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RESEARCH ARTICLE

Effectiveness of Information, Education and Communication Regarding Influence of Social Media on Children's Behaviour Among Mothers

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Abstract: In recent years, social media (SM) have become a part of our daily lives, and the usage of different types of SM platforms has been significantly increased exponentially each day. In the modern, advanced digital age, SM plays a vital role in our day-to-day life in using of smartphones, laptops and desktops. Children access these technologies and the internet at younger age. It has influenced user's physical and mental behaviours, when they use and spend more times in a day. In this regard, mothers need to monitor their children's SM usage, and cope with their behaviours often in home. However, most of the mothers are not knowing how to address the negative outcomes of SM usage. In recent years, the Information, Education and Communication (IEC) applications are essential in teaching the parents about the possible SM dangers, and offering strategies for tracking and guiding their children's daily usage. By enhancing cognizance and promoting media literacy, IEC interventions can help mothers foster healthier media behaviour of their kids. However, recent research works on IEC's effectiveness, in particular in rural regions, stays confined and requires further exploration. Therefore, this study has aimed to assess the effectiveness of IEC regarding influence of SM on children's behaviour among mothers under pre- and post- experimental investigations. The study was conducted in Rural and Urban area at Arakkonam. Non probability convenience sampling technique was adopted to collect the samples. For this study, samples of 60 mothers of school going children and their demographic data were collected. Followed by knowledge questionnaires and three-point Likert scale questionnaires were also collected to assess their attitudes towards impacts of SM usage. The results obtained from this study shows significant improvements, with 47% gaining knowledge at post-test and routine follow-up increasing from 42% to 50%. Collectively, the results indicates that the IEC was successful in increasing mothers' awareness and managing their children's SM usage. Further, more studies need to be investigated in relation to the use of IEC in near future to monitor, advise and control the long-term use of SM among the mothers and their children, and also against physiological (eye irritation and head ach) and psychological (anxiety and depression) impacts.

Keywords: Social media, Information Education Communication package, effectiveness, influence, children's behaviour, mother.

INTRODUCTION

In the internet world, a fastest growing online platform among the children, younger and adult people is social media (SM), which is extensively used to communicate remotely, express themselves, share their information, and learn and know in and outside the world. In the modern, advanced digital age, SM plays a vital role as an integral part of our daily life, and in browsing the most popular online activity in smartphones, laptops and desktops by accessing internet (Brzozowska and Gotlib, 2025). Among these, the smartphones were introduced in 2007, and by 2028 more than 80 percent of parents, teens and young adults will be owned a smartphone with many advance applications (Statista, 2023). For instance, Application of Facebook, WhatsApp, TikTok, YouTube, Instagram, Snapchat, LinkedIn, Email, Twitter (X), Text, Videos, Blogs, Message boards, Myspace, Online dating, Games and entertainment, Social networking and artificial intelligence (AI) used sites are collectively called as SM platform; easily available to the public including children via internet (Manning, 2014). The SM primarily provides potential benefits such as find and learning subject matter, enabling communication with people, socialize with new people and similar interests, and enhances their knowledge and broadens the child's perspectives overall. It encourages the people in maintaining relationships their friends who live far away that help keeping connections strong despite the distance. This evolution in the capacities of SM platforms reflects a broader, more interactive digital landscape where children and youth are active participants with the recent technology (Diaz et al., 2025).

For this study, children aged 6-12 years were used for investigating their exposure to SM usage. Indeed, the age group between 6-12 years are typically experiencing a phase of growth and development, both physical and attitudinal (Tzilas et al., 2020; Beenackers et al., 2021). Especially, children aged 6-12 years group is the most sensitive to outside influences, and helps to shaping children's behaviour at intellectually, emotionally, and socially. A regular use of SM and spending too much time in front of a screen affects children differently, depending on their gender, economic status, personalities, the nature of home and social environments, and their life experiences (Twenge and Campbell, 2020). In addition, children keeping their

phones by their sides while sleeping are often distracted by their notifications and bright light, leading to poor sleep. In this regard, according to the previous reports, a continues usage of SM more than three hours in a day may induce eye irritation, anxiety and depression in all age (children. teenage, and adult) groups. However, the impact of SM on children may be toxic in case of excessive usage, and could even cause adverse effects on the users worldwide including India due over population and use of SM.

