



EFFECT OF COVID-19 LOCKDOWN ON PLAY IN CHILDREN AGED 6-12 YEARS: A SURVEY

Dr Deepa Awasthi

Masters of Occupational Therapy in Developmental Disabilities (II).

**Dr Shailaja
Sandeep Jaywant***

Assistant Professor in Occupational Therapy, L.T.M. Medical college & G.Hospital, Sion, Mumbai 400022. *Corresponding Author

KEYWORDS :

INTRODUCTION:

As defined by Parham and Fazio, play is "any spontaneous or organized activity that provides enjoyment, entertainment, amusement or diversion" and is "an attitude or mode of experience that involves intrinsic motivation, emphasis on process rather than product and internal rather than external control; an 'as-if' or pretend element; takes place in a safe, unthreatening environment with social sanctions".^{1,2}

In 1959, the United Nations High Commission for Human Rights recognised Play as a right of every child.³ Play is a defining element for the harmonious development of children. Play is the child's basic activity that engages his/her global psychism. Every child needs to play in order to develop oneself and to form a distinctive personality. Play prepares the child for the activities of adult life. The importance of play is defining for the children's normal and complex development.⁴ Physical health, social and emotional well-being, and positive mental health are promoted through play. Research has shown that children who participate in play frequently grow quickly, experience higher achievement in school, and develop healthy habits for adulthood. Occupational therapy practitioners promote play for all children, with or without disabilities.⁵

On March 11, 2020, the World Health Organization declared a Pandemic in relation to infection with severe acute respiratory syndrome coronavirus 2, a novel coronavirus, hereafter referred to as COVID-19.⁶ In order to control the transmission of the SARS-COV-2 virus, India experienced a series of nationwide lockdown commencing from 25th March 2020. This led to closure of all public places including Schools, parks, gardens, playgrounds etc throughout the same.

Apparent changes in children's primary occupation, in the form of play may lead to a lifelong impression. Several other factors such as isolation, school shutdown, restricted social life and outdoor activities, change of routine, sleep difficulties excessive screen time, unhealthy diet etc. may also cause subsequent alteration in the physical and mental health of children. Thus impacting children of all ages, globally.⁷

Promoting adequate levels of Physical Activity (PA) amidst the Lockdown restrictions in children, is a major public health issue.⁸ Play has a crucial role in encouraging Physical Activity (PA) among children and revamping of the same, may adversely affect their Physical wellbeing. Therefore, investigating the overall effect of the COVID-19 Pandemic Lockdown on our future generation's play through an Occupational Therapist's perspective may pave way for determination of immediate as well as long-term affections, especially in the Indian context.

AIMS & OBJECTIVES :

The Survey aims at analysing the impact of Lockdown restriction imposed due to the COVID-19 Pandemic, on play in

children aged between 6 to 12 years in an Indian Metropolitan City.

Objectives of the Study consisted of the following:

1. Assessing the change of Mode of Play in children aged 6 – 12 years, if any during the COVID-19 Lockdown.
2. Analysing the most preferred Mode or media of Play during the Coronavirus Lockdown.
3. Observing the extent and frequency of each Mode of Play during the Lockdown period of the COVID-19 Pandemic.
4. Evaluating the extent and frequency of involvement of Siblings and Parents in their child's play during the Lockdown period of the COVID-19 Pandemic.
5. Evaluating the extent and frequency of Engagement of children in their hobbies, during the Lockdown period of the COVID-19 Pandemic.
6. Assessing the overall day time spent by children in play, during the COVID-19 Lockdown.
7. Examining the extent of overall Physical Activity (PA) of children, during the COVID-19 Lockdown.

METHODOLOGY:

A Retrospective Survey design assessed the effects of the COVID-19 pandemic on Play among children in a Metropolitan city of India, by using online parent-reported questionnaires.

A Parent-reported Play Questionnaire was formulated by the investigators, based on assessing the changes in the preferred mode of Play and their level of engagement with Family members through play, during the Lockdown restrictions in view of the COVID-19 Pandemic. It initially comprised of 30 play related questions, presented in English language only. This questionnaire underwent subsequent validation for its Content by five Occupational Therapist, using a Global Standardised Play Assessment named Test of Playfulness as its reference.⁹ Eight questions depicted poor Content validity, followed by their removal from the Survey. While, 23 questions revealed adequate Content validity (0.80) and were incorporated into the Final draft of the Questionnaire.

