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# Do social phobia and depression go hand in hand? A cross-sectional study among school-going adolescents of Northern region of India

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## Abstract:

**BACKGROUND:** The preeminent mental health conditions, namely social phobia and depression among adolescents, usually remain incognito. The transition period from childhood to adulthood makes adolescents more liable for low amour-propre, loneliness, and even increases the suicidal tendencies among them. To burgeon the knowledge regarding social phobia and depression among adolescents, the present study was put forward with the objective to assess the prevalence of social anxiety disorders (social phobia) and depression among adolescents.

**MATERIALS AND METHODS:** A cross-sectional study was conducted for 2 months on 600 students aged 10–19 years belonging to classes VIII–XII of government and private schools in the Dehradun district recruited through multistage random sampling technique. A pre-tested semi-structured questionnaire having sociodemographic details, validated self-administered tools, Social Phobia Inventory tool, and Kutchers Adolescent Depression Scale (Cronbach's alpha: 0.77 and 0.79) were used. Statistical package for social sciences, version 23 was used for data analysis. Chi-square test, Fisher exact test, and Pearson correlation analysis were used for analysis

**RESULTS:** Prevalence of social phobia was found to be 37% among school-going adolescents. Further, 23.7% of the study participants had mild social phobia, while moderate and severe phobia was seen among 11.5% and 2.3%, respectively. Females had more moderate and severe social phobia than males. Adolescents of government schools had more moderate affective distress and somatic distress as compared to adolescents of private schools.

**CONCLUSION:** Social phobia and depression among school-going adolescents are on the upsurge. The present study shows that social phobia and depression have a strong correlation among themselves, which needs to be addressed as expeditiously as possible. Coping strategies and social skill therapy and programs are pressing priorities for the fulgent future of adolescents.

## Keywords:

Adolescent, depression, KADS, social phobia, SPIN

## Introduction

Social phobia is defined as “an anxiety disorder that is characterized by a strong and persistent fear of social situations or performance in which the person might feel embarrassed or humiliated.”<sup>[1]</sup> The prevalence rate for social phobia ranges from 4.0% to 25.0%<sup>[2]</sup> and is higher in community surveys

as compared to clinical settings.<sup>[3-5]</sup> In India, very few studies have been conducted in the context of social phobia, and the prevalence ranges from 10.3% to 38.3%.<sup>[1,6-8]</sup> However, these figures are mostly underestimated as social phobia goes undiagnosed among adolescents due to the internalized nature of the symptoms.<sup>[9]</sup> The negative effects of biological, psychosocial, and environmental

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factors lead to the development of a feeling of loneliness, low self-esteem, and difficulty in forming friends among adolescents.<sup>[10]</sup>

In India, a study stated that anxiety among school-going children is mainly due to high expectations of parents from children, and they impose tremendous pressure on the adolescents for better academic achievement.<sup>[11]</sup> Secondary examinations play a vital role in a student's life; an Indian study reported that in one year, 2320 children committed suicide due to failure in examinations.<sup>[12]</sup> Previous empirical studies have shown the correlation of anxiety with sociodemographic characteristics such as gender, working mothers, and with parenting practices.<sup>[13,14]</sup> Social anxiety disorders (SADs) are also associated with other anxiety disorders (65%), nicotine dependence (27%), and substance use disorder (20%).<sup>[15]</sup> Adolescents with SADs tend to face difficulty in making friends.<sup>[16]</sup> The chances of personality disorders get reduced if the anxiety disorders are treated successfully.<sup>[17]</sup> Many studies have shown that impairment and distress in studies and making social relationships are often seen among adolescents who have SADs.<sup>[18-21]</sup> The earlier the onset of SADs, the longer the duration of illness as the individuals who remain untreated suffer for a long time.<sup>[22]</sup> Because a very limited number of studies have addressed anxiety disorders among school-going adolescents in India, it is considered as an important issue to explore as it may lead to deterioration in daily activities, academic performance, social and interpersonal growth, and poor family and social life, ultimately resulting in poor quality of life.<sup>[23]</sup> Therefore, a school-based survey was planned with the objectives to assess the proportion of school-going adolescents that are affected with SADs and depression and to find out the correlation between social phobia and depression among them.