In home, mothers are the primary caregivers among the family members; playing an important role in managing children's SM exposure. Recent studies have reported that most of the people are still not aware of how digital platforms affect children's behaviour. In this regard, it has been reported that 45% of parents were concerned about the impact of SM on towards their children but many parents do not actively participate in supervision due to a lack of knowledge (Barr, 2020). These can lead to overexposure or insufficient management of online content and negative effects more severe. In this case, information, education and communications (IEC) strategies are critical to filling this knowledge gap. Recent studies demonstrate the effectiveness of IEC interventions in increasing parental understanding and promoting healthy SM habits among children (Coyne et al., 2020); is needed to effectively monitor or mediate their children's use of it (Jiang, 2019). By teaching mothers about the risks and benefits of social media, the IEC program typically helps them to take a more proactive role in guiding their children's digital interactions, and ultimately promotes healthier emotional and social development. Research studies over the years have brought out various types of negative impact of intense viewing of different types social networks, platforms and media by children which is not much known to the family and society (Ganga Devi and Ramya Rathi Devi, 2016). Therefore, it is needed to focus comprehensive educational strategies to better prepare mothers for the challenges of parenting in a digital age (Kumar and Mehta, 2024). To overcome these problems and boost the parental care, the present study is aimed to assess three important objectives as follows 1) to evaluate the pre-test level of knowledge and attitude regarding influence of SM on children's behaviour among mothers, 2) to determine the effectiveness of IEC on influence of SM on children behaviour among mothers and 3) to associate between the selected demographic variables with post-test level of knowledge and attitude regarding influence of SM on children's behaviour among mothers.

RESEARCH METHODOLOGY

In this study, the research design adopted is pre-experimental and post-test designs and conducted in Kavanur, Arakkonam, a suburban town in Ranipet district, Tamil Nadu, India. It has a population of 78,395 people and 19,507 households. The researchers focused on the rural area of Kavanur, with a total population of 4,681, including 2,323 men and 2,358 women. The female population consisted of 984 mothers. A total of 60 participants were selected for the study. Nonprobability convenience sampling techniques were used to identify samples that met the inclusion criteria. Specifically, the target group was mothers of children aged 6 to 12 years after collecting demographic information. Participants will receive an informational educational communication package which includes a book. An Information Education and Communication (IEC) package consisting of pamphlets, PowerPoint presentations, and posters that addressed the relationship between social media and children's behaviour. To evaluate the effects of this educational intervention, the participants completed a knowledge questionnaire focused on SM and a three-point Likert scale questionnaire assessing their attitudes towards SM usage. This comprehensive approach aimed to enhance understanding and awareness of how SM influences children's behaviour and the overall implications for their development.

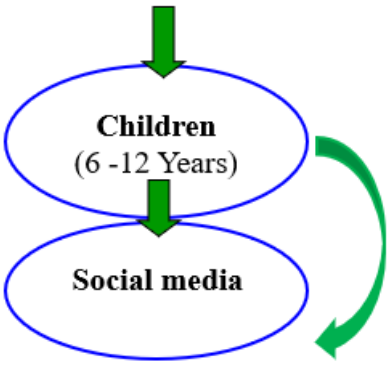
Ethical consideration

The present study was conducted according to the ethical guidelines approved by the institutional review board and institutional ethical committee of Meenakshi Academy of Higher Education and Research (MAHER), Mangadu, Chennai, Tamil Nadu, India. In addition, a permission was also obtained from the Municipal Councillor of Arakkonam, after explaining the objectives of the study. The purpose and benefit of the study were explained to the participants and written consent was obtained from each participant before the data collection. Assurance was given to the participants that the confidentiality will be maintained.

Data collection and instruments

For the present study, a questionnaire was prepared; consist of three sections. Section A dealt with a structured questionnaire to assess demographic variables (Age of the mother, number of children, type of family, area of residence, education of mother, age of children). Section B comprised of tools to assess the level of knowledge with a structured questionnaire of 20 items was created to assess mothers' knowledge of social media consumption and its effects on children's behaviour. Scores above 75% indicate adequate knowledge, 50-75% reflect moderately adequate knowledge, and below 50% represents inadequate knowledge, highlighting areas for further education and support. Section C comprised of A structured 30-item 3-point Likert scale questionnaire was developed to assess mothers' attitudes toward social media consumption and its impact on children's behaviour. The scoring ranges from 1 to 30 for poor attitudes, 31 to 60 for moderate attitudes, and 61 to 90 for positive attitudes, providing insight into their perceptions (Figure 1).

Study area: Kavanur
(Arakkonam, Ranipet district, Tamil Nadu, India)



3 Phase of Questionnaires for studying Mothers' Knowledge and Attitude about using of SM by their Children based on IEC (n = 60; Collection of Data)

P1: Demographic variables (Age, No of children, Type of family, Area of residence, Education, Age of Children)

P2: Level of Knowledge (Pre- and Post-test)

P3: Level of Attitude (Pre- and Post-test)

Significant Responses Found 2. Need Management and Control Strategy in SM Platforms

Figure 1. Schematic diagram of experimental design on social media at study

Statistical analysis

The data analysis was performed using both descriptive and inferential statistics. Descriptive statistics was included frequencies and percentage distributions to characterize maternal demographic variables. Mean and standard deviation was used to estimate knowledge scores for inferential statistics. A paired '*t*' test was executed to compare pre-test and post-tests on the evaluation of educational interventions, mothers' knowledge and their attitude levels. Chi-square tests were also conducted to examine the relationship between knowledge and attitude levels with selected demographic variables. It provides insights into how these factors influence mothers' perceptions of SM consumption and its impact on children's behaviour.

