Emotional and Behavioral Problems among School going Adolescents in Selected Schools of Pokhara: A Cross-Sectional Study

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ABSTRACT

Introduction: Adolescents are highly vulnerable to different types of emotional and behavioral problems and often have serious negative consequences for their academic achievement and potential social life. The main objective of the study was to assess the emotional and behavioral problems among school-going adolescents in Pokhara.

Methods: A descriptive cross-sectional study was conducted using the standard tool, Strengths and Difficulties Questionnaire (SDQ) among 305 adolescents studying in grades 8-10 of three randomly selected government secondary schools of Pokhara Metropolitan City through probability multi-stage sampling. Data was entered into the software EPI-DATA 3.1 and SPSS- 16 version was used for data analysis. Descriptive and inferential statistics (Chi-square test) were used to identify level of emotional and behavioral problems and to measure the association between emotional and behavioral problems, respectively.

Results: Results showed that 5.2 percent of adolescents got abnormal scores on Emotional and Behavioral Problems. On classification, 8.5 percent of adolescents have emotional problems. Likewise, 7.2 percent and 1.3 percent adolescents got abnormal scores on conduct problems and hyperactivity, respectively, which are considered as behavioral problems. Factors like sex, type of family, number of close friends, and hours spent with friends were found to be significantly associated with emotional and behavioral problems among adolescents.

Conclusions: Hence, it is concluded that emotional problems and peer relationship problems are common among girls, and hyperactivity and conduct problems are common among boys. An intervention strategy such as school-based mental health services might be beneficial to understand adolescents' problems and providing appropriate counseling.

Keywords: Adolescents, emotional and behavioral problems, SDQ

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INTRODUCTION

The adolescence period is a unique stage of human development. It is the foremost time for building the foundations for good health. Throughout the adolescence period, they undergo the complex process of emotional, physical, and social changes and are especially vulnerable to maladaptive patterns of thinking and behaving, so they require special care during this period.[1] Due to migration, change in the family structure, urbanization; and at the same time adolescents' risk-taking behavior, high academic stress, and living with adversities, make them vulnerable to psychosocial problems and psychiatric problems.[2]

The Youth Risk Behavior Surveillance System includes different health-related behaviors among youth like behaviors contributing to unintentional injuries and violence, tobacco

use, alcohol, and other drug use, sexual behaviors related to unintended pregnancy and sexually transmitted infections (STIs), including HIV infection, unhealthy dietary behaviors, and physical inactivity.[3]

In a study conducted on self-reported emotional and behavioral problems in Nepalese adolescents from urban and rural areas, girls had higher scores than boys for anxiety/depression, while boys had higher scores for delinquent behavior.[4] Adolescents are the future of the country. Healthy adolescents can contribute greatly to their society as well as the nation. Healthy development during childhood period and adolescence is very important as it contributes to good mental health as well as can prevent mental health problems. Therefore, it is crucial to assess the emotional and behavioral problems among adolescents.

The objective of this study was to assess the emotional and behavioral problems among school-going adolescents in Pokhara and to measure the association between emotional and behavioral problems and selected variables among school-going adolescents.

METHODS

This was a descriptive cross-sectional study conducted among adolescents of age 11-18 years studying in grades 8-10 of selected government secondary schools of Pokhara Metropolitan City. According to a study in Nepal, the prevalence of emotional and behavioral problems was 24.5%.[5] Based on this prevalence, sample size estimation was calculated using Cochran's formula[6] that gave a sample size of 305 including 10% possible non-response rate. The study population was selected by probability multistage sampling.

The study population was selected by probability multistage sampling. Initially, the list of government secondary schools was obtained from the Education Management Information System of Kaski. In Pokhara Metropolitan City, there are 213 government schools. Among those, there are 70 secondary schools. Out of those 70 secondary schools, 3 secondary schools were selected through a simple random sampling technique, computer-aided random selection using random tables generated by Microsoft Excel on the estimation of 40 students per section in a class. Grades 8-10 from those selected secondary schools were chosen for the study. Then, the selection of the section of grades 8-10 was conducted by simple random sampling, a lottery method. Adolescents of age 11-18 years studying in grades 8-10 of the selected schools were the study population.

