

# IMPACT OF COVID AND MENTAL HEALTH ON ADOLESCENTS

**Running Title:** Covid and mental health on adolescents

## ABSTRACT

### INTRODUCTION

The outbreak of coronavirus causes considerable risk to public health and also might cause an impact on adolescents mental health. COVID-19 has brought about a sense of fear and anxiety around the world. During lockdown, mental health of adolescents through online class and work from home makes it more stressful among adolescents . The aim of the study is to explore the pathway among the different variables in order to better understand how these factors play a part in impacting adolescents' mental health conditions.

### MATERIALS AND METHODS

The sample size used for the study is 124. Questionnaire based survey is conducted in google forms among adolescents. This standard questionnaire in Google forms is being circulated among the sample study population and at the end of the survey, all the data is been analysed by using chi square analysis. The chi square analysis was done using the software IBM SPSS (Version 23).The data were analysed from the survey and the values were tabulated in the form of pie and bar charts.

### RESULT

In this study males feel more stress than females and the p value is 0.814 and it is not significant. During COVID period, study stress is caused more among the males than in females and the p value is 0.514 and it is not significant. Mental health was more affected among the males than in females and the p value is 0.261 and it is not significant. In our study population most of them feel stressful during COVID period.

### CONCLUSION

This study creates awareness among the people about the mental health of adolescents affected during lockdown . The containment measures like school and activity centre's closures for long periods together expose the children and youth to effects on educational, developmental, psychological and attainment as they experience loneliness, anxiety and uncertainty. Using the internet and social media will put them at higher risk . The focal point of the healthcare system and policymaking should be prevention, promotion and inter-

ventions corresponding to the public mental health system to meet the mental health needs of the population at large by taking the regional contextual parameters into account.

## **KEYWORDS**

Adolescents, COVID-19, Lockdown, Mental health, Risk factors

## **INTRODUCTION**

There are more than 2.2 billion adolescents in the world which is 28% of the world's population. COVID -19 has impacted the lives of people around the world including children and adolescents in an unprecedented manner. This situation continues to have increased long term consequences on children and adolescents (1,2). The nature and extent of impact on adolescents depend on many vulnerable factors such as current educational status, having some special needs and being economically underprivileged and children being quarantined due to fear of COVID -19 (2). There is no longitudinal research examining the psychological impact of mental health among adolescents (3). Adolescents in COVID period may experience mental distress and psychiatric problems. During the impairment of SARS epidemic emergence of various psychiatric comorbidities, increased level of anxiety , depression and traumatic stress reactions (4,5). The childrens are easily affected by contact with the infected individuals (6). Even adolescents ,living in slums and those with disability and in conflict zones are at greater risk (9),(10),(11),(12). The study will show the risk factors for adolescence and anxiety during COVID (7). During the SARS period , the children's and adolescents' mental health was affected and indicated the increased long term adverse effect on adolescents' mental health. COVID pandemic period has brought about a sense of fear and anxiety among adolescents. There are short term and long term psychological mental health implications on adolescents (8). Majority of adolescents faced mental health disturbance during COVID (13)(14) .

This study also intends to look at whether gender, grade in class , single child status, online learning participation, parents' involvement in COVID-19 related work, and parents being quarantined or infected because of the disease would demonstrate clinically significant differences in anxiety and depression (15–19 ) We hypothesized that there would be significant differences in anxiety and depression, but we are uncertain which factors would contribute to those differences (20) .

