



Emotional And Behavioural Problems In Children and Perceived Stress In Their Parents During COVID19 Pandemic.

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Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Background and Objectives: COVID19 pandemic has changed the living conditions of families. There is limited research on the effect of the pandemic on mental health of children and the stress experienced by parents. The study aimed to estimate the prevalence of emotional and behavioural problems in children, perceived stress in parents, and assess parents' perception of the influence of the pandemic on the psychological well-being and academics of children during the pandemic.

Methods: Across-sectional study was conducted on 100 subjects across the state of Kerala during the month of September 2021. After taking informed consent from the parents having children aged 5-15 years, socio-demographic details were collected, Paediatric Symptom Checklist 17 scale was administered to assess child's psychosocial functioning and Perceived stress scale was administered to assess the perceived stress in parents, using an online questionnaire. To test the statistical significance of the association of emotional and behavioural problems in children with perceived stress in their parents, Chi-Square test was applied.

Result: 36% parents reported that their children have emotional and behavioural problems. 75% parents had moderate and 6% had severe stress. With increase in stress level of parents, behavioural problems of children also increased and vice-versa. Both internalising and externalising behaviours had increased with increasing severity of stress among parents. 71% parents reported that COVID19 pandemic has affected their child's overall development and 70% reported that the pandemic has affected their child's academics.

Conclusion: There is a high prevalence of emotional and behavioural problems among children and increased stress among parents during the COVID19 pandemic

Key messages

Around one-third of parents reported that their children have emotional and behavioural problems during COVID19 pandemic. Majority of the parents reported that they are stressed. With increase in stress level of parents, behavioural problems in children also increased and vice-versa. Measures should be taken to deal these issues simultaneously rather than focus on one, as both the issues are inter-related.

Keywords: Emotional and behavioural problems in children, Stress in parents, COVID19, Paediatric symptom checklist, Perceived stress scale

Introduction

COVID19 pandemic presents an unprecedented challenge in Global mental health. There are growing evidences addressing the psychological impact of

COVID19 on families. Although children are physically least affected by COVID, recent studies have shown that majority of children and parents

experience pandemic related stress.^(1,2) Data from various surveys shows that about 10-20% of children and young people are affected annually by mental health disorders.⁽³⁾ Childhood disorders can be broadly classified as Emotional disorders including anxiety, depression, somatization, phobias and Obsessive compulsive disorder; Disruptive disorders such as conduct disorder, Oppositional-defiant disorder and hyperactivity; and Developmental disorders including intellectual disability, autistic spectrum, language and speech delays, enuresis and encopresis. Another way of categorisation is whether the problems are internalising or externalising.⁽⁴⁾ Results from previous studies showed that most parents(31%) and their children(>50%) experienced lockdown related stress.⁽⁵⁾ Previous studies reported several risk factors for the development of psychological problems in children during pandemic which includes longer quarantine duration, limited or non-existent contact with others, rapid infectivity, boredom, increased screen time, lack of physical exercise ,economic crisis in the family and improper parenting techniques.^(1,5) However, the association between emotional and behavioural problems in children and parent's stress level is poorly explored, especially in South India. In this background, the current study aimed to examine the prevalence of emotional and behavioural problems in children and to assess the perceived stress among parents.

Materials and Methods

This is a cross-sectional study conducted in September 2021. It was approved by the Scientific Research and Ethics committee of the Institute. Parents, either father or mother, with children belonging to the age group of 5 to 15 years were included in the study. The study excluded those who declined to take part, had kids who were not in the targeted age range, and wasn't living with their kids. Google Form which included an informed consent, was used to generate an online survey, which was then circulated to the parents' group via social media. Convenient sampling was used in this study. When respondents agree to participate in the survey, a self-designed questionnaire with sociodemographic data and details about pandemic-related factors—including vaccination, financial situation, exposure status, and the level of distress in the child's various aspects of life, was presented to them followed by

Paediatric symptom checklist-17 and Perceived stress scale sequentially.

