

# Covid 19, School Closures, and its Complications

Hassan Joulaei<sup>1</sup>, PharmD, MPH, PhD; Zahra Zolfaghari<sup>1\*</sup>, MSc

<sup>1</sup> Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Shiraz, Iran

\*Corresponding author: Zahra Zolfaghari, MSc; Health Policy Research Center, Institute of Health, Shiraz University of Medical Sciences, Shiraz, Iran. Tel: +98-9365003435; Email: zzolfagharimedical@gmail.com

Received February 21, 2021; Revised February 22, 2021; Accepted February 23, 2021

**How to Cite:** Joulaei H, Zolfaghari Z. Covid 19, School Closures, and its Complications. Int. J. School. Health. 2021;8(1):1-2.

Corona virus disease 2019 (COVID- 19) has rapidly spread across the globe and implementation of lockdown by most governments has caused many changes in people's life style. Although separation, isolation, and quarantine could be the potential community protective responses to reduce the transmission of this virus, for school children worldwide, it means deprivation of school and disruption of social activities (1).

As children are scarcely affected by COVID-19, and it is not yet clear how often they develop chronic infections and pass it on, lockdown and school deprivation may force more parents to stay home. So, most governments around the world have temporarily closed educational institutions to help decrease the transition of this condition. As a result of school closure, more than half a billion children were sent home in 2020, according to UNESCO (2).

Because childhood and adolescence are critical stages of life, it is crucial for children to keep in touch with their peers in order to acquire cognitive and social-emotional developments. Therefore, following the period of school deprivation and educational disruption, we should expect some consequences that may lead to several physical and mental issues (3, 4).

The social isolation during childhood brings about some changes in children's daily habits, such as more screen exposure, physical inactivity, and some psychological consequences. These changes may entail various health-related implications (3-10) as follows:

## Health related Outcomes

1. *Screen exposure outcomes:* Online teaching and learning during lockdown means more exposure to the screens of tablets, mobiles, and laptops (5). Long duration of screen exposure may lead to different complications, such as overweightness, increased cardiovascular risk factors among children (3), and

myriad visual disabilities (6).

## 2. Physical inactivity and sedentary life style

Routine exercises help children maintain a strong and healthy body, build muscles and bones, develop the required motor skills, and even enhance their immune systems (7). Covid 19 lockdown and school closure reduce the exercising time among children and adolescents (5).

## 3. Psychological Consequences:

Social distance and absence of direct contact with other people of the same age may increase the risk of social abuse, such as graphic images and unlimited access to damaging content (UNICEF) (8).

Furthermore, social isolation at home may ensue domestic violence (4). Children and adolescents are strong representatives of change for the next generation. Thus, it is necessary to avoid any crisis that may be a hurdle to learning and increase resilience while trying to build a community with safer conditions (9).

Social isolation during childhood may lead to worsened role taking performances. It is important that parents keep a regular timetable consisting of healthy habits and effective strategies for minimizing the possible health damage in children who are in lockdown (10). In addition, this lockdown directly worsens the pre-existing social inequality for underprivileged children in developing countries. The deprived children have difficulty accessing education following the deprivation of basic facilities (5).

Deprivation of both socio-affective and physical activity stimuli is considered as the main concerns of scientific research. But, this is an unprecedented situation and the evidence about the effects of this strict lockdown on school children aged 6 to 19 is scarce.

Accordingly, potential health-related consequences of COVID-19 lockdown in children require further research. It is crucial to survey the various dimensions of its effect on school aged children. It is also recommended that policy makers in both health and education sectors cooperate with each other to develop a plan via social and mass media for promoting and conducting healthy behavior amongst this age group.

### Conflicts of interest

The authors of this manuscript declare no relationships with any company whose products or services may be related to the subject matter of the article. Hassan Joulaei, Editor-in-Chief, was not involved in the peer-review and decision-making processes for this manuscript. The non-author, Chairperson, oversaw the peer review process for this paper.

### References

1. Joulaei H, Sadati AK. COVID-19 Outbreak and School Dropout; A Worldwide Challenge for an Equitable Future. *Int J School Health*. 2020;7(4):1-2. doi: 10.30476/intjsh.2020.88876.1117.
2. UNESCO. COVID-19 Impact on Education; 2020. [cited 2020 December 12]. Available from: <https://en.unesco.org/covid19/educationresponse>.
3. Robinson S, Daly RM, Ridgers ND, Salmon J. Screen-Based Behaviors of Children and Cardiovascular Risk Factors. *J Pediatr*. 2015;167(6):1239-45. doi: 10.1016/j.jpeds.2015.08.067. PubMed PMID: 26434372.
4. Saurabh K, Ranjan S. Compliance and Psychological Impact of Quarantine in Children and Adolescents due to Covid-19 Pandemic. *Indian J Pediatr*. 2020;1-5. doi: 10.1007/s12098-020-03347-3. PubMed PMID: 32472347; PubMed Central PMCID: PMC7257353.
5. Pietrobelli A, Pecoraro L, Ferruzzi A, Heo M, Faith M, Zoller T, et al. Effects of COVID-19 Lockdown on Lifestyle Behaviors in Children with Obesity Living in Verona, Italy: A Longitudinal Study. *Obesity*. 2020;28(8):1382-85. doi: 10.1002/oby.22861. PubMed PMID: 32352652; PubMed Central PMCID: PMC7267384.
6. Mehra D, Galor A. Digital Screen Use and Dry Eye: A Review. *Asia-Pacific Journal of Ophthalmology*. 2020;9(6):491-7. doi: 10.1097/APO.0000000000000328.
7. Larouche R, Garriguet D, Tremblay MS. Outdoor time, physical activity and sedentary time among young children: The 2012–2013 Canadian Health Measures Survey. *Can J Public Health*. 2017;107(6):e500-e506. doi: 10.17269/cjph.107.5700. PubMed PMID: 28252366; PubMed Central PMCID: PMC6972245.
8. INFECTIOUS DISEASES Countries test tactics in 'war' against COVID-19 Lockdowns and closings proliferate, but virus testing and contact tracing are lagging; 2021. [cited 2020 December 5]. Available from: <http://science.sciencemag.org/>.
9. UNICEF. Key Messages and Actions for COVID-19 Prevention and Control in Schools March 2020; 2020. [cited 2020 December 5]. Available from: <https://www.unicef.org/press-releases/children-increased-risk-harm-online-during-global-covid-19-pandemic>.
10. López-Bueno R, López-Sánchez GF, Casajús JA, Calatayud J, Tully MA, Smith L. Potential health-related behaviors for pre-school and school-aged children during COVID-19 lockdown: A narrative review. *Prev Med*. 2021;143:106349. doi: 10.1016/j.ypmed.2020.106349. PubMed PMID: 33271236; PubMed Central PMCID: PMC7701882.