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A STUDY TO ASSESS THE KNOWLEDGE ON ILL EFFECTS OF DIGITAL MEDIA USAGE AMONG MOTHERS OF UNDER-FIVE CHILDREN IN KERALA, WITH A VIEW TO PREPARE A PAMPHLET

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ABSTRACT

A study to assess the knowledge on ill effects of digital media usage among mothers of under five children in Kerala, with a view to prepare a pamphlet. The objective of the study was to: a) To assess the knowledge of mothers of under five children regarding ill effects of digital media usage among their children. b) To find out the association between the level of knowledge of mothers regarding ill effects of digital media usage among under five children and selected demographic variables. c) To develop an information pamphlet on ill effects of digital media usage on mothers of under five children. A quantitative approach was used in the study. Convenient sampling was used. Sample size was 80 mothers of under-five children. The researcher collected the data using self-structured questionnaire regarding knowledge on ill effects of digital media usage. The tool was found to be reliable, the investigator assessed knowledge of mothers of under-five children's using structured questionnaire regarding ill effects of digital media usage. It is found that the calculated t value is greater than table value. It was inferred that the present study showed no significant association between knowledge and demographic variable like sex of child, age of child, type of family number of children, income of family at 0.05 level of significance. Based on the findings the investigators have drawn implication which were of vital concerns in the field of nursing practice, nursing administration and nursing education for future development.

KEYWORDS: Assess, knowledge, ill effects, digital media, mothers of under-five, pamphlet.

INTRODUCTION

Children are growing up exposed to both traditional and modern technology. They are constantly using ipads, iphones, tablets, and other computerized devices. By over exposing children to technology, they are being robbed of the mental stimulation that comes from doing real, non-computerized, activities. It has come to the point where one can see a two-year-old navigates an iphone with ease struggle to speak. Sixty –nine percent of children aged two to five can use a computer mouse, but only eleven percent can tie their own shoelaces.^[1] Also, children are low in creativity development because of the lack of chances to practice their creativeness. The social interactions worsen due to the fact that children would rather communicate over the internet and via text message than speak face to face. In order to be sure that children get the proper building block for their future education, there is need to limit children's use of technology.^[2]

In recent decades, there has been an overload in the diversity of media available. New (mobile phones, smartphones, tablets, and social media) and traditional media (television) have come to dominate the lives of many children and adolescents and the spaces where they spend their leisure time.^[3] The presence of a computer and/or television in the child's bedroom and access to the internet has also increased; the majority of children and adolescents own mobile phones. There is an increasing trend among younger children and infants to use mobile devices.

A recent report from Turkey showed that 58% of whole population in Turkey are active internet users, 53% are active social media users, 90% have mobile connections, and 45% are active mobile social users. Among the whole population, 86% have a mobile phone (all types), 56% have a smartphone, 48% have a desktop or laptop computer, and 11% have a tablet device. In Turkey, the average daily television viewing time is 2 hours 18 minutes, the average daily use of the Internet via

computer or tablet is 4 hours 14 minutes, and the average daily use of social media via any device is 2 hours 32 minutes. Regarding Facebook user profiles, 19% of all users are aged between 13 and 19 years.^[4]

A study was conducted to examine the knowledge of cognitive processing of TV advertising messages on 250 children aged between 4-7 years from the state of Gujarat, India. The result shows that (52.5%) of children's have ability to decode and process advertising messages and (62.5%) of children enhanced their cognitive abilities and also their (46.3%) social & personal developments. The researcher concludes that the study would contribute towards better understanding of children's processing abilities and designing of effective communication strategies. In Bangalore, about 54% of children are using mobile phone, 48% are using computer to listen music and 37% of children are spending time in playing the video games, about 62% of children are using television and about 23% of children are using computer only to attain knowledge from the internet.

