

Original Article

Educational Stress among the Adolescents in selected Schools of Kathmandu District, Nepal

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Abstract

Background: Adolescence is a crucial phase in life and the presence of conditions like stress at this stage of life is a matter of concern. Educational stress is a leading cause of anxiety and depression among adolescents.

Objectives: This study aimed to find out the educational stress among adolescents in public and private schools of Kathmandu.

Research Method: A cross sectional descriptive design was adopted for this study. Probability cluster sampling technique used for selection of schools. The study samples were 426 students of public and private schools of Kathmandu. Self-administered semi structured questionnaire and rating scale were used for the data collection. Both descriptive and inferential statistics were used for data analysis purpose.

Results: On an average, majority of the adolescents (79.3%) had moderate educational stress and 10.1% had severe educational stress. Based on type of school, private schools' students had significantly higher level of educational stress in comparison to public school students. However, public schools' students had more moderate level of educational stress (80.5%) in comparison to private schools' adolescents (78.2%). Factors found to be associated with educational stress from multivariate analysis were student's studying in nine class (AOR=2.140 95% CI: 1.408-3.252), student studying in private school (AOR=2.517 95% CI: 1.540-4.114) and use of internet (AOR=2.490 95% CI: 1.379-4.498).

Conclusion: On the basis of these findings it is concluded that educational stress is highly prevalent among adolescents and is high enough in private schools. It should be prevented and identified early, so that they can lead a healthy life and can achieve future goal related to education and career.

Key Words: Adolescent; Educational stress; Public school; Private school

Background

The World Health Organization defines adolescence as any person between ages 10 and 19. The world is home to 1.2 billion individuals aged 10–19 years (United Nations / Department of Economic and Social Affairs, 2009). In Nepal, Adolescents and Youth account for 33 percent of the total population. The adolescents cover 23.62 % of total population (Ministry of Health and Population, 2011).

Stress refers to a dynamic interaction between the individual and the environment. In this interaction, demands, limitations and opportunities related to work may be perceived as threatening to go beyond the individual's resources and skills. In case of disarrangement, this interaction may lead to cognitive, emotional and behavioral

alterations (Giancola, Grawitch, & Borchert, 2009). Academic stress is the anxiety and stress that comes from schooling and education. There is often a lot of pressure that comes along with pursuing a degree and one's education. There is homework, tests, group work, reading, and participate in extracurricular activity. There is the stress of doing all of work, balancing time and finding time for extracurricular activities. (Deb, Strodl, & Sun, 2014).

Adolescents who had academic stress were at 2.4 times (95% CI=0.9-2.4) ($P<0.001$) higher risk of depression than adolescents without academic stress. It has been estimated that 10% to 30% students experience academic related stress that affect their academic performance, cause anxiety and also affect their overall emotional and physical

wellbeing (Jewett & Peterson, 2002). One of the study conducted in India indicate that private students experience more stress in comparison to government schools students (Shabana & Dewangan, 2014).

A study conducted in India found that 63.5% of the students are stressed because of academic pressure. Two-thirds of the students reported that their parents pressurize them for better academic performance (Deb, Strodl, & Sun, 2015). Study has shown that educational stress is the leading cause of the stress & anxiety to the adolescence which probably leads to the severe depression and low self-esteem (Choulagai, 2015).

Unfortunately, not many studies explaining the prevalence of academic stress among adolescents' in Nepal are conducted. Hence, this study is expected to fill that gap by providing the prevalence of educational stress in public and private schools of Kathmandu.

Research Questions

- What is the prevalence of educational stress among the adolescents?
- What is the level of educational stress among the students of public and private schools of Kathmandu?
- What are the factors associated with educational stress among adolescents of Kathmandu?

Research Methodology

Research design: Descriptive cross sectional design was adopted to select 426 adolescent who were in between the age 13 yrs and 19 yrs.

Setting: The study was conducted in Kathmandu, Nepal. Kathmandu is the capital city of Nepal. The study was conducted in 4 schools in which 2 schools were public and 2 were private. There were total 158 public and 781 private schools (District Education Office, 2014).

