Effectiveness of educational guidelines about social media misuse and electronic extortion on knowledge, attitudes and digital skills of school age children

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Abstract

Electronic extortion is one of the most deadly crimes faces young children and associated with social media misuse. Parents and all society have the responsibility to protect children from digital crimes. **The study aimed** to evaluate the effectiveness of educational guidelines about social media misuse and electronic extortion on knowledge, attitudes and digital skills of school age children. **Subjects and Method: Design: A quasi-experimental research design was utilized**. **Subjects:** A stratified simple random sampling of 200 students from three schools, Ali Mubarak Elementary School, Sabarbay Preparatory School and Elsadat Secondary School affiliated to Tanta City at Gharbeya Governorate. Three tools were used: **Tool I**: Students' knowledge assessment sheet, **Tool II**: Students' attitudes toward social media misuse and electronic extortion **and Tool III:** Students' digital skills reported questionnaire**. The results:** 86.6% of children had low knowledge level, 48% had positive attitude towards social media misuse and 77% had unsatisfactory digital skills before educational guidelines while 93% of children had high knowledge level, the majority of them had positive attitude and satisfactory digital skills after guidelines with positive correlation between students' knowledge, attitudes and digital skills **The study concluded** that the educational guidelines enhances students' knowledge, attitudes, and digital skills regarding social media misuse and electronic extortion. **The study recommended** that regular seminars should be held at schools to educate students the potential effects of social media and protection of electronic extortion.

Key words: Digital skills, Electronic extortion, School age children attitudes, Social media misuse

Introduction

As a result of technological advancement and the growing significance of global communication, social media has recently increased in relevance in children's daily lives. Social media are web-based platforms that facilitate connections, interaction, creation, modification, sharing, and participation in easily accessible manner for individuals, families and communities. It comes in many forms, including blogs, forums, business networks, photo-sharing platforms, social gaming, chat apps, and social networks. [1, 2]

The majority of children, especially adolescents have at least one social media platform with excessive use on weekdays. Additionally, they are more likely to utilize modern websites like Snap Chat and Instagram as well as video-sharing websites

like YouTube than traditional ones like Facebook and Twitter. In 2020, there were 3.6 billion social media users globally; in 2021, that number rose to be 4.66 billion. A survey was done in Egypt claimed that, 52.1% of children had smartphones addiction and used social media extensively, which has a negative impact on how well they function and develop. [3, 4]

School-aged children engage in a range of activities on social media, such as sharing of knowledge, creativity, communicating with classmates and creating a cohesive identity. It can support constructive offline behaviors, routines and healthy outcomes. Children can broaden their understanding of current events, which may help them develop into more responsible human beings. The negative aspects and problems that can occur due to excessive use of social media are social anxiety, isolation, body image dissatisfaction, distorted values, loss of memory, poor school achievements, health problems: neck and back pain, unhealthy eating habits, insomnia, poor performance of daily life activities, exposure to developmentally inappropriate content and electronic extortion. [5- 8]

Children communicate with many strangers around the world when using new sites. They share everyday life's moments and their personal data through pictures and videos, therefore exposed to various risks. Electronic or digital extortion become a serious threat to school age children associated with social media misuse. It occurs when the blackmailers have the chance to obtain information about the victims and their personal pictures then

threaten to publish these pictures in immoral situations and force them to pay money or commit immoral crimes in the absence of religious and moral awareness of the blackmailers. [8, 9]

Electronic extortion has become one of the crimes that spread recently because of development of modern technology and means of communication, family disintegration, and poor social upbringing. The victims contribute to the spread of this type of crime because of limited knowledge about digital skills and safe use of social media also, non-reporting about the blackmailer due to fear of their reputation. Electronic extortion affects all segments of society, males and females. [8-10]

School age children especially adolescents may expose to many forms of extortion as sexual and financial exploitation that affects negatively on physical, emotional and social wellbeing. Victims especially girls suffer from anxiety, fear, depression, loss of trust, anorexia, insufficient sleep associated with disruptions to neurological development and emotional functioning as well as risk for suicide as they can't overcome this serious problem. Hence, the crime of electronic extortion against school age children needs protection through family and societal supervision and adequate legal protection for the victim of electronic extortion. [11, 12]

Training in digital literacy should be provided prior to using social media. It refers to the knowledge, skills and attitudes that enable children to develop and thrive in an interconnected digital world, while being secure and in control over their daily lives in ways that are suitable for their age as well as the local cultures and circumstances. Digital

skills education has three levels: citizenship, innovation, and competitiveness and eight competences, including identity, usage, safety, security, emotional intelligence, literacy, communication and rights. [13, 14] Maintaining privacy, creating secure passwords for online accounts, and avoiding using apps or websites that request personal information are all forms of digital skills. It is crucial to use security software that can close security gaps that can be exploited, create a backup copy of the information stored on electronic devices, respect other people's opinions, encourage parents to closely monitor their children's' use of social media, and alert parents if their children become victims of online extortion. Parental engagement is essential for building trust, healthy connections with their children and preventing crimes. [14, 15] Education of parents, children, teachers and all community are essential in building long-term approaches to manage social media misuse and prevent electronic extortion. [16]

