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A Study to Assess the Impact of Mobile Phone on Mental Health Among Mother of Under-Five Year Children at Selected Area Jamuhar Sasaram Bihar

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Abstract:

Background of the study

Since the appearance of the cell phone, the anomalous use of this device has called into question whether the abuse of its use could lead to addiction. This problem is identical to the one regarding the existence of behavioural addictions as opposed to substance addictions. The existence of cell-phone addiction, as opposed to it being the manifestation of an impulsivity disorder, has been questioned without necessarily considering the concept of addiction.

Objectives of the study

1. To assess the impact of mobile phone among mother of under-five year children.
2. To develop the structured knowledge questionnaire regarding impact of mobile phone on mental health.
3. To determine the association of knowledge score of mothers on impact of mobile phone on mental health with selected demographic variables.

Methodology

The research approach selected was quantitative experimental approach and research design was pre-experimental design.

The study was conducted at village Jamuhar. The sample consists of 40 subjects who were mothers of under five-year children. The sampling technique used to select the subjects was convenient sampling techniques.

Interpretation and Conclusion

The knowledge of impact of mobile phone on mental health among mother of under five-year children was found to be sufficient among subjects. So, the structured knowledge questionnaire can be used as an effective method to improve their knowledge on impact of mobile phone on mental health among mother of under five-year children among mothers.

Keywords: Mental Health, Mobile phone, Impact and Knowledge.

INTRODUCTION

The 21st century is undoubtedly an era of mobile phone communications with billions of subscribers worldwide. Smart phones are mobile phones that have a computer-like function. According to William and Sawyer (2011), smart phone is a mobile phone with a microprocessor, memory, and built-in modem. Smartphone is a multimedia. phone that resulting in a luxurious gadget, where there is camera, music players, videos, games, email access, digital television, GPS.

As mothers use more words during periods of joint attention with their child, smart phone use may prevent language opportunities if joint attention is disrupted. Indeed, when parents use their smart phone during interactions with their child, they initiate fewer verbal and nonverbal interactions.

As the current COVID-19 pandemic has further accelerated the move towards a "digital mental health revolution", it is crucial to identify if and under which conditions MP/WD use may be detrimental.
Overuse of mobile phones may cause psychological illness such as dry eyes, computer vision syndrome, weakness of thumb and wrist, neck pain and rigidity, increased frequency of De Quatrain's tenosynovitis, tactile hallucinations, nomophobia, insecurity, delusions, auditory sleep disturbances, insomnia, hallucinations, lower self-confidence, and mobile phone addiction disorders.

Background of study

Since the appearance of the cell phone, the anomalous use of this device has called into question whether the abuse of its use could lead to addiction. This problem is identical to the one regarding the existence of behavioural addictions as opposed to substance addictions. The existence of cell-phone addiction, as opposed to it being the manifestation of an impulsivity disorder, has been questioned without necessarily considering the concept of addiction.
Mobile phones are an important part of one's lifestyle today. Parents provide small children with cell phones, maybe under the mistaken assumption of keeping a check on them, but it may prove to be more harmful than good. There is evidence that point to the fact that cell phone usage has the potential to not only cause physical effects which range from headache to dysesthesia of the scalp, but also addiction like any other substance. Mobile phone growth in India has been fast and it has reached all segments of society, especially the young.

Need for the Study

The current generation is the first generation of children growing up with mobile devices from birth (Radesky, Schumacher, & Zuckerman, 2015); hence, no empirical longitudinal data exist on the long-term effects of mobile device usage on children's development. A review of the literature on both mobile devices and social interaction practices indicated that, although mobile communication is becoming more prominent, what is not known is the extent to which social competency is affected by the way mobile devices are being used.
Parents play an important role in modelling, monitoring, and regulating mobile device usage to ensure it is done in an appropriately meaningful way. However, research on parental monitoring so far has focused more on strategies parents can use to monitor, limit, and regulate online activities, and less on how parental monitoring affects psychosocial outcomes.[2]

PROBLEM STATEMENT

"A study to assess the impact of mobile phone on mental health among mother of under-five year children at selected area Jamuhar Sasaram Bihar."

