

Effect of Covid-19 Pandemic on Formal Education of Primary School Children (6-11 Years) Studying in Selected Municipal Corporation Primary Schools of East Delhi

Nanthini Subbiah¹, Priya Aggarwal², Bhawna Kathuria³

Abstract

The sudden closure of schools in the Covid-19 pandemic has affected formal and informal education of the students especially belonging to socially disadvantaged groups. To explore the impact of this pandemic on the formal education of primary school children an online Google Meet Parent Teacher Meeting Survey was conducted after 16 months of school closure to learning pattern, reading material, reading frequency of Hindi and English, daily study, and its association with socio economic background. This web-based school study used descriptive design. A sample of parents of 400 students age group 6 to 11 years from five selected schools of East Delhi Municipal Corporation available on Google Meet was selected through stratified random sampling. Data was collected through a Structured Interview Schedule with closed ended multiple choice questions designed into Google doc forms and filled by researchers simultaneously during survey. Data was analysed using SPSS (26) software descriptive statistics. This study showed an increase in the variety of reading material availability for students as well as increased reading frequency per week of basic languages i.e., 33.8 percent to 90.3 percent for Hindi and 23 percent to 40.3 percent for English along with total study time per day, 39.2 percent to 78.6 percent. Further, guardian education and guardian income have a direct effect on reading frequency of primary school children and total study time during periods of lockdown. Parents' engagement and sensitisation is required for problems faced by the students in adaptation to online education to reduce learning gap and improve outcomes of teaching-learning process due to lockdown and sudden school closure. Reading material can be provided to students to sustain their interest and reading ability during Covid-19 pandemic.

Key words: Lockdown, Education of young students

The implementation of sudden school closure since March 2020 and social distancing as a preventive measure of Covid-19 worldwide affected the education of school-age children during formative years of their life impacting about 98.4 percent of the world's student population (Bao et al, 2020) and approximately 0.32 billion students in India (UNESCO) (Ivi & Manavi, 2020). Although children only display mild physical symptoms or are asymptomatic due to Covid -19, prevalence between 0.8 percent and 3.3 percent yet they face massive changes in their daily lives, including school closures, home confinement, and social distancing rules, which can burden them substantially (Chaturvedi et al, 2020; Bonal & Gonzalez, 20210; Vallejo & Ceballos Maron, 2020). On 11 February 2020, the World Health Organization (WHO) proposed an official name of the virus as Covid acronym for Coronavirus disease 2019 and declared Covid -19 as a pandemic in 2020. The first case of the

Covid-19 was from Wuhan, China. All the primary schools of Delhi were announced to be closed from 6 March 2020 as precautionary measure to prevent possibility of spread of Covid-19 among children. Due to lockdown and school closure, teacher's role became quite a challenge. In the new setting, school discipline and teacher adaptive activities & children are suffering from massive changes in their learning pattern, reading frequency and comprehension, time spent on study per day, especially at formative years of life. Indian education system has launched guidelines for online education. "Pragyta". "Diksha" "Swayam" and "Noer" are the main online study material resources for students, parents, and teachers. Schools and families had to respond rapidly to a new teaching and learning scenario without the benefit of previous planning or government guidelines (Dunton et al, 2020) The main obstacle is the Digital Divide due to the non-availability of high-speed internet in rural and remote areas. Sourcing ready-to-use digital content and compatible digital tools for online classes are problematic. Students, parents and teachers are not able to use tools like Whatsapp, Worksheets, videos shared on

The authors are: 1. Professor; 2. PGDPHM; 3. Assistant Research Officer, respectively at National Institute of Health and Family Welfare, New Delhi.

school groups effectively and they have difficulties to understand their own roles in the current situation (Mustafa, 2020; Morgul et al, 2020). The other issues which produced significant differences in the learning opportunities for children from different backgrounds are structure and size of families, financial backwardness, and literacy of the parents. School children especially from disadvantaged families had suffered due to lack of digital technologies and few learning opportunities both in terms of instructional time, two-way communication with teachers, school discipline, schedule of study, and daily timetable followed by children including both curricular and co-curricular activities leading to lack of peer group and learning experiences (school discipline and co-curricular activities). Research shows that it is necessary to make some changes in the teaching learning process to reduce the effect of lockdown on emotional regulation and reading comprehension (Bao et al, 2020). It is necessary to build a real dialogical education based on a deeper knowledge of the digital technologies and the access to them. Students adapting to a new study routine lifestyle have been facing a tough challenge.

Need for the study

Due to the implementation of school closure and transition of offline to online mode of education, primary school children (6-11 years) are struggling to cope with academic activities especially reading and writing at early formative years of life. The Municipal Corporation of Delhi senior officials and teachers are trying their best to maintain two-way communication through Regular Google Meet online classes, What's app class group and video calls with the students and parents. Various academic activities, Parent Teacher meetings and competitions (art craft, slogan, etc.) are also conducted on What's app group by respective class teachers at school level and even zonal level. However, with school closure for a long time and in digital mode of education, teachers are replaced by siblings, parents, tuition teacher, relatives and a variety of online teaching learning material is available besides textbooks and workbooks. The present study assesses to what extent the pandemic has affected the formal education of the students, their human and reading material resources, learning pattern of foundation skills i.e., reading and writing, reading frequency of language i.e., English and Hindi, and total study time per day.