## Materials and Methods

**Study design and setting:** A cross-sectional study was conducted for 2 months (May–June 2019) among the school-going adolescents of government and private schools of the Doiwala region of Dehradun district in Uttarakhand, India.

**Study participants and sampling:** School-going adolescents aged 12–19 years of class 8<sup>th</sup>–12<sup>th</sup> were recruited in the study by using a multistage random sampling technique. Students who filled out the assent form for participation in the study were included. Students who were absent on the day of questionnaire filling and were acutely sick at the time of filling of the questionnaire were excluded. Based on 38.3%<sup>[7]</sup> prevalence of social phobia among adolescents with an absolute precision of 4%, the minimum sample size estimated was about 567. A multistage random sampling

technique was used in which one block out of six of the Dehradun district was selected through simple random sampling. From the selected block, the list of secondary and senior secondary schools (government and private) present in that block was arranged in alphabetical order. Through systematic random sampling, six schools were selected (three government and three private). Among the selected schools, from each school, 20 students from class VIII till class XII (each) were selected randomly, thus comprising 100 students from each school. Thus, total 600 students were enrolled in the study.

**Data collection tool and technique:** A pilot study was conducted on 30 students to check the validity of both the questionnaire wherein Cronbach alpha for Social Phobia Inventory Tool was 0.77 and for Kutcher Adolescent Depression Scale was 0.79. The outcome of the pilot study was not included in the final results. After getting the assent form filled by the students, the pre-designed, pre-tested semi-structured, self-administered questionnaire including sociodemographic details and validated tool to assess social phobia and depression was distributed to them.

**Social Phobia Inventory Tool (SPIN):**<sup>[24]</sup> This self-rating scale consisting of 17 items was developed by K. M. Connor for screening social phobia with a sensitivity of 73%–85% and a specificity of 69%–84%. Each item is rated in the range of 0–5. The maximum score is 68. For interpretation:

Score- Social phobia

<20: No

21–30: Mild

31–40: Moderate

41–50: Severe

>50: Very Severe

**Kutcher Adolescent Depression Scale (KADS 11):**<sup>[25]</sup> This scale consists of an 11-item scale to assess the cognitive, behavioral, affective, and somatic symptoms of depression among adolescents. Depending upon the severity of the symptom, each item in the tool has a score that ranges from 0 to 3. The maximum score is 33. The scale has internal consistency reliability (CI = 0.76).

Interpretation of Scores for Depression:

<11: Mild

11–22: Moderate

23–33: Severe

Based on the scores generated, the students were classified as normal, mild, moderate, or severe for social phobia and depression. Statistical Package for Social Sciences, version 23 (SPSS-23, IBM, Chicago, USA) was used for data analysis. To check the association between dependent and independent variables, Chi-square and Fisher exact test were used. Pearson correlation analysis was used to evaluate the correlation between anxiety and depression symptoms. A minimum two-sided 95% confidence interval or  $P < 0.05$  was considered as statistically significant.

**Ethical consideration:** The study was approved by the institutional ethical committee (IEC No.: SRHU/HIMS/PHARMA/E-1/2019/05) of the university and approval was taken from the concerned bodies. It was part of a short-term student project conducted by ICMR (Reference ID: 2019-03249). Written informed consent from the school authorities was taken before collecting the data. Consent was also taken from the parents of the students prior to data collection.

## Results

In the present study, 600 participants were recruited, that is, 300 participants from government schools and 300 from private schools, out of which, 54% were boys and 46% girls. Most (75.7%) of the study participants belonged to the rural area, were Hindus (87.2%), and hailed from nuclear family (72.7%). The majority (67.5%) of the study participants had small families, and most (47.2%) of the study participants were of first birth order [Table 1]. The parents of maximum participants (91%) were living together. Mothers of the majority (24.7%) of participants were educated up to intermediate level and most (81%) were housewife. Fathers of the majority (29.5%) of participants had education up to graduation and above. Most (76.3%) of the study participants had a per capita income of less than Rs 20,000 and belonged to the upper socioeconomic status (72.2%) [Table 2].