Significance of the study:

Social media misuse can cause multiple dangers for children including digital extortion, sexual assault, loss of trust, social isolation, suicidal thoughts and general decline of children's wellbeing [17]

Electronic extortion has recently become a dangerous phenomenon affecting mainly younger children and adolescents, as they are the most influential by using electronic communication sites that become their daily practice for long hours with absence of family role. In addition, children are in a stage of resistance to authority that requires parental wisdom and good relationship. They aren't interested in means of security to their data so, they may fall into many hazards by blackmailers who put intensive pressure on children that cannot be faced alone. Here comes the role of the family, which must dialogue with them, and notice any changes in their characteristics. [18] Continuous educational workshops play a crucial role in preventing exposure to electronic extortion. [18] **So that, the aim of the study was** to determine effectiveness of educational guidelines about social media misuse and electronic extortion on knowledge, attitudes and digital skills of school age children.

Research hypothesis:

School age children who receive the educational guidelines are expected to have high knowledge scores, positive attitude and satisfactory digital skills regarding social media misuse and electronic extortion after implementation.

Subjects and Method

Study Design: A quasi-experimental design was utilized in the current study.

Setting: The study was carried out in three schools, Ali Mubarak Elementary School, Sabarbay Preparatory School and El Sadat Secondary School which affiliated to Tanta City at Gharbeya governorate.

Subjects: A stratified simple random sampling was used: the students were stratified into two educational zones: East & West Tanta educational administration, East Tanta educational administration zone with three schools (Ali Mubarak Elementary School, Sabarbay Preparatory School and El Sadat Secondary School) were randomly selected. 25% were selected randomly from 6th grade of elementary school, 3th grade of preparatory school and second grade of

secondary school to reach the final sample size that was estimated to be 200 students. using Raosoft sample size calculation soft program, from the following equation: Sample Size "n = N * [Z2 * p * (1-p)/e2] / [N – 1 + (Z2 * p * (1-p)/e2]", where, N is the population size that was 800 students enrolled in the previously mentioned setting, Z2 is the critical value of the normal distribution that was 50% at α/2 (at a confidence level of 95%.), p is a sample proportion, e is margin of error 5%.

Tools of data collection: Three different tools were utilized to collect the required data, which include the following:

Tool I: **Students' knowledge assessment sheet.** The researchers constructed this tool after reviewing the most recent literatures [19, 20] to assess students' socio-demographic characteristics and knowledge regarding social media misuse and electronic extortion. It composed of three parts:

Part I: Socio-demographic data of school age children: such as: age, gender, education, residence, family income.

Part II: School age children usage of social media. This part included using social media or not, ways of applications access, commonly used platforms, duration spent daily, relationship with parents, parents' supervision on using social media, parents' discussion of electronic extortion and prevention of it, parents need for educational programs, previous school workshops and previous exposure to electronic extortion.

Part III: Students' Knowledge regarding Social Media Misuse and Electronic Extortion: it included: standardized number of hours, objectives, advantages, dis-advantages of using social media and electronic extortion (meaning, causes or motives, responsible groups, common social media platforms spreading electronic extortion, types, Hotline of electronic crimes, correct ways to treat it, preventives measures and school role in raising awareness about electronic extortion.

The scores of students' knowledge were as follows:

- Correct and complete answer was scored (2)
- Incomplete answer was scored (1)
- Wrong answer or don't know was scored (0)

Students' knowledge Total Scores were as follows:

- Less than 60% was considered low knowledge level.
- From 60 to less than 75 % was considered moderate knowledge level.
- From 75 to 100 % was considered high knowledge level.

Tool II: Students' Attitudes toward Social Media Misuse and Electronic Extortion: It was adapted from **Van den Eijnden & Jeroen., (2016)** [21, 22] and translated into Arabic language. It focused on social media attitudes among students and relationship with electronic extortion. It included 14 elements such as: using social for long periods of time, neglecting daily responsibilities (e.g., tidying bedroom and school duties), ignoring general appearance, personal cleanliness, and health (such as sleep, nutrition, and exercise**)**, using social media for learning, conflict with parents due to excessive media use, effect on reading and writing abilities, talking with strangers, suicide thoughts, informing parents and information security police when exposed to electronic extortion. **Scoring system for students' attitudes**

toward social media misuse and electronic extortion were as follows: agree was scored (3), sometimes was scored (2), disagree was scored (1). **The total scores of students' attitudes** were calculated and classified as follows:

- Positive Attitude: ≥ 75%
- Neutral Attitude: 60%: < 75%
- Negative Attitude: < 60 %

Tool III: Students' Digital Skills Reported Questionnaire: It was constructed by the researchers after reviewing the related literature [23-25] and translated in simple Arabic language to assess the eight digital skills of the students to improve their digital skills to avoid electronic extortion that include; (digital identity, digital rights, digital literacy, digital use, digital communication, digital safety, digital emotional intelligence, and digital security). It consisted of 8 statements.

