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## AN EXPLORATORY STUDY TO ASSESS THE KNOWLEDGE OF MOTHERS REGARDING IMPACT OF INTERNET ON CHILDREN IN A SELECTED SCHOOL, LUDHIANA, PUNJAB

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### Introduction

The Internet is a medium that is growing rapidly. Children may have been exposed to the Internet, where they may have learned using it in an early age. Many of the children may have used the Internet without being guided and supervised by their parents and teachers. This makes them susceptible to the negative effects of the Internet. Parents' involvement in monitoring their child's behaviour and relationships and ensuring a safer use of the Internet is very important. Parents could play an important role to control their children's activities that have anything to do with the Internet and further protect their children from the danger brought about by the Internet. (Chhachhar AR, Qureshi B, Maher ZA & Ahmed S, 2014)<sup>1</sup>.

In today's society, people are living in a "technologically civilized" society where every small work that people do is technology dependent. As children grow, they become very over dependent and rely heavily on technology to complete their tasks. Children from school age begin to lack physical activity when sitting in front of the television, video and computer screens for hours than they do playing outside with friends. They also begin to lose their personal touch because they communicate through text-messages, social networks such as Facebook, Skype, Twitter and tons of other social networking sites that connect people. Although, technology has made a tremendous impact on society, school age children become overly dependent that it begins to affect their physical, socio-emotional and cognitive development. Therefore, parents, educators, and health care providers should understand the effects that media has on childhood development and learn ways to moderate negative effects and maximize positive effects, (Blanning, 2013)<sup>2</sup>.

A study demonstrated potentially profound effects of internet that are positive and negative on children's cognitive development. They have found that technology such as video games, could enhance children's visual spatial skills. However, children who are exposure to inappropriate violent games or television shows encourages violent behaviors, (Schmidt ME & Vandewater EA, 2008)<sup>20</sup>

According to a report published on 30<sup>th</sup> June 2014, the world's internet user base was around 3 billion, in which approx. 1.4 billion users are from Asia. The higher IA, i.e., 45.7% is from Asian countries (Indians are the highest users in Asia). There has been an explosive growth of Internet usage worldwide and this is expected to continue with its use becoming an integral part of everyday life. The Internet provides tremendous educational benefits; however, excessive Internet use can lead to negative outcomes such as poor school performance and social isolation. (Choi K, Son H, Park M, Han J & Kim K, 2008)<sup>22</sup>

Technology through media and electronic gadgets are able to help children to gain vast amounts of knowledge, taught them how to be independent and has given them access to educational resources; there are some negative influences that are accompanied with the positive ones which should not be neglected. Introducing technology to children at young age can have adverse effects in their personal lives, their relationships with others, and their health in the future. It can also lead children to social isolation and give rise to other serious physical and mental diseases such as, obesity, computer vision syndrome, and depression, (Alghamdi Y, 2017)<sup>23</sup>

We live in the era of the internet; it has become an important part of our life that people can't live without. The internet has many positive effects but at the same time it has negative effects on children too. Many Indian mothers are not aware of this and have little knowledge regarding impact of internet on their children. Investigator observed many children with headache, backache, eye sight problems and weight gain. Besides lot of mother's complaints about their children having less interest in studies and family gatherings. The investigator also had seen many children who are showing aggressive behaviour to their parents, and many who wants to be aloof. All these children spend their lot of time on internet. The investigator has recognized that mothers can be powerful force in influencing the internet, as mothers are close to children and can guide them in using and choosing the appropriate sites on internet. Mothers should know all the measures to prevent negative impact of internet on children's physical health, psychological health, academic performance and social behaviour. Internet use peaks in school going children where the child develops character and grows physically. Thus, the investigator decided to assess the knowledge of mothers regarding impact of internet on children between the age group of 5-14 years.

### • Statement of Problem

"An exploratory study to assess the knowledge of mothers regarding impact of internet on children in selected school, Ludhiana, Punjab".



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• **Aim of the study**

To assess the knowledge of mothers regarding impact of internet on children in order to identify the deficits in areas of knowledge, plan exhibition and develop information pamphlet for enhancing the knowledge of mothers.

• **Objectives**

1. To assess the level of knowledge of mothers regarding impact of internet on children.
2. To find out the relationship of knowledge of mothers regarding impact of internet on children with socio demographic variables i.e., age of mother, Education of mother, age of children, Gender of children, Residential area, Occupation of mother, Monthly income, Type of family, source of information, mode of internet access, time spent by children on internet and most common app used by children.
3. To identify the deficits in areas of knowledge of mothers, plan exhibition, prepare and distribute information pamphlet regarding the impact of internet on children with the view to enhance knowledge of mothers.