The proportion of social phobia among study participants was 23.7% (mild social phobia), followed by 11.5% (moderate phobia) and 2.3% (severe phobia). None of the study participants fell into the category of very severe social phobia. The majority (63.2%) of the study participants had mild depression, followed by 34.5% and 2.3% cases of moderate and severe depression, respectively. It was found that 70.3% of girls had mild depression, while 19.9% of the girls had mild social phobia. Further, 57.1% of boys were mildly depressive, while 26.9% of boys were having mild social phobia. Boys were found to be having more moderate-severe depression as compared to females, while females had more moderate-severe social phobia [Figure 1].

**Table 1: Sociodemographic details of the study participants**

Characteristics	Study Participants (n=600)	
	Number (n)	Percentages (%)
Gender		
Male	324	54
Female	276	46
Type of Area of Permanent Residence		
Urban	146	24.3
Rural	454	75.7
Religion		
Hindu	523	87.2
Muslim	43	7.2
Christian	8	1.3
Sikh	26	4.3
Caste		
General	434	72.3
OBC	133	22.2
SC	31	5.2
ST	2	0.3
Type of Family		
Nuclear	521	86.8
Joint	79	13.2
Family Size		
Small	375	62.5
Large	225	37.5
Birth Order		
First	283	47.2
Second	202	33.7
Third or more	115	19.1

The distribution of study participants according to their SPIN and KADS scores into different grades of social phobia and depression based on type of school was done and showed mild to moderate depression to be almost equal among students of government and private schools; however, severe depression was seen more among students at private schools (3.0%) as compared to government school students (1.7%). Among the government school students, 21.3% had mild phobia, which was lower than adolescents who belonged to private schools (26%). Moderate and severe grades of social phobia were seen higher among private-school (15.3% and 2.7%, respectively) adolescents as compared to government-school adolescents (7.7% and 2%, respectively). The mean and standard deviation for the response of each item of the Social Phobia Inventory Tool by the study participants based on the type of school are shown in Table 3. For items such as "avoid giving speeches," study participants of both government and private schools had mean (SD) ranging from 1.23 to 1.54 (0.96–1.41), which was maximum as compared to other items. The lowest mean (SD) 0.44–0.48 (0.82–0.83) was for the item "scared of parties & social events" for study participants of both government and private schools. In Table 4, the mean (SD) KADS

**Table 2: Distribution table showing information related to the parents of the study participants**

Characteristics	Study Participants	
	Number (n)	Percentages (%)
<b>Marital Status of Parents (n=600)</b>		
Living together	546	91
Not living together	12	2
Separated/Divorced	2	0.3
Widow/Widower	40	6.7
<b>Educational Profile of Mother (n=600)</b>		
Illiterate/expired	27	4.5
Primary Level	72	12
High School	207	34.5
Intermediate	147	24.5
Graduate and Above	147	24.5
<b>Educational Profile of Father (n=600)</b>		
Illiterate	36	6
Primary Level	57	9.5
Middle School	66	11
High School	108	18
Intermediate	156	26
Graduate and Above	177	29.5
<b>Mother's Occupation (n=600)</b>		
Housewife	486	81
Employed	114	19
<b>Father's Occupation (n=600)</b>		
Unemployed	32	5.3
Employed	568	94.7
<b>Per Capita Income (in Rs)</b>		
<20000	458	76.3
20001-40000	103	17.2
>40000	39	6.5
<b>Socio-Economic Status (According to Modified B.G. Prasad classification)</b>		
I (Upper)	433	72.2
II (Upper Middle)	115	19.2
III (Middle)	27	4.5
IV (Lower Middle)	16	2.7
V (Lower)	9	1.5

scores are shown, in which mean (SD) 0.86–1.16 (1.07–1.09) for item “feeling decreased interest in hanging out or doing work” was found to be maximum as compared to other items in study participants of both government and private schools. The lowest mean (SD) 0.47–0.51 (0.78–0.89) was for the item “Thoughts, plans, or actions about suicide” for study participants of both government and private schools. Table 5 shows the association between social phobia and depression among the study participants based on the scores of SPIN and KADS tools. In both government and private school students, the results show that there is a significant ( $P < 0.001$ ) association between social phobia and depression among the students. Table 6 shows that on applying the Pearson correlation coefficient computed to assess the relationship between the scores

