

Effect of educational guidelines for using social media on reducing its use disorders among school age children

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Abstract

Background: Using social media is among the most common activity of children's day. It is important that parents become aware of the nature of social media sites, given that not all of them are healthy environments for children. **Aim:** of the study was to evaluate the effect of educational guidelines for using social media on reducing its use disorder among school age children. **Method:** A convenience sampling of 100 children at Abass Elakad primary school in Ismailia city throughout the period of data collection aged between 10-12 years old from both sexes to be able to understand the guidelines and have the ability to response with the researchers. A structured interview questionnaire was used to collect the data (pre and post). Children received the educational guidelines after assessing the baseline data. **Results:** Significant improvement in studied children' manner of using social media and improvement in social media use disorders total scores were observed after 6-month post-intervention and compared with the pre-intervention. **Conclusion:** The findings of the present study concluded that there is a positive significant correlation between the study variables. **Recommendations:** The study findings recommended the need for implementing of educational guidelines on wide range since proper use of social media by children can positively affect their health and development. Also, parents should have a continuous education to be able to guide their children for proper social media use.

Keywords: *Educational Guidelines, Social media, Use disorders & School age*

Introduction

Social Media refers to array of applications such as WhatsApp, Facebook, Twitter, LinkedIn, and YouTube etc. and websites through which people share the information and appreciate major events that happens around them (Sushma & Sathees, 2019). With the growing popularity of social media (SM) in our society, the number of children using them regularly has significantly increased, especially during the current COVID-19 pandemic (Paschke et al., 2021). In addition to their advantage of connecting people, social media services also entail an addictive potential due to psychological mechanisms built in by developers to achieve strong user loyalty and high usage times (Montag et al., 2019).

Children are considered particularly at risk for the development of problematic social media use (PSMU). PSMU resembles pathological and at-risk addictive behavioral patterns and is often accompanied by symptoms of mental disorders such as depression, anxiety disorders, attention deficit hyperactivity disorder, obsessive compulsive disorder, and eating disorders (Choukas-Bradley et al., 2020). Affected children show problems in their emotion regulation, which is considered a core component of psychiatric diseases (Marino et al.,

2020). Moreover, PSMU, as well as increased social media usage times in general are associated with academic performance deterioration in children (Sampasa-Kanyinga et al., 2019). Significant correlations between the frequency and duration of social media use and problematic social media use could be repeatedly shown. The inappropriate use of digital media affects the acquisition of communication, social and emotional skills, neuro-cognitive and motor development (Yildiz & Sefero, 2019).

It is necessary to provide national and/or European pediatric guidelines and recommendations for use of electronic media for children. They should be revised frequently in order to address the use of new emerging technologies. Pediatricians should use every contact of families with health services as an opportunity to emphasize the importance of responsible and safe use of mobile devices, informing and assisting parents in raising children in the digital world. Also; whenever possible the pediatricians advocate family time, discussions, media free meals and safe use of digital media. They should be provided with the materials, resources and supporting prevention and treatment programs regarding this field (Hadjipanayis et al., 2019.)

Nurses should promote child literacy and reading of age-appropriate books with the help of parents. They also should encourage parents to limit the use of digital media in the presence of children, especially under the age of three because of its detrimental effect on social development. They should rather promote direct interaction with their children. Pediatricians should promote a healthy family lifestyle with sufficient physical activity, free play time and help the families to set limitations on the use of digital media (Del Rio et al., 2019).

Based on statistics and tendencies of increasing prevalence rates of PSMU all over the world especially in developing countries and in Egypt in particular, there is a need for sustained active child education, support, and evaluation to improve the children's manure for using social media. Therefore, the current study will be carried out to evaluate the effect of educational guidelines for using social media on reducing its use disorders among school age children.

The significance of the study:

Nowadays children are growing up in an environment with a wide and growing range of digital media devices available throughout the world. Exposure to social media starts increasingly early in life. Using of social media has been linked to various negative health and development outcomes. The present study will increase the children awareness about the hazards of improper use for social media as well as it will help children to manage their manure of using social media with decreasing the negative impact of improper using of social media in their health.