Self-administered Structured Questionnaire was used to collect the data. The research instrument involved two parts. Part 1 questions were related to the background information of adolescents and their parents. It consists of altogether 14 questions. Similarly, Part 2 involved The Strength and Difficulties Questionnaire (SDQ), a standard tool of the youth version. It consists of a list of items which assess the impact of difficulties on the child's life. Questionnaires for self-completion by adolescents ask about the 25 traits. This self-report version is suitable for young people aged around 11-19, depending on their level of understanding and literacy. The SDQ standard tool was available in more than 100 languages. I administered the question in Nepali language. The 25 items in the SDQ comprise 5 subscales. Each subscale consists of 5 items. The scales include the emotional symptoms subscale, conduct problems subscale, hyperactivity / inattention subscale, peer relationships problem subscale, and prosocial behavior subscale.

The items are scored from 0 to 2, on a 3-point scale (0= not true, 1= somewhat true, and 2= certainly true). The total score (possible range, 0-10) is created by the sum of all answered items in a scale, whereas the sum of all answered items in the first 4 scales creates

the total overall score (possible range, 0-40). The higher the total score is, the larger the difficulties are. SDQ total score is considered as normal 0-15, borderline 16-19, and abnormal 20-40, indicating the presence of general psychopathology. The score for the subscales are emotional scale and hyperactivity/ inattention range 7-10; conduct problems range 5-10; peer relationship problems 6-10 and pro-social behavior range 0- 4. An abnormal SDQ score in any area indicates a substantial risk of a clinically significant problem in that area. Items numbers for the Emotional Symptoms Scale are 03, 08, 13, 16, and 24. Items numbers for Conduct Problem Scale are 05, 07, 12, 18, and 22. Items numbers for Hyperactivity Scale are 02, 10, 15, 21, and 25. Items number for Peer Problem Scale are 06, 11, 14, 19, and 23. Items number for Prosocial Scale are 01, 04, 09, 17 and 20.[5]

The clinical usefulness of SDQ in identifying mental health problems in adolescents has been established, with reliability and validity that is as good as that of Child Behavior Checklist. The tool was pretested in 31 adolescents beyond the sample in Rastriya Secondary School, Pokhara.

Research proposal approval was taken from the Research Committee of TU, IOM, Pokhara Nursing Campus. The ethical approval was received from the Institutional Review Committee (IRC) of the Institute of Medicine, Maharajgunj, Kathmandu. Permission to collect data was obtained from the authorities of selected schools. Principals and teachers at selected schools were briefed about the objectives, process, and importance of the study and formal permission was taken. Written informed consent was obtained from the adolescents' parents prior to the data collection. The written consent forms were sent to the parents through the students one day before the data collection and student brought those signed consent forms the very next day. Researcher did the data collection herself using structured self-administered questionnaire in Nepali version. The teachers and parents were provided information about emotional and behavioural problems of adolescents and encouraged them to teach problem solving skill as well as stress management techniques to adolescents. The duration of data collection was from 10th February to 10th March 2021. Anonymity and confidentiality of collected data was maintained. Code numbers were used and collected information was used only for the study purpose. Obtained data was edited, coded, and entered in Epi-Data 3.1 and was analyzed in Statistical Package for Social Science (SPSS16 version). Both descriptive (mean, frequency, percentage, standard deviation) and inferential statistics (chi-square, fisher exact test) were used to analyze the data.

RESULTS

The mean ± SD age of adolescents was 14.83±1.30. Most of the adolescents (88.9%) were Hindu, 43.6% of adolescents belonged to upper caste groups and 60.7% of respondents were from nuclear families. Nearly half (45.2%) had 4 or more close friends and 79.0% reported having siblings. Nearly half (44.9%) of adolescents reported not spending hours with friends after school time and (44.9%) of adolescents reported spending 1-2 hours with friends after school time (Table 1).

Among the adolescents' parents, 78.7% of fathers and 82% of mothers had primary level education. A total of 40.7% adolescents' fathers were service holders whereas the majority 71.5% of adolescents' mothers were homemakers (Table 2).

Table 1 Background Information of Adolescents (n=305)

Characteristics	Number	Percent
Age Group (years)		
10-14	135	44.3
15-19	170	55.7
Mean ±SD=14.86 ±1.23		
Range (13- 19)		

Characteristics	Number	Percent
Sex		
Female	163	53.4
Male	142	46.6
Religion		
Hinduism	271	88.9
Buddhism	18	5.9
Christianity	15	4.9
Islamic	1	0.3
Ethnic group		
Upper caste group	133	43.6
Dalit		
Disadvantaged Janajati	90	29.5
Relatively advantaged	69	22.6
Janajati	9	3.0
Disadvantaged Non-Dalit	4	1.3
Terai caste groups		
Type of Family		
Nuclear	185	60.7
Joint	111	36.4
Extended	9	3.0
No. of close friends		
None	25	8.2
1 to 3	142	46.6
4 or more	138	45.2
Number of siblings		
None	34	11.1
1 to 3	241	79.0
4 or more	30	9.8
Hours spent with friends beyond school time		
Not spend	137	44.9
1-2 hours	137	44.9
3 hours or more	31	10.2