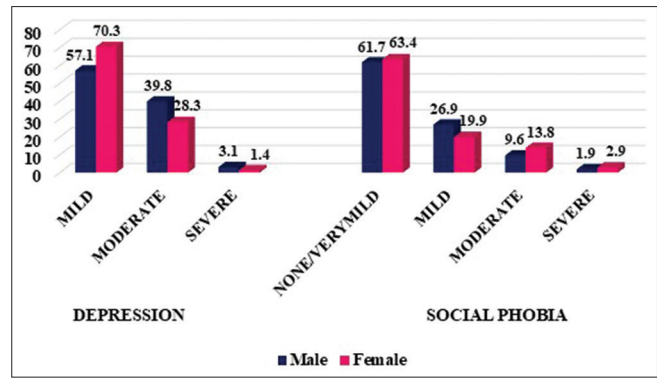


Figure 1: Graph showing the gender-wise prevalence of Social Phobia & Depression according to the severity level

obtained by the responses of the study participants for SPIN and KADS, there was a positive correlation between the two variables,  $r = 0.426$ ,  $n = 600$ ,  $P < 0.0001$ . Scatter plot showing  $R^2 = 0.182$  and regression equation  $y = 0.2523x + 5.0948$  summarizes the results. Overall, there was a strong positive correlation between social phobia and depression among school-going adolescents.

## Discussion

The present study found that 37.5% of school-going adolescents had social phobia; 11.5% had moderate and 2.3% had severe social phobia. The figures are nearly in consensus with the studies by Archana *et al.* and Jayashree *et al.*, which showed the prevalence of social phobia to be 39.7% and 40.8% among the students.<sup>[26,27]</sup> However, this was in stark contrast to the study conducted by Chhabra *et al.* and Mehtalia *et al.*, which reported the prevalence of SAD to be 10.3 and 12.8 percent, respectively.<sup>[1,8]</sup> In the current study, mild social phobia was seen among 24.1% (53) of adolescents, while 13.9% of adolescents had moderate and 1.6% had severe SAD. The study findings are almost similar to the study by Harikrishnan *et al.*<sup>[7]</sup> conducted on 561 students and stated that 14.6% of study participants had moderate level of social anxiety while 2.5% had severe social anxiety. The possible explanation for this is that the use of different screening tools to assess social phobia (SAD) may have led to varied results.

The findings of this study show that among the government school study participants, the maximum proportion of adolescents had no social phobia while 21.3% had mild phobia, which was lower than adolescents who belonged to private schools (26%). Moderate to severe grade of social phobia was seen higher among the private school adolescents as compared to government school adolescents. The type of school was also found to be significantly associated with social phobia among the study participants. The findings were in contrast to the study by Farooq *et al.*<sup>[28]</sup> that showed social anxiety was

