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Research Article

CHANGES IN BEHAVIOUR INDICATORS DURING THE COVID-19 PANDEMIC AMONG SCHOOL GOING CHILDREN OF THIRUVANANTHAPURAM DISTRICT

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ABSTRACT

Introduction: Changes in the behavior Title of the article: Changes in the behavior indicators during the COVID-19 pandemic among school going children of Thiruvananthapuram District

Methodology: Two hundred and fifty school going children (10-12 years) were randomly selected from four schools from Trivandrum district. Pre and Post study was conducted in this study for a assessing the changes in the behavior indicators of school going children before and during pandemic.

Results: Compared to before the epidemic, the majority of children's have changed their behavior pattern. Children had the habit of spending more time for using gadgets, hours of sleep and watching television were increased during pandemic .The important notable thing was daily sitting time for study were decreased during pandemic when compared with before pandemic.

Conclusion: Findings of the present study recommends that there is a need to decrease the consumption pattern of unhealthy foods and need to increase the consumption of healthy foods in children. Because the unhealthy consumption pattern of food may cause many health problems in children.

Key Issues: Covid pandemic had an impact on the behavior indicators.

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INTRODUCTION

The coronavirus disease 2019 (COVID-19) is a respiratory infection caused by the SARS-COV-II virus that was first identified in Wuhan, China, in December 2019. Since then, it has been widely reported and on march 11,2020, the World health organization (WHO,2021) declared it to be a global pandemic (WHO,2021). Globally, more than 113 million cases and more than 2.5 million fatalities had been reported by February 2021 (WHO,2021). COVID-19 made leisure-time interruptions, social withdrawal and isolation can all have a negative impact on mental health of the children's (Hossian *et al.*, 2020; Vindegaard and Benros, 2020; Xiong *et al.*, 2020). Children's level of physical activity has been greatly altered by lock down. The COVID-19 shutdown may have caused a shift in lifestyle that made weight gain worse (Khan and Moverley smith, 2020; Rundle *et al.*, 2020). Due to the decline of typical forms of physical exercise that kids once engaged in, such walking to and from school, exercising has become more difficult (Margaritis *et al.*, 2020). Plans for the quarantine of COVID-19 have been closely connected to obesogenic behavior, namely a lack of exercise, eating too much and an unbalanced diet. People are currently spending more time sitting still, which encourages sedentary behavior like screen

time (computer, video games, tablets, televisions, smart phones) remote work for those can do so, and the closure of parks, gyms and sporting venues (Reyes *et al.*, 2020).

In the present research study, an attempt is made to assess the behavior indicators of school going children during COVID-19 pandemic

MATERIALS AND METHODS

Location of the study

The present study was conducted in four schools in Trivandrum district.

Selection of the respondents

250 school going children in the age group of 10-12 years were randomly selected from 4 schools for assessing the food consumption pattern.

CONDUCT THE STUDY

250 children were interviewed using questionnaire to elicit information on the behavior indicators. The behavior indicators such as, spending time in leisure activities, hours of sleep, hours of using gadgets, hours spent watching television, quality of sleep and daily sitting time for study was investigated.

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RESULTS

Table 1 Behaviour indicators of children

Behavior indicators	Before pandemic	During pandemic	Difference	Std. Deviation	t value	p value
Leisure activities	4.38	2.32	-2.06	1.46183	22.281	.000
Hours of sleep	1.32	2.28	0.96	.71586	-21.204	.000
Hours of using gadgets	2.42	3.75	1.33	.75369	27.944	.000
Hours spent watching tv	1.30	2.91	1.60	.63240	-40.203	.000
Quality of sleep	3.59	4.42	0.82	.89679	-14.528	.000
Daily sitting time for study	2.86	1.57	-1.28	1.23416	16.501	.000

Results obtained in the study were explained below in various relevant sub headings

Participation in leisure related activities

From the above table 1, there is significant difference in behavior indicators among school going children in participation in leisure related activities like walking in park, playing, exercise in before pandemic and during pandemic (t value=22.281, p value=.000).The average mean value in before pandemic is 4.38 and during pandemic are 2.32.

Hours of sleeping

From the above table1, there is significant difference in behavior indicators among school going children in hours of sleeping before pandemic and during pandemic (t value = - 21.204 , p value =.000).The average mean value in before pandemic is 1.32 and during pandemic are 2.28.