It was depicted that 8.5% of adolescents had abnormal scores on emotional problems and 7.2% of adolescents had abnormal scores across conduct problems. Likewise, 5.9% of adolescents got abnormal scores on peer proble ms, 3.3% of adolescents had abnormal scores on prosocial behavior, and 1.3% of adolescents got abnormal scores on hyperactivity/inattention. Further, 5.2 % of adolescents acquired abnormal scores on total difficulties (Table 3).

Table 2 Parental Information of Adolescents (n=305)

Characteristics	Number	Percent
Fathers' educational level		
Illiterate	30	9.8
Primary level	240	78.7
Secondary level	24	7.9
Higher education	11	3.6
Mothers' educational level		
Illiterate	36	11.8
Primary level	250	82.0
Secondary level	11	3.6
Higher education	8	2.6
Fathers' occupation		
Service	124	40.7
Farming	69	22.6
Abroad	63	20.7
Business	49	16.1
Mothers' occupation		
Homemaker	218	71.5
Business	50	16.4
Service	34	11.1
Abroad	3	1.0

Table 3 Level of Emotional and Behavioral Problems with Different Sub-scales (n=305)

	Level			
Sub-scales	Normal No. (%)	Borderline No. (%)	Abnormal No. (%)	Mean ± SD
Emotional Symptoms	255(83.6)	24(7.9)	26(8.5)	2.97 ± 2.33
Conduct Problem	254(83.3)	29(9.5)	22(7.2)	2.02 ± 1.58
Hyperactivity	298(97.7)	3(1.0)	4(1.3)	1.77 ± 1.59
Peer problem	219(71.8)	68(22.3)	18(5.9)	2.71 ± 1.70
Prosocial Behavior	287(94.1)	8(2.6)	10(3.3)	8.65 ± 1.63
Total Difficulties	264(86.6)	25(8.2)	16(5.2)	9.49 ± 5.33

Statistical analysis of SDQ scores with gender showed that girls had scored significantly higher scores in the domain of EPS (23.9%). Likewise, boys had significantly higher scores in the domain of hyperactivity (21.1%) (Table 4).

Table 4 Gender-wise Distribution of Clinical Ranges of (SDQ) Scores among Adolescents (n= 305)

SDQ Clinical Ranges	Gender Distribution		p- Value
	Male n (%)	Female n (%)	
Emotional Problem Score (EPS)			
Normal	131 (92.3)	124 (76.1)	<0.001*
Borderline/ Abnormal	11 (7.7)	39 (23.9)	
Conduct Problem Score (CPS)			
Normal	112 (78.9)	142 (87.1)	0.540
Borderline/ Abnormal	30 (21.1)	21(12.9)	
Hyperactivity Score			
Normal	138 (97.2)	160 (98.2)	0.709**
Borderline/ Abnormal	4 (2.8)	3 (1.8)	
Peer Problem Score			
Normal	107 (75.4)	112 (68.7)	0.199
Borderline/ Abnormal	35 (24.6)	51 (31.3)	
Pro-social Score			
Normal	136 (95.8)	151 (92.6)	0.246
Borderline/ Abnormal	6 (4.2)	12 (7.4)	
Total Difficulty Score			
Normal	127 (89.4)	137 (84.0)	0.169
Borderline/Abnormal	15 (10.6)	26 (16.0)	

Test Statistics: x^2 Pearson's Chi Square Test, *: p value significant at ≤ 0.05 level, **: Fisher Exact Test.

A significant association was found also between total difficulties score and type of family (p = 0.007). and mothers' occupation (p=0.049) (Table 5).

Table 5 Association between Total Difficulties Problem and Selected Variables (n=305)

Variables	Normal No.(%)	Borderline/ Abnormal No.(%)	x^2	p- value
Age Group				
10-14	120(88.9)	15(11.1)	1.132	0.287
15-19	144(84.6)	26(15.4)		
Sex				
Male	127(89.4)	15(10.6)	1.893	0.169
Female	137(84.0)	26(16.0)		

