Original Article

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Social Anxiety and its Associated Factors among Secondary School Adolescents of Kathmandu Metropolitan, Nepal

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ABSTRACT

Background: Social anxiety is an intense anxiety or fear of being judged, negatively evaluated, or rejected in a social situation. It often develops in early adolescence, which eventually grows up to adulthood, mostly without being diagnosed. This study assessed the prevalence and factors associated with social anxiety in secondary school adolescents.

Methods: School-based cross-sectional study design was performed among secondary school adolescents of 10 schools in Kathmandu Metropolitan, Nepal. A total of 360 samples were obtained through multi-stage random sampling using the lottery method. A self-administered questionnaire was used as a data collection tool which included the Liebowitz social anxiety scale for children and adolescents. Data entry and analysis were done by using Epi Data and Statistical Package for Social Science (SPSS) software.

Results: The prevalence of social anxiety was 39.7% which was higher in females. The study found that 33.3% of the participants were in the high-risk category. A strong association ($p<.001$) was seen between self-perception and social anxiety. Similarly, a significant relationship ($p<.001$) was found with social experience-related variables, which included: the experience of traumatic situations, and being discriminated against bullied.

Conclusions: A high prevalence of social anxiety among adolescents was seen. One-third of the participants were in the high-risk category, clearly stating that the diagnosed cases only represented the tip of the iceberg. School-based youth-friendly entertainment and engagement interventions considering their emotional and mental health, might be beneficial in dealing with it.

Keywords: Adolescents; peer victimization; self-perception; social anxiety

INTRODUCTION

Social anxiety is an excessive fear of social performance or situations, potentially embarrassing or humiliating situations.[1] It persists one to avoid social situations, which eventually have negative impacts on their social functioning.[1-3] It often develops in childhood or early adolescence.[4] It is the third-largest mental health care problem in the world today.[2] Despite its high prevalence, it usually remains undiagnosed and untreated, especially in developing countries.[5] In Nepal, social anxiety is still a new term and very few researches have been conducted in this field. Therefore, this study was carried out to get an outline of the situation of social anxiety in Nepal. This study aimed to assess the prevalence and factors associated with SA among secondary school adolescents. Specifically, the purpose of the study is to identify the prevalence of social anxiety among secondary school adolescents in Kathmandu Metropolitan and also to identify the factors associated with it.

METHODS

The study design was cross-sectional study. The study followed a school-based survey method for collecting the required data. Since Kathmandu is the capital city of Nepal and people from all over Nepal reside there, the study was conducted in Kathmandu Metropolitan for

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more representativeness. The study population for this research was secondary school adolescents of Kathmandu Metropolitan. The study period was from June to December of 2019.

The sampling frame included a comprehensive list of secondary schools within the Kathmandu Metropolitan area. The sample size was calculated using the formula for infinite population with a prevalence rate assumed to be 13.1% from regional data. With a 95% confidence interval (z=1.96) and a margin of error of 5%, the initial sample size was estimated at 175. To account for design effects, the sample size was doubled to 350. However, the final sample comprised 360 participants, as all students from selected classes were included.

Multistage random sampling technique was used in this study. Out of 32 wards, 10 wards from Kathmandu Metropolitan were selected randomly, from each selected ward one secondary school was selected randomly i.e. five government schools and five private schools, and again from each selected school a single class or section (9 or 10) was selected randomly. All students in the chosen section were included in the study. Students only from age 10-19 years were included and those who were not able to provide information or answer properly were excluded from the study.

Self-administered questionnaire which included a valid tool Liebowitz Social Anxiety Scale for children and adolescents (LSAS-CA) with high internal consistency (alpha =0.90-0.97) and test-retest reliability (0.89-0.94)[6] was used as a data collection tool. Approval to use the scale was obtained from its author, Dr. Michael R. Liebowitz, and it was translated into Nepali to enhance participant understanding. Pretesting was done at school in Pokhara Metropolitan among 10% of the estimated sample size. The pretested data were entered and analyzed and necessary modification was made in the data collection tool. Tools were developed only after an adequate review of the literature and with the consultation of the supervisor. Tools were developed in both English and Nepali language. Raw data were cleaned, coded, and entered by using EpiData and all the entered data were transferred to Statistical Package for Social Sciences for further analysis. Data analysis was done by using a data analysis plan. The data were summarized in terms of frequency and percentage for descriptive analysis. Chi-square tests were performed to test the association between dependent and independent variables.