OBJECTIVES OF THE STUDY

1. To assess the impact of mobile phone among mother of under-five year children.
2. To develop the structured knowledge questionnaire regarding impact of mobile phone on mental health.
3. To determine the association of knowledge score of mothers on impact of mobile phone on mental health with selected demographic variables.

HYPOTHESIS

H_1: - There will be significant level of knowledge among mother of under-five year children about impact of mobile phone on mental health.

H_2: - There will be significant association between the knowledge scores of women regarding impact of mobile phone on mental health, with selected demographic variables.

OPERATIONAL DEFINITIONS

1. **Assess: -** In this study assess means to find out the impact of mobile phone on mental health among mother of under-five year children
2. **Impact: -**The word impact is used in the sense of 'influence.
3. **Mobile Phone: -** Portable telephone that can make and receive calls over a radio frequency as well as assess the internet.
4. **Mental Health: -** Mental health includes our emotional, psychological, and social well-being.
5. **Under five-year children: -** Those children who are underage of five years.

CONCEPTUAL FRAMEWORK

The present study aims at assessing the knowledge regarding the knowledge, impact of mobile phone on mental health among mother of under five-year children.
The framework of the study was based on: -

SUFFLE BEAM'S CIPP PROGRAMME MODEL, 1960

CIPP is an acronym that stand for Context, Input, Process and Product.
INPUT: - Demographic variables of mother of under-five year children.
PROCESS: - 20 structured questionnaires are used to assess the level of knowledge regarding impact of mobile phone on mental health.
PRODUCT: - Assessment of level of knowledge among study subject regarding impact of mobile phone on mental health.

ASSUMPTION

- The mother of under five-year children have some knowledge regarding impact of mobile phone.

DELIMITATION

- The study include only mother of under five-year children.
- The study is limited to people who are interested to participant.

REVIEW OF LITERATURE

A review of the literature is an essential part of scientific research project. A review is an evaluation report of information found in the literature related to the selected area of research to determine the nature of his/her research.
Aljohara A. Alhassan and Ethar M. Alqadhib (2018), conducted a cross sectional study on relationship between addiction to smart phone usage and depression among adults. This study investigated the prevalence and factors associated with smart phone addiction and depression among a Middle Eastern population. Methods: This cross-sectional study was conducted in 2017 using a web-based questionnaire distributed via social media. Responses to the Smartphone Addiction Scale - Short version (10-items) were rated on a 6-point Likert scale, and their percentage mean score (PMS) was commuted. Responses to Beck's Depression Inventory (20-items) were summated (range 0–60); their mean score (MS) was commuted and categorized. Higher scores indicated higher levels of addiction and depression. Factors associated with these outcomes were identified using descriptive and regression analyses. Statistical significance was set at $P < 0.05$. Results: Complete questionnaires were 935/1120 (83.5%), of which 619 (66.2%) were females and 316 (33.8%) were males. The mean ± standard deviation of their age was 31.7 ± 11 years. Majority of participants obtained university education 766 (81.9%), while 169 (18.1%) had school education. The PMS of addiction was 50.2 ± 20.3, and MS of depression was 13.6 ± 10.0. A

significant positive linear relationship was present between smart phone addiction and depression (y = 39.2 + 0.8×; P < 0.001). Significantly higher smartphone addiction scores were associated with younger age users, (β = − 0.203, adj. P = 0.004). Factors associated with higher depression scores were school educated users (β = − 2.03, adj. P = 0.01) compared to the university educated group and users with higher smart phone addiction scores (β =0.194, adj. P < 0.001). Conclusions: The positive correlation between smartphone addiction and depression is alarming. Reasonable usage of smart phones is advised, especially among younger adults and less educated users who could be at higher risk of depression.[5]

