Association of psychosocial factors at home with depression, anxiety and stress among adolescents in Srinagar Uttarakhand. A cross-sectional study

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ABSTRACT

Background: Globally, one in seven 10-19-year-olds experiences a mental disorder, accounting for 13% of the global burden of disease in this age group. Mental health of adolescents not only affects overall health at present but also has great impact on future life. Family interactions at home play indispensable role in mental health and overall development of adolescents. **Methods and Material**: Present cross-sectional study was conducted among 440 adolescents by using DASS 21 scale and interviewing them using a structured pretested questionnaire assessing psychosocial factors at home. Data analysis was done with help of SPSS version 21. Multivariate logistic regression was used to find predictors of depression, anxiety and stress. **Results**: Of 440 study adolescents, depression, anxiety and stress was respectively present among 58.9%, 69% and 43.40%. There is a statistically highly significant association between gender and different severity grades of depression (p-value= 0.001), anxiety (p-value <0.001) and stress (p-value = 0.004). Multivariate analysis using logistic regression revealed that students having frequent arguments with parents/family members were 1.97 times more likely to have depression compared to students responding no arguments with parents/family members (AOR=1.97 95%CI (1.29-3.01), p value=0.002). Other important predictors for depression are 'worry about their privacy at home' and 'want to run away from home'. Highly significant predictors for anxiety on multivariate analysis were unsupportive parents and worry about financial problems at home. **Conclusion**: Moderate, severe and extremely severe depression as well as anxiety are significantly higher among females compared to males. There is a need for improving assessed significant predictors at home by counselling parents, other family members and adolescents.

INTRODUCTION

India has highest adolescent population in world, around 253 million, which equals one-fifth of total Indian population and in Uttarakhand, 18% of total population are adolescents. (1,2) Mental health of adolescents is gaining more and more focus, as globally one in seven 10-19-year-olds experiences a mental disorder, accounting for 13% of global burden of disease in this age group.(3) WHO has defined adolescent well-being as "adolescents have the support, confidence and resources to thrive in contexts of secure and healthy relationships, realizing their full potential and rights".(4) Additionally, the term psychosocial is defined by American Psychological Association as "describing the intersection and interaction of social, cultural, and environmental influences on the mind and behaviour".(5) Known primary influences on

mental health include genetics, parents and caregivers, teachers, adequate nutrition, stable & safe homes, engaged and knowledgeable caregivers, and caring & enriching environments. Furthermore, any negative influences in homes, schools, or digital spaces interact over time and may further worsen the mental health of adolescent e.g. bullying, poverty, mental illness of a parent or other caregiver, exposure to violence etc. (3) Therefore, early identification of warning signs by parents or caregivers can preserve positive mental health and family interactions at home become most important in rightly shaping the way of thinking and overall development of adolescent.

Accordingly, to understand mental health of adolescent, we need to ask about family situation e.g. whether adolescent is living with parents (one or both) or a guardian, nature of adolescent's relationships whether they trust someone in family to talk about things that worry them, or whether they found their home environment supportive. (6) Data regarding prevalence of mental disorders among adolescents in Uttarakhand is still awaited. Hence, this study was conducted to find association of psychosocial factors at home with depression, anxiety and stress among adolescents in Srinagar Uttarakhand.

Aim & Objective(s) To find association of psychosocial factors at home with depression, anxiety and stress among adolescents in Srinagar Uttarakhand.