Singer and Singer, 2011 have described the young child's gradual development as a media consumer, i.e., how the child processes media content and handles the devices. Despite their lack of essential perceptual and symbolic understanding and fine motoric skills, even infants are already attentive to media content that matches their social ideas, expectations, and capacities to interpret those media (Barr et al. 2008; Valkenburg and Vroome 2004). Although younger children often experience difficulties in using apps on smart mobile devices, which includes uncontrolled swiping, tapping icons incorrectly, accidentally exiting the app and/or not being able to hear audible gaming instructions, many of them still are motivated to continue to use the device (Chiong and Shuler 2010). Moreover, through age, children are also honing their fine-motor skills, which make it gradually easier for them to manipulate touch screens, small keys, gadgets and controllers.^[5]

STATEMENT OF THE PROBLEM

A study to assess the knowledge on ill effects of digital media usage among mothers of under five children in Kerala, with a view to prepare a pamphlet.

OBJECTIVES

The objectives of the study were

1. To assess the knowledge of mothers of under five children regarding ill effects of digital media usage among their children.
2. To find out the association between the level of knowledge of mothers regarding ill effects of digital media among under five children and selected demographic variables.
3. To develop a health information pamphlet on ill effects of digital media usage for mothers of under five children.

OPERATIONAL DEFINITIONS

- **Assess-** In this study, it refers to estimate the level of knowledge regarding the ill effects of digital media usage among mothers of under five children in Kerala.
- **Knowledge-** In this study knowledge refers to scores obtained by respondents to the items in the structured questionnaire regarding the ill effects of digital media usage among mothers of under five children in Kerala.
- **Ill effects-** In this study, it refers to the potential hazards such as headache, fatigue, short term memory loss, attention disorders, brain cancer and aggressive behaviour.
- **Digital media-** In this study, it refers to television (TV), smart phones, tablet or computer, video games etc.
- **Mothers of under five children-** Mothers who are taking care of under five children.
- **Pamphlet-** It is a handout containing information regarding the ill effects of using digital media such as mobile phones, television, video games and especially the health hazards in under five children and mother's role in preventing health hazards of digital media in children prepared by the researchers.

RESEARCH METHODOLOGY

Research approach	: Quantitative research
Research design	: Non-Experimental research design
Variables	<p>Dependent variable: Knowledge of mothers of under five children on ill effects of digital media usage.</p> <p>Independent variable: Pamphlets on ill effects of digital media usage among mothers of under five children.</p> <p>Demographic variables: Sex of child, age of child, type of family, number of children, income of family, education status of spouse, education status of mother, occupation of spouse, occupation of mother, screen time of children.</p>
Setting of the study	: Virtual setting through Google form.
Population	: Mothers of under five children in Kerala who has email id and internet accessibility.
Sample	: Mothers of under five children in Kerala.
Sample Size	: 80 mothers of under five children in Kerala.
Sampling Technique	: Convenience sampling technique

RESULTS AND DISCUSSION

Section A: knowledge of mothers of under five children regarding ill effects of digital media usage among their children.

25%	: Good
33%	: Moderate
22%	: Poor

Demographic data

- In the case of sex of child, chi square value was 5.99 which was less than table value at 0.05 level of significance. So, there was no association between sex of child and knowledge of mothers regarding the ill effects of digital media usage.
- In the case of age of child, chi square value was 12.59 which was less than table value at 0.05 level of significance. So there was no association between age of child and knowledge of mothers regarding the ill effects of digital media usage.
- In the case of type of family, chi square value was 9.48 which was less than table value at 0.05 level of significance. So, there was no association between type of family and knowledge of mothers regarding the ill effects of digital media usage.
- In the case of number of children, chi square value was 12.59 which was less than table value at 0.05 level of significance. So, there was no association between number of children and knowledge of mothers regarding the ill effects of digital media usage.
- In the case of income of family, chi square value was 12.59 which was less than table value at 0.05 level of significance. So, there was no association between income of family and knowledge of mothers regarding the ill effects of digital media usage.
- In case of educational status of spouse, chi square value was 12.59. So, there was association between the education status of spouse and knowledge of mothers regarding the ill effects of digital media usage.
- In case of educational status of mother, chi square value was 12.59. So, there was association between the educational status of mother and knowledge of mothers regarding the ill effects of digital media usage.
- In case of occupation of spouse, chi square value was 12.59. So, there was association between the occupation of spouse and knowledge of mothers regarding the ill effects of digital media usage.
- In case of occupation of mother, chi square value was 12.59. So, there was association between occupation of mother and knowledge of mothers regarding the ill effects of digital media usage.
- In case of screen time of children, chi square value was 12.59. So, there was association between the screen time of children and knowledge of mothers regarding the ill effects of digital media usage.