The students' skills were scored as follows

- Done skills were obtained (1)
- Not Done skills were obtained (0)

Students' skills total scores according to the students' answers were calculated and classified as following.

- From 60% and more was regarded satisfactory practice.
- Less than 60% was regarded unsatisfactory practice.

Method

1. **Administrative process:**

- An official permission to conduct the study will be obtained from the responsible authorities.

- Obtaining ethical committee permission from the faculty of nursing ethical committee before conducting the study with number of approval 149-12-22.

2. Ethical and legal considerations:

a. Nature of the study didn't cause any harm or pain to the entire sample.

b. Confidentiality and privacy were taken into consideration regarding the data collection.

c. Students' oral consent was taken before the study began and children were informed that they could discontinue the study at any time

3. Tools validity: the questionnaire validity was calculated based on opinions of pediatric nursing and community health nursing professionals after calculating content validity index (%) of its items and it was 94%.

4. Content reliability: The pilot subjects put the research tools to the test during the first session to ascertain the Cronbach's Alpha, which was 0.891.

5. A pilot study: An evaluation of the tool's clarity, applicability, and practicability, 10% (20 students) involved in a pilot study and excluded from the study population.

6. Tools development: Tools of the study were created and adapted by the researchers depending on the review of recent literatures. Three tools were used in this study.

The study Phases: The research was carried out through four stages:

Assessment Phase:

- The researchers interviewed with the students to gather personal data and to assess knowledge level related to social media misuse and electronic extortion **(Tool I).**

-The researchers were available 2 days per week in the previously mentioned settings according to school schedule work to assess the actual students' attitudes and digital skills before, immediately after and one month

after implementation of the educational guidelines **(Tool II &tool III)**.

2- Planning phase: covered the following steps:

- Establishing objectives
- Content preparation, which addressed the reasons for the session's application.
- The students were classified into 10 groups and every group included 20 students.

3-Implementation phase: consisted of the following actions:

- The educational guidelines were carried out for each group separately through conduction of successive sessions according to the actual need assessment of the studied students.
- The nursing interventions were delivered **through 4 sessions.** The time of each session were about 20 minutes/session including periods of discussion according to the students' progress and feedback.
- A variety of educational techniques and media, such as interactive lectures, PowerPoint presentations, videos and discussion groups, were employed.
- The data collection occurred over a period of 6 months.
- Each group participated in the subsequent sessions:

The first session:

It focused on the program orientations and expectations, the widely used social network platforms, standardized duration for using social media and purpose of using social media, relationship with parents, supervision and roles when their children use social media applications.

The second session:

It addressed the positive and negative outcomes of using social media on children's daily life activities, physical problems (vision, neck and backbone), social isolation, family interaction and electronic extortion (introduction, meaning and types).

The third session: It focused on causes, target groups and negative consequences of electronic extortion on children.

The fourth session:

It focused on preventives measures (digital skills) and ways to treat electronic extortion, finally, school role in students' awareness about electronic extortion and social media misuse.

4-Evaluation Phase: Knowledge, attitudes and digital skills evaluation of students were achieved prior to, immediately after educational guidelines and one month later.

Statistical analysis

The collected data was processed, tabulated, and statistically evaluated using the software statistical computer program version 23 (SPSS). Range, mean and standard deviations were for numerical values. The difference between mean values of more than two categories was done using analysis of variance (ANOVA) and differences within groups repeated measures ANOVA. Pearson and Spearman's correlation coefficient r were used to assess correlation between variables. The level of significant was adopted at $p< 0.05$. [26]

Result

Table (1): Represents percentage distribution of the studied school age children according to their socio-demographic characteristics. This table shows that the age of the studied students ranged from 10-20 years, with a mean of

15.04±1.83 years old and more than half (54%) of them whose age ranged from 14< 17 years old. Less than two thirds (61%) of them were females with 50%, 25% of them came from secondary, preparatory and elementary school respectively. In relation to the residence. The majority of children (86%) came from rural area. As regards to the income of the family, 55% had enough income compared with 30 % hadn't enough income.

