



ORIGINAL RESEARCH PAPER

Paediatric Medicine

EFFECTS OF LOCKDOWN ON HEALTH OF SECONDARY SCHOOL STUDENTS. A STUDY CONDUCTED POST REOPENING OF SCHOOLS

KEY WORDS:

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ABSTRACT

Graded and gradual reopening of schools should be considered as closure for a long time closure is impacting not only education but also the social and mental wellbeing of children. Reopening schools cannot wait for all teachers and students to be vaccinated. With the global vaccine shortages plaguing low and middle-income countries, vaccinating frontline workers and those most at risk of severe illness and death will remain a priority. All schools should provide in-person learning as soon as possible, without barriers to access, including not mandating vaccination prior to school entry. Objective: We planned a questionnaire based research to know feedback of students after reopening of schools. Aim is to study their experience of online studies during lockdown and various changes in social or mental health after reopening of schools. Materials And Methods: Students of class 9-12 were the subjects of study. 209 students of 4 schools responded to online questionnaire form within one month of reopening of schools. Average age group was 13-18 years. Results: : Students reported that classroom teaching is much better method of learning as they can interact with teachers and other students for doubts clearing (52.6%) and their is better retention of subjects (34.4,%). 22.1% students report they had difficulty in concentration after reopening of schools post 16-18 months of lockdown along with phobia of contacting covid (17.4%). Students want vaccination before reopening of schools or at the earliest. However (69.9%) students report that they will report any symptoms of fever & cough at earliest to teachers & parents both . Reducing play ground activities, morning assembly, Recess period are suggested ways for reducing transmission of co vid by the students. Students now prefer personal vehicles to reach school and use of school busses has reduced to 7.7% Conclusion: Schools must be opened at earliest for primary and secondary classes to preserve the social & mental well-being of students. All students must report any symptoms of fever and cough Regular Screening should be done by school and health authorities, reopening Restaurant and cafe can wait but not the schools at present . More studies need to be carried to screen effects on heath of students due to lockdown and difficulties encounter after reopening of

INTRODUCTION

Countries need to consider graded and gradual reopening of schools as closure for a long time is impacting not only education but also the social and mental wellbeing of children. At a time when state governments are considering whether to reopen schools after 18 months of Covid-19 outbreak, school reopening needs to be considered. "It is over a year and a half and the pandemic is still around. We Do not know how long this

Will continue. Hence, like other sectors, we need to consider graded or gradual reopening of our schools. This is already being Done in many countries. Closure of schools for a long time is not only impacting education, but also the development, social and mental well-being of children and adolescents," At the local level, this educational need should be weighed against the risk of further spread of the virus. Digital technology might provide solutions. It's been 18 months since the COVID-19 outbreak started and education for millions of children is still disrupted. As of today, primary and secondary schools are shuttered in 19 countries, affecting over 156 million students. This should not go on. Schools should be the last to close and the first to reopen. These actions were frequently taken as a first recourse rather than a last measure. In many cases, schools were closed while bars and restaurants remained open. The losses that children and young people Will incur from not being in school may never be recouped. From learning loss, mental distress, exposure to violence and abuse, to missed school-based meals and vaccinations or reduced development of social skills, the consequences for children Will be felt in their academic achievement and societal engagement as well as physical and mental health. The most affected are often children in low-resource settings who Do not have access to remote learning tools, and the youngest children who are at key developmental stages.

children at home is forcing parents around the world to leave their jobs, especially in countries with no or limited family leave policies. That's Why reopening schools for in-person learning cannot wait. It cannot wait for cases to go to zero. There is clear evidence that primary and secondary schools are not among the main drivers of transmission. Meanwhile, the risk of COVID-19 transmission in schools is manageable with appropriate mitigation strategies in most settings. The decision to open or close schools should be based on risk analysis and the epidemiological considerations in the communities where they are situated. Reopening schools cannot wait for all teachers and students to be vaccinated. With the global vaccine shortages plaguing low and middle income countries, vaccinating frontline workers and those most at risk of severe illness and death Will remain a priority. All schools should provide in-person learning as soon as possible, without barriers to access, including not mandating vaccination prior to school entry. Ahead of the Global Education Meeting on July 13, WHO urged decision makers and governments to prioritize the safe reopening of schools to avoid agenerational catastrophe. Closing schools mortgages our future for unclear benefits to our present. We must prioritize better. We can reopen schools safely, and we must."