**Table 3: Mean (SD) scores of the items of Social Phobia Inventory Tool (SPIN)**

Item	School	Total Mean±SD		
		Government Mean±SD	Private Mean±SD	
1	Afraid of people in authority	1.01±1.12	1.07±1.09	1.04±1.10
2	Bothered by blushing in front of people	0.96±1.00	1.03±1.05	0.99±1.02
3	Scared of parties and social event	0.48±0.82	0.44±0.83	0.46±0.82
4	Avoid talking to strangers	1.09±1.06	1.80±1.47	1.45±1.32
5	Scared by criticism	1.34±1.18	1.26±1.24	1.30±1.21
6	Fear of embarrassment	1.21±1.24	1.39±1.34	1.30±1.30
7	Distress by sweating in front of people	0.72±0.98	0.88±1.14	0.80±1.06
8	Avoid going to parties	0.67±1.04	0.82±1.19	0.75±1.12
9	Avoid activities in which they are Centre of attraction	0.93±1.02	1.05±1.25	0.99±1.14
10	Scared by talking to strangers	1.17±1.14	1.18±1.22	1.18±1.18
11	Avoid giving speeches	1.23±0.96	1.54±1.41	1.38±1.21
12	Avoid being criticized	1.20±1.26	1.45±1.35	1.32±1.31
13	Bothered by heart palpitations when surrounded by people	0.73±1.00	1.03±1.15	0.88±1.09
14	Afraid of doing things when people might watch	0.75±1.04	1.24±1.20	1.00±1.15
15	Being embarrassed or looking stupid is among worst fears	1.18±1.32	1.50±1.43	1.34±1.39
16	Avoid speaking to anyone in authority	0.90±1.08	1.09±1.20	1.00±1.15
17	Distress due to trembling or shaking in front of others	0.99±1.16	1.04±1.22	1.01±1.19

**Table 4: Mean (SD) scores of the responses of the study participants of the items of Kutcher Adolescent Depression Scale (KADS)**

ITEM	School	Total Mean±SD		
		Government Mean±SD	Private Mean±SD	
1	Low mood, sadness, depressed	0.84±0.87	0.85±0.92	0.85±0.90
2	Irritable, losing your temper easily, feeling pissed off, losing it.	1.04±0.89	1.07±1.10	1.06±1.00
3	Sleep difficulties	0.77±0.93	0.80±0.96	0.78±0.94
4	Feeling decreased interest in hanging out, doing schoolwork or work, engaging in hobbies or sports or recreation.	1.16±1.09	0.86±1.07	1.01±1.09
5	Feelings of worthlessness and hopelessness	0.60±0.83	0.91±1.00	0.76±0.93
6	Feeling tired, feeling fatigued	1.11±0.99	1.23±1.03	1.12±1.01
7	Trouble concentrating	0.94±0.95	1.23±1.03	1.09±1.00
8	Feeling that life is not very much fun	0.80±0.92	0.92±1.03	0.86±0.98
9	Feeling worried, tensed, anxious.	0.91±0.94	0.91±0.94	0.91±0.94
10	Physical feelings of worry like headaches, restlessness, shakes or tremors.	0.76±0.89	0.77±0.91	0.77±0.90
11	Thoughts, plans or actions about suicide or self-harm.	0.47±0.78	0.51±0.89	0.49±0.84

**Table 5: Association between the severity of social phobia and depression among the study participants based on SPIN And KADS scores**

Severity of Social Phobia according to SPIN Score	Severity of depression according to KADS score							
	Government School				Private School			
	Mild	Moderate	Severe	Total	Mild	Moderate	Severe	Total
None/Very Mild Phobia	152 (73.4) [78.8]	54 (26.1) [52.9]	1 (0.5) [20.0]	207.(100.0) [69.0]	127 (75.6) [68.3]	38 (22.6) [36.2]	3 (1.8) [33.3]	168 (100.0) [56.0]
Mild Phobia	30 (46.9) [15.5]	32 (50.0) [31.4]	2 (3.1) [40.0]	64 (100.0) [21.3]	39 (50.0) [21.0]	35 (44.9) [33.3]	4 (5.1) [44.4]	78 (100.0) [26.0]
Moderate Phobia	11 (47.8) [5.7]	11 (47.8) [10.8]	1 (4.3) [20.0]	23 (100.0) [7.7]	20 (43.5) [10.8]	26 (56.5) [24.8]	0 (0.0) [0.0]	46 (100.0) [15.3]
Severe Phobia	0 (0.0) [0.0]	5 (83.3) [4.9]	1 (16.7) [20.0]	6 (100.0) [2.0]	0 (0.0) [0.0]	5 (71.4) [4.8]	2 (28.6) [22.2]	7 (100.0) [2.3]
<i>P</i>	<0.001				<0.001			

predominant in students at public school. The reason they suggested was lack of opportunities, decreased student

teacher reaction, and teacher absenteeism. Deb *et al.*<sup>[29]</sup> also described that adolescents belonging to Bengali