Aim of the study was to:

Evaluate the effect of educational guidelines for using social media on reducing its use disorders among school age children.

Research hypothesis:

Children who participated in the current study will expect to have lower levels of social media use disorder following completion of the study at post-intervention evaluation.

Research Design:

A quasi-experimental (one group pre and post) research design was used in the present study.

Subject and Method

Setting: This study was conducted at Abass Elakad primary school in Ismailia City.

Subjects: A convenience sampling of 100 children of the previously mentioned setting throughout the period of data collection aged between 10-12 years old from both sexes to be able to understand the guidelines and have the ability to response with the researchers.

Tools of data collection: Two tools were used to collect the required data. The tools were designed and written in simple Arabic language and consisted of:

Tool 1: Structure interviewed questionnaire It was designed in simple Arabic language to suit the understanding of the study subjects and to gather the required data and composed of three parts. **The First part Sociodemographic data** which developed by the researchers and involved the characteristics of the studied children as age, sex, birth order and family income. **The second part assessing the manner of using social media**, adopted from **Sushma & Sathees (2019)** and it was concerned with assessing the manner of using social media by children as, mode of access for social networking applications, the most popular social media, number of hours spend in a day on social media, purpose of using social media, personal benefits/positive impact of using social media, dis-advantages/negative impact of using social media, state of mind during the use of social media, acceptance level with respect to request from strangers in social media tools. **The third part** adopted from **Van den Eijnden et al., 2016 Social Media Use Disorder Likert Scale for school age child** which concerned with reported disorders of using social media by the studied children to determine social media use disorder for them and involved ten items such as: the child often use social media more frequently and longer than the child planned to or agreed upon with the parents, the child neglect daily duties (e.g., tidying the room, obligations for school) because the child prefer using social media, the child continue using social media although it harms the performance at school, the child neglect appearance, personal hygiene, and/or health (e.g., sleep, nutrition, exercise) due to the social media use...etc. The child was asked to read these items well and think about the last 6 months and answer how strongly he agrees with these items.

Scoring system: Regarding Social Media Use Disorder Likert Scale for school age child: strongly agree was giving one score, agree was giving two scores, partially agree/partially disagree was giving three scores, disagree was giving four scores and strongly disagree was giving five scores. The total number of recorded items for each child was 10. The total scores were 50 scores. The scores of the items were summed up and the total divided by the number of the items, theses scores were converted into a percent score. Then their total reported answers scores were classified as satisfactory ($\geq 70\%$) and unsatisfactory ($< 70\%$).

Tool 2: Educational guidelines for using social media for school age children, it was adapted from **American Academy of Pediatrics (2016)** by the researchers based on needs' assessment of the studied

children in the light of different national and international references and was written in simple Arabic language.

Method:

Preparatory phase:

An official permission to conduct the study was obtained from the director of educational administration of Ismailia city and director of Abass Elakad primary school as well after explaining the aimed of the study and method of data collection by the researcher.

Pilot study:

A pilot study was carried out on ten children who represented 10% of the studied subjects at the previously mentioned settings in order to test the applicability of the constructed tools and the clarity of the included questions related to using social media by school age children. The pilot study had also served to estimate the time needed for the illustrative session that conducted by the researchers and for each child to fill in the questionnaire sheet and answer the study related questions. According to the results of the pilot, no modifications were required. The participants of pilot study were not be included in the study total sample.

Ethical consideration was followed through:

An oral approval was obtained from each child before the study beginning, after explanation of the purpose of the study. Oral consents were obtained from the children's caregivers to gain their approval about their children' participation. The researcher assured maintaining anonymity and confidentiality of the collected data throughout the study phases. The participants were informed that they have the right to withdraw from the study at any time without any responsibility.