Table (2): This table reports that the majority (89.5%) of the studied school age children used social media, 88% used social media from their phones compared with 17% used social media from their laptop. Regarding commonly used social media platforms, it was demonstrated that YouTube and Facebook platforms were the most platform used with (93%), followed by WhatsApp and Instagram with (87%, 69%) respectively. Concerning duration spending on social media daily, the table illustrated that 56% of children used social media more than 4 hours daily compared with 5.6% used social media less than half an hour. Concerning the family relationship, family supervision on social media usage and discussion regarding electronic extortion and prevention of it. This table illustrates that, 87% of students that they had strong relationship with their parents, on the other side, there were three quarters (75%) of them didn't have family supervision on social media usage and parental discussion of electronic extortion and how to prevent it. Regarding school workshops, parent's need to educational programs and students, exposure to electronic extortion, 62% of students had no workshops at the schools

about social media misuse and electronic extortion. All the school age children (100%) reported that parents needed educational program about electronic extortion with 88.3% from those who used social media didn't expose to electronic extortion compared with 11.7% exposed.

Table (3): shows total scores of students, knowledge regarding social media misuse and electronic extortion. 86 % of them had low knowledge level as base line evaluation. Whereas 93% of children had high knowledge scores immediately post educational guidelines compared with 81.5% of them one month later. There was a statistically significant improvement in the total knowledge scores from pretest to one month after implementation of the educational guidelines (p=0.001).

Table (4): This table reports total scores of the students' attitudes regarding social media misuse and electronic extortion. 44.5% and 48% of the studied children had neutral and positive attitude regarding social media misuse and electronic extortion respectively pre the guidelines. After the implementation of the educational guidelines, 95.5% of children had positive attitude compared with 86.6% one month after implementation of guidelines. There was a statistically significant improvement in the total attitude scores from pretest to one month later guidelines (p=0.001).

Table (5): Concerning total scores of the students' reported digital skills. It was noted that 77% of the school age children had unsatisfactory digital skills before educational guidelines. After the implementation of guidelines, 95% of them had satisfactory level compared with 90%

one month after educational guidelines. There was a statistically significant improvement in the total digital skills within the whole study phases (p=0.001).

Table (6): It was found that before educational guidelines, there was a positive statistically significant correlation between Students' total knowledge scores and total Scores of attitudes regarding social media misuse and electronic extortion (r=0.163, p=0.021).While, there was no statistically significant correlation between total scores of digital skills, students' total knowledge scores and total attitudes scores (r= 0.115, p= 0.105 and r= 0.072 and p= 0.314) respectively. After implementation of the educational sessions, There was a positive statistically significant correlation between total knowledge scores and total scores of attitudes regarding social media misuse and electronic extortion (r=0.355, p=0.001). Additionally, there was a positive statistically significant correlation between total scores of digital skills and total scores of attitudes (r=0.147, p=0.038). On the other side, There was no statistically significant correlation between total score of digital skills, students' total score of knowledge (r=0.047, p= 0.507).

One month after the educational guidelines, There was a positive statistically significant correlation between students' total knowledge scores and total scores of students attitudes regarding social media misuse and electronic extortion (r= 0.673, P= 0.001). There was a positive statistically significant correlation between Students' total knowledge Scores and Total scores of digital skills (r= 0.152, p= 0.032). Also, There was a positive statistically significant

correlation between Total scores of digital skills and total scores of students attitudes regarding social media misuse and electronic extortion (r= 0.984, p=0.041).

Table (1): **Percentage Distribution of the Studied School Age Children according to Their Socio-demographic   Characteristics (n=200)**

Socio-Demographic Characteristics	School Age Children (n=200)	
	No	**%**
1- Age (in years)		
10 to < 14	44	22
14< 17	108	54
17 and more	48	24
Range	**10-20**	
Mean ±SD	**15.04±1.83**	
2-Gender		
Male	78	39
Female	122	61
3-Education		
Elementary	50	25
preparatory	50	25
Secondary	100	50
4-Residence		
a-Urban	28	14
b-Rural	172	86
5-Income		
Not Enough	60	30
Enough	110	55
Enough& Save	30	15

Table (2): Percentage Distribution of the School Age Children regarding Usage of Social Media (n=200)

Children's Usage of Social Media	School Age Children (200)	
	No	**%**
Social media use Yes No	179 21	89.5 10.5
*2-Access to online social media applications (n=179) Personal phones b-Computer Laptop	159 79 30	88 44 17
*3-Common used social media platforms (n=179) Facebook You Tube WhatsApp Webchat Instagram Twitter	166 166 156 45 123 39	93 93 87 25 69 22
4-Duration spent on social media daily (n=179) < 0.5 hour 0.5 to < 2 2 to < 4 ≥ 4	10 20 49 100	5.6 11 27.4 56
5-Presence of good relationship with parents Yes No	174 26	87 13
6-Family supervision on social media usage (n=179) Yes No	45 134	25 75
7-Parental discussion of electronic extortion Yes No	50 150	25 75
8- School workshops about social media misuse Yes No	76 124	38 62
9- Parents, need for educational programs Yes No	200 0.0	100 0.00
10-Exposure to electronic extortion (n=179) Yes b-No	21 158	11.7 88.3

* **More than one answer is allowed**

Table (3):　Total Scores of Students, Knowledge regarding Social Media Misuse and Electronic Extortion.