Paediatric symptom checklist 17 is a short and brief, parent-completed questionnaire that screens for childhood behavioural problems under three subscales measuring attention, externalising and internalising problems. It comprises 17 questions, and parents rated the frequency of behaviours and symptoms with a Likert scale ranging from 0 to 2 points (never, sometimes, or often). The response is then graded as the likelihood of having a behavioural disorder with a cut-off score of 15 (internalisation 5, externalisation 7, and attention 7).

Following that, parents' stress levels were assessed using the perceived stress scale, which consists of 10 items rated on a 5-point Likert scale ranging from (0) never to (4) very often. The questions asked were about feelings and thoughts during the last month and how unpredictable, uncontrollable, and overloaded respondents find their lives. A total score ranging from 0–13 was considered as having low stress, 14–26 was considered moderate stress, and 27–40 was considered high perceived stress.

Statistical Analysis

The percentage prevalence rate was computed with a 95% confidence limit. Chi-square test was used to test the statistical significance of association of behavioural problems of children with perceived stress in parents. *p* value less than 0.05 was considered significant. Incomplete forms were excluded.

Based on 67% prevalence of parenteral stress in a study published in Journal of Indian Association for child and adolescent Mental health⁽³⁾, the sample size was calculated based on the formula $1.96^2 \times p \times (100-p) / d^2$, where *p* is prevalence and *d* is relative precision. With 95% confidence and 20% allowable error, the sample size was calculated to be a minimum of 50. This study was completed in 1 month with a sample size of 100 participants. The data was analysed using IBM SPSS software.

Results

100 parents participated in the study. Socio-demographic variables and its distribution with psychological problems in children and perceived stress in parents are summarised in Table 1

36% of the parents reported that their children had emotional and behavioural problems during the pandemic period (Figure 1). Irrespective of the total prevalence, 28% had internalising problems, 17% had externalising problems and 14% reported attention problems in their children (Figure 2).

6% of parents had severe stress and 75% had moderate stress (Figure 3). Moreover, there was significant association with emotional and behavioural problems in children with perceived stress in parents and vice versa (p=0.01). Among the parents who reported severe stress, 83% of their

children had emotional and behavioural problems. Among the children with emotional and behavioural problems, 78% of the parents had moderate stress and 14% parents had severe stress (Table 2). Both internalising and externalising behaviour in children had increased with increasing severity of stress among parents (p=0.001) (Table 3).

Parents who reported that COVID19 pandemic has affected their child’s psychological wellbeing, academics and overall development had more stress when compared to others.

Table 1: Association of stress in parents and emotional and behavioural problems in children with various socio-demographic variables.

Demographic variables	Frequency (in percentage)	Percentage of children having emotional and behavioural problems	P value	Percentage of parents reporting mild stress	Percentage of parents reporting moderate stress	Percentage of parents reporting severe stress	P value
Age :Below 30	21%	33.3%	.551	19%	71.4%	9.52%	.671
30-35	43%	30.23%		13.9%	79%	7%	
35-40	22%	40.9%		31.8%	63.6%	4.54%	
More than 40	14%	50%		14.3%	85.7%	0	
Sex			.735				.297
Male	27%	33.3%		18.5%	81.5%	0	
Female	73%	36.9%		19.2%	72.6%	8.21%	
Highest Education			.169				.155
Graduate	55%	38.18%		21.8%	67.3%	11%	
High school	4%	75%		25%	75%	0	
Post graduate	41%	29.26%		14.6%	85.4%	0	
Occupation			.491				.025
Professional	68%	38.23%		19.1%	79.4%	1.47%	
Office staff	3%	0%		0	100%	0	
Semiskilled	24%	37.5%		16.6%	62.5%	20.8%	
Others	5%	20%		40%	60%	0	