MATERIAL & METHODS
Present cross-sectional study was conducted among 440 school-going adolescents from classes 8th to 12th eight government and private schools in urban area of Srinagar Uttarakhand. Sample size was calculated using formula, $N= Z^2 p q/ d^2$, p is expected prevalence taken as 47.9, d is acceptable error= 5. (7) So calculated sample size was 383 and considering non-response rate of 15%, final sample size was 440. Multistage random sampling was used to select required sample. In the first stage, comprehensive list of all schools in urban area of Srinagar (Garhwal) having grades from class 8th to 12th grouped into government and private categories with enrolment numbers was obtained from District Education Office, Pauri Garhwal. In second stage, 4 government & 4 private schools were selected randomly from respective categories. All of the selected schools agreed to participate in study (school response rate=100%). In third stage list of students from classes 8th to 12th was prepared with help of school authorities and 220 students were randomly selected from government and 220 from private schools. Questionnaire for data collection was used in English as well as Hindi and consisted of sociodemographic variables, DASS 21 scale and 10 specific close ended dichotomous questions to assess perception of students towards their home environment. DASS 21 scale is a reliable and valid self-administered 21 item questionnaire measuring depression, anxiety and stress. Grading of depression was normal (0-9), mild (10-13), moderate (14-20), severe (21-27) and extremely severe (28+). Similarly, anxiety was graded as normal (0-7), mild (8-9), moderate (10-14), severe (15-19) and extremely severe (20+). For stress normal (0-14), mild (15-18), moderate (19-25), severe (26-33) and extremely severe (34+). (8) Face, content and construct validity were good on pilot testing for ten specific questions to know psychosocial factors at home for mental health assessment as part of HEADS assessment and home score was calculated based on yes/no responses on these questions. Response 'yes' was scored as 1 and 'no' as 0, and final score was sum of individual responses. None of questions were reverse scored and highest score thus possible was 10 and lowest 0. Reliability analysis of these ten items showed Cronbach alpha to be 0.69.

Ethical approval was taken from Institutional Ethics Committee (MC/IEC/2022-23/37). Assent and consent were taken from study adolescents. Consent was also taken principals and parents. Students were assured that their responses will be kept anonymous and confidential, and thus encouraged to be truthful in giving responses after explaining the purpose of study. Overall students' response rate was 100%.

Data collection was done from October 2022 till March 2024. Data was analysed using SPSS version 21. Multivariate analysis using logistic regression was used to find the variables which could predict mental disorder among adolescents. 2-tailed p value <0.05 was considered statistically significant. Cronbach's alpha on reliability analysis of DASS 21 responses was 0.906.

RESULTS
Mean age of study subjects was 15.65±1.50 years. Of 440 study adolescents, 248 (56.4%) were females and 192 (43.6%) were males. 101 (23%) and 339 (77%) were respectively from 10-14 years and 15-19 years age categories. Overall, 58.90% of study adolescents have depression, 69% have anxiety, and 43.40% have stress. Mild, moderate, severe and extremely severe depression, anxiety and stress were significantly higher among females as compared to males. Statistically highly significant association was found between gender and grades

of depression (p-value = 0.001) and anxiety (p-value = <0.001). Regarding class-wise variation, mild, moderate, severe and extremely severe depression and anxiety were significantly higher among class 12th students compared to other classes (p-value= 0.047, p-value= 0.005). Severity of stress was not significantly associated with class-standard however, observed frequencies are higher in higher classes. None of students from class 8th had severe or extremely severe depression or stress, and only one student from class 8th has extremely severe anxiety. Depression and anxiety severity were significantly higher among late adolescents. Majority of adolescents (66.4%) belong to nuclear type of family and there was no statistically significant association between type of family and severity of depression, anxiety and stress (Table 1) Multivariate analysis using logistic regression revealed that students having frequent arguments with parents/other family members were 1.97 times more likely to have depression, 1.84 times more likely to have anxiety, and nearly two times more likely to have stress compared to other

students with no arguments with parents/other family members, this was statistically significant ((AOR=1.97 95%CI (1.29-3.00), p value=0.002), (AOR=1.84 95%CI (1.16-2.90), p value=0.002), (AOR= 2.11 95%CI (1.38-3.23), p value=0.009)). 22.5% study adolescents responded that they usually don't want to spend time with family members, but this was not significantly associated with either depression, anxiety or stress. Students who usually worried about their privacy at home and responded that they want separate room at home, were 1.73 times more likely to have depression and 1.99 times more likely to have stress compared to students having no worries about privacy or separate room ((AOR=1.73 95%CI (1.11-2.69), p value=0.015), (AOR=1.99 95%CI (1.28-3.10), p value=0.002)). 31.8% of adolescents agreed that fights between parents affected them negatively and among them 65.9% have depression, 77.1% have anxiety, and 57.9% have stress. However, these findings are not statistically significant (Table2).