MATERIAL AND METHODS

The study was conducted after reopening of schools in Haryana, India on students of class 9-12 th, age 13-18 years. 209 students from 4 schools responded to google online Questionnaire form within 1 month of reopening of schools. The shool in Haryana state remained close from 23 march 2020 to 16 July 2021. approx Days. In view of prolonged shut Down and to access the feedback of students on their mental and physical & social health, a 28 Questionnaire based fonn was designed and sent to students online by the class teachers after due permission from the school authorities and informed consent. Results were Analysed and graphic presented. The details of Questions and response received are discussed as follows

The losses for parents and caretakers are equally heavy. Keeping

Figure 1: Shows Age Group Distribution Of Participants Questionnaire And Results

1. Do you think your studies have suffered during lockdown

Yes a lot 63.6
 Yes to some extent 23.9
 Not affected 12.4



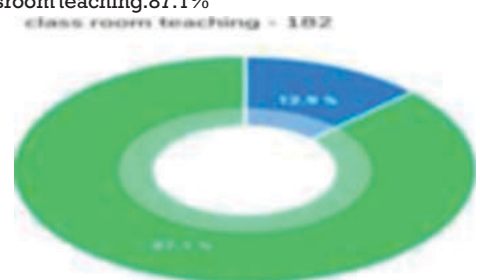
2. Do you think your performance has been affected during lockdown

period Yes 47.4%
 Yes to some extent 35.9%
 No 6.7%
 yes, a lot - 99 yes .to some extent - 75 no - 35



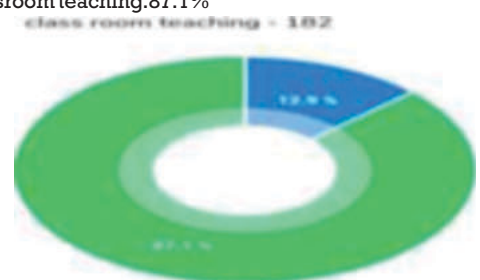
3. Were you able to grasp things by online vs classroom teaching Yes equally 37.3%

No I suffered many difficulties 62.7%



4. What Do you experience is better method of learning Online 2.9%

Classroom teaching 87.1%



5. Do you think schools should have opened earlier

Yes 79.2%
 No 20.8%
 No answers yes - 145 no - 38



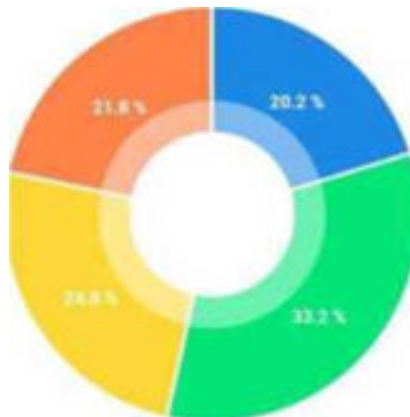
6. Why Do you think classroom teaching is better method of learning Discussion with classmates is possible 32.2%

Clearing doubts personally with teachers 52.6%
 Teachers give more attention 39.2%

Better retention of subjects 34.4%

- Discussion with classmates is possible...
- clearing doubts personally with teachers...

Teachers give more attention individual... I Better retention of subjects - 72



7. Do you find any difficulties / medical symptoms after reopening of schools Headache 16.3%

- Difficulty in concentration 24.6%
- Sleep disturbances 15.9%
- Anxiety 8%
- Phobia of contacting covid 17.4%
- Increased sleepiness in classroom 17.8%

MHeadache - 45

difficulty in concentration - 68 sleep disturbances - 22

- anxiety - 22
- phobia of contacting covid 19 - 48



8. What Do you think should be time guidelines for offline classes after re opening of schools

- same as before 40.2%
- half time as before 33.5%
- 3/4 time as before 16.7%
- Online classes only should continue 9.6%

same as before - 84 half time as before - 70 3/4 th time as before - 35 online classes only should continue - 20



9. Will you like to get vaccinated for covid 19 as soon as it is approved, yes, immediately 46.4%

- Will wait for few months 36.8%
- no I will not get vaccinated 16.7%
- yes, immediately - 97
- I will wait for few months after approval... no .1 will not - 35



