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A study to assess the effectiveness of planned teaching programme on knowledge of parents regarding screen time and its effect on behaviour of children at selected PHC, in Bengaluru rural, Karnataka

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Abstract

Background: A pre-experimental study was conducted to evaluate the effectiveness of a planned teaching program on parents' knowledge regarding screen time and its effect on children's behavior in a selected PHC area, Bengaluru Rural, The study aimed to assess parents' pre-test knowledge, evaluate the effectiveness of the intervention, and determine the association between pre-test knowledge scores and socio-demographic variables.

Materials and Methods: A pre-experimental one-group pre-test post-test design was used. A total of 60 parents with children aged 6-12 years were selected using a convenient sampling technique. Data collection tools included a demographic proforma and a structured knowledge questionnaire. The planned teaching program covered screen time definitions, effects, and preventive measures. Data was analysed using SPSS version 20.

Results: Data analysis using descriptive and inferential statistics showed a significant improvement in knowledge scores. The mean post-test score (21.5±2.62) was significantly higher than the mean pre-test score (9.417 ±3.19), with a paired t-value of 22.24 ($p<0.05$), indicating the effectiveness of the intervention. No significant association was found between pre-test knowledge scores and selected demographic variables except for monthly income ($p<0.05$).

Conclusion: The study demonstrated that the planned teaching program significantly improved parents' knowledge regarding screen time and its effects on children's behavior. These findings emphasize the need for ongoing parental education and community health interventions to promote healthy screen habits.

Keywords: Effectiveness, planned teaching program, knowledge of parents, screen time

1. Introduction

Play is a very important aspect of children's development because it provides time and space for children to explore and gain the skills needed for adult life. When children engage in a play the ideas and behaviour can be combined and practiced. Play time has steadily decreased due to limited space for play, nuclear families with single children, changes in the way that children want to spend their time, and parents' concerns about children's safety and allowing them to use digital media [1].

An entire generation of kids are growing up with smartphones, tablets, and other internet-enabled electronic devices. Screen time is an inescapable reality of modern childhood with kids of every age spending hours upon hours in front of iPad, smart phones and televisions [2].

Television have two major effect on health of the children. First, children who watch a lot of television are less physically fit and spent less time for running, jumping and doing all the other things that help children to develop strong heart, lungs and muscles. The second effect is nutrition and their ideas about eating. Children are likely to choose foods see on television commercials and means that choices are not very healthy [3]. Parents and children can experience an increase in helplessness, anger, anxiety and frustration. Trust and communication between parents and children may decrease slowly. Many parents and children may withdraw and disengage from each other, creating a tense or even hostile home environment [4].

It is so evident that children are frequently exposed to media containing food advertisements request the advertised food which is high in calorie, sodium, and added sugar, and low in nutrients, even argue with the parents to buy specific food products which is not good for health and will consume more than the body requirements and tend not to consume healthier snacks such as fruits and vegetables [5].

Daily screen-time of children may affect their behaviour in the long term. children who spend more than two hours on digital screens are likely to develop Attention Deficit Hyperactivity Disorder [6]. In India, the mobile phone ownership of children is 57%, and children aged between 5-11 years are using the Internet at 15% (this is according to the Internet and Mobile Association of India) [7]. Children

spend about three hours and 20 min each day by messaging, playing games and being online. In 2015, 94% of children had a computer at home and 61% had internet access [8].

The time spent on screen media dramatically increases from the toddler to pre-school age years. Children under two years have a screen time average of 53 minutes per day increases to almost three hours for kids in five to eight year old range. The American Academy of Pediatrics (AAP) estimates, the average child spends seven hours a day looking at a screen, cell phone, computer, TV or other electronic media. The study revealed that the children under 8 years spend an average of 25 min for playing video games, 66% of children under the age of 2 years have a practice of watching TV, 10% of children under the age of 8 years use educational software and 6% of children use computer for homework [9].

A recent survey conducted by a cartoon channel in India revealed 95% of kids live in homes with a mobile phone while 73% of Indian kids are mobile phone users. Interestingly, 70% fall under the age group of 7-10 years, while 76% are in the age group of 11-14 years. The number of smart phone user in India by 2017 estimated to reach 299.24 million, with number of smart phone users in worldwide forcast to exceed 2.3 billion and nearly 2.7 billion by 2019. The number of internet users in worldwide will reach 500 million by 2018 and in India had 481 million users. In 2015 the International Telecommunication Union estimated about 3.2 billion people or half of the world would be online by the end of the year. About 2 billion would be from developed countries, including 89 million from least developed country [10, 11].