Sample size: The prevalence of academic pressure studied in India was 63.5% (Deb et al., 2015) Thus taking the $P = 0.63$, confidence interval 95%, absolute precision 6%, the sample size was calculated by formula $n = z^2 pq / d^2$ (Lwanga & Lemeshow, 1991). To address the effect of clustering, multiplying the calculated sample size of 259 by taking design effect 1.5 and the required sample size was $259 \times 1.5 = 388$. To adjust for

possible non-response, the sample included additional 10% students in the calculated sample size. The total sample size was 427 (388+38.8). All together 430 students were participated in the study, among them 4 student's questionnaire were discarded because the questionnaire were incomplete. Thus the final sample size for this study was 426.

Sampling technique: Cluster sampling technique was used to randomly select 2 public and 2 private schools out of 158 public and 781 private schools of Kathmandu metro Politian city respectively. Lottery method was used to select school.

Research Instrumentation: Research instruments had three part; part I contains of semi structured questions regarding the socio-demographic information of respondents, part II consists of semi structured questions related to the associated factors of educational stress developed by researcher herself and part III, Standard tool Educational Stress Scale for Adolescent (ESSA). (Sun, Dunne, Hou, & Xu, 2011) was used to measure the educational stress among adolescents. The instrument was first developed in English language. Then, it was translated to Nepali. Again it was back translated to English that the meaning was retained. We use Nepali version for data collection.

Scoring criteria: In order to examine educational stress, Educational Stress Scale for Adolescent (ESSA) was used; this scale was developed to measure educational stress (Sun, Dunne, Hou, & Xu, 2011). The scale contains 16 items and five point Likert scales; score ranges from 16-80. Cronbach's alpha for educational stress was calculated from 45 pretest data which was 0.72. Three categories were determined by subtracting minimum possible value from largest possible value and dividing it by three. Hence three categories were obtained which were:

The score was categorized as:

Low educational stress: 16-37

Mild educational stress: 37-58

High educational stress: 58 and above

Validity & Reliability of the instrument:

The content validity of the instrument was established by consultation with external subject matter experts. For reliability of the instrument, pretesting of the instrument was done among 45 students of 8th and 9th class students in similar setting. After pretest, the

tool was again modified with the help of clinical psychologist and supervisor, based on the findings of pretesting. Cronbach's alpha was calculated from pretest data. The Cronbach's alpha score for educational stress was 0.72.

Ethical approval: Data was collected after getting approval from Institutional Review Board of Tribhuvan University, Institute of Medicine.

Data collection Procedure: Data collection was done by providing self-administered questionnaire to participants. The data was collected by researcher herself. Anonymity was maintained. The participants were explained about the purpose of the study, its role in generation of knowledge. Instruction was given to fill the questionnaire. It took 20-30 minutes for filling the questionnaire. The researcher checked the questionnaire. Incomplete questionnaire was again given to the participants to complete it. They were requested to answer themselves and they were requested not to ask anything to their friend for any queries but they can ask to the researcher instead.

Data analysis Procedure: Data was checked for completeness of information, and then coding was done to simplify the process of data entry. Incomplete questionnaire were excluded from analysis. Data was entered in database created in SPSS version 20.0. Normality test was done and data were not normally distributed as indicated by Shapiro

Wilk test ($p = 0.000$). Association between dependent and independent variables was observed by using bivariate and multivariate logistic regression analysis. For logistic purpose, the mild stress was further categorized as lower moderate and higher moderate by dividing the range of moderate stress into equal two half. Further lower part was combined with lower level of stress and higher part was combined with higher stress. As a result the score below 48 was categorized as low educational stress and 48 or above 48 as high educational stress. Socio-demographic variables were fitted in one model and other associated factors were fitted in another model for dependent variable educational stress. So there were two models developed for multivariate analysis.

Results

Statistical analysis showed that majority (79.3%) had moderate educational stress, (10.6%) had low and 10.1% adolescents had severe educational stress. The findings of this study showed that, the respondents studying in private school were 2.5 times more likely to have educational stress when compared with those of studying in public school. Other factors which were related to educational stress which found significant in this study by bivariate analysis are further checked by multivariate analysis which is presented in table 1 below.

Table 1. Prevalence on the basis of Level of Educational Stress among Adolescents (n=426).

Educational Stress	Number	Percentage
Low	45	10.6
Moderate	338	79.3
High	43	10.1

Table 2. Comparison of Level of Educational Stress among the Adolescents in Public and Private Schools (n=426).