Single parent							.568
Yes	6%	50%	.766	33.3%	66.6%	0	
No	94%	35.1%		18.1%	75.5%	6.38%	
Number of Children			.305				.467
One	25%	32%		20%	80%	0	
Two	48%	31.25%		14.6%	77%	8.3%	
More than 2	27%	48.14%		25.9%	66.6%	7.41%	
Family members affected by Covid			.325				.232
Affected	34%	29.4%		26.5%	64.7%	8.8%	
Not affected	66%	39.3%		15.1%	80.3%	4.5	
Financial stressors due to Covid							.421
Affected	21%	42.8%	.461	9.5%	85.7%	4.76%	
Not affected	79%	34.1%		21.5%	72.2%	6.3%	
Vaccination status			.175				.789
Fully vaccinated	72%	80.5%		19.4%	73.6%	6.9%	
Not fully vaccinated	28%	46.4%		17.9%	78.5%	3.6%	

Table 2: Bidirectional association of emotional and behavioural problems of children with perceived stress in parents

Emotional and behavioural problems in children	Mild perceived stress	Moderate perceived stress	Severe perceived stress	P value
Percentage within severity of stress	15.8%	37.3%	83.3%	0.010 (asymptomatic significance 2 sided)
Percentage within behavioural problem	8.3%	77.8%	13.9%	

Table 3: Bidirectional association of types of behavioural problems with perceived stress in parents

Types of behavioural problems	Mild perceived stress in parents	Moderate perceived stress in parents	Severe perceived stress in parents	P value
Internalising problems	5.3%	29.3%	83.3%	0.001
Externalising problems	0	17.3%	66.7%	0.001
Attention problems	0	16%	33.3%	0.074