• **Operational definitions**

1. **Knowledge:** It refers to the factual information of mothers about the specific multiple-choice questions on impact of internet on children.
2. **Mother:** Refers to woman who is biological mother having children between 5-14 years of age and visiting school.
3. **Impact of Internet:** It refers to the knowledge of mothers regarding positive and negative effects of internet on children’s physical health, psychological health, academic performance and social behavior of the child.
4. **Children-** It refers to any male and female children in the age group of 5-14 years, studying in the school.

• **Assumption**

Mothers do have some knowledge regarding the impact of internet on children.

• **Delimitations**

1. The study was limited to mothers whose children were in the age group of 5-14 years.
2. The study was limited to C.F.C Christian Fellowship Centre Public school, B.R.S Nagar, Ludhiana, Punjab.

• **Conceptual framework**

The conceptual framework of the present study is based on “Three Phase Theory” described by **Fitts PM & Posner MI (1967)**. The present study aims to assess the knowledge of mothers regarding the impact of internet on children. For the present study, investigator having the assumption that the mothers have some knowledge regarding the impact of internet on children.

The model is characterized by Three Phases which overlaps continuously but are capable of theoretical delineation. These are as follows:

1. The Cognitive Phase
2. The Associative Phase
3. The Autonomous Phase

• **Research Methodology**

• **Research approach**

A quantitative research approach was used to assess the knowledge of mothers regarding impact of internet on children.

• **Research design**

Non-experimental exploratory research design was used to plan and organize the present study.

**Independent variables (Socio-demographic variables):** Age of mother, education of mother, age of child, gender of child, residence area, occupation of mother, monthly income, type of family, source of information on impact of internet, mode of internet access, time spend by child on internet and most common app used by child.

**Dependent variables:** Knowledge of mothers regarding impact of internet on children.

• **Research setting**

The present study was conducted in Christian Fellowship Centre (C.F.C) Public School which was located at Bhai Randhir Singh



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Nagar, Ludhiana, Punjab. The purpose of selecting this school was investigator’s convenience, feasibility, proximity and expected cooperation from the authorities in getting permission and conduction of the study.

• **Target population**

The study was conducted on mothers of children between age group of 5-14 years.

• **Sample & sampling technique**

The sample for the present study was 200 mothers selected by purposive sampling technique.

• **Description of tool**

A self-structured knowledge questionnaire was used to assess the knowledge of mothers regarding impact of internet on children in selected school, Ludhiana, Punjab.

The tool consisted of two parts:

**Section-A:** Demographic variables

**Section-B:** Self Structured knowledge questionnaire

**SECTION A: DEMOGRAPHIC VARIABLES**

This section consisted of 12 items for obtaining information about demographic variables of the mothers such as age of mother, education of mother, age group of children, gender of child, residential area, occupation of mother, monthly income, type of family, source of information, mode of internet access, time spend by child on internet and most common app used by the child.

**SECTION-B:**

This section consisted of 38 self-structured multiple-choice questions regarding the impact of internet on children. It consisted of 5 areas:

Areas	Items
1. Introduction regarding internet	5
2. Impact of internet on physical health	12
3. Impact of internet on psychological health	8
4. Impact of internet on academic performance	9
5. Impact of internet on social behaviour	4
<b>TOTAL</b>	<b>38</b>
Maximum score – 38	
Minimum score – 0	

• **Criterion measure**

The criterion measure for the present study was as follows:

Each question had 4 options, the correct answer carried ‘1’ mark and incorrect answer carried ‘0’ mark. The total score obtained by adding up the score of each 38 questions.

Maximum Score = 38

Minimum Score = 0

The level for this tool was set according to maximum and minimum score i.e., 38 and 0 respectively.