10. Which school activities you think should be reduced now to minimise covid 19 spread ?

Morning assembly 19.4%
 Playground activities 15.8%
 Recess period 11.9%
 All the above 34.8%
 None of above 18.2%
 Morning assembly - 49 playground activities - 40
 Recess period - 30 all the above - 99
 none of above - 46



11. Will you report any symptoms like fever, cough cold yes, immediately 69.9% no I will not report to anyone 30.1%

yes, immediately - 146 no I will not report to anyone - 63



12. Whom will you report any fever if any * school teacher 5.3%

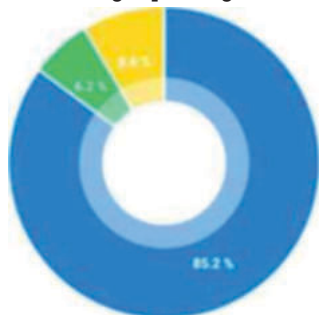
parents 10.5%
 both 70.8% none 13.4%
 school teacher 5.3%
 none of above 5.3%



13. How strictly you follow covid 19 protocols in school yes always 85.2%

no not at all 6.2%
 only if anyone is observing 8.6%

• yes always - 178
 • No .not all - 13
 only if anyone is observing or pointing ...



14. Do you feel comfortable wearing masks all the time during school time. Yes 24.9%

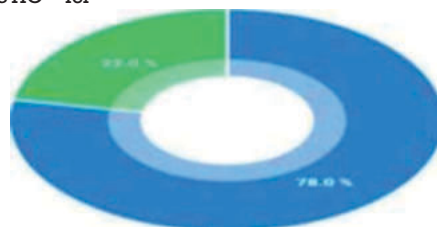
yes-52
 no -28 sometimes I feel suffocated. - 129

no
 sometimes I feel suffocated. 61.7%



15. Do you carry any extra masks in your school bags

Yes
 yes-163 HO - ICI



16. Do you prefer disposable masks or cloth masks * Disposable only 22.5%

Cloth masks 77.5%
 disposable - 47
 cloth - 162



17. How do you come to school now

By school bus as before - 26 By personal vehicle as before - 64
 By school bus now - 16
 By personal vehicle now - 103



18. How frequently you wash your hands or sanitise your desk during school times * once 43

Twice 58
 many times 113
 once - 43
 Twice - 58 many times - 113



19. Are your class rooms classrooms sanitized daily during school hours

yes - 128 no - 81



yes
no

20. Has any fine be imposed on you for violating any covid 19 school protocols * yes 27.8%

no 72.2%

21. Have you been given any checklists for covid 19 protocols by school teachers before reopening of schools *

Yes 73.2 % no 26.8 %
io - 56



22. Do you think cancelling board exams for 10 th and 12 th was a right decision

yes
no 51.2%



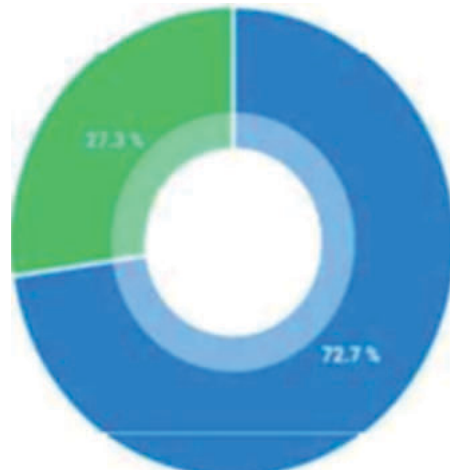
23. How Do you rate decision to close schools for 16 months (march 2020- July 2021)

* good 39.2%
not good 60.8%
good - 82 not good - 127



24. Do you think students should be vaccinated before reopening of schools Yes 72.7% no 27.3%

- yes - 152
- no - 57



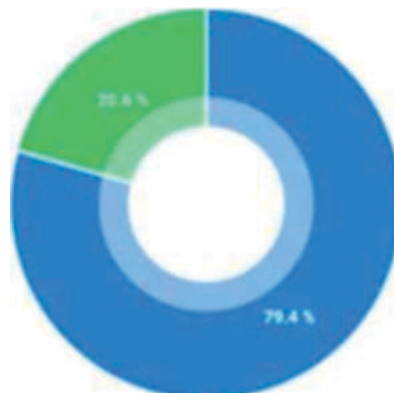
25. Should there be a routine screening every month for students in schools Yes 68.9% no 12.9%