Table 1: Association between sociodemographic variables and severity grades of depression, anxiety and stress among study adolescents (N=440)

DASS- 21 findings	Gender		8th N (%)	9th N (%)	Classes 10th N (%)	11th N (%)	12th N (%)	Age group		Type of family	
	Female N (%)	Male N (%)						Early adolescent (10-14 years) N (%)	Late adolescent (15-19 years) N (%)	Join N (%)	Nuclear N (%)
Total	248 (56.4)	192 (43.6)	46 (10.5)	74 (16.8)	89 (20.2)	111 (25.2)	120 (27.3)	101 (23.0)	339 (77.0)	148 (33.6)	292 (66.4)
Depression											
Absent	89 (49.2)	192 (50.8)	29 (16)	40 (22.1)	30 (16.6)	43 (23.8)	39 (21.5)	55 (30.4)	126 (69.6)	58 (32)	123 (68)
Mild	49 (50.5)	48 (49.5)	7 (7.2)	14 (14.4)	22 (22.7)	24 (24.7)	30 (30.9)	20 (20.6)	77 (79.4)	39 (40.2)	58 (59.8)
Moderate	63 (61.2)	40 (38.8)	5 (4.9)	15 (14.6)	24 (23.3)	30 (29.1)	29 (28.2)	15 (14.6)	88 (85.4)	30 (29.1)	73 (70.9)
Severe	31 (81.6)	7 (18.4)	5 (13.2)	3 (7.9)	9 (23.7)	8 (21.1)	13 (34.2)	9 (23.7)	29 (76.3)	14 (36.8)	24 (63.2)
Extremely severe	16 (76.2)	5 (23.8)	0 (0)	2 (9.5)	4 (19.0)	6 (28.6)	9 (42.9)	2 (9.5)	19 (90.5)	7 (33.3)	14 (66.7)
Chi-square (p-value)	19.301 0.001				26.59 0.047			12.27 0.016		3.196 0.526	
Anxiety											
Absent	61 (44.2)	77 (55.8)	22 (15.9)	34 (24.6)	23 (16.7)	31 (22.5)	28 (20.3)	44 (31.9)	94 (68.1)	42 (30.4)	96 (69.6)
Mild	50 (51)	48 (49)	8 (8.2)	9 (9.2)	19 (19.4)	28 (28.6)	34 (34.7)	19 (19.4)	79 (80.6)	36 (36.7)	62 (63.3)
Moderate	45 (54.2)	38 (45.8)	12 (14.5)	11 (13.3)	15 (18.1)	22 (26.5)	23 (27.7)	18 (21.7)	65 (78.3)	28 (33.7)	55 (66.3)
Severe	30 (63.8)	17 (36.2)	3 (6.4)	7 (14.9)	16 (34.0)	11 (23.4)	10 (21.3)	7 (14.9)	40 (85.1)	18 (38.3)	29 (61.7)
Extremely severe	62 (83.8)	12 (16.2)	1 (1.4)	13 (17.6)	16 (21.6)	19 (25.7)	25 (33.8)	13 (17.6)	61 (82.4)	24 (32.4)	50 (67.6)
Chi square (p-value)	33.278 0				34.311 0.005			9.943 0.041		1.561 0.816	
Stress											
Absent	125	123	34	43	45	69	57	66	182	75	173