Students' knowledge	School Age Children　(n=200)						Chi-Square	
	Pre		Immediate		Post			
	N	%	N	%	N	%	X²	P-value
Low	172	86.00	4	2.00	13	6.50		
Moderate	24	12.00	10	5.00	24	12.00	457.234	0.001*
High	4	2.00	186	93.00	163	81.50		

*Significant at p < 0.01 (2 tailed)

Table (4): Total Attitudes Scores of School Age Children regarding Social Media Misuse and Electronic Extortion. (n=200)

Students attitudes regarding social media misuse	The Studied School age children (n=200)						Chi-Square	
	Pre		Immediate		Post			
	N	%	N	%	N	%	X²	P-value
Negative	15	7.5	1	0.5	2	1		
Neutral	89	44.5	8	4	25	12.4	16.216	0.001*
Positive	96	48	191	95.5	174	86.6		

*Significant at p < 0.01 (2 tailed)

Table (5): Students, Total Scores of Reported Digital Skills (n=200)

Total Scores of Digital skills	The studied students (n = 200)						Chi-Square	
	Pre		Immediate		Post			
	N	%	N	%	N	%	X²	P-value
Satisfactory	46	23	190	95.00	180	90.00		
Unsatisfactory	154	77	10	5.00	20	10.00	223.694	0.001*

*Significant at p < 0.01 (2 tailed)

Table (6): Correlation between Total Scores of Knowledge, Attitudes and Digital Skills of School Age Children

		Total knowledge Scores		Total Attitudes Scores	
Time	**Variables**	**r**	**P-value**	**R**	**P-value**
Before guidelines	**Total attitudes scores**	0.163	**0.021***		
	Total digital skills scores	0.115	0.105	0.072	0.314
Immediately after	**Total attitudes scores**	0.355	**0.001***		
	Total digital skills scores	0.047	0.507	0.147	**0.038***
After one month	**Total attitudes scores**	0.673	**0.001***		
	Total digital skills scores	0.152	**0.032***	0. 984	**0.041***

* Correlation is significant at the (p < 0.05 level) (2-tailed).

Discussion

Over the past few years, Egypt's use of social networking websites has grown significantly, and the rate of electronic extortion has also risen. The use of compulsion by hackers to get victims' private information, pictures, or videos for financial gain or other criminal activities will pose one of the biggest challenges to children. Societal awareness and parental oversight are crucial for raising digital and security literacy, and preventing electronic crimes [10, 11] The study demonstrated that, the age of the selected school age children ranged from 10-20 years, This result can be explained in the light of this age group is the most popular to use modern technology and social media platforms. They also have little knowledge about digital skills and the most vulnerable category to electronic extortion.

The result of this study was supported **by Majeet (2023)** [27], who reported that, online blackmail is one of the most significant problems facing children recently and harms the child's social environment and personal development. **Another study by Ibrahim (2022)** [9], stated that, adolescents now face a major threat from electronic extortion which could increase sexual harassment.

The study declared that the majority of children used social media. This may be due to availability of internet access in many homes and children used social media for communication with others, entertainment and learning. A study made by **Chang et al., (2023)** [28] was in the same line with the current result, who revealed that, Children now use social media as their primary means of interactions and education about current events. They spent a significant amount of time for setting up and sharing their profiles. **Similarly**, **Plaisime et al., (2020)** [29], who concluded that children use social media to enhance health awareness related to fitness and physical activity.

The current study demonstrated that, most children used Facebook and YouTube platforms from their phones. This might be due to the 4G web signal has been applied on the Android mobile which facilitates access

to the internet through cellphones and internet cafes that have infiltrated cities and villages provides opportunities for young children to use social networking sites without parental control. Additionally, the main purposes for using Facebook platform are chatting, ease of use and making new friends. They also use YouTube application for social publishing, downloading videos, and pleasure. Studied done by **Ishak et al., (2023)** [30], **Hadiatul and Ashabul (2020)**[31] were in accordance with this finding, claimed that the community mostly uses Facebook, Twitter and WhatsApp, as their primary social media platforms. On the other hand, **Bhatnagar and Pry (2019)** [32] who was incongruent with this finding, illustrated that, Snapchat and Instagram are the two most widely used social media sites.

