ORIGINAL ARTICLE

Burden, Challenges, and Perceptions of Parents Towards Online Classes During Covid-19 Pandemic: A Cross-Sectional Study From Coimbatore, Tamil Nadu

Keerthana Manthisamy,[1] Viswakumar Prabakaran,[2] Padmavathy Loganathan,[3] Geeta Anasuya D[4] and Jeevithan Shanmugam[5],*

[1]*Senior Resident, Department of Community Medicine, KMCH Institute of Health Sciences and Research, Coimbatore, India*

[2]*Assistant Professor, Department of General Surgery, KMCH Institute of Health Sciences and Research, Coimbatore, India*

[3]*Assistant Professor, Department of Community Medicine, SRM Medical College, Chennai, India*

[4]*Professor, Department of Anatomy, KMCH Institute of Health Sciences and Research, Coimbatore, India*

[5]*Professor, Department of Community Medicine, KMCH Institute of Health Sciences and Research, Coimbatore, India*
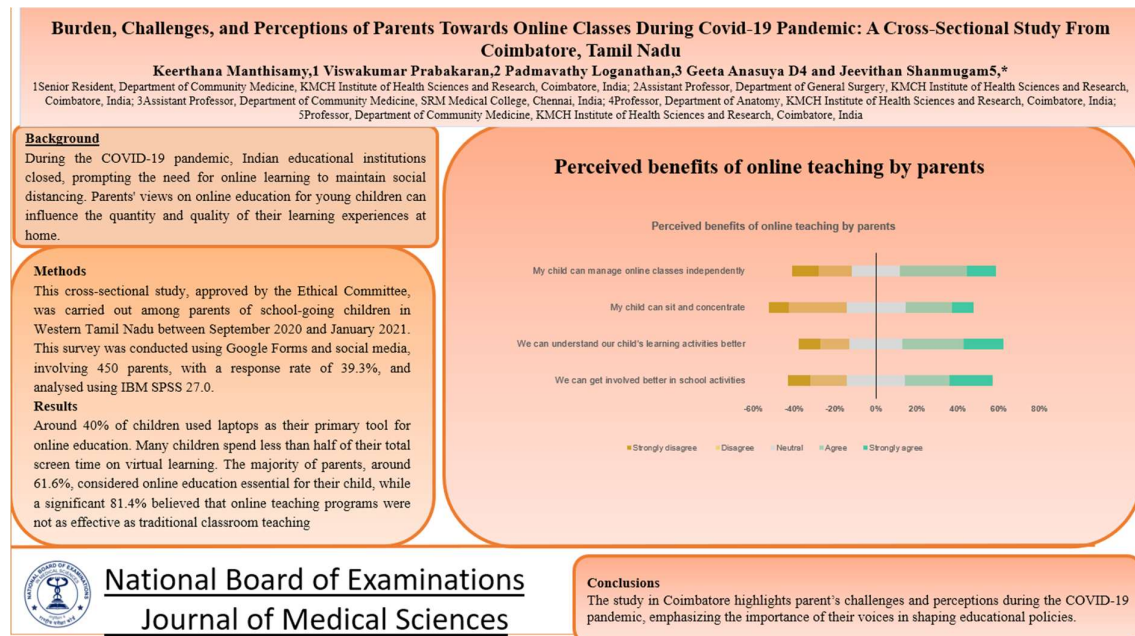
Abstract

Background: During the COVID-19 pandemic, Indian educational institutions closed, prompting the need for online learning to maintain social distancing. Parents' views on online education for young children can influence the quantity and quality of their learning experiences at home. **Objectives:** To explore the burden, challenges, and perceptions of parents about their children attending online classes. **Methods:** This cross-sectional study, approved by the Ethical Committee, was carried out among parents of school-going children in Western Tamil Nadu between September 2020 and January 2021. This survey was conducted using Google Forms and social media, involving 450 parents, with a response rate of 39.3%, and analysed using IBM SPSS 27.0. **Results:** Around 40% of children used laptops as their primary tool for online education. Many children spend less than half of their total screen time on virtual learning. The majority of parents, around 61.6%, considered online education essential for their child, while a significant 81.4% believed that online teaching programs were not as effective as traditional classroom teaching. **Conclusions:** The study in Coimbatore highlights parent's challenges and perceptions during the COVID-19 pandemic, emphasizing the importance of their voices in shaping educational policies.

