



EFFECTS OF LOCKDOWN ON HEALTH OF SCHOOL GOING CHILDREN.

Dr Rahul Gandhi*

Associate professor Department of paediatrics, Adesh medical college and hospital mohri, shahabad , Kurukshetra, India-136135. *Corresponding Author

Dr P. D Sharma

Professor Department of paediatrics, Adesh medical college and hospital mohri, shahabad , Kurukshetra, India-136135.

ABSTRACT

An online survey was conducted from July to September to assess the impact of lockdown on health of school children. A questionnaire link using <google form> was sent to students through WhatsApp and parents were instructed to fill the form. Age group from 5-17 years were enrolled in study. A simple percentage distribution was used for analysis. Various positive and detrimental impacts on physical, social, mental health were studied. Many parents report increase in mobile use, headaches, spectacle use, increase in aggressiveness, abusiveness, throwing tantrums, staying alone, even new habits like smoking. Many parents report improved appetite, interaction amongst siblings, grandparents, more sharing attitude, responsible behaviors, new hobbies. Both positive and negative effects have been reported. Further studies are urgently needed to unmask the ongoing and post lockdown impacts on health of school children.

KEYWORDS : Covid 19, Lockdown, School, Health.

INTRODUCTION

The pandemic of COVID-19 originated from Wuhan city of China (1) during November 2019. India reported first case on January 30, 2020 (9) and complete lockdown was announced from March 23. WHO declared it as Pandemic on 11 March 2020 (12). Around 320 million learners are affected in India and 600 million globally (11). The closure of educational institutions led to unprecedented impact on education institutions (5, 7) and medical colleges (2). The students and parents have to cope up with totally new e-learning platform (6). Both positive and negative impacts on performances of students have been reported (4). Hearing-impaired students now face huge challenges in online learning (8).

DATA AND METHODS

Subjects

This is an online survey-based study. 538 parents fully responded to all questionnaires. Students of class 1-12 from 2 secondary private schools of district Kurukshetra, Haryana, India were subjects. Age group and percentage distribution is age 5-12 years (41.03%) 13-17 years (58.97%).

Data Collection

Study was conducted from July 23 to September 13, 2020. The schools were yet not announced opened by Govt of India. A questionnaire link via Google Form was sent to students WhatsApp groups of classes. The principal and parents were provided full consent before participation in online survey.

Data Analysis

Simple percentage distribution was estimated to assess impacts on various parameters related to physical, social, mental, spiritual health. All the analysis was performed using statistical package for social sciences SPSS version 25.

RESULTS AND DISCUSSION

Table 4.1 Showing Impact On Physical Health

Sr No	Physical	Increased Frequency %	Number of students	Decreased Frequency %	Number of students	Total Participants
1	Visit to Doctors	27.9	145	72.1	375	520
2	Cough Cold Fever	24.95	132	75.05	397	529

	episodes in 3 months					
3	Headache episodes	22.24	121	19.67	107	228
4	Spectacle Use	31.1	166	10.1	54	220
5	Indoor Activities	86.51	465	13.49	73	538
6	Outdoor Activities	13.20	71	86.80	467	538
7	Creative Activities (Drawing / Craft)	69.74	371	30.26	161	532
8	Sleeping Hours	77.57	415	22.43	120	535
9	Appetite/weight	74.68	401	25.32	137	538

Most of the parents agreed that their visits to doctors for any child ailment has decreased. Many parents (79.78%) do not want to take their child even for vaccination of child. 75.05% parents report that cough, cold, fever episodes for which they used to consult doctor have decreased during lockdown period since last 3 months. 22 percent report increase in headache episodes in children, this may be attributed to stress, sudden unexpected changes in routine curriculum, increase in screen time in mobiles/laptop due to online classes. Few parents also report change in spectacle numbers of child. This may be an indirect evidence of mental stress and decrease adaptability to sudden devastation. However 86% believe that during stay at home their kids have increased interacting time with them, grandparents, and other siblings at home. They believe happiness and sharing environment had increased by 74% and 65% respectively at home. 77.57% and 74.68% report increase in sleeping hours & appetite. This may lead to sedentary life style. They report positive outcome of lockdown in certain aspects. 77% parents report their child now spends more time on mobiles. Many parents report that their child has developed new hobbies (figure 20) like listening to music (28.62%), cooking hobbies (13.2%), driving (6.88%), dancing (7.06%), interest in learning language like English (6.51%), and going to gym/yoga/other physical activities in 7.43%. (Table 4.1, 4.2) These hobbies were masked as child couldn't spend desirable time during their routine schedules. Routine vaccinations had been