Educational Stress	Public school	Private school
	No. (%)	No. (%)
Low	32(14.9)	13(6.2)
Moderate	173(80.5)	165(78.2)
High	10(4.7)	33(15.6)

Table 3. Level of Educational Stress based on Different Associated Factors (n=426).

Characteristics	Level of Educational stress					
	Low		Moderate		High	
	No.	%	No.	%	No.	%
Educational level						
Eight class	24	13.3%	143	79.4	13	7.2
Nine class	21	8.5%	195	79.3	30	12.2
Education status of mother						
Illiterate	7	8.0%	77	88.5	3	3.4
Literate	38	11.2%	261	77.0	40	11.8
Number of close friends						
Less than 10	42	11.1%	305	80.3	33	8.7
More than 10	3	6.5%	33	71.7	10	21.7
Living with						
With own family	32	9.2%	277	79.4	40	11.5
With other relatives	13	16.9%	61	79.2	3	3.9
Family income						
Enough for < one year	19	13.6%	113	80.7	8	5.7
Income enough for 1 year	26	9.1%	225	78.7	35	12.2
Internet use in the past 30 days						
No	5	8.2%	54	88.5	2	3.3
Yes	40	11.0%	284	77.8	41	11.2

Table 4. Multivariate Analysis of Factors related to Educational Stress (n=426).

Characteristics	Unadjusted OR	p-value	Adjusted OR	p-value
Education level				
Eight class	1			
Nine class	1.703(1.155-2.511)	0.007*	2.140(1.408-3.252)	<0.001*
Types of School				
Public	1			
Private	2.603(1.761-3.847)	0.000*	2.517(1.540-4.114)	<0.001*
Education Level of Mother				
Illiterate	1			
Literate	1.750(0.718-4.263)	0.005*	1.472(0.839-2.584)	0.178

Living With				
Own family	1.669(1.008-2.762)	0.046*	1.113(0.641-1.933)	0.703
Other relatives	1			
Family Income				
Enough for >1 year	1			
Enough for 1 year	1.750(1.161-2.638)	0.008*	1.015(0.624-1.648)	0.954
Number of Close Friends				
Less than ten	1			
More than ten	2.083(1.099-3.948)	0.024*	1.858(0.975-3.541)	0.060
Use of Internet				
No	1			
Yes	2.651(1.474-4.770)	0.001*	2.490(1.379-4.498)	0.002*

1: Reference group OR: Odds Ratio CI Confidence Interval *p-value significance at ≤ 0.05

Discussion

On an average, majority of the respondent (79.3%) had moderate and 10.1% had high educational stress in this study. This finding indicates that there is a high prevalence of educational stress. Similar results were found in a study conducted in Kolkata, India in which the prevalence of educational stress was 63.5% (Deb et al., 2015). The findings of this study showed that, the respondents studying in private school (AOR=2.517 95% CI: 1.540-4.114, $p < 0.001$) were 2.5 times more likely to have educational stress when compared with those of studying in public school. This finding was supported by the study conducted in India among 250 higher secondary students as there is significant difference ($t=2.1294$ at <0.05 level of significance) in the academic stress with regard to their Type of School Management (Menaga, S. & Chandrasekaran, 2014). This study revealed that respondents of nine class were (AOR=2.140 95% CI: 1.408-3.252, $p < 0.001$) two times more likely to have educational stress in comparison with respondents of eight class. The highly significant result may indicate that higher the class, greater the educational stress.

The findings in this study revealed that, the respondents who use internet in the past 30 days (AOR 2.490 95% CI: 1.379-4.498, $p < 0.002$) were 2.4 times more likely to have educational stress with compared to those

who had not used internet in the past 30 days. Similar findings were found in a study conducted in Turkey showed that there was a positive relationship between students' educational stress and the level of their information technology. Use of information technology was strongest predictor of educational stress. In other words, when students have to use information technologies their educational stress increases (Eskicumail et al., 2015).

Conclusion: Based on the findings, it can be concluded that prevalence of educational stress is high in adolescents and among them, private school's students has more educational stress. In addition, students studying in higher class have more educational stress than in lower class. Likewise, students studying in private schools have more educational stress than in public school students. Similarly, frequently internet user students have found to be associated with educational stress. As social media user, type of school and academic level are found to have major factors for educational stress on adolescents, combined efforts of family, school team and school health service providers is essential to timely identify and protect adolescents from developing serious psychological, physical and social ill consequences of stress and help them develop healthy personality.

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