Nithya Sara James, Princy S, Priya Samson et.al. (2022) conducted a descriptive study to assess the knowledge of mothers regarding mobile phone use and mobile phone addiction among middle school children at Kollam ". The objective of the study was to assess the knowledge of mothers of middle school children and to find out the association between knowledge regarding mobile phone use and mobile phone addiction among middle school children and selected demographic variables such as age of mother, number of children, age of child, gender of child, education of mother, occupation of mother, monthly income, type of family. A quantitative approach was used with non-probability convenient sampling method. The Sample consists of 60 mothers of children between 5 to 18 years residing at Kollam. The data collected by using self- structured questionnaire. The tool was found to be reliable (0.8). The study result shows that there was significant association between gender of child, education of mother, monthly income of family, type of family among mothers of middle school children (calculated value >tabulated value) at 0.05 level of significance. There is no significant association between age of mother, number of children, age of children and occupation of mother. 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.[6]

Lairikyengbam Sushila Devi (2021) conducted a descriptive study to assess the knowledge of influence of smart phones on behavioural changes of preschoolers among the mothers at OPD in selected hospitals of Pune City. Objectives of the study was to identify the knowledge regarding influence of smart phones on behavioural changes of preschoolers among the mothers, to associate the research findings with selected demographic variables. Material& Methodology: A quantitative research design used in the study. The study was conducted in Selected Hospitals of Pune City, Maharashtra India. The study design was non-experimental research. Total 500 mothers of preschooler children were selected for data collection. A non-probability purposive sampling technique was used to collect data from the samples. Tool was constructed to identify the demographic variables, and a set of 20 self-structured questionnaire. Result: The major finding showed that most of the age 65.2% were from 25-29 years of age group. According to education qualification majority 50.2% were graduated. According to occupation majority 48% were worker. According to family income majority 55.6% were having 15001-30000 family income. According to Any previous knowledge regarding influence of smart phones on behavioural changes of children majority 72.6 % were not having previous knowledge. knowledge regarding influence of smart phones on behavioural changes of preschoolers among the mothers is around equal percentage as 72.8% sample were having poor knowledge, 24.4% sample were having good knowledge and 2.8% sample were having Excellent knowledge. Knowledge means score is 7.17 with SD +2.68. Findings relating to the relationship between a mother's knowledge score and her demographic characteristics. Because the p value is larger than 0.05, there is no significant correlation and demographic characteristics. Conclusion: The study conducted to assess the knowledge of influence of smart phones on behavioural changes of preschoolers among mothers at OPD in selected hospitals. The statistical analysis revealed that there is majority of mothers were having poor knowledge regarding influence of smart phones on behavioural changes of pre-schoolers.[8]

Sarvendra Pratap and Rajdip Majumder (2021) conducted a Non-experimental descriptive study to assess the impact of cell phone among school children in Bhubaneswar Khorda, Odisha. Objectives of the study was to assess the knowledge of student regarding Health impact of cell phone. And to find out association between knowledge level regarding health impact and their Socio-demographic variable. Methodology: Non-experimental descriptive research design was selected for 200 school going children who were belongs age group between 0-5 years studied in selected school, Bhubaneswar, Odisha. Simple random sampling technique was used. Results: It shows that most of the students were having inadequate knowledge that is 43.611%. Only 18 % students having adequate knowledge regarding Health impact of cell phone. Knowledge level and their Socio-demographic variable (Age, Gender, Religion, father's occupation, educational status of father's, mother's occupation, Number of siblings having, Type of family, Family income) were shows significantly associated (P<0.05). Conclusion: Every technology has its own advantages and disadvantages for students and mobile phone is one of them.[8]