**Table 6: Pearson correlation between KADS and SPIN scores**

Tools	Statistical Test	KADS score
Spin score	Pearson correlation	0.426**
	Sig. (two-tailed)	0.000
	<i>n</i>	600

\*\*Correlation is significant at the 0.01 level (two-tailed)

medium schools were more anxious than those belonging to English medium schools. Chhabra *et al.*<sup>[1]</sup> conducted their study on students of government schools and stated economic crises, less educated parents, lack of care among students at government schools as the reasons for the high risk of developing social phobia. On looking further into the mean (SD) scores for individual items of the SPIN tool, private school students had high mean (SD) scores for questions such as “afraid of people in authority,” “avoid talking to strangers,” “fear of embarrassment,” and distress due to trembling or shaking in front of others.” For the item “scared of criticism,” government-school students had higher mean (SD) scores as compared to private-school students. Maximum mean (SD) scores were to “avoid giving speeches” for both government and private school students. Mehtalia *et al.*<sup>[8]</sup> also reported that above same questions were also feared by more than 505 participants in their study; however, they did not mention the type of school from where they enrolled the students. The likely reason for this might be that the desires and expectations of parents and teachers must have been putting a lot of pressure on the students both academically and non-academically to survive in this competitive world. It is also described that some extent of anxiety is good for better academic performance, but over anxiousness leads to negative results.<sup>[30]</sup> Moreover, students at private schools experience more fear of embarrassment even for insignificant things. There is much evidence that girls are more socio phobic than boys.<sup>[1,27,31-34]</sup> The present study showed that out of 324 boys and 276 girls in the study, 38.3% and 36.6% had social phobia, respectively. The overall effect of gender was modest, with the prevalence of mild phobia being higher among boys while moderate to severe phobia was more common among girls. Our study findings are somewhat in agreement with the study conducted by Deb *et al.*,<sup>[29]</sup> who showed that the prevalence of SADs among adolescent boys was higher than that in girls, though the prevalence rate among boys (20.1%) and girls (17.9%) as compared to our studies was low in their study. Few studies have shown no gender difference in social phobia among their study participants.<sup>[7,8]</sup> This might be due to cultural differences.

Most of the study participants belonged to the rural area in this study. Jin *et al.*<sup>[32]</sup> also reported a high prevalence of social phobia among students belonging to rural areas. However, as the present study was conducted in

an area that was in a transitory phase and many areas of that region were recently converted to urban areas, the students didn't have any idea regarding the same. Second, students might have interpreted the question incorrectly as their permanent residence was asked and most of the students had their villages in the remote areas of the mountains of Uttarakhand, leading to more responses for rural areas. Most of the study participants of this study belonged to nuclear families, and type of family was found to be statistically insignificant with social phobia. The findings by Jayashree *et al.*<sup>[27]</sup> also stated that adolescents belonging to joint families have more chances of developing social anxiety.

Low education levels of parents having a significant association with social anxiety have been reported by previous literature.<sup>[27,35,36]</sup> The findings of present study also support this as most of the parents of the study participants had high education profile and the no statistical association was established between educational status of parents with social phobia. Deb *et al.*<sup>[29]</sup> showed the prevalence of anxiety to be high among those adolescents who belonged to the middle socioeconomic class and working mothers. In this study, most of the study participants belonged to upper or upper middle socioeconomic class and mothers of the study participants were housewives. The association of social phobia with SES and mother's occupation was found to be statistically insignificant. Previous literature has quoted that there is no positive or negative association of mother's occupation with social anxiety among adolescents. However, working mothers have multiple responsibilities to handle, which increases anxiety among them and this passes on to their children also.