*percentage within severity of perceived stress in parents

Figure 1: Prevalence of Emotional and Behavioural problems in children

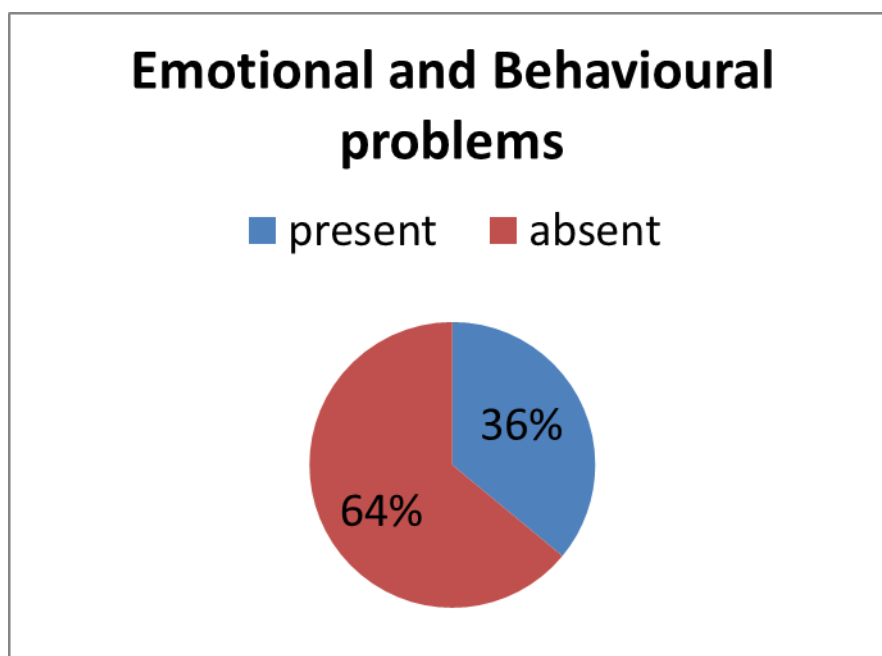


Figure 2: Prevalence of internalising , externalising and attention problems

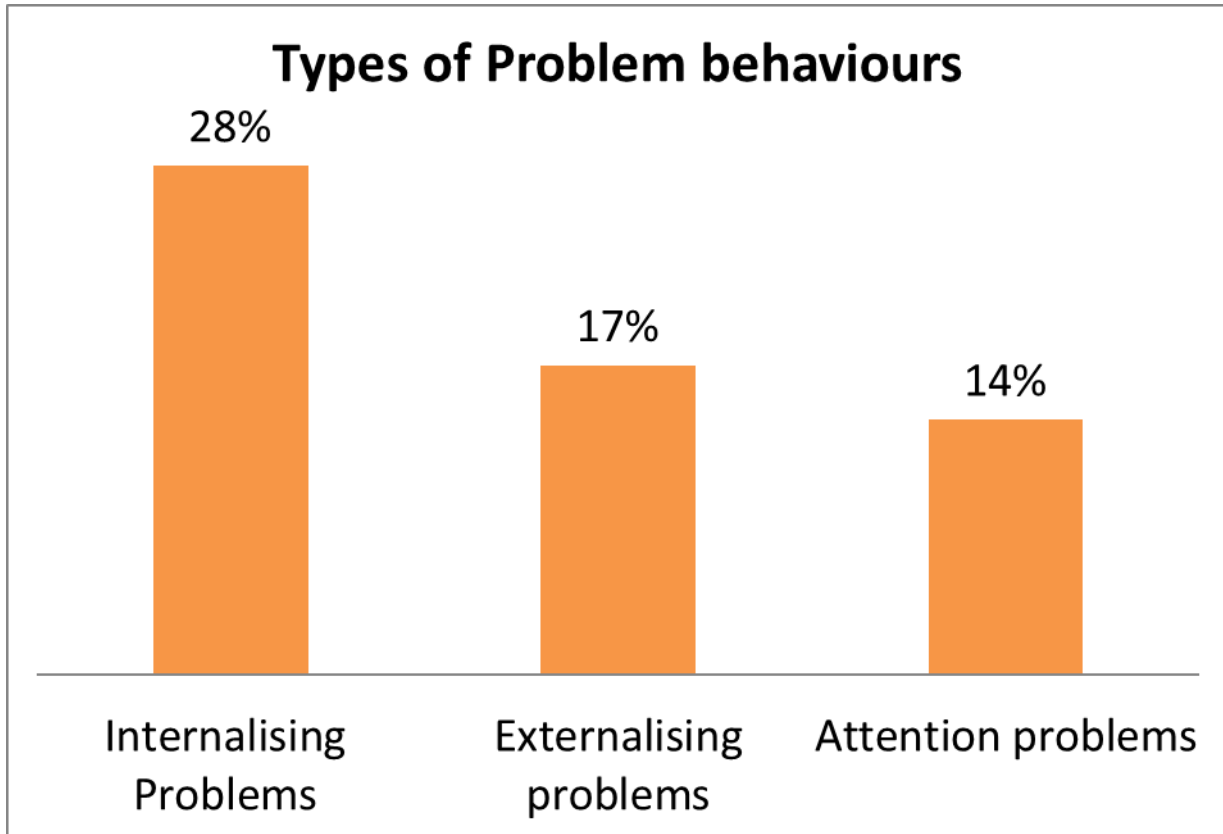


Figure 3: Prevalence of perceived stress in parents

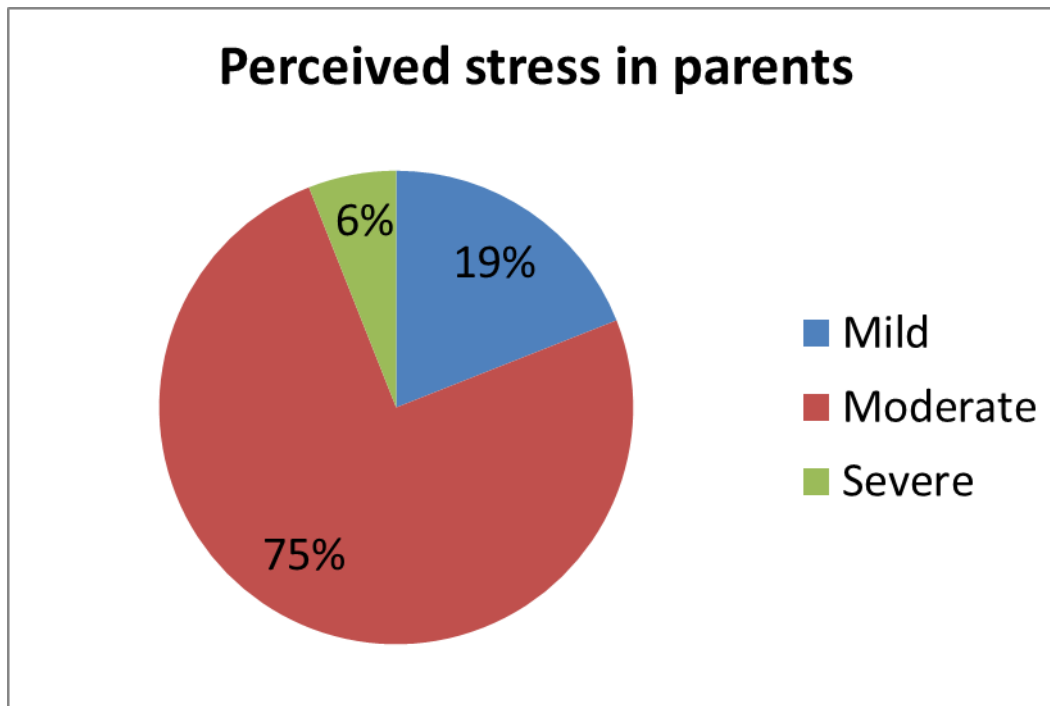
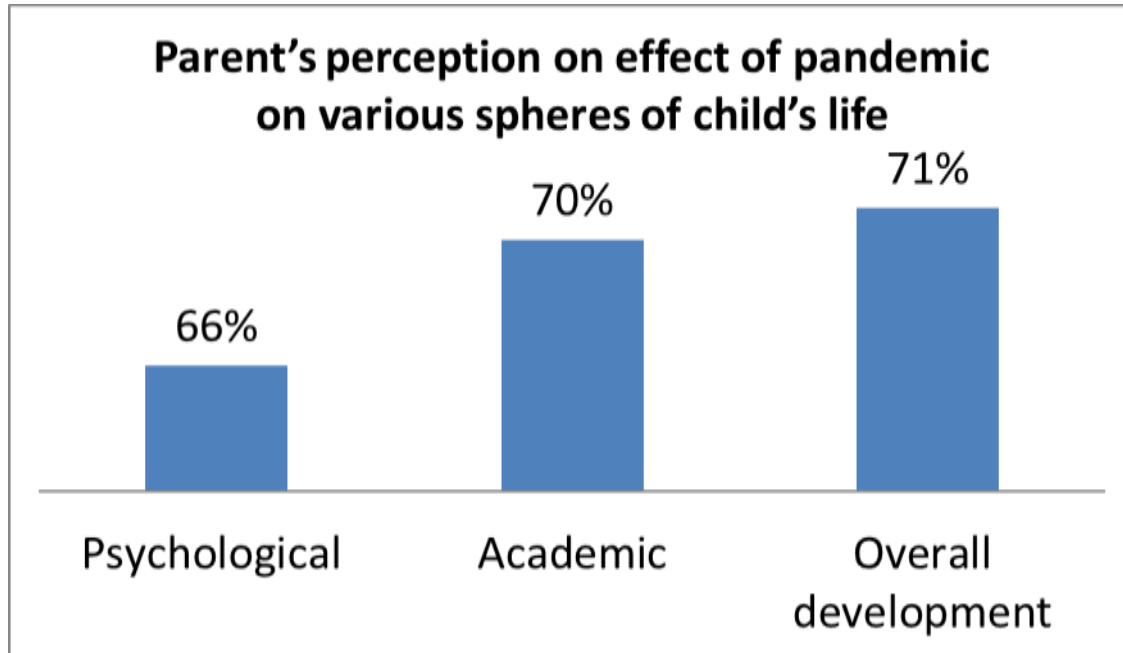


