Motivations to Engage in Social Distancing and Depression, Anxiety, and Stress Among Adolescents During COVID-19 Pandemic

Satya B Shrestha, Menuka Bhandari, Munawatee Rai, Karishma Khadgi

Author(s) affiliation

Department of Child Health Nursing, Biratnagar Nursing Campus, Institute of Medicine, Tribhuvan University, Biratnagar, Nepal

Corresponding author

Menuka Bhandari, BNS, MN
menukamenu@gmail.com

ABSTRACT

Introduction

The coronavirus disease 2019 (COVID-19) is a pandemic prevalent in most countries globally affecting people of all ages including adolescents. Social distancing was implemented to minimize the spread of the virus. The present study is aimed to determine the factors that motivate adolescents to engage in social distancing and find out the depression, anxiety and stress status of the adolescents during COVID-19 pandemic.

Methods

A quantitative, descriptive cross-sectional study was conducted among 256 adolescents studying in classes 11 and 12 of four 10+2 schools in Biratnagar Metropolitan City. The study duration of this study was 6 months. A complete enumerative sampling technique was used to enroll students. Data was collected by the structured questionnaires containing sociodemographic variables and the Nepali version of the Depression Anxiety Stress 21-point Scale through an online google docs questionnaire.

Results

The maximum number of respondents (61.8%) maintained a social distance of their own will, and 48.2% of respondents maintained social distance because of external factors. The prevalence of depression was 27.8%., anxiety was 18.5% and stress was 13.3%. No association was found between social distancing and the mental health of adolescents with demographic variables.

Conclusion

The present study concluded that adolescents are self-motivated to comply with social distancing rules and there is no effect on their mental health status during the period of the COVID-19 pandemic.

Keywords

Adolescence, anxiety, depression, motivation, social distancing, stress

INTRODUCTION

The COVID-19 infection was spread to more than 200 countries in less than 3 months of its outbreak, affecting most countries globally. People can get COVID-19 infection if they breathe in droplets from a person infected with the virus. This is why it is important to stay away from others.[1] During the period of absence of vaccines, countries around the world implemented various forms of "social distancing" as a policy to slow the virus' spread as the aim was to keep people apart from each other by confining them to their homes in order to reduce contact rates.[2]

Various studies show that in epidemics, adolescents experienced feelings of loneliness, helplessness, being socially excluded and stigmatized, or separated from loved ones. It can lead to higher number of mental health issues in adolescents such as anxiety and depression because of boredom, lack of outdoor play and social isolation during lockdown as well as prolonged stress.[3-6]

Restrictive measures imposed a complete change on the psychosocial environment and might lead adolescents more emotionally vulnerable because at this stage they are highly social and they enjoy peer relationships. Adolescence is a developmental period characterized by expanding autonomy and greater salience of peer relationships, which may contribute to prioritizing current social distancing recommendations. The aim of the study was to assess the motivations among adolescent students to engage in social distancing and their depression, anxiety and stress status during the COVID-19 pandemic.

METHODS

The study was conducted using a descriptive cross-sectional quantitative research design from August 2020 to January 2021. The study was conducted in 10+2 schools of Biratnagar Metropolitan city. Ethical approval was obtained from the Institutional Review Committee of Institute of Medicine, Tribhuvan University on November 11 2020 (Ref: 126(6-11) E² 077/078. Permission to proceed with the study was obtained from the principal of the respective 10+2 schools. Informed written consent was obtained from all the participants prior to the study questionnaires.

Four schools (two public and two private) were chosen randomly and a questionnaire was administered to all the students via online google docs. The duration of data collection was two months, 256 adolescent students completed the online form and submitted. The final sample size was 256 adolescent students. Data was collected by the structured questionnaires containing sociodemographic variables and the Nepali version of the Depression Anxiety Stress 21-point Scale, which was administered through an online google doc's questionnaire with the coordination of the IT section of the respective school.