Objectives

The study was set with three objectives.

1. To assess the changes in reading pattern and weekly reading frequency of primary school children during the period of school closure

due to Covid-19.

2. To determine the total study time of the primary school children during the period of school closure in Covid-19 pandemic.
3. To find out association of sociodemographic characteristics with the reading pattern and time spent on study by primary school children.

Review of Literature

In their study, Xue Bao et al (2020) concluded that reading ability gain in primary school children decreased to a great extent during lockdown. Vallejo & Cebbalos Maron (2020) suggested that primary school children lose their interest in reading due to lack of knowledge of their parents to help them and the difficulty in comprehension of texts. Student have found that most primary children had less study time and suffered from boredom during Covid-19 lockdown. Chaturvedi et al (2020) also concluded that the time spent by students on study is reduced during pandemic. Orben suggested loss of interest in study due to social deprivation and lack of face-to-face contact during online education. Bonal & Gonzalez (2020) found that socially disadvantaged primary school students have few learning opportunities both in terms of time and learning experiences (school work and after school activities). Hence there are more challenges in achievement of

Table 1: Profile of the students (6-11 years) of selected East Delhi Corporation schools by socio-economic characteristics (N=400)

Background characteristics	Percentage (%)	Frequency (N)
Age of the child		
6-8 years	29.2	117
9-11 years	70.8	283
Class of the child		
2nd -3rd Standard	26.8	107
4th - 5th Standard	73.2	293
Gender of the child		
Male	43.0	172
Female	57.0	228
Guardian education		
Illiterate	22.5	90
Upto primary education	40.3	161
Upto secondary education	25.0	100
Graduate	12.3	49
Guardian income (Rs)		
<1,80,000 per annum	83.0	332
>1,80,000 per annum	17.0	68
Reading material		
Teacher + Textbooks	51.0	204
Teacher + Textbooks and Newspaper/Story books/Internet	49.0	196

learning outcomes of foundation skills (i.e., reading and writing) of primary school children especially from socially disadvantaged families to prevent crisis in the education sector for future.

Methodology

In the present study a non-experimental descriptive approach was used keeping in mind the objectives of the study. Permission was taken from the Director EDMC for conducting the study in East Delhi Corporation Schools. The sample size of 400 was taken for the study using Cochran's formula. P=prevalence rate was taken as 50 percent and Confidence level =95%. Total sample size consisted of parents of 400 students. Parents of 6-11 years students i.e. 2nd to 5th class available on Google Meet in EDMC schools were included in the study. Parents not available on Google meet, Kindergarten and 1st parents of class 1 were excluded from study.

The research variables in the study were total study time, reading frequency of Hindi, reading frequency of English of primary children. Socio-demographic variables include age of the student, socio-demographic conditions of parents, their education, annual income and resource material for education. A 16-set Self Structured Interview schedule was used as a tool for the study which was developed on the basis of recent research studies. The validity and reliability of the tool was ascertained by experts. Pilot study was also done to check the feasibility of the study. Earlier, informed consent of the respondents was taken and confidentiality regarding details of samples was maintained. An Online Google Meet Parent Teacher Meeting was administered and Google Forms generated from the tool were filled by researchers simultaneously. Data was analysed statistically by using Microsoft Excel and Statistical Package for the Social Sciences (SPSS version 26). Pearson's Chi square test was applied for

determining the association of sociodemographic characteristics with effect on education of primary school children. A statistically significant value of $p < 0.05$ was considered.

Results

1. Participant Characteristics (Socio-demographic characteristics)

The profile of the students (6-11 years) by various socio-demographic characteristics has been given in Table 1.

About 70 percent of the children belong to the age group of 9-11 years of class 4th and 5th. Guardian education is mostly up to primary level i.e. 40 percent and only 12.3 percent are graduate. 83 percent of Guardian have annual income less than 1,80,000 per annum. 51 percent children were using Teacher + Textbooks as study material and 49 percent were using extra resources besides teacher and textbooks.