MD. Iqbal and Umal Saeed (2020) conducted a cross-sectional study to find Impact of mobile phone use on health, behaviour, and social interactions among mother of children aged 2 – 5 years. Children and teenagers are becoming increasingly dependent on their mobile devices, which they use for entertainment, education, and self-expression in addition to keeping in touch with friends and family. The prolonged use of mobile phones can have deleterious effects on children. Objectives of the study was conducted to evaluate these effects on specific areas of the mother. It was a cross-sectional study conducted at the outpatient department during the study period from September 2019 to February 2020. Children below the age of 2 years or mentally challenged children were excluded. Informed consent was taken from parents who participated in the activity. The child and the parents are explained the research purpose and data collected in the pre-designed and pre-tested questionnaire. SPSS version 21.0 was used to enter and analyses the data. Results: A total of 399 participants of mother of children aged 2 to 12 years were included in the study. In 50.3 % of children who were using mobile for more than 2 hours, 55.1% of children slept less than 6 hours a day with 68.9% of children having a disturbance in sleep pattern. 33.9% of children reported having been wearing glasses and 34.8% of children showed an increase in weight. Regarding social interaction and behaviour, 39.9% of children showed rude behaviour towards their parents.53.2% of children using mobiles were associated with behavioural issues like isolation thus avoiding gathering while 77.3% were addicted to mobiles and showed anger and frustration when mobiles were taken away from them. Conclusion: The use of the mobile phone negatively impacts the various aspects of a child's as well as mother life.

METHODOLOGY

Research methodology indicates the general pattern of organizing the procedure for gathering valid and reliable data for investigation. Research methodology is the systematic, theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Research methods are invented to enable a researcher to answer research questions as validly, objectively, accurately, and economically as possible. The research methodology includes the strategy to be used to collect and analyse the data to accomplish the research objectives.

- **Research Approach: -** Quantitative experimental approach.
- **Research Design: -** Pre- Experimental design
- **Variables under study:**

Independent variable

- Structured knowledge questionnaire

Dependent variables

- Age, Religion, Educational status, Occupational status, Type of family, Family income, Number of children, Age of the child, Type of mobile phone uses, and Number of cell phone used.

- **Setting of the study: -** The study was conducted at Jamuhar.
- **Sample: -** Mother of under five-year children.
- **Sampling Technique: -** Convenient sampling techniques were used.
- **Sample Size: - 4** (Pilot Study) and 40 mothers (Main study)
- **Criteria for sample collection: -**

The samples were selected with the following pre-determined criteria.

INCLUSION CRITERIA

- Only mother of under five-year children
- Who present at time of data collection?
- Able to read and understand Hindi and English

EXCLUSION CRITERIA

- Who are not willing to participate in the study.
- Mother of children under five-year children who are very ill.

DATA COLLECTION TOOL AND TECHNIQUES

Selection of tools

Structured knowledge questionnaire for assessing the impact of mobile phone on mental health among mother of under five-year children.

TABLE NO. I- Description of data collection tool

SI NO.	TOOL	PURPOSE	TECHNIQUE
1.	Sample characteristics	To seek information on demographic	Paper and pen
2.	Structured knowledge questionnaire	To assess the knowledge of mother of under five-year children on the impact of mobile phone on mental health.	Interview

DATA COLLECTION PROCEDURE

"Data collection process is the gathering of information to address a research problem."

To conduct the study in the college, a formal written permission was obtained from concerned college to the data collection. The data collection was conducted from for a stipulated period.

Phase I

The investigator got permission to conduct the study from the concerned authority.

Phase II

The concerned mothers were informed. The investigator established rapport with the subject followed by self-introduction and explained the nature of the study, confidentiality and cooperation. The investigator conducted main study by selecting 40 samples from selected areas using convenient sampling technique.

Phase III

The investigator visited the setting area during daytime every day as per the convenience of the respondents and collected the data. After selecting the sample from the inclusion criteria of the study, the purpose of the study was explained to the subject and confidentiality of the data was assured. They were administered a structured knowledge questionnaire and a checklist. The data collection process concluded with the investigator thanking the subjects. The average time taken by each participant to complete the give set of questionnaires was 20-25 minutes.