Figure 4: Parent's perception on the effect of pandemic on various spheres of child's life



Discussion

Research on the emotional and behavioural problems in children during COVID-19 are less, especially in the Southern part of India. In our study, 36% children had emotional and behavioural problems, which were lower when compared to that reported by a German study,⁽⁶⁾ which reported prevalence more than 50%. Previously, an Indian study⁽⁷⁾ had reported that 68% children had psychological issues during the quarantine. The differences in the prevalence may be probably caused by the time in which study was conducted, those studies being conducted during lockdown (peak of the pandemic) and small sample size which is one of the limitations of the current study. However, Z Qin et al⁽¹⁾ studied self reported psychological distress in children and reported a prevalence of 10.5%, which was lesser than that reported by our study.

The most common type of emotional and behavioural problems found in this study was internalising problems, including anxiety and depression. Similar findings were found in studies in Germany⁽⁶⁾ and India.⁽⁸⁾ COVID19 pandemic made school-age children and teenagers stay at home and prevented them from playing with their friends, which may have raised the prevalence of perceived loneliness and aggravated its effects. Schools were closed and classes were conducted online. In these situations, social engagement and outdoor activities were

significantly decreased, which could exacerbate depression and anxiety symptoms.⁽⁹⁾ The findings in studies by Ghanamah et al and Chen et al^(10,11) also indicate significant changes in children's daily routines during the pandemic outbreak and lockdowns, including an increase in daily screen time (i.e., smartphones, tablets, and TV), a decrease in physical activity, and more sleeping hours per day, that can have a negative influence on children's psychological well-being.

Prevalence of parental stress was high in our study (81%) which is similar to the findings of a study by Br.Sahithya et al,2020 (67%).⁽³⁾ Moreover, there was a significant association between parental stress and behavioural problems in children which were in line with the Italian study by Maria Spinelli et al.⁽¹²⁾ Parenting in the time of a pandemic can be particularly challenging because of school closings, working remotely from home, and physical distance which needs to be maintained during pandemic.⁽³⁾ Parents who are managing their jobs and child care while dealing with future uncertainties find it more difficult and this stress can make it difficult to deal with certain events and emotions.⁽¹³⁾ As a consequence, such debilitating emotions at home may lead to harsh parenting styles which may have been associated with behavioural changes in children.⁽¹⁴⁾ In the current study, perceived stress was higher among parents who were professionals ($p=0.025$).

Research has already documented that, compared to pre-pandemic times, there was an overall increase in the psychological problems in children as well as parents during the pandemic.⁽¹⁵⁾ This can have a bidirectional relationship- The parents of children with emotional and behavioural issues are more stressed and children of parents who are more stressed can have emotional and behavioural problems. Measures should be taken to deal these issues simultaneously rather than focus on one, as both the issues are inter-related.

Limitations and Conclusions

The sample size was small and the data collection period was narrow. The current study used only parent-reported scales and socio-demographic variables related to the children were not included.

Mental health is a critical concern in a pandemic situation, and children are considered a vulnerable subgroup, so it is necessary to reduce the pandemic's mental health burden among children.⁽¹⁰⁾ More studies in this direction will help us to better understand the dynamics between stress in parents and the psychological problems in children during a pandemic. Better coping skills and family-focused interventions can be implemented to reduce the stress among parents.⁽³⁾ Better parenting skills need to be emphasised such as listening to children, acknowledging their difficulties, clarifying their doubts, and limiting use of gadgets. There must be a provision for seeking immediate professional help if the behavioural and/or emotional changes last for more than two weeks or with severity.⁽¹⁶⁾

Ethical Considerations: The study was approved by the Scientific Research and Ethics committee of the Institute. Informed consent was taken from all participants.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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