

Prevalence and factors associated with emotional and behavioral problems among school going adolescents in Morang district of Nepal

Aarju Niroula^{1*}, Deepak Kumar Yadav², Nilambar Jha², Avaniendra Chakravartty², Bikram Adhikari³, Parth Guragain¹

1. Birat Medical College Teaching Hospital, Biratnagar, Morang

2. School of Public Health and Community Medicine, B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

3. HERD International, Bhaisipati, Lalitpur

Abstract

Introduction:

Adolescence, from ages 10-19, is a critical period marked by significant emotional changes. Many emotional and behavioral issues start before age 14 but are often identified later. Early detection can improve treatment. This study explores the prevalence and factors of these problems among school adolescents in Morang District.

Methodology:

We conducted a cross-sectional study among 407 school-going adolescents in Morang District, Nepal from September 2019 to February 2020. Using stratified cluster random sampling, we gathered data via structured questionnaires covering socio-demographic characteristics and emotional and behavioral problems (EBP). The EBP was assessed using self-reported Strengths and Difficulties Questionnaires (SDQ). Multinomial logistic regression was employed to analyze the association of EBP with socio-demographic variables.

Results:

The prevalence of abnormal and borderline emotional and behavioral problems were 14.5% (95% CI: 10.7-19.3) and 16.7% (95% CI: 12.7-21.3) respectively. The prevalence of abnormal: conduct problems, emotional problems, peer relationship problems, hyperactivity and pro-social problems were 16.5%, 14.3%, 10.8%, 6.6% and 5.4% respectively. The prevalence odds ratio of having borderline and abnormal emotional and behavioral problems were 1.92(95% CI: 1.08 -3.40; p=0.026) and 2.49(95% CI: 1.34 - 4.63) times respectively among females compared to males after adjusting for other sociodemographic variables.

Conclusion:

School going adolescents were vulnerable for emotional and behavioral problems. Comprehensive efforts from government, school and parents need to be initiated to reduce the problems.

Key words:

Emotional and Behavioral problem, Strength and difficulty questionnaire, Adolescents

*Corresponding Author

Aarju Niroula

Birat Medical College Teaching Hospital, Biratnagar, Morang
Email: aarjuniroula2018@gmail.com

INTRODUCTION

Adolescence is defined by the World Health Organization as the period of life between the ages of 10 and 19 years.¹ It is a time when an individual undergoes significant physical and psychological changes. Adolescence is a common period for the emergence of emotional problems. Adolescents with emotional problems may suffer increased irritability, impatience, or rage in addition to depression or anxiety. With fast and sudden changes in mood and emotional outbursts, symptoms might overlap across

several emotional disorders.² Emotional problems can have a significant impact on areas such as education and attendance. Isolation and loneliness can be exacerbated by social disengagement.² Emotional and behavioral issues have a significant detrimental impact on teenage academic success and social development. These issues may be accompanied by chronic health problems or exacerbate existing medical issues, such as substance addiction and suicidal conduct.³ Adolescence is a transformative period of sexual development that is heavily impacted by one's life circumstances and socioeconomic situations. Mental problems in children and adolescents are widespread, and they have been related to premature death and significant dysfunction in adulthood.⁴

Globally, 10–20 percent of children and adolescents suffer from mental illnesses, with half beginning by the age of 14

and three-quarters beginning before the age of 25.⁵ Childhood behavioral problems are the second most common source of illness burden in young adolescents aged 10–14 years, and the tenth most common cause in older adolescents aged 15–19 years.² Emotional-obsessive-compulsive disorder (OCD), anxiety, depression, disruptive (oppositional defiant disorder (ODD), conduct disorder (CD), attention deficit hyperactivity disorder (ADHD), or developmental (speech/language delay, intellectual disability) disorders or pervasive (autistic spectrum) disorders are all mental problems that are common in childhood.⁶ This type of childhood behavioral disorders can affect adolescents' education and may result in criminal behavior.² Studies show that a number of parental behaviors, including inadequate parental engagement, poor supervision and monitoring, harsh and inconsistent discipline, and diminished parental warmth and connection, are related with the development of behavioral problems.^{7,8} However, parenting is influenced by factors within the individual parent such as their education, occupation, marital status and recent adverse events.⁹ Mental disorders is known to be standing as one of the conditions with maximum healthcare expenditure.¹⁰