DASS-21 findings	Gender		Classes					Age group		Type of family	
	Female N (%)	Male N (%)	8th N (%)	9th N (%)	10th N (%)	11th N (%)	12th N (%)	Early adolescent (10-14 years) N (%)	Late adolescent (15-19 years) N (%)	Join N (%)	Nuclear N (%)
	(50.4)	(49.6)	(13.7)	(17.3)	(18.1)	(27.8)	(23.0)	(26.6)	(73.4)	(30.2)	(69.8)
Mild	42	31	6	12	13	18	24	12	61	24	49
	(57.5)	(42.5)	(8.2)	(16.4)	(17.89)	(24.7)	(32.9)	(16.4)	(83.6)	(32.9)	(67.1)
Moderate	46	30	5	12	22	12	25	15	61	35	41
	(60.5)	(39.5)	(6.6)	(15.8)	(28.9)	(15.8)	(32.9)	(19.7)	(80.3)	(46.1)	(53.9)
Severe	27	6	1	6	7	9	10	8	25	11	22
	(81.8)	(18.2)	(3.0)	(18.2)	(21.2)	(27.3)	(30.3)	(24.2)	(75.8)	(33.3)	(66.7)
Extremely severe	8	2	0	1	2	3	4	0	10	3	7
	(80.0)	(20.0)	(0)	(10.0)	(20.0)	(30.0)	(40.0)	(0.0)	(100.0)	(30.0)	(70.0)
Chi square	15.123		18.361					7.085		6.608	
(p-value)	0.004		0.303					0.131		0.158	

Table 2: Association of psychosocial factors at home with depression, anxiety and stress among study adolescents using multivariate logistic regression (N=440)

| Variables	Total N= 440 (Column%)	Depression present n = 258 (Row%)	aOR(CI)	p-value	Anxiety present n = 302 (Row%)	aOR(CI)	p-value	Stress present n = 192 (Row%)	aOR(CI)	p-value
Frequent arguments between parents/guardians and adolescent										
No	219 49.0%	110 49.80%	1ref	0.002	134 60.60%	1ref	0.009	72 32.60%	1ref	0.001
Yes	221 51.0%	148 67.60%	1.97 (1.29-3.00)		168 76.70%	1.84 (1.16-2.90)		120 54.80%	2.11 (1.38-3.23)	
Usually don't want to spend time with family members										
No	341 77.50%	192 56.30%	1ref	0.93	226 66.30%	1ref	0.884	132 38.70%	1ref	0.087
Yes	99 22.50%	66 66.70%	0.97 (0.58-1.64)		76 76.80%	0.95 (0.53-1.71)		60 60.60%	1.56 (0.93-2.60)	
Worry about their privacy at home/need a separate room at home										
No	247 56.20%	126 51.00%	1ref	0.015	160 64.80%	1ref	0.946	83 33.60%	1ref	0.002
Yes	193 43.80%	132 68.40%	1.73 (1.11-2.69)		142 73.60%	1.016 (0.63-1.62)		109 56.50%	1.99 (1.28-3.10)	
Fights between parents which affects adolescent										
No	300 68.20%	166 55.30%	1ref	0.664	194 64.70%	1ref	0.613	111 37.00%	1ref	0.316
Yes	140 31.80%	92 65.70%	0.89 (0.55-1.45)		108 77.10%	1.14 (0.67-1.93)		81 57.90%	1.27 (0.79-2.03)	
Get physical punishment at home										
No	358 81.40%	204 57.00%	1ref	0.942	241 67.30%	1ref	0.626	151 42.20%	1ref	0.224
Yes	82 18.60%	54 65.90%	0.97 (0.55-1.73)		61 74.40%	0.85 (0.45-1.61)		41 50.00%	0.69 (0.39-1.24)	
Parents use abusive language with adolescent										
No	349 79.00%	200 57.50%	1ref	0.538	232 66.50%	1ref	0.946	139 39.80%	1ref	0.187
Yes	91 21.00%	58 63.70%	0.84 (0.49-1.44)		70 76.90%	0.97 (0.53-1.78)		53 58.20%	1.43 (0.84-2.43)	
Adolescents find their parents to be unsupportive										
No	312 70.90%	165 52.90%	1ref 1.54	0.102	192 61.50%	1ref 2.95	0.001	113 36.20%	1ref 1.77	0.026
Yes	128 29.00%	93 72.70%	(0.91-2.58)		110 85.90%	(1.59-5.46)		79 61.70%	(1.06-2.93)	
Adolescents get scared of someone in the family										
No	303 68.80%	165 54.50%	1ref	0.14	197 65.00%	1ref	0.256	120 39.60%	1ref	0.161
Yes	137 31.20%	93 67.90%	1.42 (0.89-2.28)		105 76.60%	1.35 (0.80-2.26)		72 52.60%	1.39 (0.87-2.23)	
Want to run away from home										
No	329 74.50%	175 53.20%	1ref	0.009	211 64.10%	1ref	0.125	128 38.90%	1ref	0.413
Yes	111 25.50%	83 74.80%	1.99 (1.18-3.37)		91 82.00%	1.58 (0.88-2.85)		64 57.70%	1.22 (0.75-2.01)	