Children listen, observe and imitate their parents. Instilling and inculcating good value in a child makes them a good person and a better citizen in future. Some parents embrace screen media have a positive view of its perceived benefits for children. Parents believe that screen technology contributes towards the cognitive development of children and also provides educational experiences by screen media makes children busy. Parents are children's first teachers and role models and are responsible for shaping the child's behaviour and implementation of positive values. Most of the studies has shown screen time has an effect on behavior of children and recommended future studies to be carried out to assess the parents knowledge and create awareness. Hence the researcher felt that there is a need to assess parents knowledge on screen time and its effect on behaviour of children by providing and create awareness by planned teaching programme.

2. Materials and methods

A pre-experimental one-group pre-test post-test design was adopted to assess the effectiveness of a planned teaching program on parents' knowledge regarding screen time and its effect on children's behavior. The study was conducted among 60 parents of children aged 1-12 years in a selected PHC, Bengaluru district of Karnataka state; the samples were selected through a convenient sampling technique. A structured knowledge questionnaire with 30 items was used to assess pre-test and post-test knowledge. The planned teaching program covered screen time definitions, effects, and preventive measures, delivered through flashcards, charts, and PowerPoint presentations. Ethical clearance was obtained, and written informed consent was secured from participants. A pilot study conducted on 10 parents confirmed the reliability of the tool (r=0.88).

Parents of children aged 1-12 years in Kumbalagodu PHC area underwent a pre-test assessment on Day 1 using a structured knowledge questionnaire. The planned teaching program was then administered on the same day. After seven days, a post-test was conducted using the same questionnaire to evaluate the effectiveness of the intervention.

Data were analyzed using descriptive statistics for demographic variables, paired t-test for evaluating the effectiveness of the planned teaching program, and chi-square test for assessing associations between pre-test scores and socio-demographic variables. The data were tabulated, analysed and interpreted by using descriptive and inferential statistics by using SPSS version 20.

3. Results

Table 1: Frequency and percentage distribution of socio demographic variables of the respondents N=60

Variable	Category	Frequency(f)	Percentage(%)
Age in Year	Below 25 year	35	58.3%
	Above 25-35 year	22	36.7%
	Above 35-45 year	03	5.0%
	Above 45 year	_	_
Religion	Hindu	42	70.0%
	Muslim	17	28.3%
	Christian	1	1.7%
	Other	-	-
Educational status	No formal education	7	11.7%
	Primary education	16	26.7%
	High school	30	50.0%
	PUC	3	5.0%
	Graduate and above	4	6.7%
Occupation	Professional	1	1.7%
	Non-professional	39	65%
	Self-employed	20	33.3%
	Others	-	-
Monthly income in Rs	Below 10,000	21	35.0%
	10,001-20,000	36	60.0%

	20.001-30,000	3	5.0%
	30,001 and above	-	-
Type of family	Nuclear family	39	65.0%
	Joint family	21	35.0%
	Single parent	-	-
	Extended family	-	-
Number of children in the family	One	19	31.7%
	Two	36	60.0%
	Three	5	8.3%
	Above three	-	-
Duration of screen time usage/day by children	Less than 1 hr	5	8.3%
	1hr-2hrs	43	71.7%
	2hr-3hrs	12	20.0%
	More than 3 hrs	-	-
Since how many years the child has been exposed to screen time	Less than 1 year	13	21.7%
	1-3 year	44	73.3%
	3-5 year	3	5%
	More than 5 year	-	-
Effects of screen time	Yes	13	21.6%
	No	47	78.4%

Table 2: Frequency and Percentage distribution of overall pre-test and post-test knowledge scores of parents regarding screen time and its effect on behaviour of children.

Knowledge level	**Category**	**Classification of respondents**			
		Pre-test		**Post-test**	
		Frequency (f)	**Percentage (%)**	**Frequency(f)**	**Percentage (%)**
Inadequate	Lesser or equal to 10 (≤ 10)	42	70.0	0	0.0
Moderate	11-20	18	30.0	19	31.67
Adequate	Greater or equal to 21 (≥ 21)	0	0.0	41	68.33
Total		60	100	60	100

Table 3: Effectiveness of planned teaching programme on knowledge of parents regarding screen time and its effect on behaviour of children. N=60

Aspects of knowledge	**Pre test**		**Post test**		**t value**	**DF**	P value Inference
	Mean	SD	Mean	SD			
General information of screen time	1.62	1.010	3.83	0.924	13.736	59	$p<0.05$*
Effects of increased screen time	1.58	0.996	3.78	1.195	11.325	59	$p<0.05$*
Effects of increased screen time on physiological functions of children	2.48	1.308	5.87	1.408	14.019	59	$p<0.05$*
Effects of increased screen time on psychological functions of children	1.03	1.041	1.93	0.989	4.985	59	$p<0.05$*
Preventive measures for reducing screen time	2.70	1.406	6.08	1.211	14.019	59	$p<0.05$*
Overall Knowledge	9.417	3.1905	21.50	2.652	22.244	59	$p<0.05$*

*is significant; ^{NS} is not significant

Table 3: Association between pre-test knowledge scores of parents with selected Socio Demographic variables.