Fieldwork

The period of data collection was extended over a period of 8 months, started from March, 2021 to the end of October, 2021. The researchers were available in the study setting during working hours two day/week. To assess studied children manner of using social media through the following phases:

Assessment phase (pre-implementation of the educational guidelines):

It was started by meeting children. At the beginning of the interview, the researchers introduced themselves to the studied children and presented a brief explanation about the aim and nature of the study plus the content of the educational guidelines, clarifying that, it was designed to improve their manner of using social media to minimize its negative impact on their health and development. Each child interviewed

individually, his/her manner of using social media were assessed using the previously mentioned tool.

Implementation phase: At this stage, the researchers organized individual training sessions for the studied children that, was held immediately after assessment. A group session of 5-10 child was organized also whenever available, at which the children were instructed about social media hazards, with emphasizing on importance of proper use of social media through the following points: social media-free zones, schedules without social media, restrictions on the use of electronic devices, how to choose and diversify the media the child consume, maintain a balance when the child was not online, pay attention to ethical consideration when using social media when he uses the media, digital citizenship, sleep and exercise and safety measures. Based on studied children' needs, small individual and group training sessions were organized for them. During these sessions, the researchers taught the required training to the children, and discuss successful experiences of similar children regarding using social media in a purposeful manner. Furthermore, at this stage, the researchers helped studied children to identify barriers of behavior changes as well as strategies to overcome them. The duration of group sessions ranged from 90 to 120 minutes using different teaching methods as case scenarios, demonstration & re demonstration and lectures. The training sessions were directed by the material of the educational guidelines prepared by the researchers. Suitable teaching media were prepared and used during the implementation of the study such as data show, real equipment, posters and pictures.

Evaluation phase: children were evaluated pre-training implementation to get a baseline assessment prior to the development of the educational guidelines and post-training implementation after 6 months of the educational guidelines by using the same tools. A comparison between children' pre and post 6 months-test findings was done to determine the effect of the study intervention on their manner of using social media.

Statistical design: The study data were analyzed using SPSS version 21. Descriptive statistics including the frequency distribution and percentages were used for the analysis of nominal data as demographic data of the studied children. Differences between variables through times of evaluation were analyzed using T -test. The statistical significance and associations were assessed using, the arithmetic means, the standard deviation (SD), (chi square test), Pearson's and Spearman's tests used to explore correlation between the variables. Significant level was identified at $p < 0.05$.

Results:**Table (1): Percentage distribution of the studied children according to their sociodemographic characteristic (n = 100).**

Variable	%
Age in years	
10 –	20
11 –	38
12	42
Mean & SD	11.32 ±0.5
Gender	
Male	57
Female	43
Birth order	
First	30
Second	37
Third	18
More than third	15

Table (2): Percentage distribution of the studied children according to their manner of using social media (pre/post implementation) (n = 100).

Items	Pre implementation	Post implementation	Significance test
	%	%	
Mode of access for social networking applications			
Mobile Devices	85	80	X ² = 3.889 P = 0.144
Laptops	10	15	
Desktop Computer	5	5	
The most popular social media			
Facebook	33	35	X ² = 2.22 P = 0.31
WhatsApp	10	10	
YouTube	47	50	
Instagram	10	5	
Purpose of using social media			
To keep updated with news/trend	30	50	X ² = 0.67 P = 0.01*
Communication with others	60	20	
Social awareness	5	25	
Sharing posts	5	5	
Personal benefits/Positive impact of using social media			
Learning	10	45	X ² = 0.56 P = 0.05*
Staying connected with friends	25	30	
Entertainment and fun	60	20	
Skills development	5	5	
Dis-advantages/ negative impact of using social media			
Health Issues	20	50	X ² = 0.70 P < 0.00*
Time waste	25	35	
Wrong Text Abuse	45	10	
Being bullied	10	5	
State of mind during the use of social media			
Motivation & Happiness	80	80	X ² = 3.82 P = 0.14
Boost Self Esteem	5	5	
No fear of being left alone	8	10	
Inspiration	2	5	