RESULTS

In the present study, the demographic analysis reveals that the majority of mothers (47, or 78.3%) belong to the age group of 22–24 years, while 7 mothers (11.7%) are in the 24–26 age range, 4 mothers (6.7%) are aged 27 and above, and 2 mothers (3.3%) are in the 19–21 age group. Regarding the number of children, 25 mothers (41.7%) have one child, 22 mothers (36.7%) have two children, 12 mothers (20%) have three children, and 1 mother (1.7%) has four or more children. In terms of family type, 34 mothers (56.7%) come from nuclear families, while 26 mothers (43.3%) belong to joint families. All 60 mothers (100%) reside in urban areas. In relation to educational status, 25 mothers (41.7%) hold an undergraduate degree, 16 mothers (26.7%) completed secondary education, 11 mothers (18.3%) have completed higher secondary education, and 8 mothers (13.3%) possess a postgraduate degree. Concerning the age of their children, 47 mothers (78.3%) have children aged 6–9 years, while 13 mothers (21.7%) have children aged 10–12 years (Table 1). The knowledge level of mother in pre-test level 55 (91.75%) of mothers having inadequate knowledge, 5 (8.3%) having moderately adequate knowledge, 0 for adequate knowledge. Whereas in Post-test level 2 (3.3%) is having inadequate knowledge, 52 (86.7%) having moderately adequate knowledge, 6 (10%) is having adequate knowledge (Table 2).

The attitude level of mother in pre-test level 4 (6.7%) of mothers having poor attitude, 48 (80.0%) having moderate attitude, 8(13.3%) having high attitude. Whereas in Post-test level 2 (3.3%) is having poor attitude, 19 (31.7%) having moderate attitude, 39 (65.0%) is having high attitude (Table 3). The effectiveness of intervention of mother's knowledge of the influence of SM on children were showed a mean value 5.30 and standard deviation 1.71 in the pre-test. Whereas the post-test found a mean value 1.71 and standard deviation 1.51 (Table 4). Further, the current study was observed a mean value 38.93 and standard deviation 5.08 on the effectiveness of intervention of mother's attitude of the influence of SM on children in

the pre-test, whereas the post-test level reported the mean value 46.58 and standard deviation 8.52 (Table 5). Collectively, the results of the present study observed the correlation between knowledge and attitude of the influence of SM on children among mothers in the pretest $r = 0.156$ and $p = 0.235$ (not significant), whereas in the post-test $r = 0.105$ and $p = 0.423$ (not significant) (Table 6).

Table 1. Frequency and percentage distribution of mothers of school children based on their demographic variable. n = 60

Sl. No	Demographic variables	Study group	
		Frequency	Percentage
1.	**Age of mother**		
	a. 19 – 21 years	2	3.3
	b. 22 – 24 years	47	78.3
	c. 24 – 26 years	7	11.7
	d. 27 & above	4	6.7
2.	**No of children**		
	a. One	25	41.7
	b. Two	22	36.7
	c. Three	12	20.0
	d. Four & above	1	1.7
3.	**Type of family**		
	a. Nuclear family	34	56.7
	b. Joint family	26	43.3
4.	**Area of residence**		
	a. Rural	30	50.0
	b. Urban	30	50.0
5.	**Education of mother**		
	a. Secondary	16	26.7
	b. Higher Secondary	11	18.3
	c. UG degree	25	41.7
	d. PG degree	8	13.3
	e. Ph. D	0	0.0
6.	**Age of Children**		
	a. 6 - 9 years	47	78.3
	b. 10 - 12 years	13	21.7

Table 2. Level of mothers' knowledge of the influence of social media on children for pre-test and post-test.

Level of knowledge	Pre-test		Post-test	
	No	%	No	%
Inadequate knowledge	55	91.7	2	3.3
Moderately Adequate knowledge	5	8.3	52	86.7
Adequate Knowledge	0	0	6	10.0
Total	**60**	**100**	**60**	**100**

Table 3. Level of mothers' attitude of the influence of social media on children for pre- test and post-test

Level of attitude	Pre-test		Post-test	
	NO	%	NO	%
Poor Attitude	4	6.7	2	3.3
Moderate Attitude	48	80.0	19	31.7
High Attitude	8	13.3	39	65.0
Total	**60**	**100**	**60**	**100**

Table 4. Effectiveness of intervention of mothers' knowledge of the influence of social media on children