		Overall Knowledge		**Chi-square/significance**
		Median and below	**Above median**	
Age	Below 25 years	19	16	1.318 ^{NS}
	Above 25-35 years	9	13	DF=2
	Above 35-45 years	2	1	
	Above 45 years	0	0	
Religion	Hindu	22	20	1.154 ^{NS}
	Muslim	8	9	DF=2
	Christian	0	1	
	Others	0	0	
Education	No formal education	1	6	6.355 ^{NS}
	Primary education	7	9	DF=4
	High school	18	12	
	P.U.	1	2	
	Graduate and above	3	1	
Occupation	Professional	0	1	1.026 ^{NS}
	Non-professional	20	19	DF=2
	Self employed	10	10	
	Others	0	0	

Income	Below 10,000	15	6	7.86*
	10,001- 20,000	15	21	DF=2
	20,001- 30,000	0	3	
	30,001 and above	0	0	
Type of family	Nuclear family	22	17	1.832 NS
	Joint family	8	13	DF=1
	Single parent	0	0	
	Extended family	0	0	
number of children in the family	One	9	10	2.297 NS
	Two	20	16	DF=2
	Three	1	4	
	Above three	0	0	
Duration of screen time use/day	Less than 1 hour	2	3	1.743 NS
	1hr – 2hrs	20	23	DF=2
	2hrs- 3hrs	8	4	
	More than 3 hrs	0	0	
Since how many years the child has been exposed to scree time	Less than 1 year	5	8	1.389 NS
	1- 3 year	24	20	DF=2
	3-5 year	1	2	
	More than 5 year	0	0	
Do you know regarding effect of screen time-source of information	No	21	26	3.350 NS
	Newspaper	2	0	DF=2
	TV	7	4	

*is significant; NS is not significant

The chi square was performed to find out the association between pre test knowledge score and selected demographic variables. In the present study, there is no significant association between levels of knowledge with demographic variables of sample during pre-test except monthly income (p<0.05). Hence researcher rejected research hypothesis (H_2).

4. Discussion

Demographic characteristics: In the present study, highest number (58.3%) of respondents belonged to the age group of below 25 year. Majority (70%) of respondents were Hindus. Half of the respondents (50%) studied till high school. More than half (65%) were non professional, more than half (60%) of respondents having income is between 10,001-20,001, most (65%) of respondents belonged to nuclear family. Majority (60%) of respondents having two children, more than half (71.7%) of children spends 1hr-2hrs in front of screen media, most (73.3%) of respondents reported for about 1-3 years of exposure of screen time to their children. More than half (78.4%) were not aware regarding effects of screen time.

The study findings are supported by the prospective study conducted on electronic media exposure and use among toddlers at Korea. The study result revealed that among 390 toddlers, 39.3% watched TV, 48% of children watched TV for an hour, 63.1% of children watched TV for an hour [12].

Assessment of knowledge of parents regarding screen time and its effect on behaviour of children: The study result revealed that 70% of parents were having inadequate knowledge, 30% having moderate knowledge during pre-test. It was found that there was deficit in knowledge regarding screen time and its effect on behaviour of children during pre-test (31.39%).

The present finding of the study was supported by a descriptive correlation study conducted to assess parental knowledge and attitude regarding the impact of television on children in a selected areas at Aurangabad city. The study result revealed that 50% of parents having average knowledge, 20% having poor knowledge, 18.3% of parents having good knowledge and only 11.7% of parents having excellent knowledge on impact of television on children. The study highlights the urgent need for strategies to increase awareness regarding screen time in order to reduce the effect on children [13, 14].

Evaluating the effectiveness of the planned teaching programme on screen time and its effect on the behaviour of children: The overall mean post-test knowledge score was 21.50±2.65, which is higher than the mean pre-test score of 9.417±3.19. The obtained overall paired "t'' value (22.244) is greater than the table value which shows that planned teaching programme is effective.

The study findings are supported by the study conducted on the effectiveness of planned teaching program on knowledge regarding mobile game addiction among students at Maharashtra. The result revealed that pre- test knowledge score was 8.87 and post-test knowledge score was 11.47 which indicates the effectiveness of planned teaching programme. The study concluded that, the planned teaching programme was effective in increasing the knowledge of students [15].

Association between pre-test knowledge scores with selected socio demographic variables: There was no significant association found between knowledge scores with selected socio-demographic variables like age, religion, education, occupation, type of family, number of children in the family, duration of screen time usage/day by children, years of exposure to screen time and awareness regarding effects of screen time except monthly income.

The study findings are supported by the study conducted on association between family structure and young people's physical activity and screen time behaviours at Norway. The study result revealed that there was no significant

association found between family structure and young people screen time behaviour. This study is in par with my present study results [16, 17].