Keywords: Online education, parents, school children.

*Corresponding Author: Jeevithan S
Email: dr.jeevithan@gmail.com

Graphical Abstract

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Keerthana Manthisamy,1 Viswakumar Prabakaran,2 Padmavathy Loganathan,3 Geeta Anasuya D4 and Jeevithan Shanmugam5,*

1Senior Resident, Department of Community Medicine, KMCH Institute of Health Sciences and Research, Coimbatore, India; 2Assistant Professor, Department of General Surgery, KMCH Institute of Health Sciences and Research, Coimbatore, India; 3Assistant Professor, Department of Community Medicine, SRM Medical College, Chennai, India; 4Professor, Department of Anatomy, KMCH Institute of Health Sciences and Research, Coimbatore, India; 5Professor, Department of Community Medicine, KMCH Institute of Health Sciences and Research, Coimbatore, India

Background

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Methods

This cross-sectional study, approved by the Ethical Committee, was carried out among parents of school-going children in Western Tamil Nadu between September 2020 and January 2021. This survey was conducted using Google Forms and social media, involving 450 parents, with a response rate of 39.3%, and analysed using IBM SPSS 27.0.

Results

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Perceived benefits of online teaching by parents

National Board of Examinations Journal of Medical Sciences

Conclusions

The study in Coimbatore highlights parent's challenges and perceptions during the COVID-19 pandemic, emphasizing the importance of their voices in shaping educational policies.

Introduction

Traditional face-to-face education uses chalk and board, while online education utilizes computer-communication technology to enhance the learning environment [1]. Online education is not just technology integration replacing teachers; it simplifies and enhances learning by making it more flexible and simpler [2]. Face-to-face education is regarded as superior as it enables teachers to adapt their methods based on students' immediate feedback [3].

Utilizing technology effectively offers numerous benefits, including universal access, class recording, efficient communication through chats, multimedia content, reduced travel time, and prevention of coronavirus spread [4]. Online teaching faces challenges in terms of logistics, technical, and financial aspects [5]. Furthermore, it lacks emotional and humanistic education [6].

In March 2020, the World Health Organization declared COVID-19 as a pandemic [7]. This transition has significantly impacted not only students and teachers but also parents [8]. Homeschooling has prompted parents to adopt new roles, emphasizing the importance of parental involvement in their children's online education, as it enhances their dedication and academic performance [4,9]. Parents' attitudes and beliefs about online learning impact children's learning experiences, as they must clarify doubts [10]. Hence, this study aimed to explore the burden, challenges, and perceptions of parents about their children attending online classes.

Materials and Methods

The ethical committee approved this cross-sectional study (IEC No: 34/IHEC/2020). The study was conducted among parents of school-going children in Western Tamil Nadu between September 2020 to January 2021. A voluntary opt-in sampling included parents who had consented to participate in the study, had a

smartphone with internet access, and accompanied their child primarily during online classes. The study excluded parents who were incapable of reading or typing in English, as well as any caregivers besides the parents.

A web-based survey was used to gather data because of COVID-19 regulations. Using Google Forms, the survey tool was developed and shared on social media. Before the study began, participants were asked to digitally sign a consent form, in which it was explained that the data would be kept anonymous and used only for academic research. The link to the questionnaire was sent to 450 parents, out of which, a total of 177 responded (response rate 39.3%).

A semi-structured questionnaire was designed and its face and content validity evaluated. Data on demographic details, electronic devices used, burdens, and challenges faced by parents were collected. On a five-point Likert scale, parents' perceptions of the benefits and impacts of online learning were scored as follows: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1).

Statistical Analysis

IBM SPSS 27.0 was used to analyze the data. Frequencies and percentages have been used to summarize categorical variables, while the median and interquartile range have been used to summarize continuous variables.

Results
Demographic details of children

Of the parents surveyed, 50.3% (n=89) had only one child. Thirty percent (n=53) of the children belonged to the 1st–3rd standard. Private education accounted for 99.4% (n=176) of student enrolment. 73.4% (n=130) were found in the CBSE syllabus (Table 1).