Nepal is a low-income nation with a population of around 20 million people, 40 percent of whom are under the age of 18. According to the Ministry of Health and Population of Nepal, about 15–20 percent of this population (2–3 million) may suffer from a mental condition.⁵ Emotional and behavioral disorders are the second most prevalent mental health concerns identified among Nepalese children and adolescents.¹¹ Despite the rising public health concern about mental illnesses in children and adolescents, there has been little research on the subject in developing countries such as Nepal.¹² The Nepalese government has dedicated less than 1% of its overall health budget on mental health, with child and adolescent mental health services receiving a small proportion of this amount.¹³ Lack of adolescent-specific knowledge leads to the creation of ineffective plans, policies, and programs.¹⁴ Only lately has there been an increased emphasis placed on detecting and treating mental problems in youngsters. However, the scope of Nepal's child and adolescent mental health issues remains unknown.¹⁵

Therefore, from this study we aimed to determine the prevalence of emotional and behavioral problems and its association with socio-demographic characteristics and status of parental care among school going adolescents of Morang district, Nepal.

MATERIALS

Study design and study settings

We conducted a cross-sectional study from November 1st, 2019 to February 29th 2020 among school going adolescents of Morang District, Nepal. Morang District is located in province one in Eastern Nepal. It bordered with Bihar, India to the South, Jhapat to the East, Dhankuta and Panchthar to the North, and Sunsari to the West. The total area of Morang is 1,855 km² (716 sq mi).¹⁶ Morang district is the second most populated area (population=964,769) in Nepal with the residency of various ethnic and religious groups. The human development index, life expectancy and average literacy rate of Morang district are 0.513, 69.6 and 66.33% respectively.^{11,17}

Study population

We conducted this study among school going adolescents who meet eligibility criteria. The inclusion criteria comprised school-going adolescents aged 11-17 years, studying in grades 8, 9, and 10, who provided consent to participate. Exclusion criteria were those who did not want to participate in the study, students whose parents/guardians did not give consent for the study and students who were absent on the day of data collection.

Sample size

We calculated sample size using cochrane formulae¹⁸ assuming the prevalence of EBP among adolescents to be 30.0% based on the study by Sharma et. al 19, 20.0% relative error and 95% confidence interval, 10% non-response rate and 1.5 design effect. The sample size was calculated to be 372.

Sampling technique

We employed stratified cluster random sampling techniques to select participants. Schools were separated into two strata, government and private. The list of all private and government schools of Morang district was collected from the education development and coordination unit, Morang district. We select three government schools out of 153 government schools and three private schools out of 163 private schools using a simple random sampling method. All the students who meet eligibility criteria from selected schools were enrolled in this study. If any class had two or more sections, then one section was selected randomly and all students from that section were enrolled in the study.

Data collection tool and techniques

We collected data using self-administered techniques with structured questionnaires, pre-tested on 40 students from a government and a private school in Sunsari district. The structured questionnaire consisted of two components addressing socio-demographic characteristics of the respondents and SDQ tool.

Sociodemographic variables included age {early adulthood (11-14years) / late adulthood(15-17years)}, sex (male /female), ethnicity (Brahmin Chhetri / Madhesi / Dalit / Newar / Janajati / Muslim), religion (Hindu / Other (Buddhist, Kirat, Islam)), types of school in which participant was enrolled (private / government), residence of participant (hostel / home), education of participant's father and mother (primary or below/secondary/higher secondary and above).