The independent variables of the study were demographic variables (sex, type of school, type of residence, socioeconomic status), motivations to engage in social distancing which included autonomous motivations (social responsibility, avoid others sick, avoid personal sick, prefer stay home) and controlled motivation (lockdown, parents' rules, no alternatives, friends said i should, avoid judgment, social media influences) on the other hand the dependent variables of the study was social distancing and mental health status of the adolescents.

Modified Kuppuswamy's Socioeconomic Status Scale in the Context of Nepal was used to calculate the socioeconomic status of the family of adolescents. The mental status was assessed using DASS21. The responses were expressed as Never=0, Sometimes=1, Often=2, and Almost Always=3. The total score of DASS21 ranges from 0-63. Subscale scores for depression, anxiety, and stress were summed as per the DASS 21 manual. The obtained score was multiplied by 2 to calculate the severity of the symptoms. The scores were reported as means and standard deviations. DASS scores were then categorized as 'normal,' 'mild,' 'moderate,' 'severe' and 'extremely severe' as per the DASS manual.[7] The engagement in social distancing was classified as engaged for those responses with "a lot" and "great deal" on the other hand, not engaged for those responses with "a little" and "somewhat".

The collected data were imported to Google Sheets, filtered for completeness, and coded into Microsoft EXCEL sheet at different stages in the process of data analysis so as to suit the particular statistical test. The final data was interpreted by using descriptive and inferential statistics. Descriptive statistics (frequency, percentage, mean and standard deviation) was used to describe the socio-demographic variables). The associations between the variables were analyzed with Chi-square and reported as Odds Ratio with 95% Confidence Intervals (CIs). All the statistical analyses were carried out with IBM SPSS Statistics version 22.0.

RESULTS

The socio-demographic characteristics of respondents showed that 34.8% of the respondents were of age 17 years with a median age of 17 and an interquartile range of 2. The majority of respondents were boys (70.3%), and more than half (60.2%) of the respondents were residing in urban areas. Similarly, most of the respondents (58.2%) were studying in grade 11. Likewise, 64.8% were

Table 1. Socio-demographic characteristics of respondents (n=256)

Variables	Number (%)
Age in Years	
15	24 (9.4)
16	41 (16)
17	89 (34.8)
18	69 (27)
19	33 (12.9)
Median age	17
IQR	2
P-value of Shapiro-Wilk	0.91
Sex	
Boy	180 (70.3)
Girl	76 (29.7)
Place of residence (area)	
Rural	102 (39.8)
Urban	154 (60.2
Grade	
11	149 (58.2)
12	107 (41.8)
Type of School	
Private	166 (64.8)
Public	90 (35.2)
Socioeconomic status	
Lower class	161 (62.6)
Upper class	95 (37.5)

Table 2. Social distancing (n=256)

Variables	Responses	Number (%)
Meaning of social distancing	At least 0.5 m	3 (1.2)
	At least 1 m	59 (23)
	At least 2 m	131 (51.2)
	At least 3 m	6 (24.6)
Practicing engagement in social distancing	A little	22 (8.6)
	Somewhat	102 (39.8)
	A lot	86 (33.6)
	A great deal	46 (18)

Table 4. Depression, anxiety and stress status of respondents (n=256)

Mental Health Status	Depression	Anxiety	Stress
Normal	185 (72.2)	209 (81.5)	220 (85.7)
Mild	36 (14.1)	15 (5.9)	17 (6.6)
Moderate	25 (9.8)	23 (9)	12 (4.7)
Severe	6(2.3)	4 (1.6)	4 (1.6)
Extremely severe	4 (1.6)	5 (2)	1 (.4)

studying in private schools. Moreover, 62.6% of respondents belong to lower class socioeconomic status (Table 1).

Maximum respondents opted for the social distancing at least 2 meters which is approximately 6 feet. There was a minimal difference in respondents engaging in somewhat (39.8%) and a lot (33.6%) of social distancing. Only a few respondents (8.6%) were involved in a little amount of social distancing (Table 2).