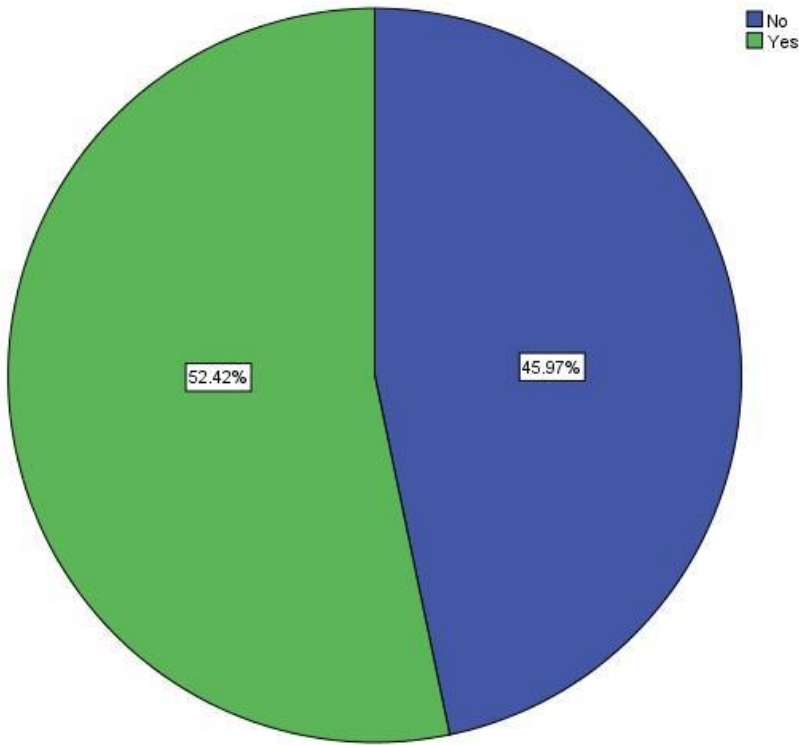
Finally, this study intends to explore the pathways among the various variables and understand how these factors play a role in impacting adolescents' psychological state (4). Previous studies have revealed significant associations between family factors and changes in child mental state during the COVID-19 period across a variety of countries, and parenting behaviors is one among the identified factors (21). Anxious parental rearing style also proved to be a mediator between stressful life events on adolescents. This study is about identifying

mental health outcomes in adolescents and correlates ,either positive or negative , associated with adolescents (22). This study deals with the awareness among the people about mental health in adolescents (24–26). The following sections discuss findings of studies on mental health aspects of adolescents impacted during COVID and being implemented at national or regional level to prevent further spread of infection (22,23). The aim of the study is to create awareness among the people about the impact of mental health on adolescents and to explore the pathway among the different variables in order to better understand how these factors play a part in impacting adolescents' mental health conditions (27–32).

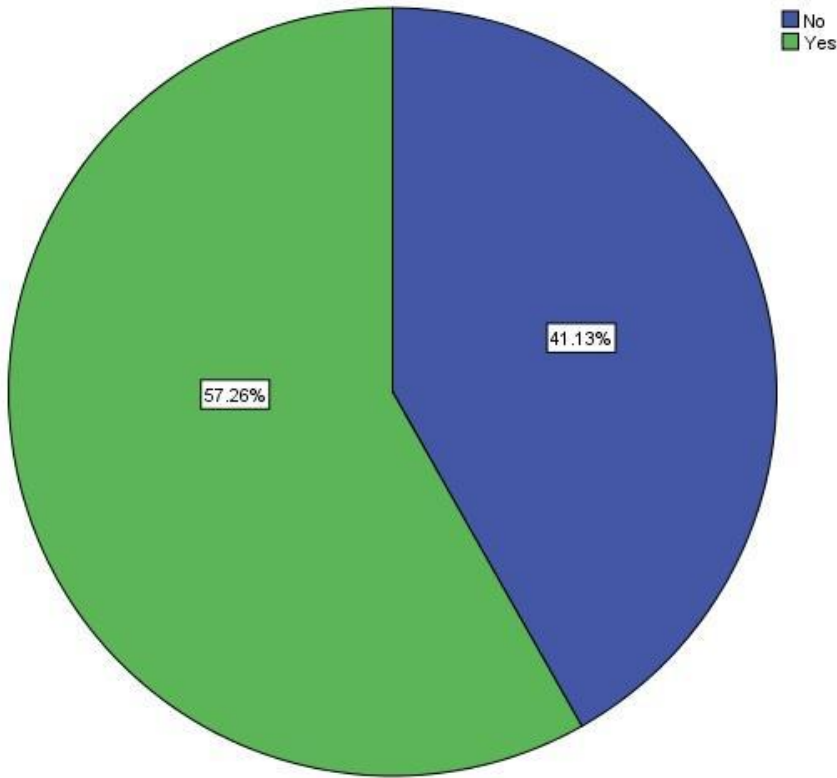
## **MATERIALS AND METHODS**

The sample size used for study is 124. A self structured questionnaire is being prepared and uploaded in Google forms. This standard questionnaire in Google forms is being circulated among the sample study population and at the end of the survey, all the data is been analysed by using chi square analysis. The chi square analysis was done using the software IBM SPSS (Version 23). The survey is within Saveetha university adolescents. The data analysed were represented in pie and bar charts. We searched the electronic databases of medline through pubmed ,library and google scholar databases. This is cross sectional study ,using data randomly collected during lockdown. Ethical approval of the participants were noticed about the purpose and procedures of this study through questionnaire , a survey platform used to collect information. The survey to understand children and adolescents mental health conditions during the lockdown. All those who were willing to participate were included in the study. Those who were not willing and those who had language barrier in answering the english version of the questionnaire were excluded from the study.