Ethical approval was taken from the Institutional Review Committee, Pokhara University as well as the Nepal Health Research Council (NHRC). Permission was taken from each school. Parents' assent and written informed consent was obtained from the participants. Confidentiality, anonymity, and privacy of the information were maintained. For the benefit of the participants, an interactive mini-lecture on social anxiety was conducted in each selected school.

RESULTS

Table 1. Status of social anxiety.

Characteristics	Number	Percent (%)
No social anxiety	97	26.9
Mild social anxiety	120	33.3
Moderate social anxiety	67	18.6
Marked social anxiety	41	11.4
Severe social anxiety	30	8.3
Very severe social anxiety	5	1.4

The presence of social anxiety was seen among 39.7% of the total participants while one-third of the participants (33.3%) were at high risk of mild social anxiety (table 1).

Table 2. Factors associated with social anxiety.

Characteristics	Social anxiety				Chi-Square	df	p-value
	No to mild		Moderate to Severe				
Sex							
Male	118	69%	53	31%	10.363	1	<0.001**
Female	99	52.4%	90	47.6%			
Ethnicity							
Privileged Caste	126	65.3%	67	34.7%	4.36	1	<0.05*
Non-privileged caste	91	54.5%	76	45.5%			
Presence of disease							
Yes	13	40.6%	19	59.4%	5.665	1	<0.05*
No	204	62.2%	124	37.8%			

Table 2. Factors associated with social anxiety.

Characteristics	Social anxiety				Chi-Square	df	p-value
	No to mild		Moderate to Severe				
Negative performance expectation							
Never	39	69.6%	17	30.4%	20.488	4	<0.001**
Rarely	48	80%	12	20%			
Occasionally	99	56.9%	75	43.1%			
Often	21	42%	29	58%			
Always	10	50%	10	50%			
Fear of negative evaluation							
Yes	94	47.7%	103	52.3%	28.675	1	<0.001**
No	123	75.5%	40	24.5%			
Concerned about physical appearances							
Yes	98	48.8%	103	51.2%	25.231	1	<0.001**
No	119	74.8%	40	25.2%			

**p-value significant at < 0.05, **p-value highly significant at < 0.001*

Females, non-privileged castes, and participants with existing diseases had significantly higher rates of moderate-severe social anxiety. Psychological factors like frequent negative performance expectations, fear of negative evaluation, and concerns about physical appearance were also strongly linked to severe social anxiety (table 2).

Table 3. Concerned about physical appearances*(n=201)

Concerns	Number	Percent (%)
Weight	78	38.8
Pimple/acne	70	34.8
Height	63	31.3
Skin color	47	23.4
Hair	12	6.0
Others	8	4.0

**Multiple response*

In those concerned about physical appearances, more than one-third of respondents were concerned about their weight followed by acne and height (table 3).

Table 4. Association of social anxiety with social activities

Variable	Social anxiety				Chi-Square	df	p-value
	No to mild		Moderate to severe				
Been in a traumatic situation							
Yes	98	51.3%	93	48.7%	13.669	1	<0.001**
No	119	70.4%	50	29.6%			
Experience of discrimination							
Yes	30	32.6%	62	67.4%	39.514	1	<0.001**
No	187	69.8%	81	30.2%			
Bullied by peers							
Yes	44	33.1%	89	69.9%	65.151	1	<0.001**
No	173	76.2%	54	23.8%			

***p-value highly significant at < 0.001*

Traumatic experiences, discrimination, and bullying are found strongly associated with moderate to severe social anxiety, with bullied individuals showing the highest prevalence (69.9%). The findings highlight the significant impact of negative social experiences on social anxiety (table 4).