Level of knowledge	Score	Percentage
Good	>26	>70%
Average	13-26	34-70%
Below average	≤12	≤33%

• **Organization of data for Analysis**

The analysis of data was organized according to the objectives and presented under the following sections:

**Section I:** Sample Characteristics

**Section II:** Findings related to relationship of knowledge of mothers regarding impact of internet on children.



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SECTION-I  
SAMPLE CHARACTERSTICS

TABLE No.1: Frequency and Percentage Distribution of Sample according to Sample Characteristics  
N= 200

Sample characteristics	f	%
<b>Age of Mothers (in years)</b>		
20-24	-	-
25-29	42	21.0
30 or above	158	79.0
<b>Education of mother</b>		
Illiterate	2	1.0
Primary	6	3.0
Secondary	54	27.0
Graduate or above	138	69.0
<b>Age of children</b>		
5-9 years	100	50.0
10-14 years	96	48.0
Both a & b	4	2.0
<b>Gender of children</b>		
Male	84	42.0
Female	91	45.5
Both a & b	25	12.5
<b>Residential area</b>		
Urban	163	81.5
<b>Sample characteristics</b>		
Rural	37	18.5
<b>Occupation of mother</b>		
Business	13	6.5
Labourer	2	1.0
Service	61	30.5
Housewife	124	62.0
<b>Monthly income (in Rs)</b>		
<5000/-	12	6.0
5001-10,000/-	51	25.5
>10,000	137	68.5
<b>Type of family</b>		
Nuclear	116	58.0
Joint	84	42.0
<b>Source of information</b>		
Family/friends	100	50.0
Mass media	82	41.0



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Health professional	18	9.0
<b>Mode of internet access</b>		
Mobile	159	79.5
Personal computer	20	10.0
Laptop	10	5.0
Electronic tablet	11	5.5
<b>Time spent on internet</b>		
Less than 1 hour	101	50.5
1-2 hours	76	38.0
<b>Sample characteristics</b>		
	<b>f</b>	<b>%</b>
More than 2 hours	23	11.5
<b>Most common app used</b>		
Facebook	5	2.5
You Tube	123	61.5
WhatsApp	32	16.0
Any other	40	20.0

Table No.1 shows Frequency & Percentage distribution of sample according to sample characteristics in which majority of mothers (79.0%) were in the age group of 30 years or above, 21.0% in 25-29 years. According to education of mother, maximum number (69.0%) of the mothers were graduate or above, followed by 27.0% mothers who had secondary education, 3.0% had primary education and 1.0% was illiterate. According to age of children, maximum (50.0%) were from the age of 5-9 years, followed by 48% in age group of 10-14 years and 2.0% were in both age groups. According to gender of the children, maximum number (45.5%) had female children, 42.0% had male children and 12.5% had both male and females. According to residential area, maximum number (81.5%) of mothers were from urban area followed by 18.5% who were from rural area. According to occupation of mothers, maximum number (62.0%) of mothers were housewives, 30.5% were in service, 6.5% were business women and 1.0% were labourer. According to monthly income of the family, maximum number (68.5%) of mothers had monthly income of > Rs.10,000, followed by 25.5% who had monthly income between Rs. 5001- Rs.10,000 and 6.0% had < Rs. 5000. According to type of family, maximum number (58.0%) were from nuclear family, followed by 42.0% who were from joint family. According to source of information, maximum number (50.0%) received information about internet from family/ friends, 41.0% from mass media and 9.0% from health professionals. According to mode of internet used by children, maximum number (79.5%) of children used mobile, 10.0% used personal computers, 5.0% used laptop and electronic tablet. According to time spent by children on internet, maximum number (50.5%) of children used internet for less than 1 hour, 38.0% used for 1-2 hours and 11.5% used for more than 2 hours. According to most common app used by children, maximum number (61.5%) of children used YouTube, 20.0% used any other app, 16.0% used WhatsApp and 2.5% used Facebook.

Hence, it can be concluded that maximum mothers were in the age group of 30 years or above, graduate & above, had children in age group of 5-9 years and were having female children, lived in urban areas, were housewives, had monthly income of > Rs. 10,000, belonged to nuclear family, got information from family/friends, mobile was common mode of access, children used internet for less than 1 hour and commonly used app was YouTube.

## SECTION-II

### Findings Related to Relationship of Knowledge of Mothers Regarding Impact of Internet on Children.

**Objective 1:** To assess the level of knowledge of mothers regarding impact of internet on children.



TABLE No. 2(a): Frequency & Percentage Distribution of Mothers According to Level of Knowledge Regarding Impact of Internet.

N=200

Mothers			
Level of Knowledge	Score	f	%
Good	>26	02	1.0%
Average	13-26	170	85.0%
Below average	≤12	28	14.0%

Maximum score = 38

Minimum score = 0

Table No.2(a) & Fig.3 depict that majority of mothers (85.0%) were having average knowledge score, followed by 14.0% mothers who got below average knowledge score and 1.0% mother got good knowledge score regarding impact of internet on children. Hence, it can be concluded that majority of the mothers had average knowledge regarding impact of internet on children.