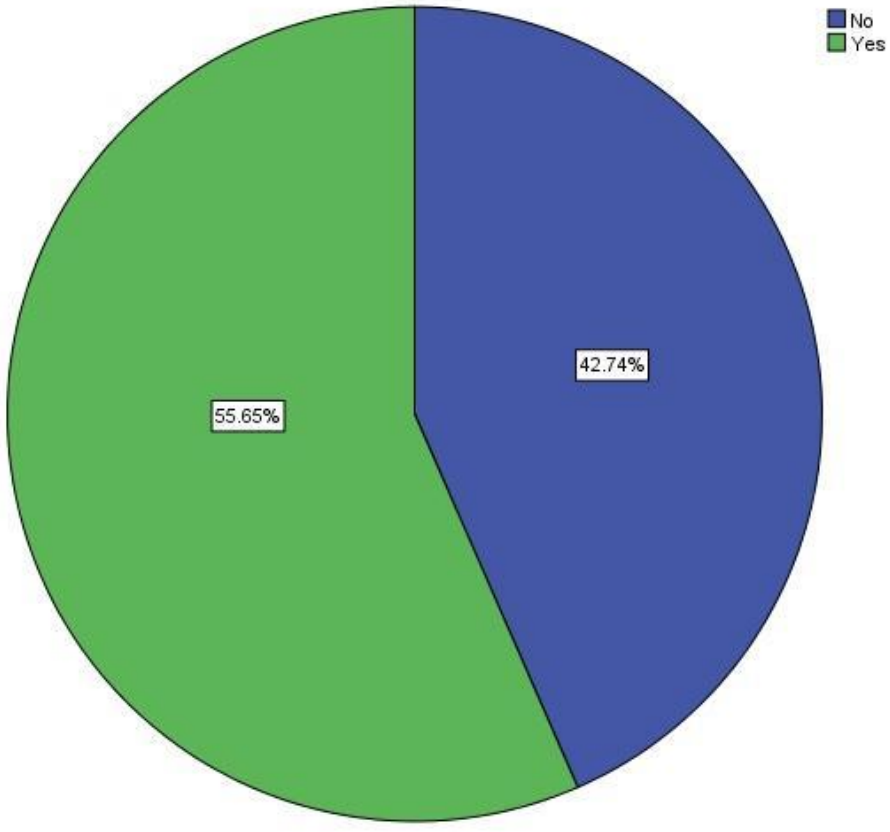
## **RESULTS AND DISCUSSION**



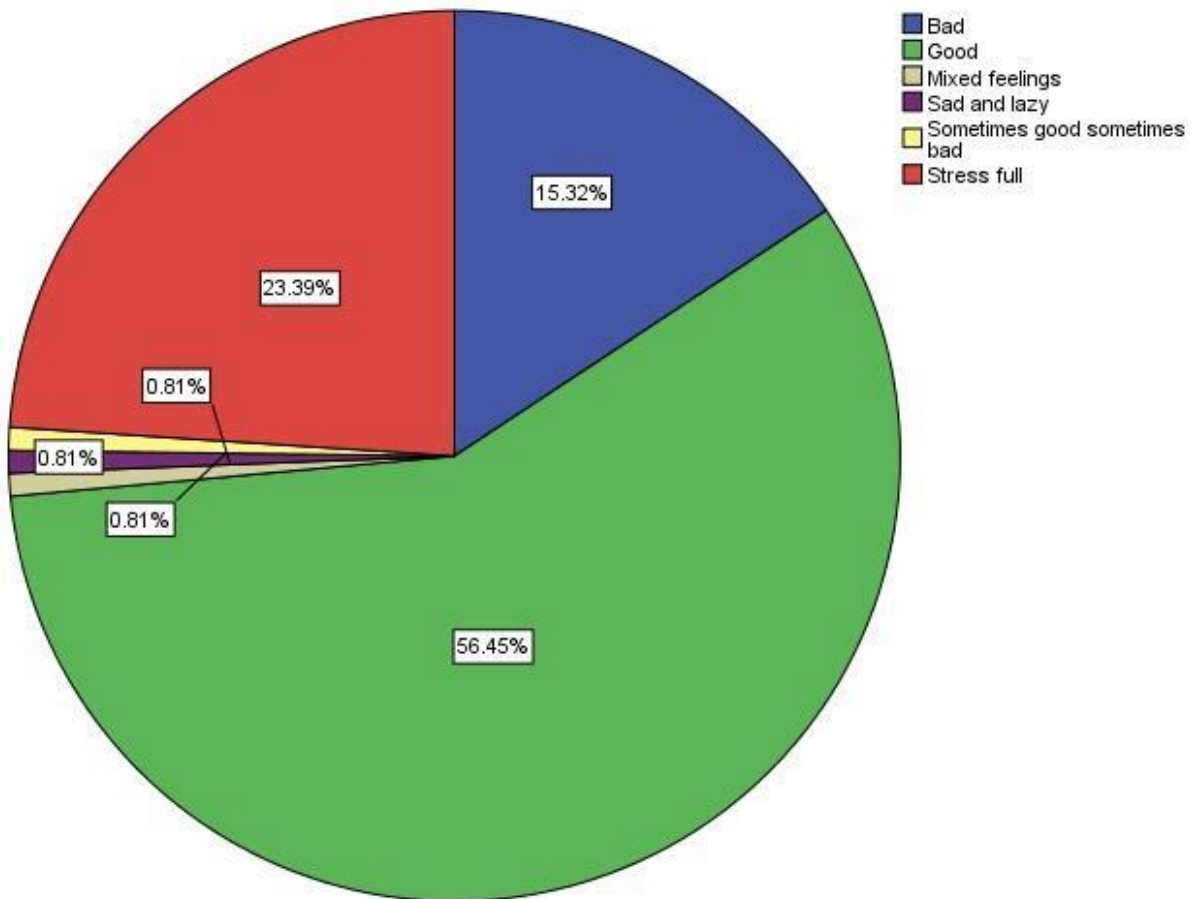
**Figure 1** Pie chart showing the percentage distribution of mental health during COVID among adolescents. Whereas, green represents yes (52.42%), blue colour represents no (45.97%). Majority of them says yes and their mental health was affected during lockdown.



**Figure 2** Pie chart showing the percentage distribution of mental stress during COVID among adolescents. Whereas, green represents yes (57.26%), blue colour represents no (41.13%). Majority of them said yes and they were feeling mental stress during the lockdown.

