly prevalent among college students. Our study represent depression as

the significant health concern among college going students nearly 3/4th of them are affected. Peer pressure, internet addiction, career pressure, financial issues at home, parental over expectation are found to be risk factors depression among college students.

Recommendation

Certain factors like education counselling, parenting, behaviour therapy should be focussed among college students and their parents to decrease the prevalence of depression. Psychological counselling to prevent internet addiction among students in order to improve the mental status and academic performance should be encouraged. Special attention to familial relationship and letting one to pursue their own dream should be done. Physical activity among students must be encouraged in order to prevent depression among students. New policy and interventions should be started targeting the specific age group according to their requirement.

Limitation of the study

Sample size is relatively small so the findings can not be generalized to the common population.

Relevance of the study

This study among college going students helped to assess the various factors associated with high prevalence of depression. Periodic psychological counseling for both students and their parents aid the situation better.

Authors Contribution

SK: Framing Hypothesis &study design. KN: Data collection & compilation. YB: Statistical analysis. RC: Review of literature and references

Acknowledgement

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Tables

TABLE 1 ASSOCIATION OF DEPRESSION WITH ITS CORRELATES

Association of depression with its correlates			
Variable	Subjects with depression (N=34) Frequency (%)	Subjects without Depression (N=92) Frequency (%)	Chi-squre value
Parental issue	23 (67)	16(17)	17.32***
Financial issue at home	24 (75)	18 (19)	18.75***
Parental Over expectation	23(67)	13(14)	16.36*
Relationship problem	11(32)	9(9)	9.47 **
Peer pressure	32(94)	82(89)	0.71
Exercise for 30 minutes 5 day in a week	24(75)	83(90)	7.47**
Away from the internet at least for one day	25(73)	69 (75)	0.28
Career Pressure	30 (88)	78(84)	.242

TABLE 2 MULTILEVEL LOGISTIC REGRESSION ON DEPRESSION

Multilevel logistic regression on depression				
Variable	β	P value	OR	OR (CI 95%)
Parental issue	.633	0.43	1.8	0.38-9.14
Financial issue at home	.683	0.35	1.9	0.84- 8.32
Relationship problem	1.8	0.03**	6.38	1.8-21
Peer pressure	1.55	0.12	4.73	0.65-20
Exercise for 30 minutes 5 day in a week	1.6	0.02**	0.20	0.06-0.7
Career Pressure	0.34	.65	0.70	0.15-3.5

Figures

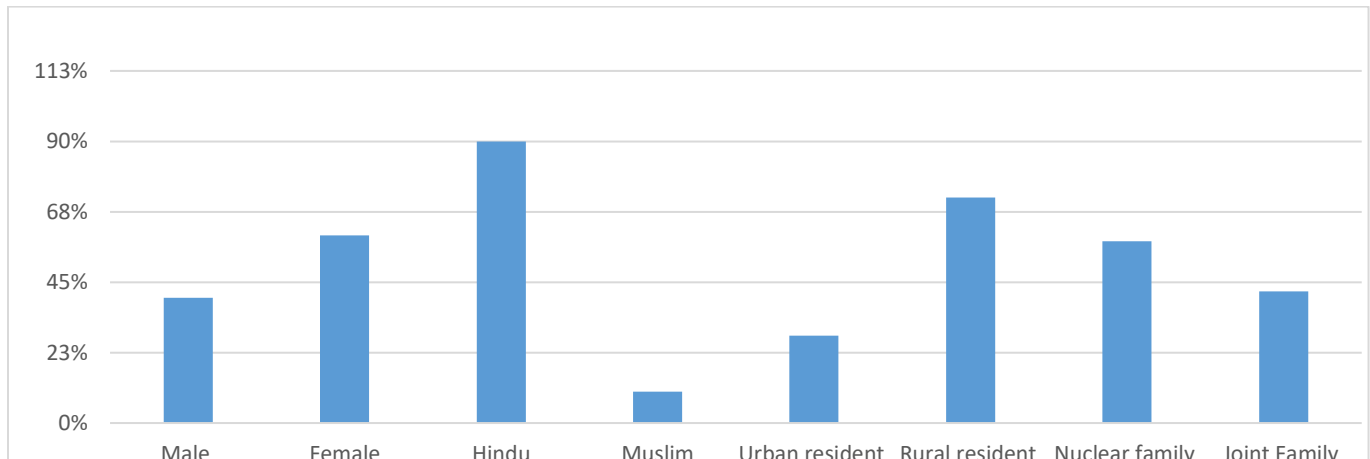## FIGURE 1 SOCIODEMOGRAPHIC PROFILE OF STUDY SUBJECTS
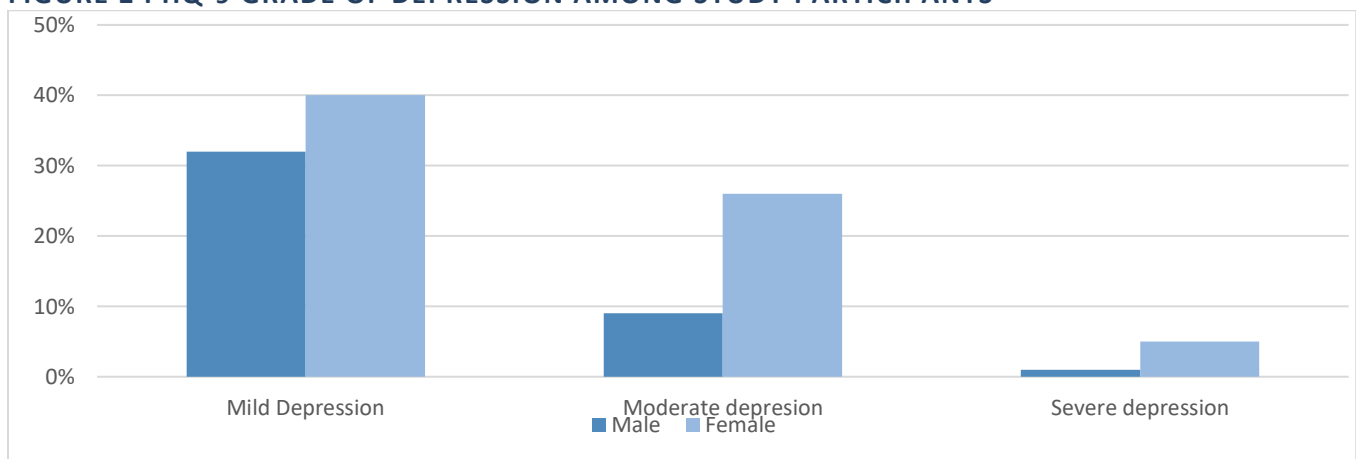

FIGURE 2 PHQ-9 GRADE OF DEPRESSION AMONG STUDY PARTICIPANTS

FIGURE 3 ASSOCIATED FACTOR WITH DEPRESSION (N=126)