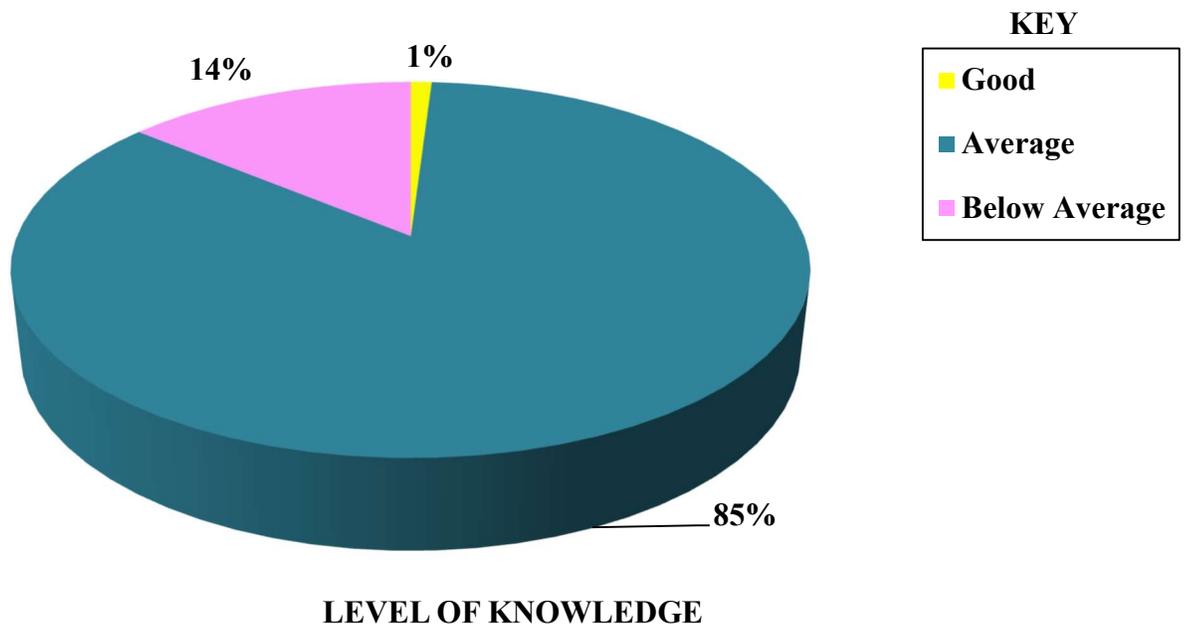


Fig.3 Percentage Distribution of Mothers Regarding Impact of Internet on



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TABLE 2 (b): Mean, Mean Percentage and Rank Order of Knowledge Score of Mothers Regarding Impact of Internet on Children according to Areas of Knowledge

Areas of Knowledge	Knowledge score			
	Max Score	Mean	Mean%	Rank Order
Introduction regarding Internet	5	3.62	72.4	I
Impact on Physical Health	12	5.18	43.17	III
Impact on Psychological Health	8	3.59	44.94	II
Impact on Academic Performance	9	3.43	38.11	IV
Impact on Social Behavior	4	1.17	29.37	V

Maximum Score = 38

Minimum Score = 0

Table No.2(b) & Fig.4 indicate that according to areas of knowledge regarding impact of internet on children, mothers had highest knowledge in the area of introduction regarding internet (72.5%) and was given (Rank I), followed by 44.94% in impact of internet on psychological health (Rank II), followed by 43.17% in impact of internet on physical health (Rank III), followed by 38.11% in impact of internet on academic performance (Rank IV), followed by 29.37% in impact of internet on social behaviour of the child (Rank V).

Hence, it can be inferred that mothers had highest knowledge in the area of introduction regarding internet and least knowledge in the area of impact of internet on social behaviour of the child.