2. Reading Frequency (per week) of children during school closure

Table 2 depicts the association of weekly reading

Table 2: Reading frequency of students (6-11 years) per week by background characteristics (N=400)

Background characteristics	Reading frequency per week (Hindi) (%)			Reading frequency per week (English) (%)		
	Once in a week	2+ times in a week	p-value	Once in a week	2+ times in a week	p-value
Age of the child						
6-8 years	23.9	76.1	0.000	64.1	35.9	0.152
9-11 years	44.5	55.5		70.0	30.0	
Class of the child						
2nd-3rd standard	26.2	73.8	0.0001	68.2	31.8	0.543
4th-5th standard	43.0	57.0		68.3	31.7	
Gender of the child						
Male	40.7	59.3	0.248	65.7	34.3	0.199
Female	36.8	63.2		70.2	29.8	
Guardian education						
Illiterate	76.7	23.3	0.000	93.3	6.7	0.000
Up to primary education	45.3	54.7		75.8	24.2	
Up to secondary education	12.0	88.0		38.0	62.0	
Graduate	0.0	100.0		59.2	40.8	
Guardian income (Rs)						
<1,80,000 per annum	46.1	53.9	0.000	73.8	26.2	0.000
>1,80,000 per annum	1.5	98.5		41.2	58.8	
Reading material						
Teacher + textbooks	66.2	33.8	0.000	77.0	23.0	0.000
Teacher + textbooks and Newspaper/story books/Internet	9.7	90.3		59.2	40.8	
Total	38.5	61.5		68.2	31.8	

frequency of children for both languages Hindi and English (once in a week or more) with socio-demographic characteristics.

Table 2 depicts the association of weekly reading frequency of children for both languages English and Hindi i.e., once in a week or more with sociodemographic characteristics. Reading frequency has significant value and direct proportional relation to guardian education, guardian income and variety of available. Reading frequency more than once a day per week for Hindi increases with guardian education: 23.3 percent for illiterate parents, 54.7 percent for primary education, 88 percent for higher secondary education, and 100 percent for students whose parents are graduates. Reading frequency more than once a day per week for English also increases with Guardian Education being 6.7 percent for illiterate parents, 40.8 percent for Graduate parents. 98.5 percent Primary school children whose Guardian income is more than Rs.1,80,000 per annum have reading frequency more than once a week for Hindi while it is 53.9 percent for students

with guardian's income less than Rs. 1,80000.

Weekly reading frequency of children for English is less than that of Hindi.

Total study time increases with increase in age of the student, variety of reading material guardian education, guardian income among primary children. Our study found (Table 3) that more females (girls) study in single sitting 64 percent as compared to boys 51.2 percent. Total study time of students increases with the education of the parents: 25.6 percent for illiterate parents, 49.1 percent for primary, 89 percent for secondary education, 87.8 percent for graduates. Total study increases with annual income of the parents ie.50.6 percent to 97.1 percent. Total study time also increase with increase in variety of reading material i.e. Newspaper, Story books, Internet in addition to textbooks i.e. 39.2 percent to 78.6 percent.

Discussion

The present study findings, correspond to those of Bao et al (2020) indicate that the reading ability of the students can be increased by increasing the variety of reading material. Findings reveal that as education of the parents decreases total study time, reading frequency of both English and Hindi decreases which corresponds to Santiago who suggested that primary school children lose their interest in reading due to lack of knowledge of their parents to help them and the difficulty in comprehension of texts. Our study found that only 58.5 percent have a total study time of one hour in a single sitting which corresponds to Chaturvedi et al (2020) who concluded that time spent by students on study is reduced during Covid-19 pandemic. Our findings concluded that decrease in guardian's income decreases total study time and reading frequency of Both English and Hindi which proves the suggestions of Bonal & Gonzalez (2020) that socially disadvantaged primary school students have few learning opportunities both in terms of time and learning experiences (school work and after school activities).

Recommendations

Story books with puzzles, riddles, and moral education books can be provided as a simple strategy to improve reading frequency and comprehension of the students. Guardians should be sensitised and educated about their active participation in the teaching-learning process during e-learning. For disadvantaged students, availability of digital infrastructure with proper internet availability and access to

Table 3: Total study time of students (6-11 years) per day by background characteristics (N=400)

Background Characteristics	Total study time per day			
	Half an hour	1 hour (Single sitting)	1 hour (Multiple sitting)	p-value
Age of the child				
6-8 years	.9	66.7	32.5	0.000
9-11 years	18.7	55.1	26.1	
Class of the child				
2nd-3rd standard	.9	62.6	36.4	0.000
4th-5th standard	18.1	57.0	24.9	
Gender of the child				
Male	30.8	51.2	18.0	0.000
Female	.4	64.0	35.5	
Guardian Education				
Illiterate	2.2	25.6	72.2	0.000
Upto primary education	32.3	49.1	18.6	
Upto secondary education	0.0	89.0	11.0	
Graduate	0.0	87.8	12.2	
Guardian income				
<1,80,000 per annum Rs)	16.3	50.6	33.1	0.000
>1,80,000 per annum	0.0	97.1	2.9	
Reading Material				
Teacher + textbooks	25.5	39.2	35.3	0.000
Teacher + textbooks and	10.0	78.6	20.4	
Newspaper/story books/Internet				
Total	13.5	58.5	28.0	

gadgets must be ensured to avoid any disruption in their study.

Conclusion

Covid-19 pandemic leads to a crisis in the education sector, especially students of socially disadvantaged children are lacking to achieve foundation skills like reading and writing due to lack of guardian education, income and lack of variety of reading material available.

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