*Statistically significant differences

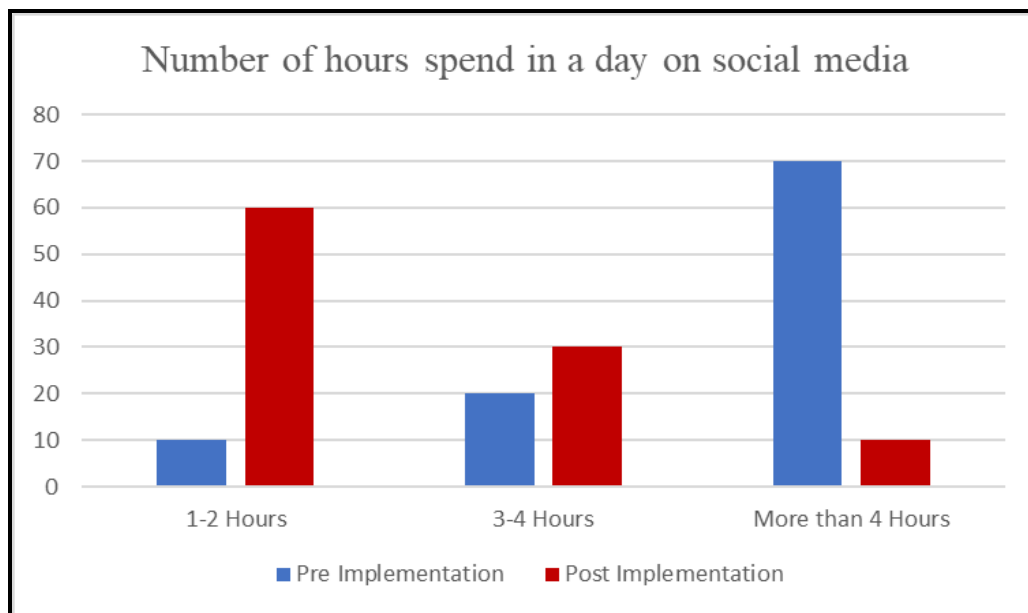


Figure (1): Frequencies distributions of the studied children according to their number of hours spend in a day on social media (pre/post implementation) (n = 100).

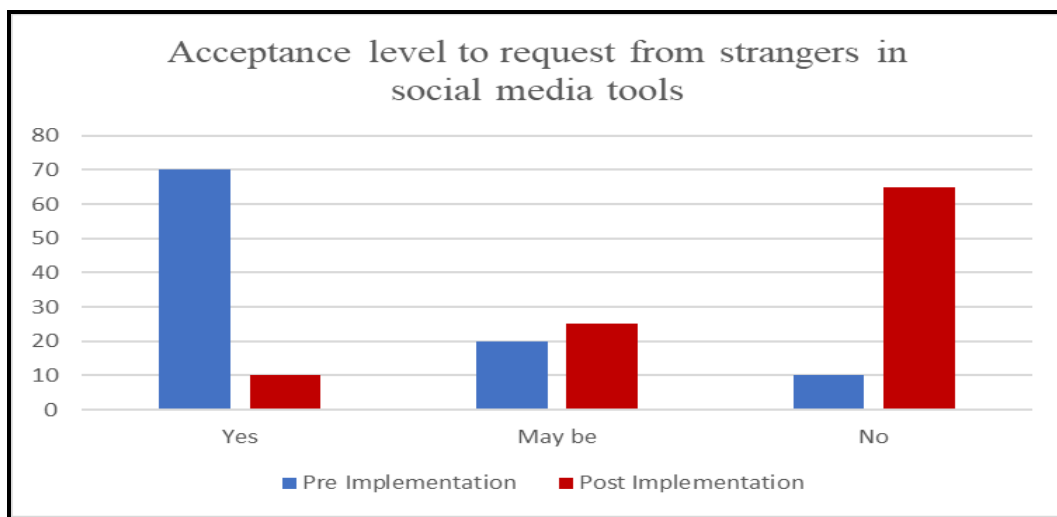


Figure (2): Frequencies distribution of the studied children according to their acceptance level with respect to request from strangers in social media tools (pre/post implementation) (n = 100).