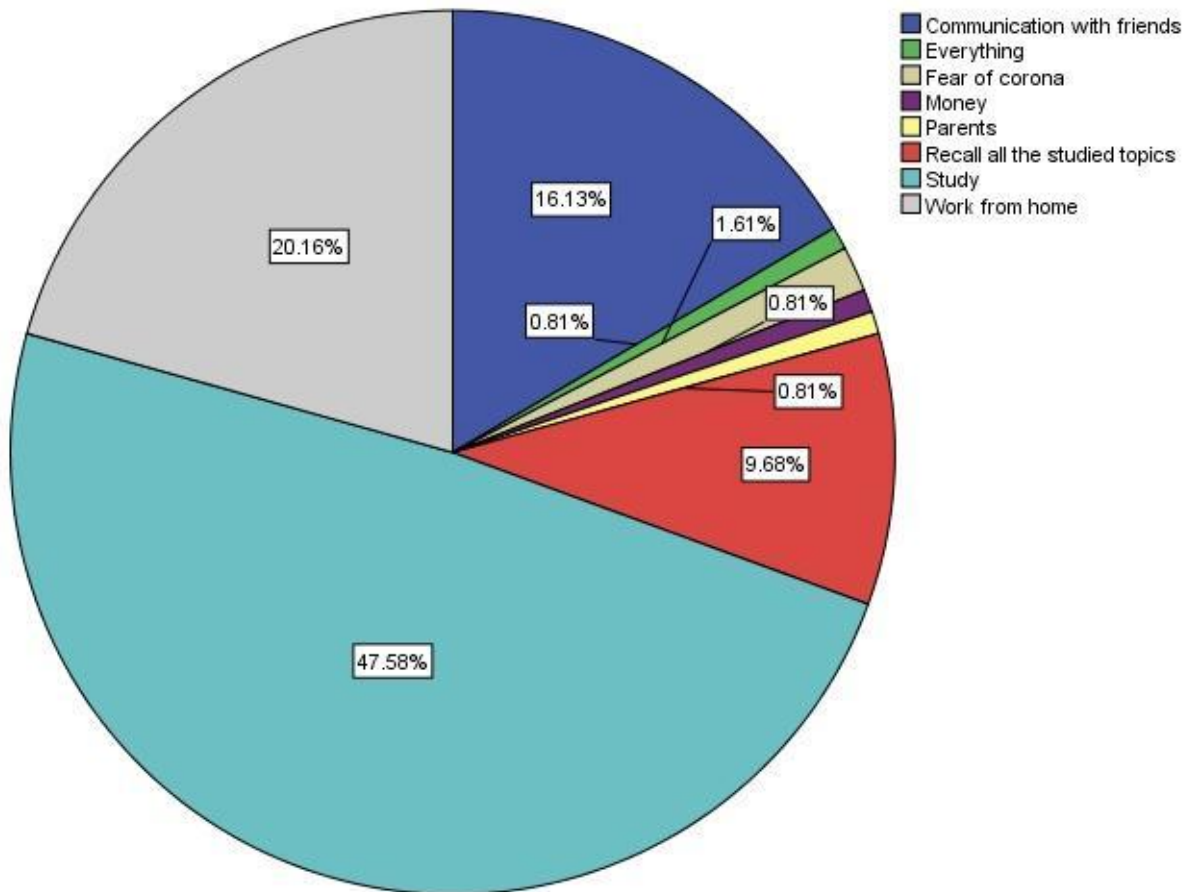


**Figure 3** Pie chart showing the percentage distribution of study stress during COVID among adolescents. Whereas, green represents yes (55.65%), blue colour represents no (42.74%). Majority of them said yes and they felt that studies during the lockdown which makes them more stressful.