SEX OF THE CHILD

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	Male	10	13	10
2	Female	15	20	12

- Table 1 shows that 33 mothers have male under five children. Among the 33 mothers who had male under five children, 10 had good knowledge, 13 had moderate knowledge and 10 had poor knowledge. 47 mothers have female under five children. Among the 47 mothers who had female under five children, 15 had good knowledge, 20 had moderate knowledge and 12 had poor knowledge.

CHILD AGE

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	>1 Year	2	5	3
2	1-2 Year	13	8	11
3	2-3 Year	6	10	5
4	> 5 Year	4	10	3

- Table 2 shows that 10 mothers have children less than 1 year of age. Among the 10 mothers who had children less than 1 year, 2 had good knowledge, 5 had moderate knowledge and 3 had poor knowledge. Among the 32 mothers who had children between the age of 1-2 year, 13 had good knowledge, 8 had moderate knowledge and 11 had poor knowledge. Among the 21 mothers who had children between the age of 2-3 year, 6 had good knowledge, 10 had moderate knowledge and 5 had poor knowledge. Among the 17 mothers who had children <5 year of age, 4 had good knowledge, 10 had moderate knowledge and 3 had poor knowledge.

TYPE OF FAMILY

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	Joint	10	10	7
2	Nuclear	15	14	8
3	Extended	0	9	7

- Table 3 shows that 27 mothers of under five children belongs to joint family. Among the 27 mothers who had under five children, 10 had good knowledge, 10 had moderate knowledge and 7 had poor knowledge. Among the 37 mothers who had under five children belonged to the nuclear family, 15 had good knowledge, 14 had moderate knowledge and 8 had poor knowledge. Among the 16 mothers who had under five children belonged to extended family, 0 had good knowledge, 9 had moderate knowledge and 7 had poor knowledge.

NUMBER OF CHILDREN

Sl.No	Variable	Knowledge		
		Good	Moderate	Poor
1	1	3	3	4
2	2	15	17	6
3	3	7	12	9
4	more than 3	0	1	3

- Table 4 shows that 10 mothers had 1 under five children in their home. Among the 10 mothers who had 1 under five children, 3 had good knowledge, 3 had moderate knowledge and 4 had poor knowledge. Among the 38 mothers who had 2 under five children, 15 had good knowledge, 17 had moderate knowledge and 6 had poor knowledge. Among the 28 mothers who had 3 under five children, 7 had good knowledge, 12 had moderate knowledge and 9 had poor knowledge. Among the mothers who had more than 3 under five children 0 had good knowledge, 1 had moderate knowledge and 3 had poor knowledge.

INCOME OF FAMILY

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	>5000	3	4	7
2	5000-10000	12	16	5
3	10000-20000	8	9	4
4	<20000	2	4	6

- Table 5 shows that 14 mothers had family income less than 5000. Among the 14 mothers who had family income less than 5000, 3 had good knowledge, 4 had moderate knowledge and 7 had poor knowledge. Among the 33 mothers whose family income lies between 5000 to 10000, 12 had good knowledge, 16 had moderate knowledge and 5 had poor knowledge. Among the 21 mothers whose family income lies between 10000 to 20000, 8 had good knowledge, 9 moderate knowledge and 4 had poor knowledge. Among the 12 mothers who had family income greater than 20000, 2 had good knowledge, 4 had moderate knowledge and 6 had poor knowledge.