Problems faced during study.

- No major problem faced during data collection.

PLAN FOR DATA ANALYSIS FOR INTERPRETATION.

- Data analysis to be done by using both descriptive and inferential statistics Frequency and percentage distribution of sample characteristics.
- Mean, median, standard deviation of knowledge scores of mothers of under five-year children.
- Mean score and mean percentage of knowledge scores of mothers of under five-year children.
- Chi square test will be done to seek association between knowledge score with selected variables of mother of under five-year children.

TABLE NO. 2- Frequency and percentage distribution of mothers by their demographic characteristics.
N=40

Sl.no.	VARIABLES	FREQUENCY	PERCENTAGE
1.	**Age of mother**		
	a. < 20 years	10	25%
	b. 20-30 years	15	37.5%
	c. 31-35 years	20	50%
	d. 36-40 years	5	12.5%
	e. Above 40 years	0	0%
2.	**Religion**		
	a. Hindu	35	87.5%
	b. Muslim	5	12.5%
	c. Christian	0	0%
	d. Others	0	0%
3.	**Educational status**		
	a. Primary education	10	25%
	b. Secondary education	14	35%
	c. Graduate	8	20%
	d. Doctorate	4	10%
	e. Uneducated	4	10%
4.	**Occupational status**		
	a. Housewife	25	62.5%
	b. Private employee	4	10%
	c. usiness/ Self employee	4	10%
	d. Government employee	7	17.5%
5.	Type of family		
	a. Nuclear family	20	50%
	b. Joint family	12	30%
	c. Extended family	8	20%
6.	Family income		
	a. Below Rs. 5000	5	12.5%

	b. Rs. 5000 – 10,000	12	30%
	c. Rs. 10,001 – 20,000	16	40%
	d. Above Rs. 20,000	7	17.5%
7.	Number of children		
	a. One	22	55%
	b. Two	12	30%
	c. Three	8	20%
	d. 4 and above	0	0%
8.	Age of child		
	a. Below 6 months	8	20%
	b. 6-12 months	10	25%
	c. 1-2 years	14	35%
	d. 3-5 years	8	20%
9.	Type of mobile phone uses		
	a. Smartphone	36	90%
	b. Normal/ basic phone	4	10%
	c. Rail line/ land line	0	0%
10.	Number of cell phone used		
	a. One	32	80%
	b. Two	8	20%
	c. More than two	0	0%

Frequency and percentage distribution of knowledge score of mothers according to their scoring criterion
N=40

Knowledge score categories		
	Frequency	**Percentage%**
Inadequate (1-7)	10	25%
Moderate (8-13)	20	50%
Adequate (14-20)	10	25%

Maximum score: 20

Chi square showing association between knowledge scores with selected factors of mothers of under five-year children.
N = 40

Sl.no.	Associated factors	Knowledge scores		df	Chi square calculated	Chi square table value	Significance
		BELOW MEDIAN	ABOVE MEDIAN				
1.	**Age of mother**						
	a) <20 years	4	6	4	48.49	9.48	Significant*
	b) 20-30Years	7	8				
	c) 31-35years	8	12				
	d) 36-40 years	7	13				
	e) Above 40 years	0	0				
2.	**Religion**						
	a) Hindu	10	25	3	12.9	7.81	Significant*
	b) Muslim	3	2				
	c) Christian	0	0				
	d) Others	0	0				
3.	Educational status						
	a) Primary education	4	6	4	20.3	9.48	Significant*
	b) Secondary education	7	7				
	c) Graduate	4	4				
	d) Doctorate	0	4				
	e) Uneducated	3	1				
4.	Occupational status						
	a) Housewife	10	15	3	20.25	7.81	Significant*
	b) Private employee	2	2				
	c) Business	1	3				
	d) Government employee	2	5				
5.	Type of family						
	a) Nuclear family	12	8	2	4.9	5.99	Not significant*
	b) Joint family	6	6				
	c) Extended family	5	3				
6.	Family income						
	a) Below Rs. 5000	2	3	3	20.58	7.81	Significant*
	b) Rs. 5000 - 10,000	5	7				
	c) Rs. 10,001 - 20,000	7	9				
	d) Above Rs. 20,000	3	4				
7.	Number of children						
	a) One	9	13	3	18.7	7.81	Significant*
	b) Two	7	5				
	c) Three	3	5				
	d) 4 and above	0	0				
8.	Age of the child						
	a) Below 6 months	3	5				
	b) 6 – 12 months	4	6				