Table 5. Feeling discrimination (n= 92)*

Types of discriminations	Number	Percent (%)
Academic performance	33	35.9
Physical appearance	25	27.2
Caste / Ethnicity	21	22.8
Discriminated against siblings	19	20.7
Gender	5	5.4
Economic status	4	4.3
Others	4	4.3

**Multiple response*

The most common reasons for the discrimination were academic performance (35.9%) and physical appearance (27.2%), followed by caste/ethnicity, discrimination against siblings, and less common reasons being gender and economic status. Multiple responses were allowed, indicating various sources of discrimination (table 5).

DISCUSSION

The findings of this study showed the overall prevalence of social anxiety to be 39.7% which is much higher compared to that of other research in developing countries such as India, Ethiopia, and Nigeria.[5,7,8] This might be due to the dissimilarities of social settings in between the countries. The other possible reason for this might be the tool used in this study, which is a self-administered tool, and this might overestimate the prevalence of social anxiety among adolescents. This study showed that 33.3% of the participants had mild social anxiety. A similar result was seen in a study in India where the percentage of the sample in the high-risk category was 34.2% [8] clearly stating that the diagnosed cases only represented the tip of the iceberg.

Various studies in Pakistan[9], China[10], and Turkey[11] showed that females have a higher prevalence than males and are more prone to social anxiety. The World Mental Health Survey Initiative also showed an association between social anxiety and the sex of the respondents.[12] A similar result was analyzed in this research, which showed a higher prevalence of social anxiety in females than males. The community's perception of shyness and politeness as a measure of predominant cultural norms might have a high influence on female students' social anxiety.

In this study, a significant association of the ethnicity of participants with social anxiety was seen. The higher prevalence rate of social anxiety was seen in the non-privileged caste group which included Janajatis and other religious minorities as compared to the privileged caste group which is the upper caste group. The reason behind it might be the higher population and relative dominance of upper caste groups and also the existing discriminatory society. The current study showed a high association between the presence of other diseases with social anxiety. This finding was supported by a study done in Turkey.[13] Students with some sort of disease might fear being viewed negatively by their peers and might feel uncomfortable in social situations.

Negative performance expectation was significantly associated with social anxiety in this study. Similar results have been seen in other studies in the Netherlands[14] and Florida.[15] This study and a study in Arizona[16] suggested fear of negative evaluation to be a core feature of social anxiety. Adolescents with higher levels of social anxiety had more negative performance expectations and a higher fear of negative evaluation. It is likely that, from an early age, some socially anxious individuals received negative responses in social situations because of a lack of social skills or because of withdrawn behavior that is not accepted in the peer group. Based on these experiences, they might develop negative self-evaluations as well as negative expectations regarding responses from other people.

This study suggested that adolescents with social anxiety were somehow concerned about their physical appearances. This finding was consistent with previous findings in India.[17] Most of the respondents in this study as well as the study in India were concerned about their weight. This could be linked with having a fear of negative evaluation from others based on appearances which eventually lowers your social interaction.

The findings from this study showed social experience which included exposure to trauma, experience of discrimination, and bullying by peers all were highly significant to social anxiety. This finding was consistent with prior research. Some previous researches suggest that severe and traumatic bullying appears to be a likely determinant for social anxiety given the negative social interaction between the bully and victim.[18, 19] When people are exposed to persistent negative situations, they start to perceive these events as out of control and

they begin to think, feel, and act as if they are helpless. Experiencing victimization of bullying or discrimination may also increase adolescents' fear of being bullied and discriminated against in socially interactional situations, which increases the risk of developing social anxiety. As the study was carried out in Nepal's Kathmandu Metropolitan Area, its findings cannot be extrapolated to other rural regions of Nepal.

CONCLUSIONS

The study concludes the high prevalence of social anxiety among adolescents. One-third of the participants are in the high-risk category clearly stating that the diagnosed cases only represent the tip of the iceberg. Bad social experience increases the fear of social situations eventually resulting in social anxiety. Therefore, this study has provided public health implications that serve as a basis to formulate interventions for promoting the mental health of adolescents. Some strategies can be used to deal with social anxiety, such as conducting periodic screening programs in schools to identify pre-syndromal cases, providing mental health awareness programs, not only for students but also for teachers and family members, socio-emotional learning programs at school, promoting self-perception among adolescents and implementing anti-bullying programs in schools with clear policies.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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