Table 1. Demographic details of children

Variables	Responses	Number (n)	Proportion (%)
Number of child/ children attending online classes	1	89	50.3
	2	84	47.5
	3	4	2.3
Children's level of study	Pre-primary	43	24.3
	1 -3	53	29.9
	4 -6	41	23.2
	>7	40	22.6
School type	Government	1	0.6
	Private	176	99.4
Education Board	CBSE	130	73.4

	ICSE/IGCSE	33	18.6
	Others*	14	8.0
Gadgets brought for online education	Desktop/ Laptop	55	31.1
	Mobile/ iPad	71	47.5
	Modem/ Internet access/ Upgrade bandwidth	90	50.8
	Web camera, Headphone & speakers	83	46.9
	Furniture (chair, desk, table)	29	16.4

*Others- Montessori, state board, Waldorf, matriculation, International Baccalaureate.

Use of electronic devices in online teaching

Nearly forty percent (n=70) of children used laptops as their primary gadget for online education, followed by mobile (27.1%), iPad (23.2%), desktop (11.3%), and TV (1.7%). The median hours of online sessions each day were 180 minutes (90-240). Three hundred minutes per day (180-420) was the median amount of screen time. A significant proportion of children (n = 94) dedicated only a small amount of time (<50%) to virtual learning when compared to total screen time.

The burden and challenges faced by parents regarding online classes

Almost sixty-two percent (n=109) of parents said that online education was necessary for their child. Almost half of the children expressed interest in attending online lessons. Before beginning online classes, 80.8% (n=143) of school management provided complete guidelines. Over half of the parents have made additional investments in online teaching. Owing to online classes, three-fourths of parents have purchased new electronic devices. Table 1 lists the devices that parents have brought. During lockdown, 63.8% (n=113) of parents (either one or both) said they work from home. Of them (n=113), 80.5% of respondents found difficulty in managing their work and children's online classes. 77.4% of parents stated that their homes provided a suitable place for children to learn. 79.7% (n=141) of parents said they took precautions to prevent their kids from playing games or going to unapproved websites. Their children have developed dry eye (12.4%), eye strain (58.8%), fatigue (20.3%), headache (22.6%), neck pain (23.7%), backache (9.0), anxiety (17.5%), and weight gain (50.3%) as a result of increased screen time on electronic devices.

Perceived impact of online teaching by parents on their children

The majority of parents (47.7%) believe (strongly agree + agree) that their child can manage online classes independently, but some express doubts about their child's focus during learning activities. While a notable percentage of parents (33.3%) believe their child can sit

and concentrate well, a similar proportion (37.8% - disagree + strongly disagree) express doubts about their child's ability to focus during learning activities.