Variables	Total N= 440 (Column%)	Depression present n = 258 (Row%)	aOR(CI)	p-value	Anxiety present n = 302 (Row%)	aOR(CI)	p- value	Stress present n = 192 (Row%)	aOR(CI)	p-value
Worry about financial problems at home										
No	278 63.10%	151 54.30%	1ref	0.157	170 61.20%	1ref	0.001	104 37.40%	1ref	0.054
Yes	162 36.90%	107 66.00%	1.36 (0.88-2.11)		132 81.50%	2.3 (1.40-3.77)		88 54.30%	1.53 (0.99-2.36)	

Regarding use abusive language with adolescents by parents 21% agreed that their parents use abusive language with them and among them 63.7% have depression, 76.9% have anxiety, and 58.2% have stress, however, these findings are not statistically significant. Similarly, 18.6% study adolescents got physical punishment at home, and on multivariate analysis this was not significant predictor for depression, anxiety or stress, however 42.5% of students had no depression if they didn't get physical punishment at home. Adolescents who felt that their parents were unsupportive, were 2.95 times more likely to have anxiety (AOR= 2.95 95%CI (1.59-5.46), p value=0.001), and 1.77 times more likely to have stress (AOR= 1.77 95%CI (1.06-2.93), p value=0.026) compared to those adolescents who found parents to be supportive. 31.2% got scared of someone in family. Another important significant predictor for depression was want to run away from home (AOR=1.99, 95%CI (1.18-3.37), p value=0.009), but this is not significantly associated with anxiety and stress. Highly significant predictor for anxiety on multivariate analysis was worry about financial problems at home. 66% of study adolescents have depression, 81.5% have anxiety and 54.3% have stress, if they worry about financial problems at home (Table 2).

Overall mean score of 440 adolescents is 3.1±2.1. Mean score on home environment perception variables shows an increase with different severity grades of depression, anxiety and stress. Mean scores among study adolescents with no depression, no anxiety and no stress were respectively 2.4±2.1, 2.1±1.7 and 2.4±1.9. There is statistically significant difference between mean scores among normal study adolescents and study adolescents with moderate, severe and extremely severe depression, anxiety and stress. Standard deviation is also smaller among study adolescents with no depression, anxiety or stress and thus more reliable (Figures 1, 2, 3).