Discussion related to testing of Hypotheses

H1: There was a significant improvement in post-test knowledge scores compared to pre-test scores, indicating that the planned teaching program was effective ($p<0.05$). Thus, the research hypothesis (H1) is accepted.

H2: There was no significant association between pre-test knowledge scores and selected socio-demographic variables such as age, religion, education, occupation, type of family, number of children, screen time duration, and years of exposure, except for monthly income. Therefore, the research hypothesis (H2) is rejected.

Implications of the Study

- This study has significant implications for nursing practice, education, administration, and research. In nursing practice, community health nurses should actively educate parents on screen time effects to promote healthier habits.
- Nursing education should integrate media exposure topics into curricula to prepare nurses for effective health education.
- Nurse administrators should facilitate continuous training programs to enhance public awareness.
- In nursing research, further studies should explore innovative strategies to reduce excessive screen exposure among children.

The study highlights the need for structured health promotion initiatives. Findings suggest that economic factors influence parental awareness, emphasizing the need for targeted interventions. Healthcare professionals should implement community-based educational programs. Future research should assess long-term behavioral changes following such interventions. Strengthening parental knowledge can help prevent the negative impacts of screen time on children's well-being.

5. Conclusions

The study concluded that the planned teaching program was highly effective in enhancing parents' knowledge regarding screen time and its effects on children's behavior. The significant improvement in post-test knowledge scores indicates the importance of structured educational interventions in addressing parental awareness gaps. The findings suggest that community-based educational initiatives should be implemented to educate parents on the risks associated with excessive screen exposure in children and encourage healthier screen habits. Although most socio-demographic variables did not show a significant association with knowledge levels, the study highlighted the role of economic factors in influencing awareness. Further research is recommended to assess the long-term impact of educational interventions on parental knowledge and children's screen-related behaviors.

6. Ethical approval: Approved by the institution ethics committee

7. Source of Funding: None.

8. Conflict of Interest: The authors declare no conflict of Interest.

9. References

1. Meyer J. Importance of play in children's development. 2015 Sep 4. Available from: https://pathways.org/news/articles/importance-of-play-in-children-development.
2. Radcliffe S. Is screen time altering the brains of children? Healthline. 2018 Jan 19. Available from: https://www.healthline.com/health-news/how-does-screen-time-affect-kids-brains.
3. Mangalit L. What screen time can really do to kids' brains. Psychology Today. 2016 Apr 17. Available from: https://www.psychologytoday.com/intl/blog/behind-online-behavior/201604/what-screen-time-can-really-do-kids-brains.
4. Eastman DW. Media culture and media violence: Making the television work for young children, parents and early childhood educators. Available from: http://www.worldforumfoundation.org/wf/history/presentations/pdf.
5. Available from: http://cmch.tv/parents/nutrition-and-physical-activity.
6. Available from: https://www.hcplive.com/view/screen-time-linked-to-inattentiveness-behaviour-problem.
7. Available from: http://www.theguardian.com/society/most-children-own-mobile-phone. 2020 Jan.
8. Available from: http://www.thehindubusinessline.com/info-tech/66-mn-internet-users-in-india-aged-between-5-and-11-year.
9. Brent D. Children's use of TV, video games, and internet. 2014 Feb. Available from: http://www.techaddiction.ca/media-statistics.html.
10. Statista. Number of mobile phone, internet users. Available from: https://www.statista.com/statistics/274774/forecast-of-mobile-phone-users-worldwide.
11. Chang H, Park E-J. Electronic media exposure and use among toddlers. 2018 May;15(6):568-573.
12. Rikkers W, Lawrence D, Hafekost J, Zubrick SR. Internet use and electronic gaming by children and adolescents with emotional and behavioural problems in Australia–results from the second Child and Adolescent Survey of Mental Health and Wellbeing. BMC Public Health. 2016 Dec 1;16(1):399.
13. Patil MN, Mhaske A. A correlation study to assess parental knowledge and attitude regarding the impact of television on children in selected areas at Aurangabad city.
14. Pendse N, Zagade T. Knowledge and attitude regarding health hazards of mobile phone use among junior college students. Int J Sci Res (IJSR). 2014;3(5):554-561.
15. Al-Ali NM, Yaghy HS, Shattnawi KK, Al-Shdayfat NM. Parents' knowledge and beliefs about the impact of exposure to media violence on children's aggression. Issues Ment Health Nurs. 2018 Jul 3;39(7):592-599.

16. Dani R, Dani P. Effect of planned teaching programme on knowledge regarding mobile phone addiction among students. 2018 Mar;3(2):1517-1518.
17. Langoy A. Association between family structure and young people's screen time behaviours. 2019 Apr 25.

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