OCCUPATION OF SPOUSE

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	Govt. Employees	4	10	5
2	Private Employees	13	16	8
3	Unemployed	0	0	0
4	Others	8	7	9

- Table 8 shows that 19 spouses were Government employees. Among the 19 spouses who had government job, 4 had good knowledge, 10 had moderate knowledge and 5 had poor knowledge. Among the 37 spouses who had private job, 13 had

EDUCATION STATUS OF SPOUSE

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	School level	5	8	5
2	Graduate	8	9	9
3	Post graduate	8	10	7
4	Others	4	6	1

- Table 6 shows that 18 spouses had school level education. Among the 18 spouses who had school level education, 5 had good knowledge, 8 had moderate knowledge and 5 had poor knowledge. Among the 26 spouses who are graduates, 8 had good knowledge, 9 had moderate knowledge and 9 had poor knowledge. Among 25 spouses who are postgraduates, 8 had good knowledge, 10 had moderate knowledge and 7 had poor knowledge. Among 11 spouses who belonged to higher educational status, 4 had good knowledge, 6 had moderate knowledge and 1 had poor knowledge.

EDUCATION STATUS OF MOTHER

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	School level	5	2	1
2	Graduate	10	22	10
3	Post graduate	5	6	4
4	Others	5	3	7

- Table 7 shows that 8 mothers had school level education. Among the 8 mothers who had school level education, 5 had good knowledge, 2 had moderate knowledge and 1 had poor knowledge. Among the 42 mothers who are graduates, 10 had good knowledge, 22 had moderate knowledge and 10 had poor knowledge. Among the 15 mothers who are postgraduates, 5 had good knowledge, 6 had moderate knowledge and 4 had poor knowledge. Among the 15 mothers who belonged to higher educational status, 5 had good knowledge, 3 had moderate knowledge and 7 had poor knowledge.

good knowledge, 16 had moderate knowledge and 8 had poor knowledge. No spouses are unemployed. Among the 24 spouses who belonged to other category, 8 had good knowledge, 7 had moderate knowledge and 9 had poor knowledge.

OCCUPATION OF MOTHER

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	Govt. Employees	11	10	2
2	Private Employees	9	16	12
3	Unemployed	5	4	4
4	Others	0	3	4

- Table 9 shows that 23 mothers were Government employees. Among the 23 mothers who had government job, 11 had good knowledge, 10 had moderate knowledge and 2 had poor knowledge. Among the 37 mothers who had private job, 9 had good knowledge, 16 had moderate knowledge and

12 had poor knowledge. Among the 13 mothers who are unemployed, 5 had good knowledge, 4 had moderate knowledge and 4 had poor knowledge. Among the 7 mothers who belonged to other category, 0 had knowledge, 3 had moderate knowledge and 4 had poor knowledge.

SCREEN TIME OF CHILDREN

SL.NO	Variable	Knowledge		
		Good	Moderate	Poor
1	>2 hr	4	22	9
2	2-4 hr	13	10	8
3	<4 hr	8	1	5

- Table 10 shows that 35 mothers had under five children with less than two hours of screen time. Among the 35 mothers who had under five children with less than two hours of screen time, 4 had good knowledge, 22 had moderate knowledge and 9 had poor knowledge. Among the 31 mothers who had

under five children with 2-4 hours of screen time, 13 had good knowledge, 10 had moderate knowledge and 8 had poor knowledge. Among the 14 mothers who had under five children with greater than 4 hours of screen time, 8 had good knowledge, 1 had moderate knowledge and 5 had poor knowledge

Table 11: Association between knowledge and selected demographic variables.

Sl.no	Variables	Knowledge					
		Good	Moderate	Poor	df	Chi square	Significance
1.	Sex						
	Male	10	13	10	2	5.99	NS
	Female	15	20	12			
2.		Age					
	>1year	2	5	3			
	1-2 year	13	8	11	6	12.59	NS
	2-3 year	6	10	5			
	>5 year	4	10	3			
3.	Type of family						
	Joint	10	10	7			
	Nuclear	15	14	8	4	9.48	NS
	Extended	0	9	7			
4.	Number of children						
	1	3	3	4			
	2	15	17	6	6	12.59	NS
	3	7	12	9			
	More than 3	0	1	3			
5.	Income of family						
	>5000	3	4	7			
	5000-10000	12	16	5	6	12.59	NS
	10000-20000	8	9	4			
	<20000	2	4	6			
6.	Education status of spouse						
	School level	5	8	5			
	Graduate	8	9	9	6	12.59	S
	Post graduate	8	10	7			
	Others	4	6	1			