Table (3): Percentage distribution of the studied children according to their total reported decrease in social media use disorder (pre/post implementation) (n = 100).

Reported social media use disorder total score	Pre implementation	Post implementation	Significance test
	%	%	
Satisfactory ($\geq 70\%$)	24	79	F= 87.65 P <0.001**
Unsatisfactory (<70 %)	76	21	

*Statistically significant differences

Table (4): Relation between demographic characteristics of studied children and their total reported decrease in social media use disorder (pre/post implementation) (n = 100).

Item	Reported social media use disorder level pre implementation		Reported social media use disorder level post implementation		Significance
	Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory	
	%	%	%	%	
Age in years:					
▪ 10 –	8	12	14	6	$X^2 = 0.75$ $P < 0.00^*$
▪ 11 –	17	21	24	14	
▪ 12	16	26	30	12	
Gender:					
▪ Male	8	49	48	9	$X^2 = 0.70$ $P < 0.00^*$
▪ Female	5	38	35	8	
Birth Order:					
▪ First	12	18	20	10	$X^2 = 0.56$ $P < 0.05^*$
▪ Second	14	23	28	9	
▪ Third	6	12	10	8	
▪ More than third	6	9	10	5	

*Statistically significant differences

Table (1): Illustrate demographic characteristics of the studied children in which, 42% of the participants are aged 12 years, (mean age, 11.32 ± 0.5), in addition, 57%, 67 % of them were male.

Table (2): Shows that 85% of participant can access to social media through using mobile device and 47% of them choose you tube as the most popular social media tools before implementation of educational guidelines, while 80%, 50% of them use mobile devises and YouTube after implementation of guidelines respectively. In addition, 60% of them reported that they use social media as away to communicate with others before, while 50% of them reported that they use social media as away to keep updated with trends and news. Also, this table shows that 60% of the participant reported that entertainment and fun is the most positive impact for social media and 45% of them reported that wrong text abuse is the most negative impact for social media before implementation of guidelines, while 45%, 50% of participant reported that learning is the most positive impact and health issues are the most negative impact for social media after implementation of educational guidelines respectively.

Regarding state of mind during the use of social media, 80%, 80% of participant reported that motivation and happiness is the most popular state of mind during the use of social media before and after implementation of the educational guidelines respectively. There was significance difference before and after implementation of educational guidelines regarding purpose, positive impact and negative impact of using social media found at $P = 0.01^*$, $P = 0.05^*$ and $P < 0.00^*$ respectively.

Figure (1): Shows that 70% of the studied children spent more than 4 hours in a day on social media before implementation of the guidelines, while 60% of them spent from 1-2 hours on social media after implementation of the guidelines.

Figure (2): Shows that 70% of the studied children accept request from strangers in social media tools before implementation of the guidelines, while 65% of them refuse to accept request from strangers after implementation of the guidelines.

Tables (3): Illustrates significant improvement in participants' total level of reported social media use disorder after implementation of the educational guidelines with $P < 0.001$.

Tables (4): Reveals a significant correlation between total decrease in social media use disorder scores of the participants and their demographic characteristics (age, gender and birth order) pre and post implementation of the educational guidelines with highly statistically significant differences found at $P < 0.00^*$, $P < 0.00^*$ and $P < 0.05^*$ respectively.

Discussion:

Children are growing up in an environment with a wide and growing range of digital media devices available throughout the world. Using of social media has been linked to various negative health and development outcomes (Yildiz & Sefero, 2019). Therefore, social media related education is crucial to reduce the negative impact of social media on the child's health. Accordingly, this study aimed to evaluate the affect of educational guidelines for using social media on reducing its use disorder among school age children.

As regards demographic characteristics of the participants (table 1), the current study revealed that, more than half of them were male. From the researchers' point of view this result may be due to that the males have a lot of time than females to play and using social media. These findings are goes in line with a study conducted by **Austermann et al., (2021)** in which they assessed problematic social media use in adolescents by parental ratings: development and validation of the social media disorder scale for parents and found that, more than have of participant were males.