A Google form was composed for the same. Page 1, constituted of Demographic information, followed by the Twenty-three previously validated play related questions, to be subjectively filled by parents. A link, directing the user or the parents towards the Survey was created. The Inclusion Criteria consisted of parents or legal guardian's to children aged 6-12 years and residing in an Indian Metropolitan city. Individuals currently taking medication for any Psychiatric illness or were unable to read English were excluded.

A convenience sampling strategy was focused towards recruiting a general population of parents during the COVID-19 Pandemic, residing in an Metropolitan City. In order to follow Social distancing norms and avoid in-person contact, the potential respondents were electronically approached to

participate in the Survey through various Social media platforms such as WhatsApp, Facebook, twitter, Instagram etc. Parents who showed interest and agreement to participate in the survey were first directed to a Screening form. If falling into the inclusion criteria, parents were instructed about the purpose and the procedure of the Study with a Parent Information sheet and on agreement for participation, an Online Parent Consent was provided. Successful fulfilment of all the mentioned criteria's, redirected the parents to the Demographic Page of the Survey, followed by the Twenty-Three play associated questions regarding their children (questionnaire attached-Image 1). In case of multiple children, Individuals were notified for filling the Google form separately for each sibling.



Image 1: The Parent-Reported Questionnaire included in the current Survey

The quantitative data, thus obtained was further statistically analysed using Excel sheet.

RESULTS:

181 Parents, fulfilling the eligibility criteria were considered. The Questionnaire was completed by 11.05%, 18.78%, 11.05%, 11.05%, 22.65% and 25.41% Parents of children aged 6-7 years, 7.1 - 8 years, 8.1-9 years , 9.1-10 years, 10.1-11 years and 11.1-12 years, respectively.

67.96% of parents agreed to change in their child's play during the COVID-19 Lockdown. On the other than, 13.81% parents were not sure about the above-mentioned change. 50.82% reported digital games that are played alone as the most preferred mode of play in Lockdown period. This was followed by Indoor games in sitting, digital games played with peers and Indoor Games with some Physical Activity at 19.89%, 13.26% and 7.73%, respectively.

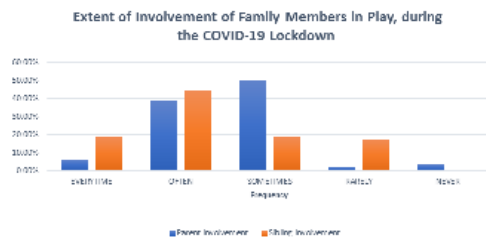
The Successive table distinctly elaborates the extent and frequency of each mode of play considered in the Study. Data revealed, digital games played alone were most often used i.e 61.88% . While, indoor games in sitting were largely preferred sometimes (43.65%). 54.69% and 55.24% of children, rarely use Indoor games with some physical activity and digital games played, as subjectively reported by their parents. Data analysis disclosed 73.48% increase in the frequency of playing with Indoor games in sitting and digital games played

alone. Although, the frequency of digital games with peers remained same as prior to Lockdown in 86.74% of children.

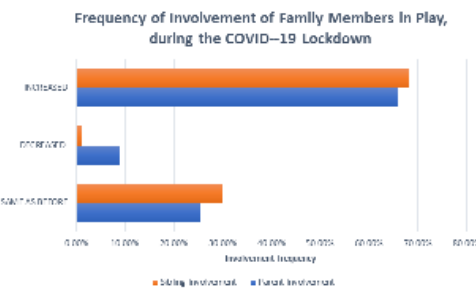
MODE OF PLAY	EXTENT OF PLAY DURING COVID-19 LOCKDOWN		FREQUENCY OF PLAY DURING COVID-19 LOCKDOWN	
	EVERYTIME	OFTEN	INCREASED	DECREASED
Indoor Games with Sitting (such as Table top Games)	1.66%	36.46%	73.48%	22.65%
	43.65%	14.92%	3.87%	
	3.31%			
Indoor Games with some Physical activity	6.63%	9.94%	18.78%	40.33%
	24.31%	54.69%	40.88%	
	3.31%			
Digital Games played Alone	3.87%	61.88%	73.48%	3.87%
	26.51%	4.41%	22.65%	
	3.31%			
Digital Games played with Peers	2.76%	12.15%	9.94%	3.31%
	22.65%	55.24%	86.74%	
	7.18%			