The SDQ, developed by child psychologist Robert N Goodman, is an instrument that has been widely used to assess mental health problems, emotional and behavioral problems and strength among children and adolescents aged 11-17 years.³ The SDQ tool contains 25 items which are divided into 5 scales with 5 items in each scale. Scale one contains five items which assess emotional problems and scale 2, 3 and 4 assess conduct problems, hyperactivity/ inattention, peer problems respectively assess behavioral problems. The total score in this scale gives overall emotional and behavioral problems.⁶ Each item is scored on a 3-point scale (0 not true; 1 somewhat true; 2 certainly true) and the sum of all answered items in a scale creates its total score (possible range, 0–10), whereas the sum of all answered items in the first 4 scales creates the total overall score (possible range, 0–40).^{6,7} The reliability of the Nepali translated tool in terms of Cronbach alpha was 0.73.⁷

Emotional and Behavioral problems were categorized into three: Normal, borderline and abnormal based on the total difficulties score⁶ as shown in Table 1.

Table 1: Categorization of emotional and behavioral problems

	Normal	Borderline	Abnormal
Emotional Problem Score	0-5	6	7-10
Conduct Problem Score	0-3	4	5-10
Hyperactivity Score	0-5	6	7-10
Pro-social activity	6-10	5	0-4
Peer Problem Score	0-3	4-5	6-10
Total difficulties score	0-15	16-19	20-40

Statistical analysis

We entered paper-based collected data in Epi-data manager version 4.6. The entered data was imported into Statistical Package for Social Sciences (SPSS) version 20 for pre-analytical processing and statistical analysis. The categorical variable was presented as frequency and percentage whereas numerical variables were presented as mean and standard deviation (SD). Goodman method⁹ was used to determine confidence intervals around the proportion of variables with multiple categories. Multinomial Logistic regression was applied to determine association between total emotional and behavioral problems with sociodemographic variables and results were presented with adjusted odds ratio (AOR) with 95% confidence interval. P-value less 0.05 was considered statistically significant throughout the study.

Ethical Clearance

We obtained ethical approval from the institutional review committee, BP Koirala Institute of Health Sciences (Ref. No-056/076/077-IRC) and Nepal health research council (NHRC) (Ref. No-2035) before conducting the study. We obtained assent from all adolescents participated in this study, written informed consent from parents/guardian, approval from principals of each school. The consent form was sent to home /hostel along with details of the research before data collection. The data was collected only after obtaining consent from parents /guardian and permission from school authority. We maintained confidentiality and anonymity throughout the study. Control, privacy and storage of the data were strictly maintained. Only the researcher had access to the data.

RESULTS

A total of 407 eligible students from selected schools were enrolled in the present study. Table 2 presents the socio-demographic characteristics of the study participants. Of 407 respondents, 65% were late adolescents and 35% were early adolescents. About three-fourth (60%) of the respondents were male. The mean age of the respondents was 14.97 ±1.08 years. Majority of the adolescents belonged to Brahmin/Chhetri (43.7%) followed by Madhesi (33.2%) and Janajati (13.5%) ethnic groups. Most of the respondents were Hindus (97.3%). Of the total respondents, 38.8% were from grade ten, 34.9% from grade nine and 26.3% from grade eight. More than half of the respondents (56.3%) were from private schools.

Table 2: Socio-demographic characteristic of the respondents (n=407)

Characteristics	n (%)
Age group (in years), Mean±SD	14.97± 1.08
Early adolescent (11-14 yrs)	142 (35.0)
Late adolescent (15-17yrs)	265 (65.0)
Gender	
Female	163 (40.0)
Male	244 (60.0)
Ethnicity	
Brahmin/Chhetri	125 (42.7)
Madhesi/ Muslim	97 (33.1)
Other (Dalit, Newars, Janajati)	71 (24.2)
Religion	
Hindu	396 (97.3)
Other (Budhist, Christian, Islam)	11(2.7)
Education	
Grade eight	107 (26.3)
Grade nine	142 (34.9)
Grade ten	158 (38.8)
Residence of respondents	
Home	354 (87.0)
Hostel	53 (13.0)
Types of school	
Government school	178 (43.7)
Private school	229 (56.3)
Fathers Education	
Primary or below	143 (35.1)
Secondary	107 (26.6)
Higher secondary and above	157 (38.6)
Mothers Education	
Primary or below	200 (49.1)
Secondary	113 (27.8)
Higher secondary and above	94 (23.1)