The present study found that nearly 37% (221/600) of adolescents had moderate to severe depression in the past 1 week. This finding is slightly in accordance with the results by Jayashree *et al.*<sup>[27]</sup> who reported that 40.7% their study participants had mild mood disturbance to severe and extreme depression. Previous studies reported 52.6% prevalence of severe depression among female adolescents by using the Center for Epidemiologic Studies Depression scale (CES-D) and 21% prevalence of depression among school-going adolescents in Central Uganda with 11% of them having major depression.<sup>[26,29]</sup> Raheel *et al.*<sup>[37]</sup> reported that 30% of their study participants had depression. Grover *et al.*<sup>[38]</sup> stated that point prevalence of depression/affective disorders ranges from 0.1% to 68% in clinic-based studies, school-based studies, and community studies. Males were more depressed as compared to female adolescents in the current study. In this study, gender was one of the factors that was strongly associated with depression, and the results were statistically significant ( $P = 0.003$ ). The

findings were in sync with the studies by Shivaswamy VKC *et al.* and Joseph *et al.*<sup>[39,40]</sup> On the contrary, they differed from the study conducted by Mishra *et al.*,<sup>[33]</sup> which showed females' (19.1%) preponderance for depression as compared to males' (10.8%). Few other studies have also supported that female gender is strongly correlated with depression.<sup>[41-44]</sup> The reason quoted earlier was that this was due to pubertal surge and psychological problems among girls.<sup>[42]</sup> Thapar *et al.*<sup>[45]</sup> also stated that depression is more prevalent among girls due to hormonal changes and stress. However, some research has reported that severity of depression is equal in both genders and the paramount distinction is in depression symptoms.<sup>[46]</sup> The possible reason for boys being more depressed as compared to girls in this study might be due to school performances as the most feared situation for boys was "scared of exams." Nowadays, the impact of peer pressure and the "need to fit in" concept, especially among boys, increases the risk-taking behavior; thus, though the present study did not explore the "pocket money" given by parents to the study participants, this can be one of the potential cause if they might not be receiving the expected pocket money. Not having girlfriends and fear of social exclusion make boys more vulnerable for depression. Moreover, boys usually do not share their problems with their parents or even with their best pals, which leads to accumulation of the emotions inside and exasperation. Family history of depression also increases the risk of developing the depression among adolescents, which might be prevailing but was not questioned from the study participants. Figures for depression with respect to the type of school showed nearly similar findings, but severe depression was seen more in adolescents going to private schools (3%) as compared to adolescents of government schools (1.7%). A study by Moeini *et al.*<sup>[47]</sup> reported higher rate of depression among students going to public high schools than in private schools, the reason being strong social reinforcements and motivations in private schools. Within the realm of possibility, private schools put a lot of pressure on students not just for academic purposes but even for extracurricular activities such as sports and thus make the environment competitive instead of healthy learning, which lays more constraints on the students, especially boys. Type of locality was also found to be strongly associated with depression among the study participants. Jayashree *et al.*<sup>[27]</sup> also found no association between type of family and depression, which was in concordance with our study.<sup>[27]</sup> Family size in our study was found to be not associated with depression, and the findings were similar to the studies conducted by Moeini *et al.* and Boden *et al.*<sup>[47,48]</sup> However, a study reported the prevalence of depression to be high among families of small size, the reason being that in joint families, all the family members figure out the problem faced by any of the family member.<sup>[42,48]</sup> The findings of this

study were coherent with findings of Moeini *et al.* and Khasakhala *et al.*, which showed no correlation between the marital status of parents with depression among adolescents.<sup>[47,49]</sup> However, few studies have reported high depression rate among adolescents who have single parent,<sup>[50-51]</sup> the rationale being that adolescents need either of the parent mother or father depending upon the comfortability level to share their feelings or emotional problem. Single parents themselves have to face more challenges in their personal life that they might not dig deeply into the matters of their children, thus depriving adolescents of the conducive environment and precipitating the psychiatric problems among them. However, few studies have reported that low education level of parents increases the risk of depression and other psychiatric disorders.<sup>[27,35-36]</sup> Parents' occupation level had no association between depression among adolescents, and the findings were similar to a study by Shivaswamy VKC *et al.*<sup>[39]</sup>