hit badly during lockdown(1) .The impact of delayed/missed vaccination on vaccine preventable diseases is hard to guess.

Table 4.2 Showing Impact On Parameters Of Social Healthand New Hobbies Developed.

Social Health	Increased frequency%	Number of students	Decreased frequency%	Number of students	Total participants
Screen Time on Mobile/ laptop/ Tv	87.7	471	13.3	66	537
Time spent with Family atBreakfast / Lunch / Dinner)	88.17	477			
Responsible behaviour	75	403	25	134	403
Interaction with Parents / Grand Parents	83.02	440	16.90	90	530
New Interest Gardening	6.69	36			
Listening to Music	28.62	154			
Kitchen Work	19.89	107			
Cooking	13.20	71			
Learning Dance	7.06	38			
Driving	6.88	37			
Gym activities	7.43	40			
Child prefers staying alone/ (yes)	29.29	157	70.71 (no)	379	

Table4. 3 Showing Impact On Mental Health

Mental	Increased frequency %	Total no of students	Decreased frequency%	Total no of students	Not applicable
Sharing Attitude	65	351	35	189	
Aggressiveness	35.2	189	33	177	31.9%
happiness	74.05	408	25.95	143	
Addiction to mobiles	77.65	417	22.35	120	
Obeying command of parents	77.4	404	22.6	118	
Abusiveness	10.54	55	20.31	106	
Addictions smoking, alcohol	1.88				

Many parents report depressive behaviours like child prefers to stay alone in 29.29%.1.88 percent report child has started to smoke and 1 found consuming alcohol.10%parents report increase in abusivenesss .,35.2% parents report increase in aggressiveness in form of throwing things ,throwing tantrums .These could be attributed to prolonged effects of staying at home, child missing school activities, more of screen times, less interaction amongst friends, reduced outdoor activities for long and unexpected lockdown .How much these small changes in behaviour will have long term effects on mental health of child will need further follow up studies but are believed to certainly have long term effects on concentration , memory, school performances. There are reports of increased domestic violence and abuse as a direct or indirect effect of

being home bound for long periods(1)this lockdown period, it was reported that learners were mostlysuffering from stress, depression, and anxiety (42.0%). The students were also facing problems related to poor internet connectivity(32.4%), followed by the absence of a favorable environment to studyat home (12.6%). Students residing in rural and remote areas may facepoor internet connectivity.(6)

Table4.4 Imact On Spiritual Health

Spiritual	Increased frequency	Total number	Decreased frequency	Total number of students	Total
Prayer time	63.10	330	36.90	193	523
Going to temple	22.3	118	77.7	411	529
Meditation time	48.2	250	51.8	269	519
Yoga Classes	14.42	76	85.58	451	527

Parents report their kids prefer to spent some time now on prayers at home, going to nearby temples ,meditation and some prefer doing yoga (Table4.4).These activities have been reported to increase endorphins and gives feel good factor as reported by Parents.

Table 4.5 Knowledge About Online Classes And Covid 19 Situation.

Q1 What should be suitable time for online classes Parents report 2hrs is sufficient 26.81%	Q2What will you do if child has fever? Parents report (figure 35) a) They will give self medications and wait in 26.5% b)They will consult nearby rmp/or chemist in7.2% c)They will consult only child specialist for fever50.3%	Q3)Do you have Thermometer at home? 92.2%% say they have thermometer s at home and 7.8%% donot have thermometer s at home even .	4 Do your child now follows social distancing norms,use sanitiser ,masks, washes hands ? 97.5.%report that their child now follows social distancing norms, use of sanitisers,masks, handwashing is now been followed by their kids
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10. would you like to visit doctor for vaccination during lockdown ?