%. percent; n: frequency; SD: standard deviation

Table 3 shows the prevalence of emotional and behavioral problems and its subscales. The prevalence of abnormal and borderline total problems (emotional and behavior problems) were 14.5% (95% CI: 10.7-19.3] and 16.7% (95% CI: 12.7-21.3) respectively. The prevalence of abnormal emotional problem, conduct problem, hyperactivity, peer problems and pro-social activity were 14.3% (95% CI: 10.5-19.0), 16.5% (95% CI:12.5-21.4), 6.6% (95% CI:4.2-10.3), 10.8% (95% CI: 7.6-15.1) and 5.4% (95% CI:3.3-8.9) respectively. The prevalence of borderline difficulties under subscale of emotional problem, conduct problem, hyperactivity, peer problems and pro-social activity were 11.1% (95% CI:7.8-15.4), 16.0% (95% CI:12.0-20.9), 9.3% (95% CI:6.4-13.5), 26.3% (95% CI:21.3-31.9) and 7.4% (95% CI:4.8-11.2) respectively.

Table 3: Prevalence of emotional and behavioral problems and its subscales (n=407)

Categories of problems	Borderline n, % [95%CI]	Abnormal n(%)
Total problems (EBP)	68, 16.7[12.7-21.3]	59, 14.5[10.7-19.3]
Emotional	45, 11.1[7.8-15.4]	58, 14.3[10.5-19.0]
Conduct	65, 16.0[12.0-20.9]	67, 16.5[12.5-21.4]
Hyperactivity	38, 9.3[6.4-13.5]	27, 6.6[4.2-10.3]
Peer problems	107, 26.3[21.3-31.9]	44, 10.8[7.6-15.1]
Pro-social activity	30, 7.4[4.8-11.2]	22, 5.4[3.3-8.9]

%. percent; CI: confidence interval; n: frequency

Table 4 presents the multinomial logistic regression analysis to determine association of emotional and behavioral problems with sociodemographic variables. The variables which were significantly associated with total emotional and behavioral problems at $p \leq 0.20$ in bivariate analysis were gender, ethnicity, types of school, father's education, and mother's education and were taken for multinomial regression. The odds of having borderline and abnormal emotional and behavioral problems were 1.92(95% CI: 1.08, 3.40; $p=0.026$) and 2.49(95% CI: 1.34, 4.63; $p=0.004$) times respectively among females compared to males after adjusting for age, ethnicity, religion, education, residence, type of school, father's education and mothers education.

Table 4: Multinomial logistic regression to determine association of emotional and behavioral problems with sociodemographic variables

Variables	Categories	Normal vs Borderline		Normal vs Abnormal	
		AOR (95%CI)	p-value	AOR (95%CI)	p-value
Gender	Male	1		1	
	Female	1.92(1.08,3.40)	0.026	2.49(1.34,4.63)	0.004*
Ethnicity	Brahmin/chhetri	1		1	
	Madhesi/ Muslim	0.82(0.41,1.63)	0.566	1.69(0.81,3.51)	0.162
	Other	1.20(0.58, 2.45)	0.625	2.32(1.08, 5.02)	0.032
Types of school	Private	1		1	
	Government	0.97(0.47, 2.02)	0.931	1.07(0.47, 2.47)	0.869
Fathers Education	Above Secondary	1		1	
	Secondary	1.33(0.54, 3.25)	0.536	0.91(0.36, 2.30)	0.846
	Primary or below	2.24(0.81, 6.19)	0.122	0.92(0.32, 2.70)	0.884
Mothers Education	Above Secondary	1		1	
	Secondary	1.37(0.52, 3.60)	0.527	1.55(0.54, 4.41)	0.414
	Primary or below	0.93(0.31, 2.79)	0.889	1.50(0.48, 4.70)	0.485

AOR: adjusted odds ratio; CI: confidence interval; 1 refers to reference group
P value ≤ 0.05 is denoted by *