Concerning the most popular social media tools used by participant (table 2), it was clarified that, half of the participant after implementation of the educational guidelines reported that YouTube was the most popular social media used by them. From the researchers' point of view this result may be due to that the children found their exciting and enjoying with YouTube because it contains a lot of videos and general news. These results were in contrary by **Rathgeb et al., (2020)** in which they evaluated the media use by 12- to 19-year-old in Germany and found that, nearly half of them reported that Instagram was the most popular social media used by participant.

Results of the current study detected that before implementation of the educational guidelines nearly two thirds of the participant's access for social networking applications through mobile devices and more than half of them said that their purpose of using social media is to have communication with others. From the researchers' point of view this result may be due to that the mobile is the easiest method for using social media and it can be used at any sitting and all the times. This result supported with **Sushma & Sathees (2019)** who conducted a study about impact of social media on youth and reported that most of the respondent's access for social networking applications through mobile devices, while more than one third of the respondents said that their purpose of using social media is to have a communication and connect with friends and family.

Also, the current study reported that, after implementation of the educational guidelines less than half of participant reported that learning was the most positive impact for using social media. These finding in contrast with **Sushma & Sathees (2019)** who reported that more than half of respondent said that entertainment and fun was the most positive impact, while the current study reported that, after implementation of the educational guidelines half of participant reported that health issues was the most negative impact for using social media, which was in contrast with **Sushma & Sathees (2019)** who reported that less than half of respondent said that

cyber theft was the most negative impact for using social media. Also; The current study illustrated that the majority of participant said that they feel happy and motivated while using social media, these finding goes in line **Sushma & Sathees (2019)** who reported that more than two fifth of respondent reported that happiness and motivation was the popular state of mind during the use of social media

Also; the current study shows that, after implementation of the educational guidelines the majority of participant reported that happiness and motivation was the popular state of mind during the use of social media. These finding goes in line with **Stockdale & Coyne (2020)** who conducted a study about Reasons for using social media, problematic social networking site use, and behavioral outcomes across the transition from adolescence to emerging adulthood and reported that the majority of participant said that happiness was the state of mind during using social media.

The current study shows that, more than half of participant spent from 1-2 hours on social media and refuse to accept request from strangers after implementation of the guidelines respectively. From the researchers' point of view this result may be due to the educational guidelines which improves the participants' manner of using social media. These finding in contrast with **Austermann et al., (2021)** who reported that more than half of participant spent more than 4 hours on social media per day and accept request from strangers.

The current study shows significant improvement in participants' total level of social media use disorder scores (table 3) after implementation of the educational guidelines. From the researchers' point of view, this result proven that, the improvement in participants' total level of social media use disorder scores is usually related the educational guidelines which improved the children manner of using social media. These findings were in different with **Rathgeb et al., (2019)** who conducted a study basic study on media use by 12- to 19-year-olds in Germany and reported that the more than two fifth of respondent have social media use disorder.

It was clear from (tables 4), that there was a significant correlation between participant's demographic characteristics (age, gender and birth order) and their reported total level of social media use disorder scores pre and post implementation of the educational guidelines. From the researchers' point of view this result could be owing to the fact that, educational guidelines for proper using of social media is a crucial part of child education and rearing. Child' education has been proven to be beneficial in reducing the social media use disorder through enabling them in managing their manner of using

social media. Children need effective educational training program regarding their manner of using social media. In addition, these guidelines should be implemented periodically to achieve a positive change in children' behavior. Parents have a key role in children' education process if only they know when and how to educate them efficiently, so that these guidelines should be implemented also for parents to qualify them for educating their children.

Conclusion:

The results of the current study showed that educational guidelines were effective in reducing social media use disorder among school age children.

Recommendations:

At the light of study results, the present study recommends:

- Implementing of educational guidelines for reducing social media using disorder on wide range since proper use of social media by children can positively affect their health and development.
- Parents and caregivers should have a continuous education to be able to guide their children for proper social media use.

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