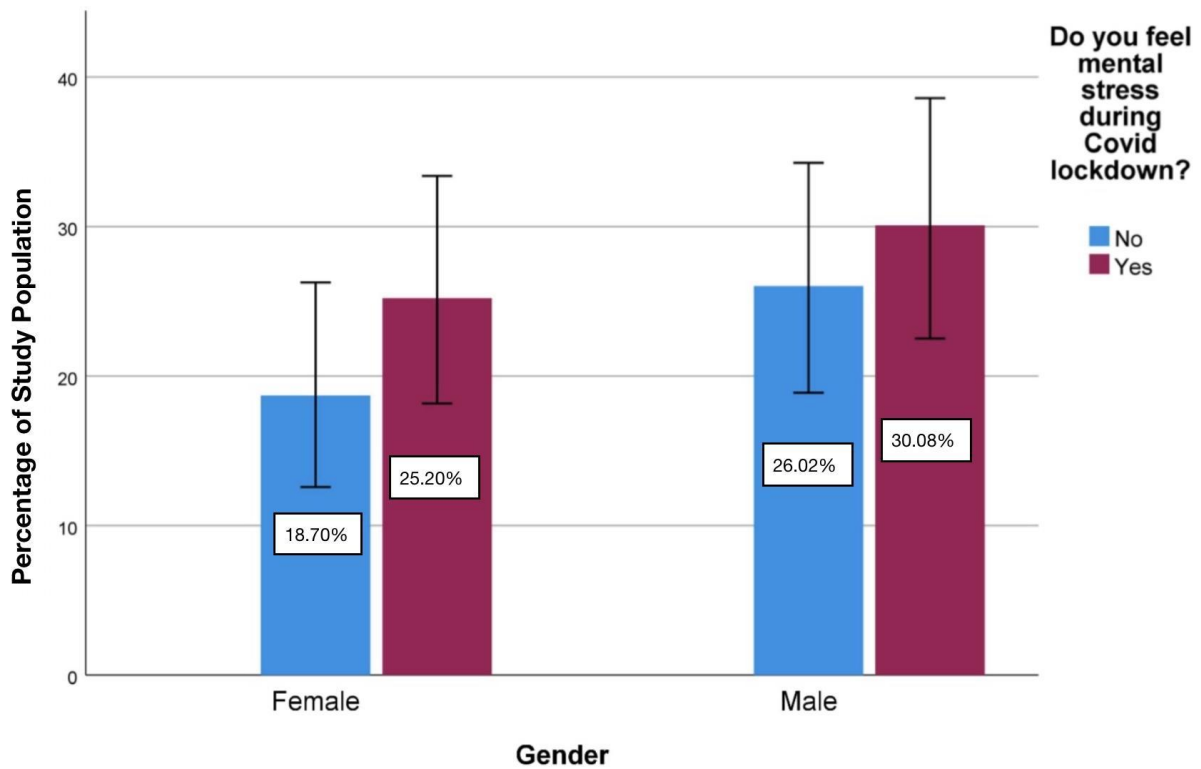


**Figure 4** Pie chart showing the percentage distribution of feeling during COVID among adolescents. Wherein, green represents good (56.45%), beige colour represents mixed feeling during COVID (0.81%), blue colour represents bad (15.32%), red represents stress full condition (23.39%), yellow represents sometimes good or bad (0.81%), purple represents sad and lazy (0.81%). Majority of them feel good during lockdown and some of them feeling bad and stressful during lockdown.