DISCUSSION

The public health significance of mental health conditions in children and adolescents has grown in recent decades. Evidence suggests that these conditions persist throughout adulthood, with up to 50% of all adult behavioral problems beginning in adolescence.²⁰⁻²³ The current study examines emotional and behavioral problems among school going adolescents in Morang district, Nepal. The most common problems among adolescents were conduct problems followed by peer relation problems (10.8%), hyperactivity (6.6%) and pro-social activity (5.4%) respectively. Emotional and behavioral problems were associated with gender of the study population. Emotional and behavioral difficulties increased in both boys and girls, with females experiencing a higher rise, which is consistent with the literature.^{21,24}

The prevalence of overall emotional and behavioral issues was 14.5 percent, which is consistent with the findings of other studies done both within and outside of the nation. A review from 51 Asian countries revealed the general prevalence of children and adolescents' mental health problems/disorders to be in the range of 10–20%.²² Similarly, a study identified a 14% incidence of psychological issues in India.²⁵ These studies are comparable in many ways to the current finding; however, the current research indicated a lower frequency of mental difficulties among teenagers. Similarly, a study conducted in Nepal by Bista et al reported the prevalence of psycho-social problems to be 17.0%.²⁶ Similarly, other studies conducted in Nepal reported the prevalence of total emotional and behavioral problems to be 18.6%²⁷ and 18.3%.²⁸

A multivariate and bivariate analysis was also performed to determine the risk variables for overall emotional and behavioural problems in adolescents. This study showed that emotional and behavioral problems were comparatively higher in female respondents (41.7%) than in male respondents (24.2%). In multivariate analysis, female respondents were 2.1 times more likely to have a problem. Hence gender is the strong predictor of emotional and behavioural problems in this study which is similar to the study conducted in 2010 by Risal et al which revealed females having higher incidence rates of emotional problems and a more chronic course.²⁹ Being female was linked to an increased risk of borderline and abnormal emotional and behavioral issues. This might be ascribed to a male-dominated society in which female children receive less care and emotional support from their parents.^{30,31} As a result, in this study, gender is a substantial predictor of emotional and behavioral issues.

Similar to a study conducted by Sharma et al (2018) in Pokhara, Nepal.¹⁹ We did not find any significant association of emotional and behavioral problems with age. In contrast to this, a study done in China in the year 2013 using SDQ found a significant association of emotional and behavioral problems with age factor with higher odds of having problems in late adolescents compared to early adolescents.³² Similarly, the current study found no significant link between emotional and behavioral problems and school type. On the contrary, research done in India found a significant association between emotional and behavioral problems and school type and socioeconomic class.³³

According to several studies, students living in hostels encounter a variety of challenges and obstacles, including financial problems, adjustment concerns, personal powerlessness, anguish, changes in eating and sleeping habits, and a variety of other issues.³⁴⁻³⁷ However, the current study did not show any significant association of emotional and behavioral problems with residence of participants.

Strength and limitation

There are several strengths of this study. First, this study described the prevalence of emotional and behavioral problems among school going adolescents. Second, we used a pre-tested validated standard Nepali-translated tool. Third, the collected data were cross-checked for cleanliness and errors at the end of every week. Despite the strengths of the present study, there are some limitations. First, the cross-sectional nature of the study prevents us from drawing causal conclusions between emotional and behavioural problems with sociodemographic variables. Longitudinal studies should be carried out to confirm the conclusions obtained in this study. Second, this study collected data from the school going students but hierarchical data including parents, teachers and school going children is more important in drawing conclusions. Third, the children who did not go to school or who were absent on the day of the survey were not enrolled in the study so the findings of this study should be generalized cautiously. Finally, different confounding variables like Parent-adolescent relationship, study pressure, parental expectations, parental violence were not included in the model for the better conclusion.

CONCLUSION

This study reported that 14.5% of the adolescents were having abnormal emotional and behavioral problems. Analyzing the domain of EBP, the conduct problem was most common followed by emotional problems. Emotional and behavioral problems were higher among the female adolescents. The problem among the adolescents was in an appalling situation. Integrated efforts from parents, schools and community are to be initiated to address the existing problems. The finding of the prevalence of EBP in this study suggest the need of child and adolescent mental health policy and plan to reduce the problem.