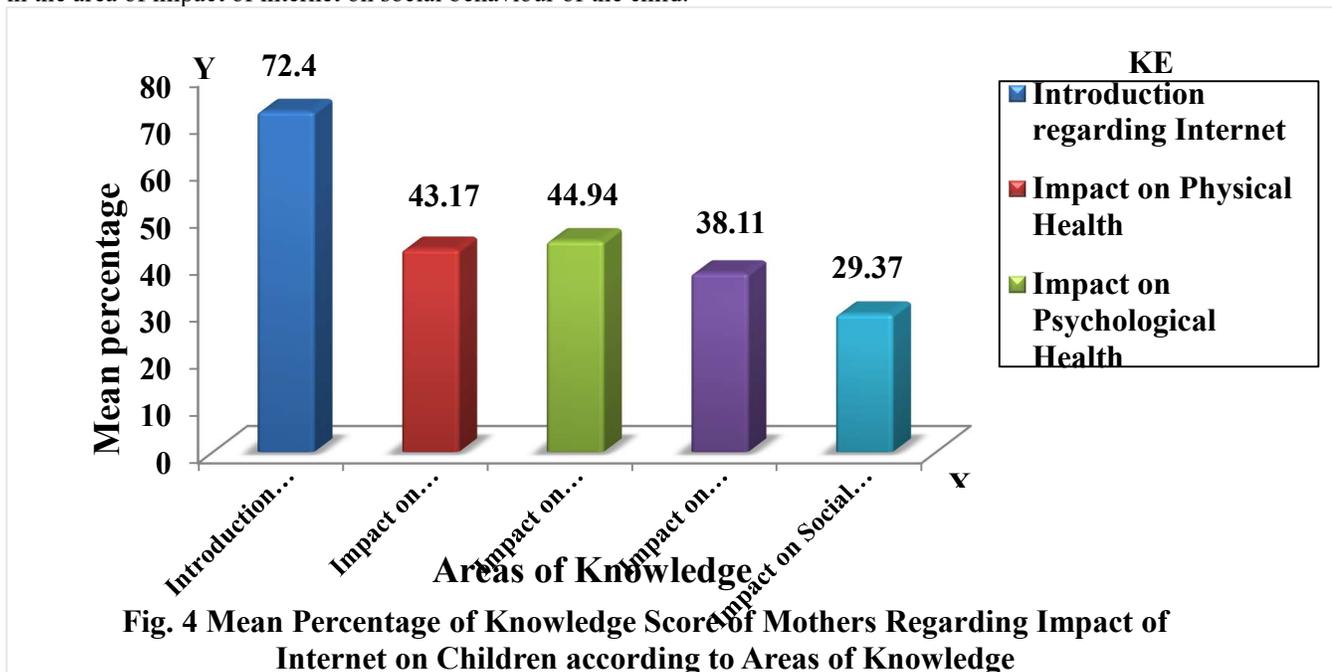


Fig. 4 Mean Percentage of Knowledge Score of Mothers Regarding Impact of Internet on Children according to Areas of Knowledge

Major findings

The analysis of the data revealed following findings:



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• **Findings related to sample characteristics**

- Maximum number of mothers (79.0%) were in the age group of 30 years & above
- Maximum number of mothers (69.0%) were graduate and above
- Maximum number of mothers (50.0%) were having child/children in the age group of 5-10 years.
- Maximum number of children (45.5%) were female
- Maximum number of mothers (81.5%) lived in urban area
- Maximum number of mothers (62.0%) were housewives
- Maximum number of mothers (68.5%) were having monthly income of > Rs. 10,000
- Maximum number of mothers (58.0%) belonged to nuclear family
- Maximum number of mothers (50.0%) got information from family/friends
- Maximum number of children (79.5%) used mobile for internet access
- Maximum number of children (50.5%) used internet for less than 1 hour
- Maximum number of children (61.5%) used YouTube on internet

• **Findings related to knowledge of mothers regarding impact of internet on children**

- The mean knowledge score of mothers regarding impact of internet on children was 17.01. Majority of mothers (71.0%) obtained average knowledge score, followed by 26.0% mothers got below average knowledge score and 3.0% mothers got good knowledge score.
- Mothers had highest knowledge in the area of introduction regarding internet, followed by impact of internet on psychological health, impact of internet on physical health, impact of internet on academic performance and impact of internet on social behaviour.
- Mothers of age group 30 years and above had highest mean knowledge score and least in the age group of 25-29 years.
- Mothers who had secondary education had highest mean knowledge score and mothers who had primary education had least mean knowledge score.
- Mothers who had children of both the age groups had highest mean knowledge score and mothers who had children between 10-14 years had least mean knowledge score.
- Mothers who had female children had highest mean knowledge score and mothers who had male children had least mean knowledge score.
- Mothers who live in urban areas had highest mean knowledge score and who lives in rural areas had least mean knowledge score.
- Business mothers had highest mean knowledge score and mothers who were labourers had least mean knowledge score.
- Mothers who were having monthly income of >Rs 10,000 had highest mean knowledge score and mothers who had < Rs5,000 had least mean knowledge score.
- Mothers who belong to nuclear family had highest mean knowledge score and least in mothers who belongs to joint family.
- Mothers who got information from health professionals had highest mean knowledge score and mothers who got information from family/ friends got least mean knowledge score.
- Children whose mode of internet access is electronic tablet had highest mean knowledge score and least in personal computers.
- Children who use internet for more than 2 hours had highest mean knowledge score and least in those who uses internet for less than 1 hour.
- Children who use Facebook had highest mean knowledge score and children who uses WhatsApp had least mean knowledge score.