Variables	Normal No.(%)	Borderline/ Abnormal No.(%)	x^2	p- value
Type of Family				
Nuclear	168(90.8)	17(9.2)	7.311	0.007*
Joint & Extended	96(80.0)	24(20.0)		
No. of close friends				
None	22(88.0)	3(12.0)	0.049	1.000**
1 or more	242(86.4)	38(13.6)		
No. of siblings				
None	33(97.1)	1(2.9)	0.057	0.062**
1 or more	231(85.2)	40(14.8)		
Hours spent with friends				
Spend	122(89.1)	15(10.9)	1.329	0.249
Do not spend	142(84.5)	26(15.5)		
Mothers' education level				
Illiterate	96(85.0)	17(15.0)	0.396	0.529
Literate	168(87.5)	24(12.5)		
Fathers' Occupation				
Employed	205(86.9)	31(13.1)	0.085	0.771
Unemployed	59(85.5)	10(14.5)		
Mothers' Occupation				
Employed	70(80.5)	17(19.5)	3.889	0.049*
Unemployed	194(89.0)	24(11.0)		
Substance usage by father				
Yes	101(88.6)	13(11.4)	0.651	0.420
No	163(85.3)	28(14.7)		

Test Statistics: x^2 Pearson's Chi Square Test, *: p value significant at ≤ 0.05 level, **: Fisher Exact Test

DISCUSSION

In this study, 5.2% of adolescents had abnormal scores on emotional and behavioral problems. This finding is similar to the study findings conducted in Saudi Arabia where 8.3% of students were found emotionally and behaviorally disturbed.[7]

The findings of the study done by Rimal and Pokharel in Biratnagar, Nepal showed a higher score (18.6%) adolescents had emotional and behavioral problems than this current study's findings where 5.2 % adolescents had emotional and behavioral problems.[5]

Similarly, in this study, 8.5% of school-going adolescents have abnormal scores on emotional problems and 7.2% have abnormal scores across conduct problems. Likewise, 5.9% of adolescents have peer problems, 3.3% of adolescents have abnormal prosocial behavior, and 1.3% of adolescents have hyperactivity/ inattention problems. The findings of this study differ with the result of the study conducted in Banglore, India which depicted that 10.1% of adolescents had total difficulty level, 13.0% had conduct problems, 12.6% had hyperactivity/ inattention problem and 9.4% had peer problems but there is found similarity in the findings with emotional problems where 9%

are at risk for having emotional problems.[8]

In this study, 5.2% school-going adolescents had the total difficulties problem, and this finding differs with the findings of the study done by Kafle et al., which revealed that the total difficulties problem was found among 35.0% school-going adolescents.[9]

In terms of gender differences, the results of this study are consistent with other studies which suggest that males were more likely to have higher behavioral problems scores as they are more likely to have conduct and Hyperactivity problems. Likewise, in this study, the female rated higher than male in the domain of emotional symptoms. Female were significantly more likely to have emotional problems than boys (p = <0.001). This finding is supported by study done in Malaysia which showed that emotional problems were higher for girls and hyperactivity problems were higher for boys.[10]

Might be of differences in gender roles and expectations between boys and girls in Nepalese communities like boys are supposed to be brave and girls to be quiet and calm, it could contribute to higher levels of emotional problems in girls compared to boys. Similar findings were observed in a study conducted in Central Kenya, where girls reported higher scores on emotional problems compared to boys.[11]

The current study illustrated the factors like sex, type of family, number of close friends, hours send with friends beyond school time, adolescent's mother occupation were found to be significantly associated with emotional and behavioral problems among adolescents. Emotional problems were found more amongst female than male adolescents. It is consistent with the result of the study done in Greece where the factors like parental marital status, low level of maternal subjective mental health, poor parent-child relations were found correlated significantly with adolescents' emotional and behavioral problems.[12] This finding is similar with the findings of the study conducted by Hasan and Husain in Uttar Pradesh where emotional problems were found to be more among girls than boys.[13]

Similarly, in this study there was a significant association between conduct problem and type of family (p=0.002). Likewise, there was a significant association between peer problems and hours spend with friends (p=0.004). This is similar with the study conducted in Korea which showed that the emotional and behavioral problems of school going adolescents are influenced not only by the individual factors but also by the environmental factors.[14]

CONCLUSIONS

The study concluded that emotional and behavioral problems still exist among school going adolescents. Emotional and peer relationship problems were common among girls, hyperactivity and conduct problems were common among boys. Likewise, factors like sex, type of family, time spend with friends were associated with emotional and behavioral problems among school going adolescents.

To detect and manage the emotional and behavioural problems among adolescents on time, parents and teachers were advised and encouraged to teach life skills such as problem solving, critical thinking, communication, interpersonal relations, empathy, and methods to cope with emotions and crises to adolescents.

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