As regards duration spent on social media, it was found that, more than half of students used social media more than four hours daily. This may be the result of absent or inadequate parental monitoring of their children's social media use, lack of knowledge about the dangers of social media, as well as social media addiction, which prevents children from stopping using it despite obvious serious disadvantages. Studies done by **Ishak et al., (2023)** [30], **Aljasir and Alsebaei (2022)** [33] were in the same line with this finding, claimed that, teenagers spent long hours using social media applications per day. Similarly, **Kerai et al., (2022)** [34] **and Bozzola et al., (2022)** [16] who demonstrated that, spending a lot of time on social media increases the risk of social and developmental problems of children, exposure to unacceptable sexual content and early sexual activity.

The results revealed that, three quarters of studied children didn't have family supervision on social media content with no parental discussion about electronic extortion. This could be due to low and moderate socioeconomic status of most parents who occupied with work and meeting essential life needs of their children so that, they may have no or little time to supervise their children. In addition, poor understanding of online extortion. **Arifin et al., (2019)** [35] **and Trninić et al, (2023)** [36] were in acceptance with the present finding, who argued that, parental knowledge of social media hazards is low and needs to be improved for promoting online safety and offering guidance to their children. In contrast, **Badri et al., (2017)** [37] who was incongruent with this result, stated that, parents of most children were aware and monitor social media accounts of their young children. In addition, the study illustrated that, about two thirds of students had no school workshops about electronic extortion. This may be due to low school awareness about social media risks. **Ondrušková and Pospíšil (2023)** [38] were in the same line with the research finding, who revealed that, digital safety education in schools is urgently needed and must be included in the educational processes.

The results showed that, all students reported that, their parents needed educational program about digital extortion. This could be explained in the light of parental involvement supports media literacy competencies and protection. Similarly, **Elnakib (2022)** [39], who mentioned that awareness of family and society need to be improved regarding internet extortion.

The findings of the study showed that, most children using social media didn't expose to electronic extortion. This may be due to values, ethics, culture, good child - parent relationship as well as strong bonding between families that still present in rural areas of most children. On the contrary side, **Ibrahim (2022)** [9] disagreed with this result, who claimed that, a large percentage of the study

sample suffered from extortion. Also, **Abraham (2020)** [1], who stated that, a lot of children's information is now digital through social media; this endangers their privacy and aids hackers to collect private data for their illegal activities.

Regarding students᾽ total scores of knowledge; it was observed that, most children had low level of knowledge before educational guidelines while the majority of them had high knowledge immediately after guidelines sessions. This could be due to unawareness of all society regarding harmful effects of social media, absent parental discussions and school training about digital security before educational sessions. Whereas, after implementing educational guidelines, children's knowledge improved due to educational guidelines' content was established based on children's needs, their clarity and simplicity, the use of audiovisual aids, the accessibility of the researcher in the field for greater clarification, and repetition to fix the information. All these elements lead to enhancement of knowledge.

Eltahir and Ahmed (2023) [40] was in harmony with this study, who declared that, most undergraduate students at Sudan's higher education institutions had low information about social media privacy. On the opposite side, **Ondrušková and Pospíšil (2023)** [38] disagreed with this result, who declared that, There is no significant improvement in children's knowledge about social media crimes after short time training. The study demonstrated that, less than half of students had positive attitude regarding social media misuse and electronic extortion before guidelines sessions. While, the majority of them had positive attitude after guidelines. This could be explained in the light of culture, morals, values that still present in rural areas and can shape children's thoughts and learn

them positive and ideal attitudes. In addition, after educational guidelines, children's knowledge about competencies of social media use as avoiding sharing personal data to others or communicating with strangers, using social media for short time. All these items improve their attitudes. These findings were consistent with **Salih and Elsaid (2018)** [41], **Karthik and Ramaraj (2022)** [42], who declared that students had positive attitudes towards social media usage.

Regarding total scores of the student's digital skills, about three quarters of children of school age had unsatisfactory digital skills before educational guidelines while after the implementation of sessions, the majority of them had satisfactory level. Studies performed by **Alghamdi (2022)** [15], and **Jackman et al., (2021)** [13] were corroborated with the present study, found that; many students are not familiar with the concepts of electronic protection and in urgent need for digital skills training. The study stated that, immediately after educational sessions, there were a positive correlation between students' total scores of knowledge and attitude. This could be due to effect of educational guidelines in increasing student's knowledge about positive usage of social media and associated crimes, importance of parental supervision as well as ways to face electronic extortion. All these factors improved their ideas and attitudes. **Yuan et al., (2021)** [43] were in acceptance with this outcome; who found that, attitudes of social media utilization are influenced positively by social media literacy and behavioral control. Also, **Elnakib (2022)** [39] mentioned that, poor knowledge of social media correlates with bad attitudes of children as sharing private data and images to others lead to spreading electronic extortion crimes. While there was a positive correlation between students' knowledge scores and total scores of

digital skills one month later of educational guidelines. This could be attributed to learning digital skills require multiple educational sessions and some time to try and implement these skills and achieve social media security. **Arifin et al., (2019)** [35] were in agreement with the study, stated that, without knowledge of social media uses, children cannot implement electronic skills. Similarly, **Althibyani and Al-Zahrani (2023)**[44] who mentioned that, there was positive correlation between student's awareness and digital citizenship skills.