Table-1.0 describes the Extent and Frequency of the various types of Modes of play during the COVID-19 Lockdown, considered in the Survey (As per subjective reporting by Parents)

49.72% Parents engaged in their child's play, sometimes. Whilst, 38.67% parents, were often involved in their child's play during the COVID-19 Lockdown. 65.75% increase in the same was observed during the Lockdown. 61.33% of participants belonged to a nuclear family with 46.41% of Survey entrants bearing 1 child, only. Sibling Indulgence in play as often noted by parents in 44.33% children along with 68.04% increase in the same, during the COVID-19 induced Lockdown. The following graphs provide a vivid description of the extent and frequency of family involvement in Play.



Graph-1.0 Describes the Extent of involvement of family members in Play, during the COVID-19 Lockdown (As per subjective reporting by Parents)



Graph-2.0 Describes the Frequency of involvement of family members in Play, during the COVID-19 Lockdown (As per subjective reporting by Parents)

71.27% parents reported increase in the overall physical activity of their children. While only 11.60% reported decrease in the same, during the Lockdown period. 64.09% children were recognised to spend half of their day time in play with 75.14% increment in their overall playtime, precisely during the Coronavirus lockdown. Engagement into hobbies was sometimes and often noted in 46.41% and 33.15% children, respectively. This was followed by 52.49% increase in individual Hobby engagement within the Lockdown phase, as informed by parents in the Survey Questionnaire.

DISCUSSION:

Children are not the face of the ongoing SARS-COV-19 Pandemic. But, they may cease as its biggest victims. In April 2020, WHO manifested its concern in a Policy Briefing, stating that while children have thankfully been largely spared from the direct health effects of COVID-19 (at least to date), the crisis could have a profound effect on their wellbeing. Its broader impacts on children risk being catastrophic and amongst the most lasting consequences for societies as a whole.¹⁰

The Survey data, distinctly revealed change in mode of play in children during the Lockdown phase of the COVID-19 Pandemic. This finding indicates the significance of play assessment of children in times of an uncertain Pandemic that lead to unprecedented restrictions such as a nationwide Lockdown. Although, 13.81% parents were not definite about this change, which could be accounted to lower involvement or observation in their child's play.

The history of Games is as old as that of the Human race. It has undergone several modifications with every passing century.¹¹ The shape and content of the games played together with the developing technology have also changed. With the advent of technological advancements, digital or virtual games have gained immense popularity. Outdoor restrictions during the Coronavirus Lockdown, drifted children towards an easier and interesting mode of play. Hence, majority of children opted for maximum use of digital games that are played alone, during the Pandemic induced Lockdown, as depicted in the results. Often, choice of Indoor games in sitting (such as Table Top activities), was next in line. This could be attributed to the limitations in the physical environment (if any), owing to their socio-economic background. Susan et al, presented evidence that natural play spaces are Thus, space and financial constraints could be a contributing factor for often choosing sitting indoor games over virtual games by children of Survey participants.

Similarly, the frequency of digital games (played alone) and sitting indoor games was remarkably increased during Lockdown, signifying play adaption in children in relation to in-person and outdoor restrictions of the Coronavirus Pandemic. The total amount of digital game time appears to be related to school performance, risk of obesity, and other physical health outcomes.¹² Although, parents reported no change in the frequency of playing digital games with peers. This can be indicative of physical peer play to of prime interest to children aged 6 to 12 years, with rare use of the virtual platform form for indulging in playful activities with peers. Therefore, the onset of the Lockdown, resulted in no notable difference in the frequency of the same.