RESULTS

Choices	%	Count
yes	20.59	63
no	79.41	243

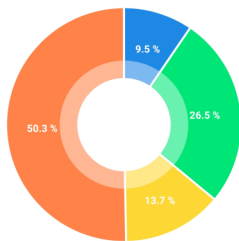
35. what will you do if your child has fever?

20. New interests developed

PIE CHART

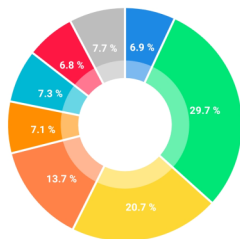
PIE CHART

- stay at home and wait - 50
- Give some self medications - 139
- visit a local practising person/ chemist - 72
- visit only child specialist - 264



PIE CHART

- gardening - 36
- listening to music - 154
- helping in kitchen - 107
- cooking - 71
- Driving - 37
- dance class - 38
- learnig new language - 35
- Gym - 40

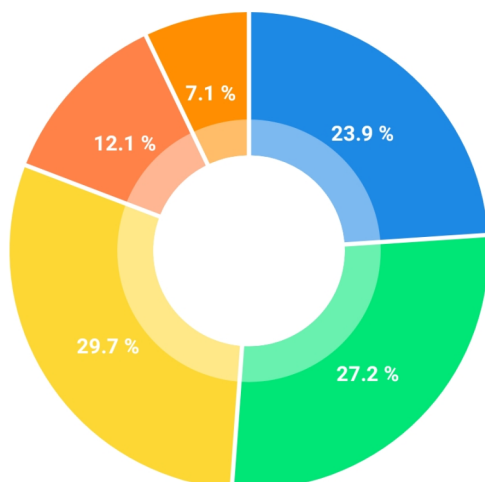


34. How many hours should be sufficient for online classes for your child?

PIE CHART

PIE CHART

- 45 min - 125
- 1 hour - 142
- 2 hours - 155
- 3 hours - 63
- 4hours - 37



CONCLUSION

Lock down of 6 month's has been observed to have many

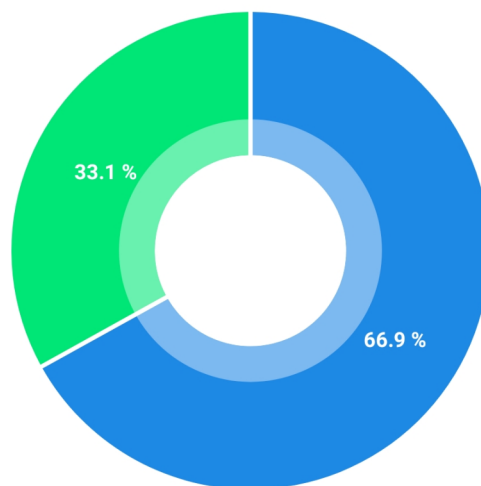
positive and detrimental effects on health of child .Any sudden, unexpected change in life of children from age5-17 years is concluded to have many detrimental effects on health .Long term follow ups are very essential and help of child psychologist should be taken at earliest. Most of parents want that schools should reopen only when effect of covid19 virus goes .The psychological fear of Pandemic prevails in all sectors .In our study 66.9%parents report effect of lockdown as constructive on family health till September (figure50) .

50. How do you rate overall effect of lockdown on health of your family.?

PIE CHART

PIE CHART

- constructive - 334
- destructive - 165



However this percentage may decline if lockdown continues .Even when school reopens children need to be observed closely for post effects of lockdown in behaviour, school performance, and practising social distancing norms. Teacher and are also advised monthly screening of covid 19. Many children though asymptomatic but can be carriers .Cases have been reported amongst pediatrics age groups as asymptomatic carriers.

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