



Original Article

Managing stress in Adolescents: A challenge to be addressed during COVID 19 Pandemic

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Abstract

Background: COVID-19 pandemic is intensely affecting lives around the globe. Lockdown, social distancing, quarantine and isolation caused entire change of psychosocial environment of countries. As pandemic is progressing through phases, this study aimed at evaluating the effect of these phases on Mental health of children and adolescents and the provision of necessary interventions. So this study was conducted with an objectives to assess the prevalence of stressors and to estimate the prevalence of anxiety among school going adolescent children in Kolar.

Aims: To assess the prevalence of stressors and anxiety among school going adolescents in Kolar. Using Adolescent stress questionnaire.

Settings and Design: Cross sectional study conducted during July 2020 to September 2020. All school going children in the adolescent age group 10-16 years from the selected Private schools in Kolar, depending on the availability of the online teaching platforms.

Methods and Material: A Cross-sectional study was carried out among 288 school going adolescents in Kolar using a 14 point shortened version of Adolescent stress questionnaire, via Google forms and communicate through the school online learning platforms. The school Principal permission was taken along with consent and assent from the parent and child respectively by an option of opting into the survey.

Statistical analysis used: The data was compiled in Microsoft excel and SPSS statistical software version 22 was used to analyse the data.

Results: Among the 288 responses obtained from the children, 32% had symptoms of anxiety and 52% were found to be stressed, whereas 16.3% children had sleep disturbances and. 51.9% of them complained of not getting enough time for leisure.85.1% children's parents spent time with their children.

Conclusions: In the current context of restriction of movements due to the pandemic, children have constrained access to socialization and playing outdoor. As supported by our study results, children are found to feel anxious and are at a loss due to over-exposure to media and academic pressure. Hence it's the need of the hour to find ways to explain and address with children regarding the present day situation in a way that is understandable to them.

Keywords: COVID 19, Stress, Anxiety, Adolescents, School going children.

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Introduction

Coronavirus disease 2019 (COVID-19) pandemic is profoundly affecting lives around the globe.¹ On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic, To tackle the rapid increase of cases in India and to restrict the community spread, national level "lockdown" was announced from midnight of March 25, 2020 to start with for 21 days, which was

later extended with various restrictions, these measures intended to prevent the spread of the virus, implicated strict public health measures and effectively putting cities under lockdown, which led to closure of schools and business.^{2,3}

Adolescence is a transition phase that can be seen from childhood to adulthood and critical developmental period in humans, it can be identified through several biological, cognitive, and psychosocial changes. Characteristics such as a tendency to look for new experiences, desire for independence and an inner search for self-identity gradually shape their personality through the developing years. Transformation into adolescence is a critical period in one's life and may exert influence on the psychological outcome of adolescents as they face changes related to pubescence and pressure from peer group, family and academic matters. There can be both positive and negative things that can happen. On one hand, it is a phase of tremendous growth preparing children to sustain pressure and challenges whereas on the other hand it is a transition phase that can increase risk of various psychological disorders. Positive environments in the family, school and communities enable adolescents to maintain good mental well-being.⁴

In response to the unpredicted public health threat posed by the COVID-19 pandemic all the schools have been closed from the mid of March. School closure has disrupted the lives of students and their families which may have consequences in the mental health of the child. The COVID-19 pandemic may worsen existing mental health problems and lead to more cases among adolescents because of the unique combination of the public health crisis, social isolation, and economic recession. It is important to consider the effects of school closure during the lockdown period on children's mental health wellbeing.⁵

The present day situation exert influence on children, adolescents and their families in an unusual way.⁶ Schools were shut, social connections forcibly limited and out-of-home leisure time activities cancelled. Parents were asked to assist their little ones with home schooling, meanwhile parents doing home based work.⁷ Support by other kith and kin and system of social support have dropped away. Apart from fear and anxiety related to COVID-19, the financial situation has worsened with rising and high levels of joblessness in all countries.⁸ This has put a lot of pressure on children, adolescents and their families which could result in distress and mental health problems. As the pandemic is evolving through phases, evaluating the impact of these phases on Mental Health of children and adolescents and the

provision of necessary interventions.⁹

Stress and anxiety about their own health and the health of loved ones can be overwhelming and cause strong emotions among adolescent children. In present day computerised world, children too get access to various kinds of information and news through media and digital platforms, some may not be true factually, causing additional stress and anxiety. It is intensified when children were not able to go out, play or attend school.

