

## Psychological and Social Factors Affecting the Behaviour of Middle School and High School Children during the Covid-19 Pandemic

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### Abstract

**Objective:** The present study focuses on the EBP [Emotional and Behavioral Problems] in middle school (6 - 12yrs) and high school (13 - 17yrs) children during covid-19 pandemic and its relation to gender, family type, socio economic status and siblings.

**Method:** It is a quantitative, cross sectional survey-based study consisting of 172 children of age 6 - 17 years and their mothers from India. The mothers were taken as the informant for this study. Strength and Difficulties questionnaire (SDQ-parent form) was used to assess the EBP (conduct, hyperactivity, peer problem and pro social) aspects of the children. The form also consisted of socio demographic details- gender, single child/sibling, socio economic status of the family to assess its effect on the EBP of the middle and high school children. The questionnaire was shared as Google form via social media platforms. The children who marked of having neurological/psychiatric condition were not included in the study. Descriptive statistics and t-Test was computed by SPSS trial version.

**Result:** The result shows increased level of hyperactivity as well as emotional, conduct, peer and total problem score in both groups irrespective of their gender. Rise in conduct problem were seen in high school children hailing from nuclear families. There was decrease in pro social behavior.

**Conclusion:** The study revealed increased EBP and decrease in pro social behavior of middle and high school children. Also increase in conduct problems in high school children hailing from nuclear families was observed.

**Keywords:** Emotional and Behavioral Problems; Pro Social Behavior; Conduct Problems; Nuclear Family; Covid-19

### Abbreviations

EBP: Emotional and Behavioral Problems; SDQ: Strength and Difficulties Questionnaire

### Introduction

COVID- 19 pandemic took its effect in India by March 2020 leading to complete lockdown in the whole country. As a result, all the educational institutions, public places and areas including Co-curricular activities were closed down and online mode was adopted for regular communication and continuation of industrial and educational activities.

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This led to a huge change in the lifestyle of individuals with significant effect in their emotional and psychological adjustment. Although children have been getting a milder form of the Covid-19 infection in general, there has been reported significant emotional and behavioral disturbances in them as a result of the lifestyle changes due to the Pandemic. Research reports from as early as the beginning of 2020 from China shows emotional and behavioral problems in children and adolescents as a result of the Pandemic [1,2]. Factors such as parental stress, home confinement, school closure have been designated as important causes for these problems [3]. However, more studies are needed to get an understanding on the relation between EBPs in children during pandemic and to assess the effect of socio-demographic factors such as, gender, family type, socio-economic status and the presence or absence of siblings on the same. It is expected that this information will be effective in giving us a clearer picture of the differential effect of the pandemic in the different groups of the population

The present study is designed to see the relation between emotional and behavioral disturbances in middle and high school children of India with such personal factors like gender, family type and socio-economic status. It is expected to provide important information regarding prognostic indicators for children with EBPs during the pandemic.

### **Aims of the Study**

There are mainly three aims for the present study:

1. To see the effect of covid-19 pandemic on the EBP of middle and high school children.
2. To see the influence of the sociodemographic factors such as - family type, siblings, gender and socio-economic status on the EBP of middle and high school children during the Covid-19 pandemic.
3. To see the difference if any, in EBP according to gender in both groups.

### **Materials and Methods**

It is a quantitative cross-sectional survey-based study. This paper was completed by the first and second author as a thesis, which was a part of post-graduation (first author) and under graduation (second author) project curriculum. First, the thesis proposal was verified and approved by the ethical committee of applied psychology department, The Neotia University. Further the work was completed under the guidance and supervision of the corresponding author. The study consisted of 172 participants- 6 to 17 years old school going children and their mothers from India.

The tool used for the study was Strength and Difficulties questionnaire (SDQ- parent form 4 - 17 years) by Robert N. Goodman [4], for the assessment of EBPs. SDQ consists of 5 domains- peer problem, conduct problem, hyperactivity, emotional problem and pro social behavior. Each domain consists of 5 statements each with total of 25 questions with 3 responses for all - "not true, 'somewhat true' and 'Certainly true'. Each domain has a score range of 0 - 10 and maximum score that can be attained in total is 40.