	c) 1 – 2 years	5	9	3	6.32	7.81	Not significant*
	d) 3 – 5 years	4	4				
9.	**Type of mobile phones uses**						
	a) Smartphone	10	26	2	14.8	5.99	Significant*
	b) Normal/ basic phone	2	2				
	c) Rail line/ land line	0	0				
10.	Number of cell phone used						
	a) One	12	20	2	8.23	5.99	Significant*
	b) Two	4	4				
	c) More than two	0	0				

***Significance at 0.05 level of significance**

CONCLUSION

This chapter deals with the conclusion, implications, recommendations, and limitations drawn for the study "to assess the impact of mobile phone on mental health among mother of under five-year children at selected area Jamuhar Sasaram Bihar." The following conclusions were drawn based on the findings of the study:

- Regarding age of mother 20 (50%) mother were ages of less than 20 years, 15 (37.5%) were age of 23-30 years, 10 (25%) were age of less than 20 years, 5 (12.5%) were age of 36-40 year and 0 mother of age above 40 years.
- Most of the mother were Hindu 35 (87.5%), Muslim were 5 (12.5%) and others are zero.
- Out of 40 sample 14 (35%) were secondary education, 10(25%) were primary education, 8 (20%) were graduate, 4 (10%) were doctorate and uneducated.
- Majority of the sample 25 (62.5%) were housewife, 7 (17.5%) were government employee, 4 (10%) were private and business/self-employee.
- 16 (40%) sample family income was below 20,000 and 12 (30%) was below 10,000.
- Majority of mother were having 22 (55%) were one child, 12 (30%) were having 2 children, 8 (20%) were having 3 children and no mother having more than 3 children.
- 14 (35%) children were age of 1-2 years, 10 (25%) were age of 6-12 months, 8 (20%) were below 6 months.
- Majority of mother 36 (90%) were using smart phone and 4 (10%) were using normal phone.
- 80% mothers using one smart phone and rest are using two smart phones.

Findings related to the knowledge regarding the impact of mobile phone on mental health among mother of under five-year children at selected area Jamuhar Sasaram Bihar."

- The Median of knowledge scores of mothers of under-five year children impact of mobile phone on mental health (14.0) is higher than the mean knowledge score (**13.5)**, indicating a normal probability curve, which means all the measures of central tendency coincide at the centre of the distribution to a greater extent. The standard deviation of knowledge scores (3.02).
- The frequency of knowledge scores under Inadequate category was 25%. The frequency of Moderate category was 50%. The frequency of adequate criteria was 25%. This suggests that the majority of the mother's scores were under Moderate and Adequate knowledge category.

Findings related to association between knowledge scores of mothers of under five-year children and selected factors.

The association between knowledge and the socio-demographic variables of women regarding impact of mobile phone on mental health, which was analysed using chi-squire test. The findings revealed that there

was no significant association between the level of knowledge and socio-demographic variables such as type of family, age of children.
However, there was a statical significant association between knowledge and the socio-demographic variables such as age of mother, religion, educational status, occupational status, family income, number of children, type of mobile phone uses, and number of cell phone used.

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