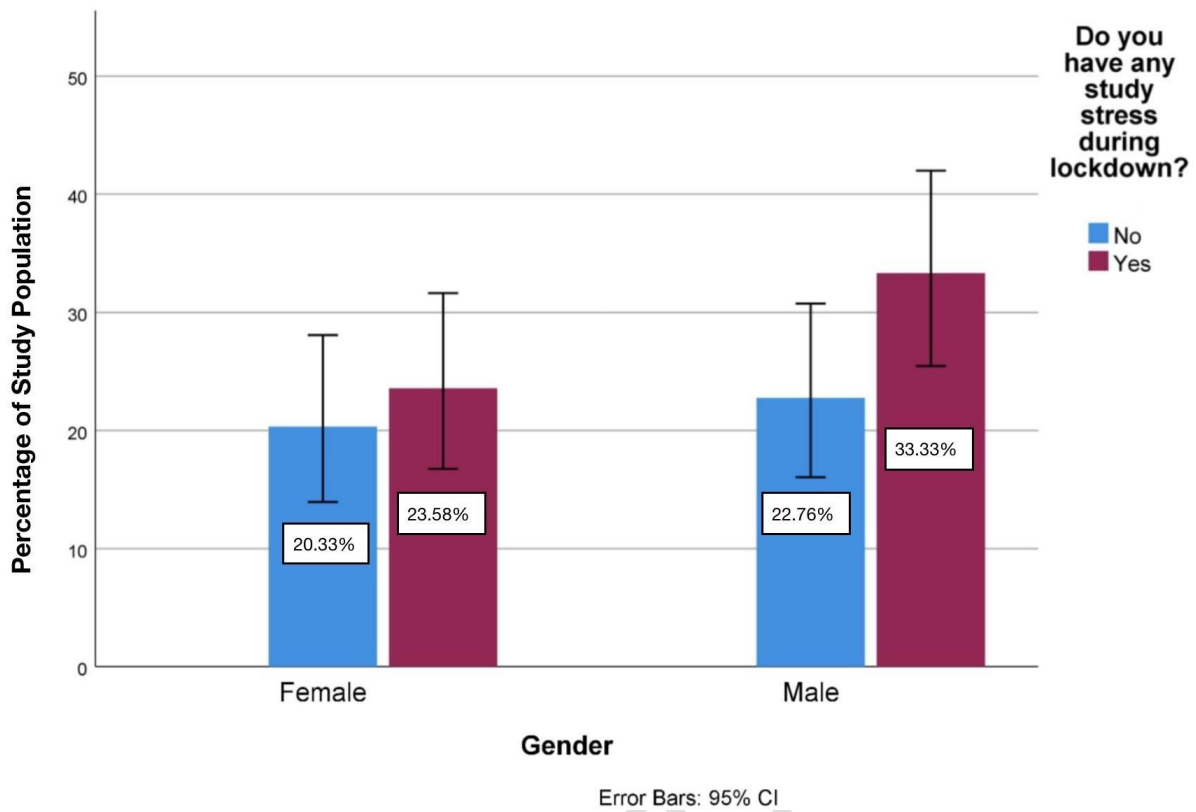
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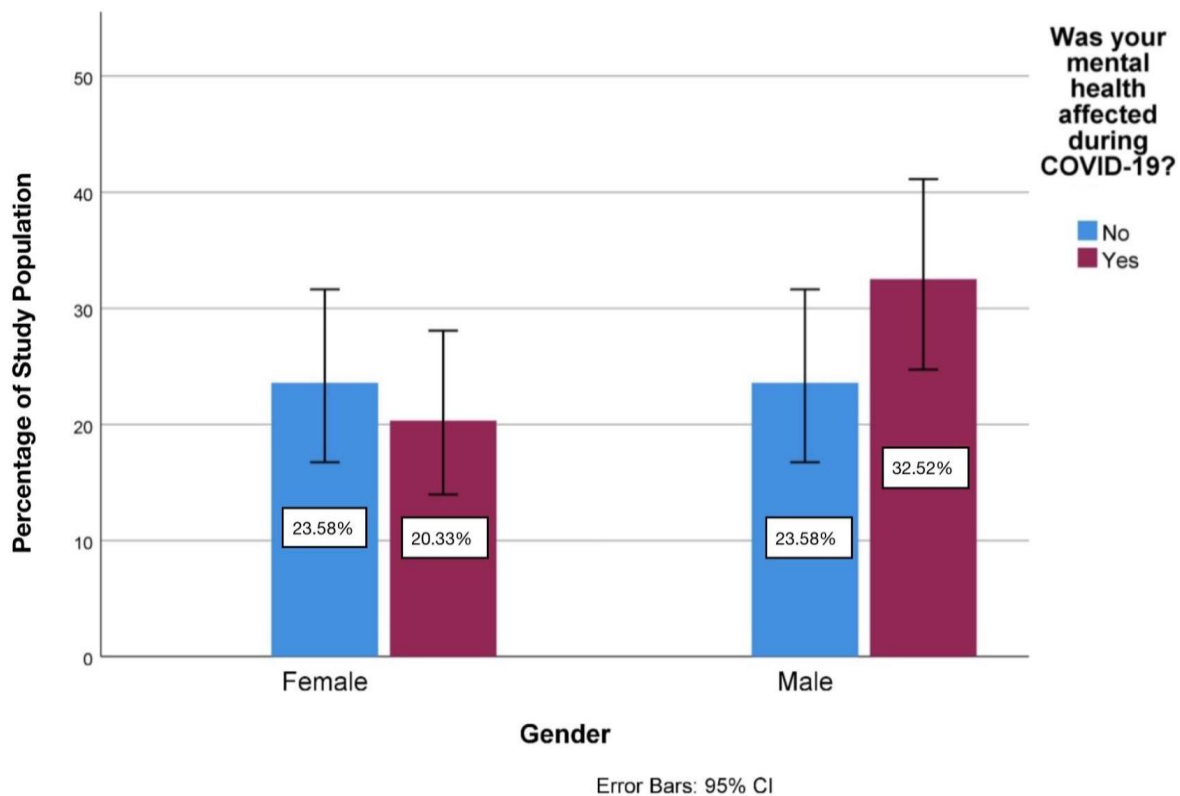
**Figure 5** Pie chart showing the percentage distribution of stressful work during COVID among adolescents. Wherein, green represents everything (0.81%), beige colour represents fear of corona(1.61%), purple colour represents money (0.81%), sky blue represents study (47.58%), red represents recall all the studied topics (9.68%), light brown colour represents work from home (20.16%), yellow represents parents (0.81%), blue represents communication with friends (16.13%). Majority of them feels stressed by study and next factors like work from home and communicating with friends.



**Figure 6** Bar graph showing association between gender and mental stress during COVID. The X- axis represents gender and the Y-axis represents percentage or mental stress among adolescents. 25.83% of females feel stress, 30.00% of male feel stress. Green represents , blue colour represents no. Chi- square test was done and association was found to be statistically not significant. Pearson's Chi square value :0.412, p value 0.814, ( $p > 0.05$ ) , hence statistically not significant .