Figure 1,2,3: Error bar graph showing association between home environment perception score with severity grades of depression, anxiety and stress among study adolescents (N=440)
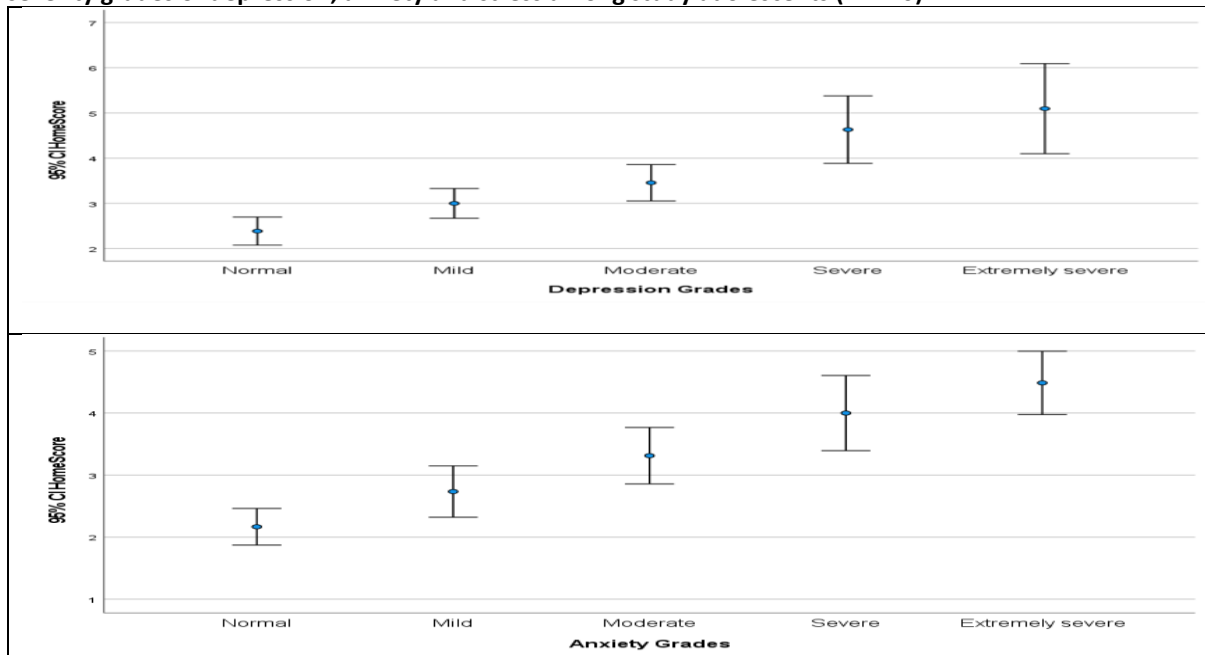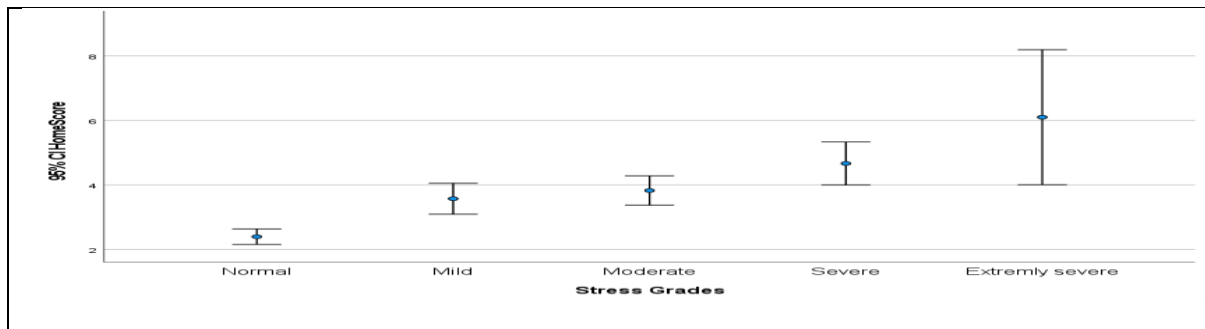
DISCUSSION

Present study explored the psychosocial factors at home among 440 adolescents and revealed their association with depression, anxiety and stress using DASS 21. In our study 58.9% of study adolescents were found with depression, 69% had anxiety & 43.40% had stress. Statistically, highly significant association was found between gender and severity grades of depression, anxiety as well as stress. On score-based assessment, severity of all three conditions is found significantly associated with psychosocial factors at home. Similar prevalence along with severity grades revealed in previous studies using different scales. (9-14) Also in our study, class-wise variation showed that severe & extremely severe depression and anxiety were significantly higher among class 12th students compared to other classes. Similar findings by Singh S et al in Lucknow where higher prevalence of depression & anxiety was found among students of 12th class and severe anxiety is present among 20% of class 12th adolescent girls. (15)