7. Education status of mother							
School level	5	2	1				
Graduate	10	22	10				
Post graduate	5	6	4				
Others	5	3	7				
				6	12.59		S
8. Occupation of spouse							
Government Employees	4	10	5				
Private Employees	13	16	8				
Unemployed	0	0	0				
Others	8	7	9				
				6	12.59		S
9. Occupation of mothers							
Government Employees	11	10	2				
Private Employees	9	16	12				
Unemployed	5	4	4				
Others	0	3	4				
				6	12.59		S
10. Screen time of children							
>2 hour	4	2	9				
2-4 hour	13	10	8				
<4 hour	8	15	5				
				6	12.59		S

0.05 level of significance

NS- non-significant

S - Significant

Table 11 shows that there is significant association between the selected demographic variables except the variables sex of the child, age of the child, type of family, number of children and income of family which has no significant association.

DISCUSSION

The present study was conducted to assess the knowledge regarding ill effects of digital media usage in mothers of under five children in Kerala. In order to achieve the objectives of the study non experimental survey design was adopted. The sample was selected by the non-probability convenience sampling. The sample consisted of 80 mothers of under five children. The findings of the study had been discussed in relation to objectives and other similar studies.

Discussion of findings with other studies based on objectives

- To assess the knowledge of mothers of under five children regarding ill effects of digital media usage among their children.

The present study revealed that 25 % of mothers had good knowledge, 33% of mothers had moderate knowledge, and 22% had poor knowledge. The above study findings is supported by a quasi-experimental study among 60 mothers of lower primary students at Karnataka in 2017 to better understand the child media knowledge and check the effectiveness of printed hand-outs regarding media usage. The samples were selected by simple random sampling technique. A structured knowledge questionnaire was used to collect the data and followed by administering the printed hand-outs. The

pre-test result showed that the sample had poor knowledge regarding child media usage. After administering the printed hand-outs the result revealed that they had increased their knowledge (average).Findings of the study revealed that printed hand-outs was an effective method to enhance the knowledge of mothers of lower primary students regarding media usage.^[40]

- Association between the level of knowledge of mothers regarding ill effects of digital media usage among under five children and selected demographic variables**

In the case of sex of child, chi square value was 5.99 which was less than table value at 0.05 level of significance. So there was no association between sex of child and knowledge of mothers regarding the ill effects of digital media usage. In the case of age of child, chi square value was 12.59 which was less than table value at 0.05 level of significance. So there was no association between age of child and knowledge of mothers regarding the ill effects of digital media usag. In the case of type of family, chi square value was 9.48 which was less than table value at 0.05 level of significance. So there was no association between type of family and knowledge of mothers regarding the ill effects of digital media usage. In the case of number of children, chi square value was 12.59 which was less than table value at 0.05 level of significance. So there was no association between number of children and knowledge of mothers regarding the ill effects of digital media usage. In the case of income of family, chi square value was 12.59 which was less than table value at 0.05 level of

significance. So there was no association between income of family and knowledge of mothers regarding the ill effects of digital media usage. In case of educational status of spouse, chi square value was 12.59, which is greater than calculated value. So there was association between the education status of spouse and knowledge of mothers regarding the ill effects of digital media usage. In case of educational status of mother, chi square value was 12.59, which is greater than calculated value. So there was association between the educational status of mother and knowledge of mothers regarding the ill effects of digital media usage. In case of occupation of spouse, chi square value was 12.59, which is greater than calculated value. So there was association between the occupation of spouse and knowledge of mothers regarding the ill effects of digital media usage. In case of occupation of mother, chi square value was 12.59, which is greater than calculated value. So there was association between occupation of mother and knowledge of mothers regarding the ill effects of digital media usage. In case of screen time of children, chi square value was 12.59, which is greater than calculated value. So there was association between the screen time of children and knowledge of mothers regarding the ill effects of digital media usage.

CONCLUSION

It was realized that there is a significant need for an informative pamphlet regarding the harmful effect of digital media and its prevention. On computing the association between knowledge and selected demographic variables it was found that there was no significant association between knowledge and demographic variables like sex of child, age of child, type of family, number of children, income of family.

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