Hours of using gadgets

From the above table 1, there is significant difference in behavior indicators among school going children in using devise and gadgets like computer, tablets ,cell phones in before pandemic and during pandemic (t value = 27.944, p value=.000).The average mean value is before pandemic is 2.42 and during pandemic are 3.75.

Hours spent watching television

From the above table 1, there is significant difference in behavior indicators among school going children in watching television before pandemic and during pandemic (t value= - 40.203 ,p value = .000).The average mean value in before pandemic is 1.30 and during pandemic are 2.91.

Quality of sleep

From the above table 1, there is significant difference in behavior indicators among school going children in sleeping pattern before and during pandemic (t value =-14.528, p value =.000).The average mean value before pandemic is 3.59 and during pandemic are 1.57.

Study time

From the above table 1, there is a significant difference in behavior indicators among school-going children in daily sitting time for study before pandemic and during the pandemic (t value=16.501, p value =.000).The average mean value before pandemic is 2.86 and during pandemic are 1.57

DISCUSSION

Behavior indicators means that a person to asks questions about assessing one or more particular person behavior (David *et al.*, 2002).Behavior indicators describes the assessment of physical

activity, sleep pattern, usage of devices, number of hours spend watching television, quality of sleeping and sitting time for study.

The present study resulted that mean value of the leisure activities decreased among the children during p andemic (2.32) when compared with before pandemic (4.38). Engaging in leisure activities includes walking in park, playing, exercise .Similar results are piloted in a study conducted by Matsungo *et al.* (2020) reported that 62.5% of children reduced their physical activity. According to the Phillipou *et al.* (2020) conducted in Australia, The majority of persons (43.4%) in the general population group lowered their exercise levels, which may be attributed to staying at home, limits on sports activities and park closures at the peak of the pandemic. The results in the present study indicates that mean value of the majority of the children spent more time for sleeping during pandemic (2.28) when compared with before pandemic (1.32). Similar results are piloted in the study conducted by Pietrobelli and colleagues (2020) also reported that the sleeping time increased in children during COVID-19 pandemic. Di Renzo *et al.* (2020) also revealed that an increase in the sleeping time and increase in the sedentary life style and behavior.

Majority of the children in the present study spent more time using the gadgets during COVID-19 pandemic. The mean value in during pandemic was 3.7520 when compared with before pandemic (2.42). Pietrobelli *et al.* (2020) revealed that children and teenagers’ daily exposure to devices were increased as four hours during the COVID-19 lockdown. Mota and Moura (2020) also reported that increase in the usage of device/gadgets on social isolation, which may have contributed to the high levels of poor sleeping habits.

The present study resulted that the mean value of the hour spent watching television was high in children during pandemic (2.91) when compared with before pandemic period (1.30). A study by Rodriguez *et al.* (2020) showed that 89.1% of respondents spend more time on screens and watching television. Pearson and Biddle (2011) revealed that sedentary behavior such as watching more television and screens is linked to poor eating habits. Yet another study conducted by Priyanka *et al.* (2021) showed that due to exposure to online learning during the COVID-19 epidemic, children’s screen time has greatly increased when compared to before the lockdown situation. 35.5% of parents noticed an increase in screen time of about 4 hours per day. The general health of school-age children was impacted by an increase in screen time.

The present study resulted that, the mean value of the quality of sleep-in school-going children was high in during the pandemic (4.42) when compared with before the pandemic (3.59). A study conducted by Ravi *et al.* (2020) reported that lockdown

has an impact on sleep patterns. There has been a shift towards later bedtimes, delayed sleep onset, shorter nighttime sleep duration and more daytime naps. Also, a sizable proportion of subjects mentioned their sleep quality getting increased.

According to the findings of the present study, the mean value of the daily sitting time for study in children were high in before pandemic (2.86) when compared with during lockdown pandemic (1.57). Similar results were piloted in a study conducted by Andrew (2020) and Reimer *et al.* (2021) reported that, children spend significantly less time studying when schools are locked down.

CONCLUSION

Behavior indicators of the school going children were assessed through the collection of details. Majority of the children follow unhealthy behavior during COVID-19 pandemic. Hours of sleep and hours of using gadgets and hours of watching television were increased during pandemic. Leisure/ physical activities, daily sitting time for study were decreased during pandemic. This may cause childhood obesity. Findings of the present study recommends that there is a need to increase the time for engaging in leisure activities and daily sitting time for study for children and minimize the amount of time for spending in watching television, usage of gadgets. Because the unhealthy behavior may cause many health problems in children.

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