**Figure 7** Bar graph showing association between gender and study stress during COVID. The X-axis represents gender and the Y-axis represents percentage of study stress among adolescents. 23.77 % of females feel stress, 32.79% of male feel stress. Green represents yes , blue colour represents no. Chi-square test was done and association was found to be statistically not significant. Pearson's Chi square value :1.111, p value 0.514, ( $p > 0.05$ ), hence statistically not significant.



**Figure 8** Bar graph showing association between gender and mental health during COVID. The X- axis represents gender and the Y-axis represents percentage or mental health among adolescents. 20.49% of females feel stress, 32.79% of male feel stress. Green represents yes , blue colour represents no. Chi-square test was done and association was found to be statistically not significant. Pearson's Chi square value :2.690, p value 0.261, ( $p > 0.05$ ) , hence statistically not significant.

Majority of the population's mental health was affected during lockdown, about (52.42%) of people's mental health was affected (Figure -1). Most of them were feeling mental stressed during lockdown ,about 57.26% of peoples feel mental stress during lockdown (Figure - 2). About 55.65% of people having study stress during lockdown (Figure -3). About 56.45% of population feels good during lockdown, 15.32% of people feels bad during lockdown, 23.39% of people feels stressful during lockdown (Figure -4). About 47.58% of people were more stressed by the study, 16.13% of people were stressed by not communicating with friends, 20.16% of people were stressed by the work from home (Figure -5). Males feel more stress than females and the p value is 0.814 ( $p > 0.05$ ) and it is not significant (Figure -6). During COVID period study stress is caused more among the males than in females and the p value is 0.514 ( $p > 0.05$ ) and it is not significant (Figure -7). Mental health was more affected among the males than in females and the p value is 0.261 ( $p > 0.05$ ) and it is not significant (Figure -8).

Most of the people with age 18-29 are more affected by mental health during COVID. Male were aware of the impact on adolescents. In our study, most of the adolescents were affected by mental health. Most of them are lonely during COVID lockdown. Most people both children and adolescents, feel mental stress. But some of the adolescents feel good during

COVID. Factors that affected the adolescents were study, work from home and unable to communicate with friends. Childrens also feel stressed during COVID. In our study males feel more stress than females and the p value is 0.814 ( $p>0.05$ ) and it is not significant. During COVID period study stress is caused among the males than in females and the p value is 0.514 ( $p>0.05$ ) and it is not significant. Mental health was more affected among the males than in females and the p value is 0.261 ( $p>0.05$ ) and it is not significant. Around 54.03% of adolescents felt lonely during COVID. About 62.90% of adolescents feel study stress during COVID. We found that studying online class only has a direct effect on adolescents, but an indirect effect through parenting outcomes. This study reveals what are the risk factors faced by adolescents. The sample in our study was very less but among them most of the males felt stressful during COVID. They feel more stressed while they are through online classes and work from home. This study aimed to add to our knowledge by evaluating and synthesising existing evidence on the impact of COVID-19 on the mental health of young people aged 18 years old or younger.

In previous research, the parameters like mental stress, mental health, depression, Emotions during COVID, loneliness feeling which affects adolescents more during COVID(33). The previous study was done in China with the above parameters taken into consideration. Most of them felt a stressful online class which made more discomfort among the adolescents and some of them felt more stressful while they were working(34). The overall findings of this review indicate that the COVID-19 global pandemic has impacted young people's psychological state(35). While COVID-19 emotional reactions were related to a variety of psychological state outcomes, the reported rates across studies didn't leave inferences regarding levels of those psychological state outcomes related to the pandemic(33,36)).

In our study, males were more stressed during COVID. The sample size was very less because of the period of time. Most adolescents feel stressful during study but it can be overcome in future. The limitation of the study is less sample size in a shorter period of time. The result of this study shows that the nature and extent of this impact depend on several vulnerability factors which can be overcome in future.

## CONCLUSION

International health organisations have warned governments to be prepared to tackle the psychological state complications related to COVID-19. While there's increasing empirical evidence indicating the psychological state complications of COVID-19 in adults, our knowledge of the impact of the pandemic on youth psychological state remains significantly restricted. Hence, most research so far has focused on exploring the psychological state consequences in older people. The result of this study shows that the nature and extent of this impact depend on several vulnerability factors which can be overcome in future.

## COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because

we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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