A larger proportion of parent said (strongly agree+ agree) that their children had increased, screen time (84.7%), altered sleep patterns (71.7%), altered daily routine (88.1%), altered dietary habits (67.8%), and reduced physical activity (78%). Most parents believe online teaching programs are not as effective as classroom teaching (81.4%), a lack of supervision (41.3%), and guidance from teachers affects assignment completion (59.3%). Most parents acknowledge the difficulty of managing children at home (72.9%) (Figures 1-3).
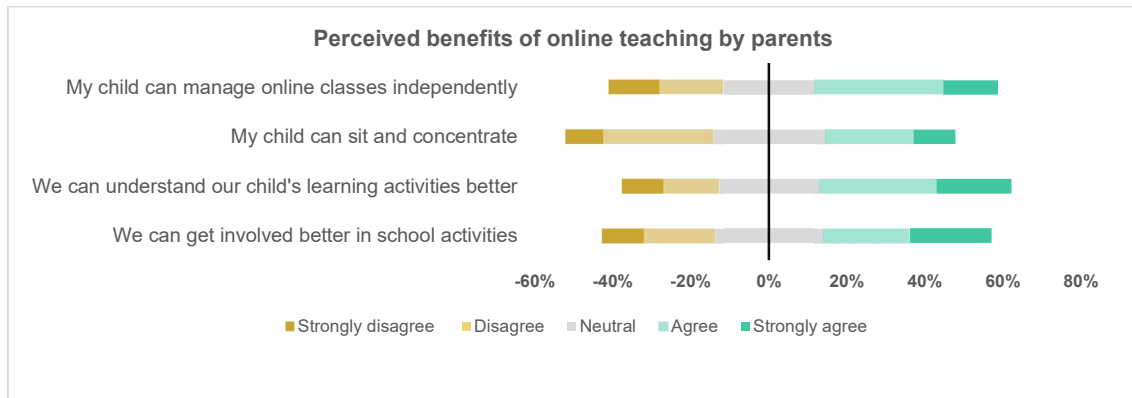
Figure 1. Perceived benefits of online teaching by parents.
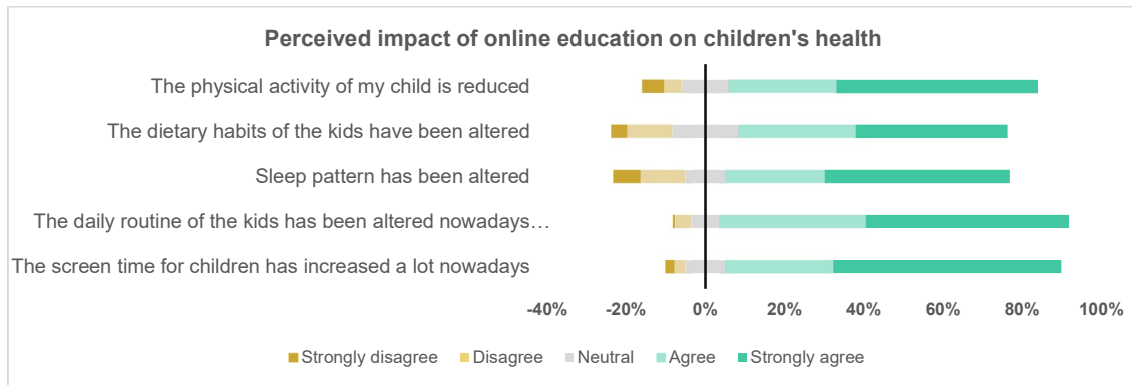
Figure 2. Perceived impact of online education on children's health.
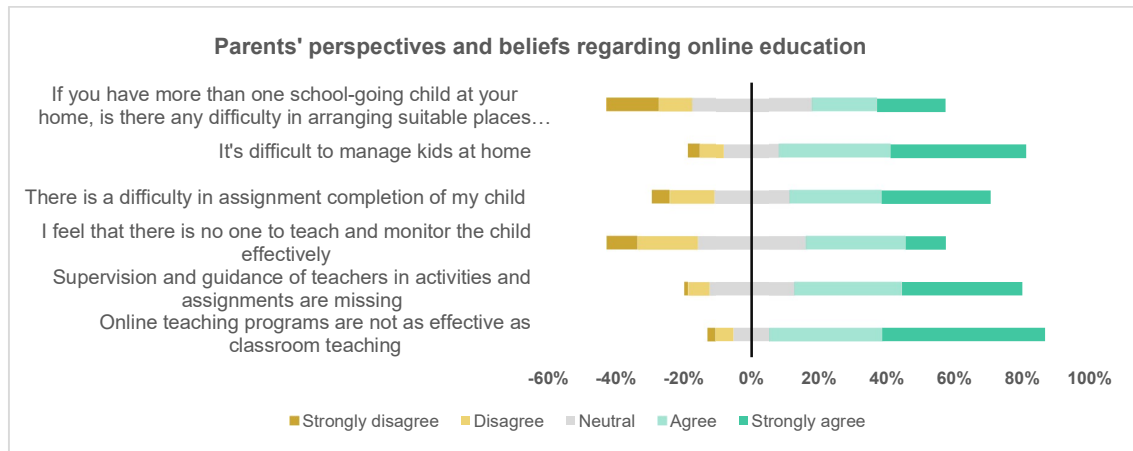
Figure 3. Parents' perspectives and beliefs regarding online education

Discussion

Online learning offers several benefits and drawbacks in addition to limiting the spread of COVID-19. The burden, challenges, and perspectives of parents toward online education were evaluated in this study. The children in this study come from the CBSE Board in 73.4% of cases. In the prior study, the CBSE board comprised 86% of the child population, indicating that the CBSE board offered early online classes during COVID-19 [11]. A paradigm shift toward competency-based medical education (CBME) has occurred in education during the last 20 years [12].