• **Findings related to significance**

- Education of mother, Residential area and source of information had significant relationship with knowledge of mothers regarding impact of internet on children. Age of mother, education of mother, age of children, gender of children, occupation of mother, monthly income, type of family, mode of internet access, time spent on internet and most common app used by children had no significant relationship with knowledge of mothers regarding impact of internet on children.

• **Implication of the study**

The findings of the study provide important implications for nursing profession i.e., nursing education, nursing administration, nursing practice and nursing research. In all the areas, the role of nurse is to improve knowledge of mothers regarding impact of internet on children. Mass awareness is very important regarding impact of internet to promote good physical & psychological health, good academic performance and social behavior of children. The findings of the study had several implications, which have been discussed in four areas:

- Nursing Education
- Nursing Administration
- Nursing Practice



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○ Nursing Research

1. **Nursing Education:** Education is the key for development of excellent nursing practice. Child Health (Paediatric) Nursing curriculum for all levels of nursing students should include the topic of impact of internet on children so that they educate the parents and children about positive and negative effects of internet and encourage the parents to inculcate good habits of internet use among children as part of health promotion activities. Nurse specialized in Child Health (Paediatric) Nursing can utilize time to organize school health program on impact of internet on children. Moreover, nursing curriculum should provide opportunity to the students to plan and conduct teaching programs and health education regarding impact of internet on children in a variety of setting like community, hospital, health centers etc.
2. **Nursing Administration:** As a nurse administrator, Nurse have to take responsibility to arrange in- service education program, workshop, seminar on impact of internet on children so that they can use that knowledge in disease prevention, health promotion, health education and for enhancing knowledge of parents. It is essential for nursing administrators to facilitate activities to improve knowledge of public, parents, teachers and children regarding impact of internet on children by organizing health education program.
3. **Nursing Practice:** Nursing professional should render services according to changing needs of the society. Nurses specialized in Child Health (Paediatric) Nursing need to take the responsibility of helping children and their parents in regulation of internet usage habits in order to minimize the negative impact of internet on physical health, psychological health, academic performance and social behavior. Paediatric nurse can also utilize time to organize school health program on impact of internet on children.
4. **Nursing Research:** The findings of the study act as catalyst to carry out more extensive research on a large population sample in different areas of community. The nurse can conduct more research to further define the relation of impact of internet on physical health, psychological health, academic performance & social behaviour of the children. Similar studies can be conducted to find the impact of internet on adolescents, college students etc.

● **Recommendations**

Based on the findings of the study, following recommendations are offered:

- Study can be replicated on a large sample of mothers to generalize the findings.
- Study may be conducted in different school of particular state.
- Similar studies can be conducted in different settings like community, hospital, colleges etc.
- Study can be conducted among parents to assess whether parents are monitoring the children's use of internet
- Study can be conducted to assess knowledge, practice and attitude of children regarding impact of internet on children
- A co-relational study can be conducted to assess the habit of internet use among parents and children
- An experimental study can be done to find the effectiveness of teaching program on positive impact of internet on children
- A study can be conducted to assess the impact of excessive internet use on psychology of children.
- The tool used for assessing the knowledge of mothers regarding impact of internet on children can further be modified and tested for standardization.

● **Conclusion**

Present study revealed that majority of mothers 170 (85.0%) had average knowledge score, followed by 28 (14.0%) had below average knowledge score and 2 (1.0%) had good knowledge score. Therefore, it was concluded that majority of mothers had average knowledge score regarding impact of internet on children. Mothers had highest knowledge in the area of introduction regarding internet and least knowledge in the area of impact of internet on social behavior of the children. Education of mother, residential area and source of information had significant influence on knowledge of mothers regarding impact of internet on children.

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