In our study subjective insight of home environment by adolescents is associated significantly with severity grades of depression, anxiety and stress. Similarly, in a study by Jeny et al in Kerala reveals that psychological well-being of adolescents is solely a function of subjective environment of home of which he/she is a part.(16) Also, HEADS assessment approach for adolescents gives first priority to home assessment(6) Chaudhary J et al in urban Rishikesh revealed family-related factors to have significant impact on adolescents' psychosocial health.(17) In our study significantly more students had no depression, anxiety or stress if they don't argue with their parents frequently. Arguments may reflect self-expression of thoughts which is good but also show non-acceptance of their views by parents or other family members, which can negatively affect their mental health if this happens frequently. Previous studies have also shown that adolescents in families where there is conflict are more likely to experience depression and if excessive, is associated with behavioural problems. (18,19) More than one-fifth of students don't want to spend time with their family members and observed frequencies of depression, anxiety or stress are higher among them. Previous study by Singh S et al in Lucknow revealed that adolescents having positive relationships with their parents are less likely to experience depression and among adolescent girls with depression and anxiety symptoms, it was not easy to discuss problems with parents and unnecessary restrictions present, and these were significantly associated. (20) So, while spending time with family members is important, it may also interfere with busy academic schedules or digital spaces. Das T et al found that 12% of subjects lacked freedom to express opinions and 40% were not given any time by parents to listen to their concerns. (21) In present study significantly, higher number of study adolescents had no depression, stress or anxiety, if they don't need separate room at home as compared to those who worry about their privacy and need a separate room at home. This may be due to their inability to cope up with distractions present in home environment. In our study more than one third adolescents responded that parental fights negatively effective them. Likewise, in a systematic review by Aggarwal S et al it was found parental fights, and strained familial relationships were associated with behavioural problems and psychiatric morbidity among Indian adolescents. (19)

Highly significant predictor for anxiety in multivariate analysis was worry about financial problems at home in our study, this is in accordance with findings of the review among Indian adolescents. (19) Unsupportive parents' perception by students was significantly associated in multivariate analysis with anxiety and stress. Want to run away from home was important significant predictor for depression in our study. This reflects that they have no one to trust at home at all and overall lack of faith at home. Parents may sometimes be unaware of such perception and they should be counselled to identify early warning signs and build supportive environment at home. This is in close resemblance with finding of Deb S et al in Kolkata that more than half were not comfortable

in sharing their personal problems with their parents. (22)

In our study use of abusive language by parents and physical punishment was reported by 21% and 18.6% students respectively. Comparatively higher frequencies of depression were observed among these students, not found significant on multivariate analysis. On the contrary, Singh M et al in Chandigarh found that beating or scolding by parents or other family members was significantly associated with depression. (10) Das T et al found 43.31% of adolescents & young adults have encountered physical violence from their parents, which is higher than 18.6% in our study. In our study significantly, more students had no depression, no stress and no anxiety, if they find their parents are supportive (p<0.001). (21) Similar findings were revealed by Shaikh B M et al and Chaudary J et al where strict parental behaviour was associated with higher levels of mental health problems. (11,17)

CONCLUSION & RECOMMENDATION
Present study concluded that parental fights, worry about privacy at home, worry about financial problems at home, unsupportive nature of parents are associated with poor mental health of adolescents. Educating parents to help them understand early warning signs and rightly shape their way of thinking. Parents should encourage self-expression, be supportive, encourage healthy coping and problem-solving skills.

LIMITATION OF THE STUDY
Sample size is small and DASS-21 scale is not diagnostic of depression, anxiety and stress. Since the study was cross-sectional, a cause-and-effect relationship was challenging to establish. This was a school-based study and home environment assessment was based on perception of students, which can be better assessed at home and was not feasible.

RELEVANCE OF THE STUDY
The present study emphasizes that psychosocial factors at home are significantly associated with depression, anxiety and stress among adolescents, and mental health can worsen with time if such factors are not timely addressed during this transitional phase of development and can result in serious psychiatric disorders later on in life.

AUTHORS CONTRIBUTION
All authors have contributed equally.

DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS.
During the process of work, the authors have not used any AI tools.