In the last 1 week, students felt a decreased interest in the activities that they felt pleasurable before, felt fatigued and irritable, angry, lost temper easily, and had trouble concentrating. Nevertheless, the mean (SD) scores for suicidal thoughts both for government ( $0.47 \pm 0.78$ ) and private ( $0.51 \pm 0.89$ ) school students were the last out of all 11 items of the KADS tool. Jayashree *et al.*<sup>[27]</sup> had used Beck Depression Inventory (BDI-II) and noticed that 9% of their study participants had suicidal thoughts. They also showed religion, caste, birth order, and socioeconomic status to have a statistically non-significant correlation with depression, which was in sync with the present study findings. However, factors such as type of family, family size, birth order, marital status of parents, and occupation of parents were also not significantly associated with depression ( $P > 0.05$ ). The tenable justification for this divergence in the results might be due to distinctive cultural patterns, peculiar lifestyles, disparate instruments used, and mean age differences. However, parental expectations from adolescents for admissions in some good, reputed college or stress on taking up branches such as engineering and medical also imposes greater mental pressure on adolescents. In India, being in relation with the opposite sex or having sexual relationship is not at all socially acceptable creating fear among the adolescents. Concealed emotions and an increase in turmoil among adolescents lead to sleep difficulties, concentration problems, fatiguability, etc., mimicking symptoms of severe depression.<sup>[52]</sup>

In the current study, adolescents of both government and private schools had significant association between social phobia and depression. In both government and private schools, there were adolescents who along with moderate grade of social phobia were also having severe

depression. Mehtalia *et al.*<sup>[8]</sup> also stated in their study that individuals with SADs have five times more risk of developing major depressive disorders. In this study also, strong correlation was seen between social phobia and depression among the study participants. Ratnani *et al.*<sup>[53]</sup> also reported that the likelihood of developing depression increases if the person is having social phobia. The present study findings were also consistent with the findings reported by Stein *et al.*<sup>[21]</sup> who stated that depressive people have more chances of experiencing social anxiety in social fear, avoidant behavior, and physical symptoms domains, and both the conditions are strongly correlated.

### Limitations and recommendations

Because the present study was carried out in a few government and private schools of Dehradun district in Uttarakhand, the result findings cannot be generalized. Future longitudinal and qualitative studies can be conducted on a larger sample size for getting better insights on temperamental factors. The findings of this study can be taken into deliberation for framing new guidelines and schemes to address this neglected issue. Coping strategies and social skills therapy can be taught to adolescents as well as to their parents to limit the progression.

### Conclusion

This study has enhanced the knowledge in the field of anxiety and depression among adolescents and will aid in understanding the issues related to it and even steer the psychologists and counselors for managing adolescents. In a nutshell, the present study established the proportion of social phobia and depression among school-going adolescents. Social phobia was seen more among adolescents going to private schools. Moderate to severe grade of social phobia was seen more among females as compared to males. The current study also found that extreme social phobia among adolescents was regarding “scared of talking to people” and “being embarrassed.” “Avoid giving speeches” and “being criticized” were also a few important social situations in which adolescents felt very much phobic. The most feared social situations of the study participants were that they were “scared of exams,” followed by “stage fear.” A significant correlation was seen between the scores obtained by the responses of the study participants for SPIN and KADS tools. Despite certain limitations, the objective of the study was well-served to explore the common-yet-overlooked problem. Cognitive behavior therapies and programs can be utilized effectively to deal with these mental illnesses. They are the need of an hour for the brighter future of

adolescents who are dealing with anxiety and depression.

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### Declaration of consent

The authors certify that they have obtained all appropriate consent forms. In the form, the study participants has/have given his/her/their consent for clinical information to be reported in the journal. The study participants understand that their names and initials will not be published, and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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### Conflicts of interest

There are no conflicts of interest.

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