The maximum number of respondents (61.8%) maintained a social distance of their own will, 23.0% felt it was social responsibility and 10.1% of respondents maintained it as they did not want to fall sick. On the other hand, 48.2% of respondents maintained social distance because of external factors, 8.3% as the influence of social media and 7.8 because their parents have said so. (Table 3).

The maximum score of depression was 36 with a median score of 4 and IQR 8. the Shapiro-Wilk p-value was 0.86. The anxiety subscale ranged from 0-38 with a median score of 6 and IQR of 10. Anxiety subscale scores had lower values of median and IQR (2, 6 respectively) and ranged from 0-22. The prevalence of mental health status of respondents based on the DASS21 subscale was mild depression 14.1%, and 1.6% had extremely severe depression. Similarly, 9% had moderate only 1.6% had severe anxiety. Likewise, 6.6 % of respondents had mild and 0.4% had extremely severe stress. (Table 4).

Table 3. Motivations for social distancing (n=256)

Motivation	Responses	Number (%)	Percent of cases
Autonomous motivations (61.8%)	It is socially responsible	182 (23.0)	71.4%
	I don't want others to get sick	110 (13.9)	43.1%
	I don't want to personally get sick	80 (10.1)	31.4%
	I prefer to stay at home anyway	116 (14.7)	45.5%
Controlled motivations (38.2%)	My parents are making me	62 (7.8)	24.3%
	My state/city is on lockdown	61 (7.7)	23.9%
	There is nothing else going on	50 (6.3)	19.6%
	My friends told me I should	20 (2.5)	7.8%
	I don't want to be socially judged	44 (5.6)	17.3%
	Influence of social media	66 (8.3)	25.9%

Table 5. Association between variables and social distancing (n=256)

| Variables | Social distancing | | p-value |
	Engaged n (%)	Not engaged n (%)	
Sex			
Boy	88 (48.9)	92 (51.1)	0.89
Girl	36 (47.4)	40 (52.6)	
Place of residence			
Rural area	51 (50.0)	51 (50.0)	0.39
Urban	73 (47.4)	81 (52.6)	
Socioeconomic status			
Lower class	51 (51.0)	49 (49.0)	0.30
Upper class	73 (46.8)	83 (53.2)	
Type of school			
Private	82 (49.4)	84 (50.6)	0.39
Public	42 (46.7)	48 (53.3)	

No association was observed between demographic variables and social distancing. Similarly, there is no significant association between demographic variables and mental health status Likewise, there was no association between respondents' engagement in social distancing and their motivation in maintaining social distancing and no association between mental health status and their engagement in social distancing (Table 5 and 6).

DISCUSSION

A total of 256 adolescent students were virtually assessed for their motivations for engaging in social distancing and their depression, anxiety, and stress status. The adolescents ranged from 15 to 19 years with a median age of 17 (IQR 2); most of them (70.3%) were boys. Most of the respondents reported that the idea of 2 meters may be because the government pushed forward social distancing as the practice of maintaining at least 6 feet distance from one's co-workers, neighbors, friends, and family, or isolating oneself while avoiding social, religious, political, and any other type of gathering.[8]

The engagement in social distancing was found to be somewhat satisfactory as 33.6% of the respondents were practicing a lot of social distancing which was similar to a study done by Oosterhoff, Palmer, Wilson and Shook.[9] in their study most youths were engaging in social distancing a lot (26.9%) or a great deal (56.6%), with fewer youth engaging in social distancing somewhat (13.0%) or a little (3.5%).