REFERENCES
1. World Health Organization. Adolescent health in South-east Asia region, 2021. Available from https://www.who.int/southeastasia/health-topics/adolescent-health, accessed 12 Dec 2024.
2. National Health Systems Resource Centre (NHSRC). Health Dossier 2021: Reflections on Key Health Indications-Uttarakhand. Available from https://nhsrcindia.org/sites/default/files/practice_image/HealthDossier2021/Uttarakhand.pdf, accessed 12 Dec 2024.
3. WHO factsheet. Mental health of adolescents 17 November 2021 https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health, accessed 12 Dec 2024.
4. Global Accelerated Action for the Health of Adolescents (AA-HA!): guidance to support country implementation, second edition. Geneva: World Health Organization; 2023.
5. American Psychological Association. APA Dictionary of Psychology. Available from https://dictionary.apa.org/psychosocial, updated on 19 April 2018, accessed 31 August 2024.
6. Ministry of Health and Family Welfare, Government of India. Rashtriya Kishor Swasthya Karyakram (RKSK). Facilitator's Guide, Training manual for Medical Officers; Module XI: Mental Health in Adolescents 2014:183-222.
7. Kumar A, Yadav G, Chauhan N, Bodat S. Prevalence of depression, anxiety and stress among school going adolescents in Delhi: a cross-sectional study. International Journal of Community Medicine and Public Health 2019; 6 (12):5021-5026.
8. Lovibond, S.H. & Lovibond, P.F. Manual for the Depression Anxiety Stress Scales (2nd. Ed.), 1995. Sydney: Psychology Foundation.
9. Kamath P, Dsouza SM, Mahapatra S, Jayakumar S. Prevalence of depression among school going adolescents in India: a systematic review and meta-analysis of cross-sectional studies. International Journal of Community Medicine and Public Health 2021; 8(2): 833-840.
10. Singh M, Gupta M, Grover S. Prevalence & factors associated with depression among school going adolescents in Chandigarh, north India. Indian J Med Res 2023; 158: 494-504.
11. Shaikh BM, Doke PP, Gothankar JS. Depression, anxiety, stress, and stressors among rural adolescents studying in Pune and a rural block of Nanded district of Maharashtra, India. Indian J Public Health 2018; 62:311-4.
12. Verma A, Rao AP, Andrews T, Binu VS. Prevalence of stress and depression among adolescents in Udupi taluk, Karnataka. J Comm Health. 2019; 31, 1: 132-136.

13. Nakie G, Segon T, Melkam M, Desalegn GT, Zeleke AT. Prevalence and associated factors of depression, anxiety and stress among high school students in Northwest Ethiopia. BMC Psychiatry 2022; 22: 739.

14. Maheshwari SK, Chaturvedi R, Gupta S. Impact of family environment on mental wellbeing of adolescent girls: A cross-sectional survey. Indian J Psy Nsg 2020; 17:24-8.

15. Singh S, Singh SK, Kar SK, Manar MK, Gupta A. Perception of self and its effect on anxiety and depression among adolescent girls. J Family Med Prim Care 2024; 13:107-11.

16. Jeny Rapheal, D K Damodaran, Varghese Paul K. Influence of Home Environment on Adolescent Psychological Well-being. International Journal of Indian Psychology 2014;2(1): ISSN 2348-5396.

17. Chaudary J, Kishore S, Bhadoria AS, Aggarwal P. Family-related factors and its impact on psychosocial health of school-going adolescents of Urban Rishikesh, Uttarakhand. Indian J Soc Psychiatry 2020; 36:333-7.

18. Zhang J, Buchanan GJR, Piehler TF, Gunlicks SM, Bloomquist ML. The Relationship Between Parent-Adolescent Conflict Dynamics and Adolescent Depression. Journal of Child and Family Studies 2022; 31: DOI: 10.1007/s10826-022-02318-w.

19. Aggarwal S, Berk M. Evolution of adolescent mental health in a rapidly changing socioeconomic environment: a review of mental health studies in adolescents in India over last 10 years. Asian J Psychiatr 2015; 13:3-12.

20. Singh S, Singh SK, Manar MK, Kar SK, Gupta A. Perception of home environment and its effect on the mental health of school-going adolescent girls of Lucknow: a cross-sectional study. Int J Community Med Public Health 2022; 9(8):3125-31.

21. Das T, Das P, Kundu P, Roy TB. Individual and parental factors on depressive disorder and its detrimental effects among adolescents and young adults: A study from Bihar state.

22. Deb S, McGirr K, Bhattacharya B, Sun J. Role of Home Environment, Parental Care, Parents' Personality and Their Relationship to Adolescent Mental Health. J Psychol Psychother 2015; 5: 223.