Hence this study is planned to assess the prevalence of anxiety and stress during the COVID-19 Pandemic.

Material and Methods

A cross sectional study was conducted during July 2020 to September 2020. According to WHO guidelines adolescent age group is between 10-19 years.¹⁰ As the study was planned among school going children all the school going children in the adolescent age group 10-16 years from the selected Private schools in Kolar, based on the availability of the online teaching platforms. The sample size of 288 has been calculated by using prevalence of Anxiety among adolescents of 25%, 5% absolute error and 95% confidence interval.⁶

Selection of subjects, there are about 29 schools in Kolar, among them 3 schools are using online platform for teaching students. Out of that one school was selected through simple random sampling. The children between the age of 10 to 16 years were selected and google forms were sent to each individual student by simple random sampling.

Adolescent Stress Questionnaire - 14 (ASQ - 14),¹¹ Generalized Anxiety Disorder - 7 (GAD-7),¹² were used to assess the level of stress and anxiety. The scales were free access and was modified to a local vernacular language and validated. It was a self-administered questionnaire which had closed ended questions, easy to comprehend and respond. As the children in the selected private schools were already using the online platforms for submission of assignment and learning purposes, it was easy for the adolescent age children to fill the forms with some assistance from parents. The school Principal permission was taken along with consent and assent from the parent and child respectively by an option of opting into the survey being provided in the Google forms.

The data was compiled in Microsoft excel and SPSS statistical software version 22 was used to analyse the data. All the categorical data was expressed in frequency and percentage. The association between the stress level and

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socio-demographic details was tested using bi-variate logistic regression.¹³ The association was expressed as Prevalence Ratio (PR) with 95% Confidence Intervals (CI). P value ≤ 0.05 was considered as statistically significant. Institutional ethical committee approval was obtained.

Results

Table 1 shows a total of 288 adolescent school

going children participated in the study. Majority of children were between 13 and 14 years 49% (n=141), female participants were more 58% (n=167) compared to male. Almost equal distribution of study participants were there from 6th, 8th and 10th standard which was approximately 19%, whereas in 9th std it was 24% and in 7th std 18% respectively. 85.1% of children's parent spend time with their children every day.

Table 1: Socio demographic profile of adolescent school going children aged 10-16 years in Kolar (n=288)

Sl. No	Characteristics		Frequency	Percentage %
1	Age	10-12 years	91	31.6%
		13-14 years	141	49%
		15-16 years	56	19.4%
2	Gender	Male	121	42%
		Female	167	58%
3	Standard	6 th	54	19%
		7 th	56	19.4%
		8 th	52	18%
		9 th	64	24.6%
		10 th	55	19%

Table 2 shows majority 53.8% of adolescents had mild stress and 5.2% had moderate stress. 31.2% of them were found to have mild anxiety and 0.8%

had moderate anxiety. One sixth of the adolescents 16.3% were found to have disturbed sleep and 6.7% were unable to sleep.

Table 2: Distribution of study participants based on level of stress, anxiety, and sleep disturbance (n=288)

Sl. No	Characteristics		Frequency	Percentage %
1	Stress (ASQ-14)	No stress or minimal stress (14-20)	118	41%
		Mild (21-28)	155	53.8%
		Moderate (29-42)	15	5.2%
		Severe (43-56)	0	0
		Very Severe (57-70)	0	0
2	Anxiety (GAD-7)	No or minimal anxiety (0-4)	196	68%
		Mild (5-19)	91	31.2%
		Moderate (10-14)	6	0.8%
		Severe (16-21)	0	0
3	Sleep pattern	No disturbance	222	77%
		Disturbed sleep	47	16.3%
		Not able to sleep	19	6.7%

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Table 3 shows prevalence of stress to be 59%. Stress was found to be statistically significant among children whose parents were not spending time with them than with parents who were spending time with their children p value ≤ 0.05 .