Laptops were the primary device utilized by 39.5% of children. Yet, 74.4% of respondents to a web-based cross-sectional study by Grover et al. in 2021 utilized smartphones, and 27.7% used computers, for their online learning [13]. More than half of the parents increased their spending on virtual learning. These results are consistent with the earlier survey, in which 54.4% of parents voiced concerns about rising school expenses [14]. Three-fourths of parents have bought new electronics because of online classes. However, in a study by Selvaraj et al.,

89.4% of participants said they already owned the necessary electronic devices, and only 8% bought new ones [15].

The Indian government states that in 2020 [16], preschoolers should not be encouraged to take online courses on their laptops or mobile devices. For them, radio and television can serve this function. To reduce screen time and its negative effects on children, the guidelines suggest a maximum of 30-minute sessions for pre-primary students, not more than two sessions of 30-45 minutes each for classes 1 through 8, and not more than four sessions of 30-45 minutes each for classes 9 through 12. However, the mean hours for pre-primary (2.1), classes 1–8 (2.9), and classes 1–9 (3.6) in this study are greater than the suggested hours.

For 80.5% of the parents surveyed, balancing work and their kids' online classes was a struggle. A study by Garbe et al. (2020) found similar results, with 72% of participants reporting that they had struggled to balance their responsibilities [17]. Parents (41.3%) in this study reported that there is a lack of teacher supervision and guidance for assignments and activities. Similar results, with 55.6% of

participants expressing concern that their child's use of online learning will be hampered by the physical absence of a mentor [2]. Screen time has increased, according to 84.7% of parents surveyed. Comparable results were observed in a prior study, wherein 68.9% of participants reported an increase in the duration of their screen media use [13]. Approximately 20% of parents testify in a Ludji et al. 2021 study that their children would rather play online games on their smartphones than use them for educational purposes [4]. These results may indicate that children's screen time has increased as a result of inadequate supervision.

Seventy-eight percent of parents in this study said their kids were not as active as they used to be. 53.8% of participants in a cross-sectional study conducted in 2022 said they thought online learning encourages kids to lead sedentary lives [11]. The majority of respondents in this study (88.1%) reported changing their daily routine. A qualitative study conducted by Bhamani et al. [18] revealed similar results. The results were in opposition to a study conducted by Rathaliya et al. in which 58.5% of parents reported that during the COVID-19 pandemic, distance learning had encouraged their children to adhere to daily routines [11]. Regarding the effects on a child's physical health, earlier research revealed comparable findings, indicating that taking classes online could cause headaches, neck pain, eye strain, backaches, and decreased physical activity as well as changes in eating and sleeping patterns [13,18,19].

48.1% of respondents in this study strongly agreed with the statement "online teaching is not as effective as classroom teaching," while 33.3% agreed. These results were in line with a study by Jony et al. [2], which found that 44.4% of respondents agreed and 27.8% strongly agreed that online teaching cannot be compared to traditional teaching. This study had certain limitations. Self-reported instruments, which could have been biased, were used to evaluate perception, burden, and challenges. Parents with smartphones and English language proficiency were the only participants in the study.

Conclusions

The COVID-19 pandemic has highlighted parents' challenges in online education, including device accessibility, work-life balance, and screen time limitations. Parents also worry about the impact on children's well-being due to decreased physical activity and disruptions to daily routines. The perceived ineffectiveness of online teaching compared to traditional methods is a major concern. A comprehensive approach involving equitable device access, clear screen time guidelines, and routine consistency strategies is needed to address these issues. Collaborative efforts between educators, policymakers, and parents are crucial.

Acknowledgment

Ethical Approval

The ethical committee approved this cross-sectional study (IEC No: 34/IHEC/2020).

Authors' contribution

All authors have contributed equally.

Statements and Declarations
Conflicts of interest

The authors declare that they do not have conflict of interest.

Funding

No funding was received for conducting this study.

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