Comprehensively, the most frequently preferred modes of play i.e Indoor games in sitting and digital games(played alone), during the Lockdown phase are drifted towards a sedentary course of action with respect to playfulness in children. Susan et al, presented evidence that natural play spaces, provide for more diverse forms of play for children of varying ages and competencies.^{13,14,15} On the contrary, the Survey revealed parent perception of increase in the overall physical

activity (71.27%) of their children, in times of the COVID-19 Lockdown. The Study relied on the subjective data provided by parents and the perceived distinguishable increase in physical activity, could be associated with enhanced leisure time of children, that allowed greater participation in routine home-based activities. Large spare time, promoted overall playtime of children and allowed 52.49% increment in indulging in their respective hobbies, during the Lockdown period.

Often, Researchers only examine physical activity in play, they overlook the valuable contributions that play makes to other aspects of children's health and development.¹³

During the School-age years, an important part of growing up is learning to interact and socialize with others.¹⁰ Schools are the primary source of social development in childhood, which experienced closure in view of the infection prevention. Social Distancing norms, further inhibited in-person interactions with peers and significant others in the vicinity. Limited playful interaction with peers, during the Pandemic has made indoor playful experiences crucial for adequate social development of children. 61.33% of the Survey participants resided in a Nuclear family, which heightens the concern for social skill development in these children. A Parent revealed to the researchers, how his six-year-old equates the lockdown experience to that in a Prison. Their child urges to play with peers, cousins, socially interact with neighbours. But, all restrictions laid down during the lockdown, may further impact the desired social development through opportunities of free play.¹⁶

Although, 68.04% increased frequency of sibling involvement in play, could be a positive intimation, regarding the same. As mentioned in an Study on the impact of COVID-19 on children, Psycho-therapists stated that Children miss the ability to have random conversations with peers, play during lunch time, lunch break conversation & freeplay on the ground ground. There is deprived opportunity to outlet their excessive energy.¹⁶

This may have resulted in increased parents involvement in child's play. Parents are implicated as prime source of influence on child's play.¹⁷ Statistics depict that majority parents recorded increase in and were Often (38.67%) or Sometimes (49.72%) engaged in their child's play, during the Coronavirus Lockdown. The importance of playing with one's own child is fundamental in the construction of the parent-child relationship, in the understanding of the child, when approaching the child, as well as in gaining the child's trust.⁴ Dimensions of the parent-child relationship are linked to the child's cognitive, social and psychological development, which appeared to be improved during the Lockdown.

To our best knowledge, the current Study is first of its kind since the outbreak of the Coronavirus Pandemic, especially in the Indian context. The socio-economic aspect, availability of electronic gadgets & the use of personalised tab or mobile by children, during the Lockdown, was not considered in the study. Small sample size and inhomogeneity of data, mark as a limitation of the Survey.

COVID-19 is suppositly affecting every walk of life. Children too, do not appear to remain untouched from the ongoing Pandemic. The current Survey illustrated changes in play media during the COVID-19 induced Lockdown, in children aged 6 to 12 years. Sedentary play choices in the form of sitting indoor games and digital games, may precipitate as long-term reduction in physical activity in the due course of the Pandemic. Amidst social distancing norms, social development is fundamentally reliant on indoor experiences of interaction with family members, essentially, through play. As the COVID-19 Pandemic persists, large scale research

regarding its impact on children's play is recommended. Further, the use of an Occupational Therapist's perspective is suggested for the same, as it will not only help in therapeutic assessment of play, but also provide adequate modifications, if required.

The COVID-19 Pandemic has restricted children's free play. It has forced them to engage in indoor play. Children with availability of electronic gadgets have taken over to digital games, some still enjoy playing indoor games with peers. Some parents in the current survey could not differentiate between indoor table top games & digital games. Whereas, findings revealed that most of the children interacted with their respective siblings, preferred & enjoyed playing indoor with each other, amidst the bereavement of free play opportunities. Although, nuclear families with single child reported greater involvement in digital games in comparison to children staying in joint families. Some parents started devoting more time for their child. Hence, the COVID-19 Pandemic outbreak induced Lockdown has provided children with the opportunity to interact with their parents, more intensely. While, overall children are lacking free play, outdoor games & fun to interact with peers. This may affect development of our future generation.