In the present study, more than half of the respondents 61.8% were self-motivated to maintain

Table 6. Association between motivation and depression, anxiety and stress (n=256)

| Motivations | Engagement | | p-value |
	Not Engaged	Engaged	
Autonomous	69 (43.7)	89 (56.3)	0.35
Controlled	55 (56.1)	43 (43.9)	

social distance. On the other hand, the remaining 38.2 % of respondents, social distancing due to some controlled motivations. Similar finding was presented in a study by Oosterhoff. There was no association found between sex, socio-economic status, type of school and place of residence, and social distancing, a similar finding was reported in the study by Oosterhoff.[9]

The present study reported that 27.8% were presented with depressive symptoms, 18% reported anxiety symptoms, and 13.3% were presented with stress symptoms based on the DASS21 scale. A study was done at Imphal, Manipur among 830 higher secondary school students to assess depression, anxiety, and stress and reported nearly similar findings with the prevalence of depression, anxiety, and stress being 19.5%, 24.4%, and 21.1%, respectively.[10] There was a significant relationship between sex and mental health status in the study, in contrast, there was no association between sex and mental health status in the present study.

A cross-sectional study among adolescents aged 17-19 in Kashmir resulted in the prevalence of depression, anxiety, and stress found to be 40%,50%, and 37.5% respectively which was higher than the prevalence in the present study.[11] The prevalence of higher psychiatric morbidity may be due to continuing conflict in Kashmir over the last 18 years. There was no association found between social distancing and depression, anxiety, and stress in the present study, Oosterhoff et. al. also reported that there was no association between social distancing engagement and depression, anxiety, and stress in adolescents.[9]

CONCLUSION

The present study concluded that a greater number of adolescents were presented with depression than anxiety and stress symptoms. Furthermore, adolescents are self-motivated to comply with social distancing rules and it does not affect their mental health status. In the present study, motivating factors for adolescents are assessed, self-motivating strategies could be implicated to motivate adolescents for their involvement in different causes.

FINANCIAL SUPPORT

CONFLICT OF INTEREST

The author(s) declare that they do not have any conflicts of interest with respect to the research, authorship, and/or publication of this article.

REFERENCES

1. WHO. WHO Coronavirus Disease (COVID-19) Dashboard [Internet]. WHO Coronavirus Disease (COVID-19) Dashboard. 2020. Available from: https://covid19.who.int/

2. Organization WH. Official Coronavirus Updates [Internet]. 2020. Available from: www.who.int/covid-19/information

3. Venkatesh A, Edirappuli S. Social distancing in covid-19: what are the mental health implications? BMJ 2020;m1379.

4. Children at risk of lasting psychological distress from coronavirus lockdown': Save the Children [Internet]. 2020 May 8. Available from: URL:https://reliefweb.int/report/world/children-risk-lasting-psychological-distress-coronavirus-lockdown-save-children

5. Witt A, Ordóñez A, Martin A, et al. Child and adolescent mental health service provision and research during the Covid-19 pandemic: challenges, opportunities, and a call for submissions. Child Adolesc Psychiatry Ment Health. 2020 Jun 13;14(1):19. s

6. Khan DA. Doctor's Note: The psychological effects of social distancing [Internet]. 2020. Available from: URL:https://www.aljazeera.com/indepth/features/doctor-note-psychological-effects-social-distancing-200414071411061.html

7. Lovibond SH, Lovibond P. DASS21. In: Manual for the Depression Anxiety & Stress Scales. 2nd Ed. Sydney: Psychology Foundation; 1995.

8. Rajak R. Social distancing or social ostracising [Internet]. 2020 April 10. Available from: URL:https://www.recordnepal.com/covid19/social-distancing-or-social-ostracising/

9. Oosterhoff B, Palmer CA, Wilson J, et al. Adolescents' Motivations to Engage in Social Distancing During the COVID-19 Pandemic: Associations With Mental and Social Health. J Adolesc Health 2020 Aug 1;67(2):179-185.

10. K SK, Brogen SA. Depression, Anxiety and Stress among Higher Secondary School Students of Imphal, Manipur. Wolters Kluwer -- Medknow Publ Indian J Community Med. 2017;42(2):94–6.

11. Naqshbandi I, Bashir N, Qadri SY, et al. Prevalence of Stress, Anxiety and Depression among Medical Undergraduate Students of Kashmir - A Cross-Sectional Study. Int J Contemp Med Res 2019 Feb 1;6(5).