Conclusion

The study concluded that: the educational guidelines had successfully improved students' knowledge, attitudes and digital skills regarding social media misuse and electronic extortion

Recommendations:

1. Regular seminars should be organized in all schools to enlighten students more about the possible implications of social media usage, electronic extortion and improving their digital skills against blackmailers.

2. Teachers should adopt new strategies by channeling assignments or discussions on social media platforms to help inculcate the habit of using these sites for academic work.

3. Parents should receive ongoing training to counsel their children on appropriate social media use and following up.

References

1- **Abraham B**. Attitude of adolescents towards use of social media. International Journal of Advanced Research. 2020; 8(2): 443-453.

2- **Ruão T, Andrade J**. Navigating Digital Communication and Challenges for Organization. 1st ed. United States of America: IGI Global Co., 2022; 113-130.

3- **Ofcom**. Children and Parents: Media Use and Attitudes. 2022. **Available at**: https: // www.ofcom.org. uk /_data /assets/ pdf file /0027 / 255852 /childrens-media-use-and-attitudes-report-2023.pdf.

4- **Amer A, Farrag Sh** .Developing and testing smartphone addiction scale among a sample of Egyptian children after covid-19 pandemic. American Journal of Educational Research. 2023; 11(5): 333-336.

5- **Charmaraman L, Lynch A, Richer A, Zhai E**. Examining early adolescent positive and negative social technology behaviors and well-being during the COVID-19 pandemic. Journal of Technology, Mind, and Behavior. 2022; 3(1):1-20 .

6- **Güney K**. Considering the advantages and disadvantages of utilizing social media to enhance learning and engagement in k-12 education. Journal of Social Sciences and Technology.2023; 8(2):83-100.

7- **Barry C, Sidoti C, Briggs S, Reiter S**. Adolescent social media use and mental health from adolescent and parents perspectives. Journal of adolescence. 2017; 61(1):1-11.

8- **Boer M, Eijnden R, Boniel- Nissim, M, Wong S**. Adolescents' intense and problematic social media use and their well-being in 29 countries. Journal of Adolescent Health.2020; 66 (1): 89- 99.

9- **-Ibrahim A.** Contribution of youth centers in facing the problem of electronic extortion of Adolescents. Journal of Future of Social Sciences.2022; 9(4):209-239.

10- **AÇAR K**. Sexual extortion of children in cyberspace. Journal of International Cyber Criminology.2016; 10 (2):110-126.

11- **Abdul Kareem H**. The Social risks of electronic extortion. Journal of Palarch's Archaeology of Egypt. 2021; 18(4):8263-70.

12- **Calvetea E, Oruea I, Gámez-Guadixb M**. A preventive intervention to reduce risk of online grooming among adolescents. Journal of Psychosocial Intervention. 2022; 31(3) 177-184.

13- **Jackman J, Gentile D, Park Y**. Addressing the digital skills gap for future education. Journal of Nature Human Behaviour. 2021; 5: 542 - 545.

14- **Qerimi G, Jahiri M, Ujkani B, Zeneli A**. Media literacy and young people's digital skills. Journal of International Emerging Technologies in Learning. 2023; 18(7): 50-60.

15- **Alghamdi A.** Cyberthreats facing high school students & methods of addressing them. Journal of Information Security & Cybercrimes Research, 2022; 5 (2): 116-23.

16- **Bozzola E, Spina G, Agostiniani R, Barni S, Scarpato E**. The use of social media in children and adolescents: Scoping review on the potential risks. International Journal of Environmental Research and Public Health. 2022; 19(16): 1-33.

17- **Hoare E, Milton K, Foster C, Allender S**. The associations between sedentary behaviour and mental health among adolescents: a systematic review. Journal of International Behavioral Nutrition Physical activity. Act. 2016; 13(1):108.

18- **Finkelhor D, Walsh K, Jones L, Mitchell K**. Youth internet safety education: aligning programs with the evidence base. Journal of Trauma Violence Abuse. 2021; 22(5): 1233- 1247.

19- **Sampasa-Kanyinga H, Chaput J, Hamilton H.** Social media use, school connectedness, and academic performance among adolescents. Journal of Primary Prevention. 2019; 40 (7): 189- 211.

20- **Al Habsi A · Butler M, Percy A, Sezer S**. Blackmail on social media: what do we know and what remains unknown?. Journal of Security.2021; 34(1): 525–540 .

21- **Van den Eijnden R, Lemmens J, Valkenburg P**. The social media disorder scale. Journal of Computers in Human Behaviors. 2016; 61(2): 478–487.