ACKNOWLEDGEMENT

We would like to acknowledge all the participants of the study and express our grateful thanks to all who directly or indirectly supported us in the study.

FUNDING

This research work was funded by the Nepal Health Research Council [Ref no. 1585]. The grant did not cover the publication cost. The funders had no roles in study design, data collection and analysis, the decision to publish, or preparation of the manuscript.

CONFLICT OF INTEREST

The authors have declared that no competing interests exist.

References

- World Health Organization. Adolescent health. https://www.who.int/health-topics/adolescent-health#tab=tab_1. Accessed October 2, 2021.
- Gurung Y. Social demography of Nepal: evidence from population and housing census 2011. *Popul Monogr Nepal*. 2014;111.
- Goodman R, Scott S. Comparing the Strengths and Difficulties Questionnaire and the Child Behavior Checklist: is small beautiful? *J Abnorm Child Psychol*. 1999;27(1):17-24.
- Klasen H, Crombag AC. What works where? A systematic review of child and adolescent mental health interventions for low and middle income countries. *Soc Psychiatry Psychiatr Epidemiol*. 2013;48(4):595-611.
- Chaulagain A, Kunwar A, Watts S, Guerrero APS, Skokauskas N. Child and adolescent mental health problems in Nepal: a scoping review. *Int J Ment Health Syst*. 2019;13(1):53. doi:10.1186/s13033-019-0310-y
- Rimal HS, Pokharel A. Assessment of Mental Health Problems of School Children Aged 11-17 Years Using Self Report Strength and Difficulty Questionnaire (SDQ). *J Nepal Paediatr Soc*. 2013;33(3).
- Goodman R. Psychometric properties of the strengths and difficulties questionnaire. *J Am Acad Child Adolesc Psychiatry*. 2001;40(11):1337-1345.
- Goodman R. The Strengths and Difficulties Questionnaire: A Research Note. *J Child Psychol Psychiatry*. 1997;38(5):581-586. doi:10.1111/j.1469-7610.1997.tb01545.x
- Goodman LA. On Simultaneous Confidence Intervals for Multinomial Proportions. *Technometrics*. 1965;7(2):247-254. doi:10.1080/00401706.1965.10490252
- Soni A. Statistical Brief# 242: The Five Most Costly Children's Conditions, 2006: Estimates for the US Civilian Noninstitutionalized Children, Ages 0-17. MEPS Ed Qual AfHRa. 2009:1-5.
- Government of Nepal, United Nations Development Programme. Nepal Human Development Report 2014: Beyond Geography Unlocking Human Potential. Government of Nepal, National Planning Commission; 2014.
- Kafle TK, Kafle TK, Mashrekya S, Rimal HS, Sapkota D, Pokharel A. Behavioral problems among school going adolescents in Eastern Development Region of Nepal. *Birat J Health Sci*. 2019;4(2):712-717.
- Uprety S, Lamichhane B. MENTAL HEALTH IN NEPAL. 2016:10.
- Aryal MN. National Adolescent Health and Development Strategy. *Fam Health Div Dep Health Serv Minist Health His Majestys Gov*. 2000:51.
- Chaulagain A, Kunwar A, Watts S, Guerrero APS, Skokauskas N. Child and adolescent mental health problems in Nepal: a scoping review. *Int J Ment Health Syst*. 2019;13(1):53. doi:10.1186/s13033-019-0310-y
- Districts • LGIS Nepal • Local Governance Information System Nepal. <https://lgisnepal.com/en/district?page=9>. Accessed October 30, 2021.
- Gurung Y. Social demography of Nepal: evidences from population and housing census 2011. *Popul Monogr Nepal*. 2014;111.
- Cochran W. Sampling Techniques. 3rd ed. New York: John Wiley & Sons, Inc; 1977.
- Sharma B, Rai MK, Sharma A, Karki S. Emotional and behavioral problems among adolescents in Pokhara City in Nepal. *J Nepal Health Res Counc*. 2018;16(41):419-424.