REFERENCES:

1. Susan H.Knox. Ch-18 Play. Jane Case-Smith, Jane Clifford O'Brien. Occupational therapy for children and adolescents. 6th Ed. St. Louis, Missouri :Elsevier, 2015.
2. Parham, L. D., & Fazio, L. Play in occupational therapy for children. 2nd ed. St. Louis, Missouri: Elsevier, 2008.
3. Play as a right of every child: The United Nations High Commission for Human Rights, 2012 May. (Available at: <https://ipaworld.org/childs-right-to-play/uncrc-article-31/un-convention-on-the-rights-of-the-child-1/>)
4. Runcan, P. L., Petracovschi, S., & Borca, C. The Importance of Play in the Parent-Child Interaction. *Procedia - Social and Behavioral Sciences* 2012; 46: 795–799. doi:10.1016/j.sbspro.2012.05.201.
5. **Building Play Skills for Healthy Children & Families:** American Occupational Therapy Association/ Patients-Clients/ChildrenAndYouth, 2019. (Available at: <https://www.aota.org/About-Occupational-Therapy/Patients-Clients/ChildrenAndYouth/Building-Play-Skills-Healthy.aspx>)
6. Beeching NFT, Fowler R: Coronavirus disease 2019 (COVID-19). *BMJ Best Practices* 2020. (Available at: <https://bestpractice.bmj.com/topics/engb/3000168>.)
7. Araujo LA, Veloso CF et al. The potential impact of the COVID-19 pandemic on child growth and development: A systematic review. *J Pediatr (Rio J)*. 2020. (Available at: <https://doi.org/10.1016/j.jped.2020.08.008>).
8. Nicola Theis, Natalie Campbell et al. The effects of COVID-19 restrictions on physical activity and mental health of children and young adults with physical and/or intellectual disabilities. *Disability and Health Journal*, 2021,101064,ISSN 1936-6574, (Available at : <https://doi.org/10.1016/j.dhjo.2021.101064>)
9. Sarah Fabrizi. Measuring the playfulness of children with special needs in occupational therapist led, caregiver-included community playgroups. Doctoral dissertation. Nova Southeastern University. Retrieved from NSUWorks, College of Health Care Sciences – Occupational Therapy Department, 2014(36) (https://nsuworks.nova.edu/hpd_ot_student_dissertations/36)
10. Policy Brief-The impact of Covid-19 on children: United Nations, 2020 April 5. (Available at: https://unsdg.un.org/sites/default/files/2020-04/160420_Covid_Children_Policy_Brief.pdf)
11. HAZAR et al. INVESTIGATION OF THE RELATIONSHIP BETWEEN DIGITAL GAME ADDICTION AND PHYSICAL ACTIVITY LEVELS OF SECONDARY SCHOOL STUDENTS. *Journal of Physical Education & Sports Science*, 2017 Dec; 11: 320-332.
12. Gentile, D.A. (2011), The Multiple Dimensions of Video Game Effects. *Child Development Perspectives*, 5: 75-81. (Available at: <https://doi.org/10.1111/j.1750-8606.2011.00159.x>)
13. Herrington S, Brussoni M. Beyond Physical Activity: The Importance of Play and Nature-Based Play Spaces for Children's Health and Development. *Curr Obes Rep*. 2015 Dec;4(4):477-83. doi: 10.1007/s13679-015-0179-2. PMID: 26399254.
14. Nair, P. (2016). The Indian Child: Growing Young, Urbane and Liberal with Digital Games. *Indian Anthropologist*, 46(1), 79-92. Retrieved July 7, 2021 (Available at: <http://www.jstor.org/stable/43899794>).
15. Farah Deba Keya et al. Parenting and child's (five years to eighteen years) digital game addiction: A qualitative study in North-Western part of Bangladesh. *Computers in Human Behavior Reports*; 2020: 100031, ISSN 2451-9588. (<https://doi.org/10.1016/j.chbr.2020.100031>)
16. Effects of lockdown on children. *Mumbai Mirror*; 2021 June (Available at : (https://mumbaimirror.indiatimes.com/opinion/columnists/sonali-gupta/effects-of-lockdown-on-children/articleshow/75955437.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst).
17. Ellen Beate Hansen Sandseter, et al. The relationship between indoor environments and children's play – confined spaces and materials. *Education*. 2020 Aug; 3-13.