22- **Durak H, Seferoˇ S**. Modeling of variables related to problematic social media usage: social desirability tendency example. Scand. Journal of Scand Psychology. 2019; 60(1): 277–288.

23- **Stofkova J , Poliakova A , Stofkova K, Malega P , Krejnus M , Binasova V, Daneshjo N**. Digital skills as a significant factor of human resources. Journal of Sustainability. 2022; 14(20):1-18.

24- **Cabello-Hutt T, Cabello P, Claro M**. Online opportunities and risks for children and adolescents: The role of digital skills, age, gender and parental mediation in Brazil. Journal of New Media and Society. 2018; 20(7): 2411- 2431.

25- **Feijoo B, Sádaba C, Martínez G**. Acquiring technical digital skills for mobile phone use in chile. Parents-children perceptions. International Journal of Media and Information Literacy. 2021. 6(2): 289-298.

26- **White S**. Reading the Medical Literature: Basic & Clinical Biostatistics. Lange Medical Book. 5th ed. New York: McGraw-Hill Medical Publication Co., 2019; 20 – 233.

27- **Majeet B.** Childhood and negative phenomena spread in light of societal changes. Journal for Re Attach Therapy and Developmental Diversities. 2023; 6 (7): 582-591.

28- **Chang V, Golightly L , Boonmee Th, Liu B**. Cyber security for children: an investigation into the application of social media. Journal of Enterprise Information Systems. 2023.17(9): 1-30.

29-Plaisime M, James C, Mejia L. Social media and teens: A needs assessment exploring the potential role of social media in promoting health. Journal Social Media and Society. 2020; 6(1): 1-11.

30-Ishak A, Rose N, Ismail F, Ahmad N, Erna N. The effect of addictive social media use among teenagers. The 2nd International Recent Trends in Engineering, Advanced Computing and Technology Conference.2023.Availableat:https://www.rese archgate.net/publication/514931_The_effect_o f_addictive_social_media_use_amtnagrs

31-Hadiatul R, Ashabul M. The impact analysis of Facebook on the education patterns of elementary school children. Journal of Physics,.2020; 1539 (1):1- 6.

32-Bhatnagar N, Pry M. Student attitudes, awareness, and perceptions of personal privacy and cybersecurity in the use of social media: An initial study. Journal of Information Systems Education.2020. 18(1): 48-58.

33- Aljasir S, Alsebaei M. Cyber bullying and cyber victimization on digital media platforms: The role of demographic variables and parental mediation strategies. Journal of Humanities and Social Sciences Communications .2022; 9(320):1-6.

34- Kerai S, Almas A, Guhn M, Forer B, Oberle E. Screen time and developmental health: results from an early childhood study in Canada. Journal of BMC Public Health. 2022; 22(1):310.

35-Arifin N, Mokhtar U, Hood Z, Tiun S, Jambari D. Parental awareness on cyber threats using social media. Journal of Malaysian Communication.2019; 35(2): 485-498.

36-Trninić D, Vukelić A, Mlinarević J. Parental education in media literacy, social media, and internet safety for children in Bosnia and Herzegovina. Journal of Media Literacy Education.2023; 15(2): 1-16.

37- Badri M, Alnuaimi A, Al Rashedi A, Yang G. School children's use of digital devices, social media and parental knowledge and involvement – the case of Abu Dhabi. Journal of Education and Information Technologies. 2017; 22 (5): 2645–2664.

38- Ondrušková D, Pospíšil R.The good practices for implementation of cyber security education for school children. Journal of Contemporary Educational Technology. 2023; 15(3): 1-16.

39- Elnakib A. The social effects of the crime of electronic blackmail against women and ways to confront it: A study applied to a sample of girls in Beheira Governorate. Journal of The Egyptian Social and behavioral sciences. 2022; 2(5): 96-125.

40- Eltahir M, Ahmed O. Cyber security Awareness in African Higher Education Institutions: A Case Study of Sudan. Journal of Information Sciences Letters.2023; 12(1): 171-183.

41-Salih A, Elsaid A. Students attitude towards the use of social media for learning purposes (case study: Al-Baha University, College of Sciences & Arts Biljurashi). Journal of Literature, Languages and Linguistics. 2018; 50(10): 31-36.

42-Karthik U, Ramaraj S. Attitude of student- teacher towards using social media. Journal of Contemporary Educational Research and Innovations. 2022; 12 (1): 18-23.

43-Yuan D, Rahman M, Gazi M, Hossain M. Analyzing of user attitudes toward intention to use social media for learning. Journal of Sage.2021; 11(4):1-11.

44-Althibyani H, Al-Zahrani A. Investigating the effect of students' knowledge, beliefs, and digital citizenship skills on the prevention of cybercrime. Journal of Sustainability. 2023; 15(15):1-18.