- Eric Maisel. The New Definition of a Mental Disorder | Psychology Today. <https://www.psychologytoday.com/us/blog/rethinking-mental-health/201307/the-new-definition-mental-disorder>. Accessed January 27, 2022.
- García-Moya I, Johansson K, Ragnarsson S, Bergström E, Petersen S. School experiences in relation to emotional and conduct problems in adolescence: a 3-year follow up study. *Eur J Public Health*. 2019;29(3):436-441. doi:10.1093/eurpub/cky244
- Srinath S, Kandasamy P, Golhar TS. Epidemiology of child and adolescent mental health disorders in Asia. *Curr Opin Psychiatry*. 2010;23(4):330-336. doi:10.1097/YCO.0b013e32833aa0c1
- Merikangas KR, Nakamura EF, Kessler RC. Epidemiology of mental disorders in children and adolescents. *Dialogues Clin Neurosci*. 2009;11(1):7.
- Ingoldsby EM, Kohl GO, McMahon RJ, Lengua L. Conduct problems, depressive symptomatology and their co-occurring presentation in childhood as predictors of adjustment in early adolescence. *J Abnorm Child Psychol*. 2006;34(5):602-620.
- Dash DM, Charlie MT. Assess the level of psychosocial health among adolescents at MTPG & RIHS, Puducherry". *Int J Nurs Didact*. 2015;5(05):19-22.
- Bista B, Thapa P, Sapkota D, Singh SB, Pokharel PK. Psychosocial Problems among Adolescent Students: An Exploratory Study in the Central Region of Nepal. *Front Public Health*. 2016;4. doi:10.3389/fpubh.2016.00158
- Rimal HS, Pokharel A. Assessment of Mental Health Problems of School Children Aged 11-17 Years Using Self Report Strength and Difficulty Questionnaire (SDQ). *J Nepal Paediatr Soc*. 2013;33(3):172-176. doi:10.3126/jnps.v33i3.8752
- Ma J, Mahat P, Brøndbo PH, Handegård BH, Kvernmo S, Javo AC. Parent reports of children's emotional and behavioral problems in a low- and middle- income country (LMIC): An epidemiological study of Nepali schoolchildren. *PLOS ONE*. 2021;16(8):e0255596. doi:10.1371/journal.pone.0255596
- Risal A, Sharma PP. Psychiatric Illness in the Paediatric Population Presenting to a Psychiatry Clinic in a Tertiary Care Centre. *Kathmandu Univ Med J*. 2012;8(4):375-381. doi:10.3126/kumj.v8i4.6235
- Ogundele MO. Behavioural and emotional disorders in childhood: A brief overview for paediatricians. *World J Clin Pediatr*. 2018;7(1):9.
- Ram U, Strohschein L, Gaur K. Gender Socialization: Differences between Male and Female Youth in India and Associations with Mental Health. *Int J Popul Res*. 2014;2014:e357145. doi:10.1155/2014/357145
- Wang JN, Liu L, Wang L. Prevalence and associated factors of emotional and behavioural problems in Chinese school adolescents: a cross-sectional survey. *Child Care Health Dev*. 2014;40(3):319-326.
- Harikrishnan U, Sailo GL. Prevalence of emotional and behavioral problems among school-going adolescents: A cross-sectional study. *Indian J Community Med*. 2021;46(2):232.
- Iftikhar A, Ajmal A. A qualitative study investigating the impact of hostel life. *Int J Emerg Ment Health Hum Resil*. 2015;17(2):511-515.
- Pasupula SK, Kodali M, Benerji T, Parvathaneni KM. Depression and behavior problems among children residing at welfare hostels and orphanages. *Arch Ment Health*. 2021;22(1):10.
- Effect of Hostel Living Situation on Mental Health. <https://www.ukessays.com/essays/psychology/effect-hostel-living-situation-mental-8843.php>. Accessed January 28, 2022.
- Liaqat H, Choudry UK, Altaf A, Sauleh J, Rahman S, Choudry A. Deranged mental homeostasis in medical students: Evaluation of depression anxiety and stress among home and hostel students. *Acta Psychopathol*. 2017;3:1.