Data collection form consisted of 3 pages, a consent form for the study asking permission for using the data for research purpose keeping personal details confidential. Only those data were included in the study where the participants had filled the no objection statement at the end of the consent form. Followed by the consent, a general information page which consisted of the child's age, gender, single child/sibling, socio-economic status of the family, to assess the effect of these factors on the EBP of the children. This page also consisted of an exclusion criteria statement which was whether the child was suffering from any neurological/psychiatric condition. Those who stated yes for the statement, their data was not used in the study. Apart from these the only inclusion criteria used was that the child should be within the age range of 6 - 17 years. The consent, general information and SDQ page was compiled into a google form and was shared from March 2021 - April 2021 at the peak of covid in India through different social media platforms assuring the randomized collection of data. The mothers were taken as the informant for the study.

After the completion of data collection, the data received were checked according to the inclusion-exclusion criteria's and the data which fit the criteria were selected and further statistical analysis was performed using the Statistical package for the social sciences

(SPSS TRIAL VERSION WINDOWS 10). Mean and t-test were computed for both the groups and the results were interpreted in accordance with the norms of SDQ.

### Results

The first and second author targeted of sharing the google form with minimum of 100 married women per week through social media platforms without knowledge of whether they have children or not to assure the randomized collection of data. A total of 1000 married women were approached among which 453 married women having children of ages 6 - 17 years responded back. After the completion of data collection, when inclusion exclusion criteria were applied it was seen that only 172 data among 453 respondents had completed the whole set and met the criteria. The remaining 281 data contained inadequate information as in some of them sociodemographic details were not mentioned, some had filled the form for different age groups which did not meet the inclusion- criteria.

In the total 172 data selected, there were 80 data for middle school children in which 38 were female and 42 males. For high school children 92 data in which 50 female and 42 males was found as depicted in table 1.

Area	Female (N)	Male (N)
Middle school Children	38	42
High School Children	50	42
Total (N = 172)	88	84

Table 1: Total number of participants in middle and high school groups.

### Charts depicting sociodemographic details of the data set used in the study

The following pie charts depicts the percentage of socioeconomic status, birth order and family type as present in the data sample selected for the study.

The charts 1-3 above depicts respectively - the socio-economic status for the study was found to be consisting of 95% middle socio-economic class people and 5% upper socio-economic class people, It was seen that among the 172 children 60% of them reported of having siblings while 40% were single child, and the presence of 52% nuclear families and 48% joint families in the sample.

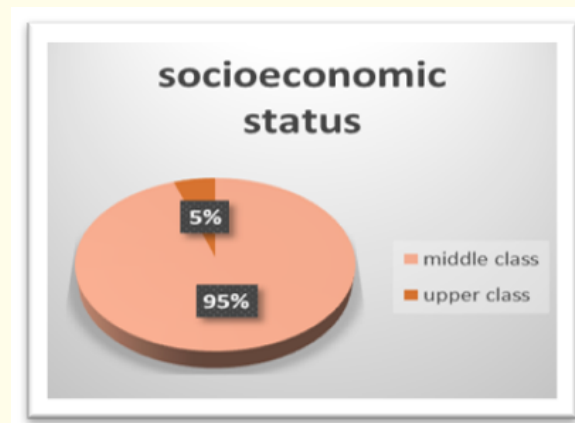


Chart 1: Socioeconomic status.

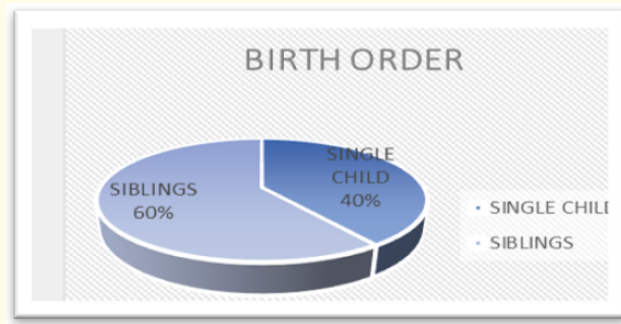


Chart 2: Children with and without siblings.

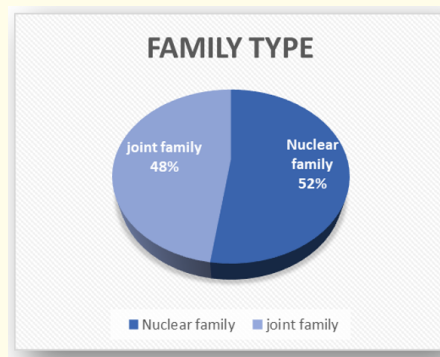


Chart 3: Family type.