Descriptive statistics	Knowledge score (n = 60)		
	Pre-test	Post-test	Difference (post - pre)
Mean	5.30	12.40	7.100
Standard deviation	1.71	1.51	2.31
Paired *t* - test = 23.786			

Table 5. Effectiveness of intervention of mothers' attitude of the influence of social media on children

Descriptive statistics	Attitude score (n = 60)		
	Pre-test	Post-test	Difference (Post - Pre)
Mean	38.93	46.58	7.65
Standard deviation	5.08	8.52	5.05
Paired *t* - test = 11.738			

Table 6. Correlation between knowledge and attitude of the influence of social media on children among mothers' in pre-test and post-test

Variables	Correlation value	
	***r* - value**	***P* - value**
Knowledge and Attitude: Pre-test	$r = 0.156$	$p = 0.235$ Non-Significant
Knowledge and Attitude: Post-test	$r = 0.105$	$p = 0.423$ Non-Significant

DISCUSSION

Every day news and research show that the quantity and quality of SM usage among the children has been increased; caused various behaviours and problems in children physically and psychologically. Worldwide it has been reported that there is a possibility, the children using SM platforms more than 3 hours may get involved in risky sexual behavior and cybercrimes. Parents are frequently confronted with the challenge of supervising their children's activities in and outside the home (Gallego et al., 2020). Typically, it is proved that the parental warmth is beneficial, and parental rejection is detrimental for children's mental (emotional and behavioral) health (Havewala and Wang, 2021). In this regard, mothers need to monitor their children's SM usage, and cope with their behaviours often in home. However, most of the mothers are not knowing how to address the negative outcomes of SM usage. The recent studies reported that IEC applications are providing essential guidelines to the parents and offering strategies for tracking and guiding their children's daily SM usage, and also for their family and social issues. The current study aimed at assessing effectiveness of IEC on SM and children's behaviour among mothers at Kavanur, Arakkonam, Chennai. A total of 60 samples were selected and their knowledge, attitude assessed using structured questionnaires. The study reveals demographic insights about mothers of school children, with 72% aged 22-24 years, 72% having a single child, and 67% from nuclear families, evenly split between urban residences. Regarding their knowledge, 53% spend 2-3 hours on SM, while 55% believe it negatively impacts their child's academic performance. Concerns are prevalent, with 60% regularly discussing content with their children, and 64% unsure of behaviour changes post-exposure. Although 42% support SM literacy education, many remain worried about peer influence, balancing SM benefits and risks while monitoring their child's consumption with various strategies. To assesses the knowledge and attitudes of mothers regarding their school-age children's SM usage. In the pre-test, 53% of mothers demonstrated inadequate knowledge, while 47% showed adequate knowledge in the post-test, indicating a notable increase in awareness. Regarding their attitudes, 58% reported rarely monitoring their children's SM in the pre-test, but this improved to 50% indicating frequent monitoring in the post-test. This shift reflects a growing concern among mothers, highlighting their evolving attitudes toward actively engaging with and overseeing their children's SM habits for better guidance and support.

A recent study reported that the effectiveness of IEC programs designed for mothers in understanding and managing the influence of SM on their children. They found that an enhanced communication strategies lead to greater engagement from mothers in monitoring and discussing SM usage, resulting in improved behavioural outcomes in children (Thomas and Fernando, 2024). Education and educational programs influence children's behaviour in relation to SM and to equip mothers with the knowledge necessary to navigate the complexities of SM (Bhandari and Singh, 2023). Further, Nakamura and DeCaro, (2022) examined various IEC strategies tailored for parents, particularly mothers, to enhance their awareness of SM's impact on children's behaviour. They found that comprehensive IEC programs lead to increased awareness and more effective parent-child communication regarding online behaviour. The study underscores the necessity of equipping mothers with the

tools to navigate the digital landscape responsibly. The results of the current study suggest that the associations between mothers' knowledge and attitudes are much needed to control the media exposure and children's behaviour. Significant relationships were identified between demographic variables, area of residence and educational status with knowledge levels. Further, significant relationships were also found between the area of residence, educational status, and children's age with attitudes, whereas no overall association was found with demographic variables in this study.

CONCLUSION

The study highlights the importance of IEC in empowering mothers to understand the influence of SM on their children's behaviours in normal life. Further, an increased awareness equips mothers to implement positive strategies, fostering healthier interactions with digital platforms and promoting better behavioural outcomes for children. It gives many ways to adopt new cultural, social and behavioral patterns among all age groups. Collectively, the results indicates that the IEC was successful in increasing mothers' awareness and managing their children's SM usage. However, it is necessary to communicate knowledge on overall impact of SM and its usage which help to create healthy society and to develop a healthy and wealthy nation. Further, more studies need to be investigated in relation to the use of IEC in near future to monitor, advise and control the long-term use of SM among the mothers and their children, and against physiological (eye irritation and head ach) and psychological (anxiety and depression) impacts.

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