only for symptomatic 18.2%

26. Is there any suggestion box near your classroom for covid 19 related issues Yes 55% no 45%

27. Are you comfortable with arrangements made by school authorities for maintaining covid 19 protocols?

Yes 79.4%
no 20.6%
H yes - 166
• no - 43



28. Have you visited any Doctor post reopening of school for any psychological reasons like anxiety/ depression/ difficulty in concentration, or any other .please specify

yes 22.8%
no 77.2%
yes - 44
No - 149



DISCUSSION

Less than 5% of cases in the European Economic Area and the UK have been reported to occur in young people aged 18 years and under [2]. Specifically, children often present an asymptomatic infection, during Which it is not well known how infectious children are. Instead, symptomatic children

can spread the infection similarly to adults [2]. Evidence indicates that no age correlation with viral load exists, thus suggesting that children and young people can carry the same high levels of virus [3].

Although outbreaks in schools have been reported, their detection is extremely difficult because of the poor presentation of symptoms among younger people [2], and there is little evidence on the transmission dynamics in school settings [4]. The Documented cases in schools indicated that child to child transmission in schools is not common and appropriate measures of prevention can potentially be effective in preventing transmission in the school setting [2]. Data about the effect of the school closure/reopening on the transmission in the community are conflicting and equivocal [2,5], and a wide range of impacts of school closures have been reported, from poor to substantial effects [5]. Recently, modelling studies have indicated that school closures alone would avoid only 2-4% of deaths, a percentage much smaller than other strategies of social distancing [5].

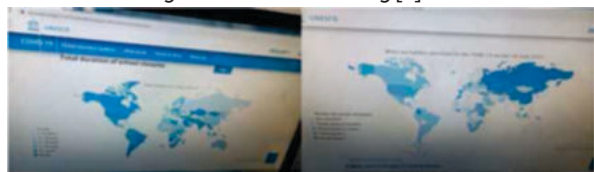


Figure 2(a) Shows WorldWide Total Duration Of School Closure

Figure 2 (b) Shows WorldWide Vaccination Status Of Teachers

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In the present study conducted on students of class 9-12 , age 14-18 years ,63.6%students report that their studies have been grossly affected due to lockdown and their performance and thinking has reduced.87.1% believe offline classroom teaching is a better method of learning due to better

doubtsclearing(52.6%) by teachers and more attention personally received from teachers, there is better retention ofsubjects(34.4%).Although schools remained closed for 17 months from march 23 to July 16 2021 ,46.1 %students want to join schools only after getting vaccinated. 36.8% want to wait for vaccinations .To minimize covid spread, students want reduction in playground activities (19.1%) morning assembly(23.4%) and recess periods (14.1%) ,and they want to follow covid protocols (72.2%) fully during school timings .Since board exams of 10 th and 12 th class were cancelled for academic year 2020-21 ,52.2 % agree with government decision while others don't feel it as a right decision.77.5% students prefer cloth masks over disposable masks . 49.3% students have switched to personal vehicles and only 7.3 percent are now usings school buses to reach school as before.Students report medical symptoms like difficulty in concentration 32.5%, sleep disturbances (21.1%), anxiety (10.5%),phobia of contacting

covid (23.4%). This is of grave concern . Although only 209 students participated in study, this may just be a tip of ice berg of reporting medical symptoms ,hence prolonged studies are definitely required enrolling more students to unmask the new emergingsymptoms and follow up..Students believe that the school timings should be reduced to 1/2 or or more after reopening, ently, modelling studies have indicated that school closures alone would avoid only 2-4% of deaths, a percentage much smaller than other strategies of social distancing [5],School closures have also led to reduced physical activity, poor eating habits, and disrupted sleep patterns. For some children, more time at home has increased the risk of Domestic violence, just as more screen time has exacerbated the risks of online harm. And with schools closed, a critical avenue for identifying and reporting abuse and mental-health issues has been closed off. Such closures