Table 3: Factors associated with stress among adolescent school going children during COVID 19 pandemic in Kolar (n=288)

Sl. No	Characteristics		No Stress (n=118)	Stress Present (n=170)	P value
1	Standard	6 th —8 th (n=162)	63(38.8%)	99(61.1%)	0.069
		9 th —10 th (n=126)	55(43.6%)	71(56.4%)	
2	Gender	Male (n=121)	44(36.4%)	77(63.6%)	0.039
		Female (n=167)	74(44.3%)	93(55.6%)	
3	Parent's time	Not spent with children (n=43)	10(23.2%)	33(76.7%)	0.005
		Spent with children (n=245)	108 (44.1%)	137(55.9%)	
4	Sleep pattern	No disturbance (n=222)	97(43.6%)	125(56.4%)	0.061
		Disturbed sleep (n=47)	11(23.4%)	36(76.5%)	
		Not able to sleep (n=19)	10(52.6%)	9(47.4%)	

Table 4 shows prevalence of anxiety to be 32% among the school going adolescent children. In 9th and 10th standard they were found to be more anxious than others, similarly children who had disturbed sleep had more anxiety than children who did not have sleep disturbance which was found to be statistically significant p value ≤ 0.05 .

Table 4: Factors associated with anxiety among adolescent school going children during COVID 19 pandemic in Kolar (n=288)

Sl. No	Characteristics		No Anxiety (n=196)	Anxiety present (n=92)	P value
1	Standard	6 th -8 th (n=162)	119(73.4%)	43(26.6%)	0.009
		9 th -10 th (n=126)	77 (61.1%)	49(38.9%)	
2	Gender	Male (n=121)	82(67.7%)	39(32.3%)	0.101
		Female (n=167)	114(68.2%)	53(31.8%)	
3	Parent's time	Not spent with children (n=43)	28(65.1%)	15(34.9%)	0.125
		Spent with children (n=245)	168(68.6%)	77(31.4%)	
4	Sleep pattern	No disturbance (n=222)	159 (71.6%)	63(28.4%)	0.004
		Disturbed sleep (n=47)	28(59.5%)	19(40.4%)	
		Not able to sleep (n=19)	9(47.3%)	10(52.7%)	

Discussion

In the present study prevalence of stress among adolescents was found to be 59% whereas in the study conducted by Bindu et al. in 2016 before COVID-19 outbreak found the stress among adolescents to be 25%, where we see almost doubling of stress level among adolescents compared to pre COVID-19 times and studies done by Wendy et al in Canada found the stress among adolescents during COVID -19 pandemic to be 56.6% which is similar to that of our study results. Study by Grover et al in India found stress among adults during COVID-19 to be 70.1% which is more than that of adolescents.^{2,3,4}

In the present study prevalence of anxiety among adolescents was found to be 32% whereas in the study conducted by Bindu et al. in 2016 before COVID-19 outbreak found the anxiety among adolescents to be 17%, where we again see almost doubling of anxiety level among adolescents compared to pre COVID-19 times and study done by Qi et al in China found the anxiety among adolescents during COVID -19 pandemic to be 37.6% which is similar to that of our study results. Study by Grover et al in India found anxiety among adults during COVID-19 to be 38.1% which is similar to adolescents.^{2,4,13}

In this study it was observed that the stress level is less among the children with whom their parents spent time, it was also found that children with no disturbed sleep has less anxiety compared to children who had disturbed sleep.

The study was done during lockdown using online platforms so only private school children were involved in the study and not the children from public schools. As the study is a cross sectional study there can be temporal association, so we cannot establish which preceded over the other, cause or effect.

Conclusions

Social restriction imposed by pandemic has led to increase of stress and anxiety in children; Children have constrained access to socialization and playing outdoor. Long term stress on children will have adverse effect on academics, mental health, physical health, and wellbeing of adolescents, Important to find ways to explain and communicate with children about the current situation and how to cope it up.

Recommendations

Normal to feel sad during crisis, during which talk to people you trust, Maintain healthy lifestyle, Gather right information, Draw time to your skills, Limit worrying by avoiding things that upset, Don't smoke, use alcohol or other drugs to deal emotions. Seek doctor's or psychologist's assistance if required.

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