Domains	Groups	Female		Male		P Value
		Mean	S. D	Mean	S. D	
EPS	Middle School	3.2	2.8	2.6	1.9	.264
	High school	3.1	2.5	2.9	2.6	.721
PPS	Middle school	2.7	1.9	2.5	1.7	.739
	High school	2.9	2.0	3.1	1.6	.778
CPS	Middle school	2.3	2.1	2.3	1.9	.941
	High school	2.5	1.8	1.9	1.9	.184
Hyperactivity	Middle school	4.6	2.6	4.8	2.5	.725
	High school	4.0	2.2	4.1	1.9	.778
Pro social	Middle school	7.3	2.5	7.1	2.2	.681
	High school	7.2	2.1	7.8	2.2	.232
TDS	Middle school	12.8	5.9	12.3	5.1	.681
	High school	12.6	5.8	12.3	5.4	.802

Table 2: T-test showing the difference in SDQ subscale score in the male and female children.

As shown in the table given above t-Test was conducted to check whether there is any difference in gender of the middle and high school children in the areas of EBPs, but no significant difference was found inferring that both the genders in both groups have been

equally affected during the covid-19 pandemic. Apart from this a t-Test was also conducted between children with sibling and without sibling, and no difference was found in both the groups on the basis of SDQ- subscales.

Domains	Groups	Nuclear Family		Joint Family		P Value
		Mean	S. D	Mean	S. D	
EPS	Middle school	3.2	2.4	2.6	2.3	.289
	High school	2.9	2.5	3.1	2.6	.767
PPS	Middle school	2.8	1.9	2.3	1.6	.197
	High school	3.0	2.0	2.9	1.6	.860
CPS	Middle school	2.2	1.8	2.4	2.1	.599
	High school	2.6	2.1	1.7	1.6	.026
Hyperactivity	Middle school	4.6	2.2	4.8	2.9	.800
	High school	4.3	2.2	3.8	1.9	.259
Pro social	Middle school	7.1	2.3	7.3	2.4	.681
	High school	7.4	2.1	7.5	2.3	.814
TDS	Middle school	12.9	5.1	12.2	5.8	.569
	High school	12.9	6.0	11.9	5.1	.378

**Table 3:** T-Test showing the difference between the children of both groups belonging from nuclear and joint family type on the basis of SDQ subscales.

The table above depicts the influence of family type on EBPs of children where after conducting t-Test no significant difference was found in nuclear or joint family type for middle school children but a significant difference in conduct problems for high school children belonging from nuclear families was observed. Also, an overall mean computation for both the groups showed a slightly higher mean value of conduct problems of nuclear families (M = 2.43, S.D = 1.9) than the joint family type (M = 2.08, S.D = 1.8).

Domains	Normative mean	Middle school	High school
Emotional problem scale	1.6	2.9	3.0
Peer problem scale	1.4	2.6	2.9
Conduct problem scale	1.3	2.3	2.2
Hyperactivity scale	2.8	4.7	4.1
Total difficulty score	7.1	12.5	12.4
Pro-social scale	8.6	7.2	7.5

**Table 4:** Mean comparison of middle and high school children with the normative mean data.

The table and graph shown above, depict the mean of SDQ subsets when compared with the norms in both the group’s indicated elevated mean values in the domains of emotional problems, hyperactivity, peer problems, conduct problems and total difficulty score. Whereas a lower mean value than the norms was observed in the domain of pro social behavior. The results indicated that both the age groups have been significantly affected during covid-19 pandemic.

**Discussion**

The present study was conducted with the aim to highlight the impact of Covid-19 Pandemic on the emotional and behavioral conditions of middle and high school children of India. Also, the study aimed to see if demographic factors are related with this condition. The

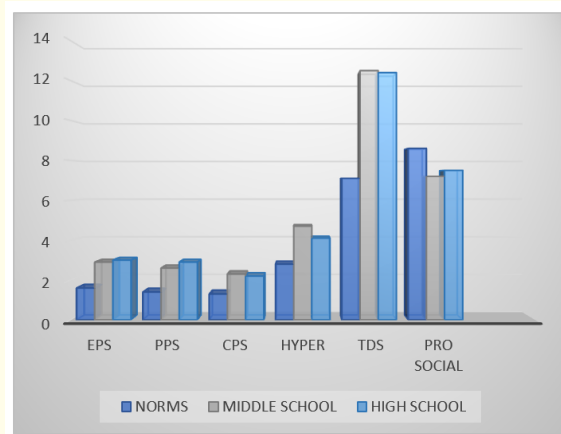


Figure 1: Graphical Representation Of Mean Comparison.