are not likely to be effective as a single control measure, but they should be matched with other physical distancing and public health response measures outside the school setting [2]. Schools can't be kept shut indefinitely and children away from physical classes. It is essential for their academic progress as well as their mental health. Not interacting, playing, sharing, studying with each other is not good for their mental health and balance. Already, the number of children and adolescents seeking medical help for behavioural disturbances, functional symptoms and depressionhas increased tremendously. On the other hand, in some Western countries, opening up of schools has resulted in spikes of Covid cases in children as well as their families.The danger of children bringing home the infection and passing it on to their grandparents and parents in joint families is quite real and can have disastrous consequences for the old and infirm. Quick and comprehensive coverage of school-age children is our best bet. But the reality is that this is not going to happen.The next best thing that we can do is to open schools in a graded manner, for example, allowing only one third of the class to come to school on any particular day. This way every student will get a chance to attend school physically two times a week. The rest of the syllabus can be covered through online classes. Further, students can be asked to come only for half a day, so that there is no need for a tiffin break - a time when continuing Covid precautions like wearing a mask may not be feasible.In the past months, some data about school reopening have shown that, despite the low-incidence period and hygiene measures promoted in schools, school outbreaks did occur [6,7]. However, the number of cases was lower compared to before school closures, thus indicating that containment measures in schools may be effective and should be implemented in the best possible way [6,8].

Interestingly, Sweden, Which kept preschools and primary schools open, did not report greater numbers of hospitalized children due to COVID-19, although the overall epidemic has been reported to be severe [2]. However, indirect data suggest that children in Sweden were infected considerably more than similar countries, such as Finland [9],

Therefore, given the limited evidence of school closure effectiveness in containing the pandemic and the importance of the consequences of school closure on young people's lives, it seems essential to implement preventive measures when reopening schools, along with clear strategies to manage potential cases and outbreaks in school settings, in order to reduce the transmission of COVID-19 and keep schools open.

With the COVID-19 pandemic now well into its second year, safely reopening schools has become an urgent priority. School attendance is critical for children's education and lifetime prospects. The long-tenn costs of closures - both for individual children and society - are simply too large to justify on a continuing basis.

Evidence since the start of the pandemic shows that COVID-19 Does not pose a high risk to children, and that schools are not drivers of transmission within the surrounding community.We have also amassed a large body of knowledge about how to reduce the risks to children, teachers, and their families. Using this knowledge, we all need to urgently work toward reopening schools safely to protect our children's future.

In nearly half the countries in developing Asia, schools have been closed formore than 200 days during the pandemic. The region should prepare for a reduction in the expected gains in reading and math skills for children in both preschool and primary school, as well as a wider achievement gap between disadvantaged children and their peers.

Despite the obvious costs of school closures, many countries

are still reluctant to reopen, citing fears of further transmission. But our focus now should be on using what we know about COVID-19 and children to work towards the safe reopening of schools.

Globally, children account for a very small proportion of confirmed COVID-19 cases. Children of primary-school age and younger are among the least likely cohorts to be infected. And even when they do contract COVID-19, they tend to have milder symptoms than adults (Which is Why they have not contributed significantly to the proportion of hospitalized cases or reported deaths). And a study of children from the Republic of Korea shows that infected children are less likely to spread the virus. In short, primary schools, preschools, and early childhood development (ECD) centres are not high-risk settings for transmission, especially if the right safety measures are followed. Transmission levels in these settings have been found to reflect those of the surrounding community.

The one possible exception is secondary schools (high schools), Which have accounted for a higher number of outbreaks than primary schools. Because adolescents appear to transmit the virus much like adults, partial closures for secondary schools should remain an option, but only as a last resort and for limited periods where community transmission is surging. When schools are forced to close temporarily, this must be done in conjunction with other community-level public-health and social measures.

But overall, the evidence overwhelmingly points to the need for schools, especially preschools and primary schools, to be reopened. The World Health Organization's guidance on operating schools during the pandemic includes several measures to reduce COVID-19 exposure and transmission. These include personal hygiene practices, proper mask use, physical distancing, adequate ventilation, and regular cleaning and disinfection of surfaces. Clear and consistent communication with parents and children to ensure compliance both in the classroom and during after-school activities is equally important.

Maintaining vigilance and adherence to all of these measures is critical - not only for schools, but also for our broader efforts to contain COVID-19, including the development and spread of virus variants and mutations. The good news is that school reopening are not dependent on the availability of vaccines. We need to work toward a sustainable "new normal" right now. While the relatively low risks of children being in school are easily managed, the consequences of keeping them out of their classrooms are grave and far-reaching. It is time for the school gates to reopen.

Acknowledgments

We sincerely thanks all the school authorities ,teachers and students for participating in study

Declaration Of Conflict Of Interest

None

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