sample consisted of 172 children and their mothers. Among them, 80 children were middle school students (6 to 12 years) and 92 were high school students (13 to 17 years). 95% of the total sample consisted of people from middle socio-economic status [5]. 60% of the 172 children had siblings and 52% belonged to Nuclear family. Among the rest 48%, there were children living with grandparents as well as with other extended family set up. The sample therefore, consists of a mixed group of participants belonging to nuclear family as well as families with extended family members. It is expected that in a family with required economic resources and people to provide company and support, the children will be in a better emotional state. In the Pandemic situation, which is marked with home confinement, school closure and movement restrictions, a big family with emotionally supportive members is expected to have a more positive impact on the children.

The results showed that there was a rise in emotional and behavioral problems in both middle and high school children as compared to the age norms. All the domains of the SDQ scale (emotional problem, peer problem, conduct problem and hyperactivity) showed substantial rise in scores from the norm. This indicated that all the children showed problems in these domains. This can be due to the emotional distress the children may be going through because of the Pandemic. Other studies have also found emotional and behavioral problems like anxiety, depression and clinginess in children during the pandemic [1]. Interestingly, it was seen that there was no difference between the male and female children in this regard. Many studies have shown that girls and boys have difference in their expression of problem behavior [6]. However, in this group of children of both middle and high school goes there was no difference in their degree and direction of behavior problems on the basis of their gender.

Moreover, we can see that apart from the rise in the problem behavior, there is a decrease in the level of pro-social behavior expressed by both the middle and high school children. Pro-social behavior comprises of those behaviors such as helping others, performing for others and all such activities that is done for the benefits of other people in the individual's surrounding. Pro- social behavior is one of the aspects of social development that helps an individual to enhance their quality of relationship formation by inculcating such qualities like empathy, altruism, and trust in them [7]. These are important aspects of personality that may predict the development of individuals who have good communication and socialization skills as well as good moral character [7]. The lack of socialization opportunities that is brought on by the Pandemic may be an important reason for the decrease in the level of prosocial behavior in the children. This may be having a detrimental effect on the future of these children. It may be said that the presence of problem behavior can be tackled with psy-

chological intervention at a later stage, but the development of pro-social behavior beyond the formative years of childhood may prove to be very challenging. This maybe one of the most detrimental effects of the Pandemic for the development of children.

Another interesting finding in the present study was that 60% of the total sample of children (both middle and high school) had siblings. According to various studies it has been indicated that the presence of siblings inculcates positive behavioral changes such as development of empathy, adjustment, good communication and pro social behaviors [8]. In this study, however, there was no difference found in the presence of problem behavior and decrease of prosocial behavior in children with or without siblings. This may be an important indication that the effect of the Pandemic is so profound in children that even having siblings at home is not working as a good prognostic indicator.

Another important finding in the present study was that family type had an impact on problem behavior in children. It was seen that high school children, belonging to nuclear families had significantly more conduct problems compared to those from joint families or families with grandparents. This trend was also observed among that in middle school as well as in the overall sample. Family has an important role in the physical and mental development and overall health of children and adolescents. There are researches with similar results and conclusion where it was observed that adolescents from nuclear families do not show better life satisfaction or pro social behavior as compared to adolescents from closely knitted cohesive family structures [6]. In a research of adolescent's wellbeing, a worse physical health and mental health outcome was indicated in adolescents belonging to discordant nuclear families [9,10]. The present study also shows a similar trend. However, it may be expected that children from nuclear families may be further deprived from emotionally stable environment and lack of social support during the Pandemic.

The present study therefore confirms that personal and social factors may play an important role in determining the mental health of children during the pandemic.

## **Conclusion**

The study showed an increased prevalence in EBP of school children irrespective of their gender. A significant decrease in pro social behavior in both middle and high school children was noticed due to the pandemic. Also, rise in conduct problems of high school children (13 - 17 years) belonging from nuclear families was seen.

## **Conflict of Interest**

There is no conflict of interests among the authors as well as with any other agencies (Government and non-government).

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