

Research article**Impact of an educational program in developing saudi mothers' knowledge, and preventive practices of children sexual abuse (CSA)****Amal I. Khalil^{1,2}, Reem H. Alsulami², Al-Zahraa M. Alolasi²and Sultanah M. Alsulami²**¹Assistant Professor of Psychiatric and Mental Health Nursing, Menoufyia University, Egypt²King Saud Bin Abed Al-Aziz University for Health Sciences, College of Nursing, Jeddah**Abstract**

Background: Each child around the world has the right to live in peace. Child sexual abuse is a serious public health problem globally.

Aim: to investigate the effectiveness of an educational program targeting children sexual abuse in developing Saudi mothers' knowledge and preventive practices of children sexual abuse.

Methods: A Quasi-experimental, "one group pre-posttest" design was used with a convenient sample of 38 mothers who have children in "81 elementary schools" affiliated to the ministry of education, Jeddah, KSA.

Results: 89 % of the participants were aged between 20 - 40 years. 57.9% had 4 -6 children, and are secondary level (55.3%). A highly statistically significant difference between pre/post assessment knowledge as $P= 0.000$ with the difference in their attitudes but is not significant While, a significant correlation was found between the total score of pre/post knowledge assessment and the mothers' work state as $P= .000$ and $.037$. However, there was a significant difference in post knowledge and attitudes total score ($P=.006$) with age and number of children in the family $P\leq 0.05$ while, a negative significant difference was found in pre-knowledge 'total score ($P = -.001$).

Conclusion and recommendation:

The results concluded that mothers' knowledge and attitude were inadequate enough to protect their children from CSA in pre-assessment with a significant difference in post-assessment. Therefore, it is recommended that conducting more CSA prevention programs for parents and children is an urgent necessity. In addition, replication of the current study with longitudinal design that might help in identifying the change of attitudes.

Key words: sexual abuse, Saudi mothers, educational program, knowledge, attitudes.

***Corresponding author:** Amal I. Khalil, Assistant Professor of Psychiatric and Mental Health Nursing, Menoufyia University, Egypt. Email: amalkhalil34@yahoo.com

1. Introduction

Millions of children have been targets of sexual, physical or emotional abuse [1, 2] which is a serious public health problem globally.

Furthermore, Attar-Schwartz [3] reviewed the literature and indicated that both genders are suffering from sexual victimization. The World Health Organization (WHO) [4] reported that more than 40 million children aged from 0 to 14 years were victims of sexual abuse [5].

WHO [4] defines sexual abuse as "the engagement of a child in sexual activity against his will as they don't fully comprehend, or give informed consent which violates the rules and regulation of the community?

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The term CSA includes a range of three forms of activities like verbal (notes with sexual connotation), physical (pulling clothes in a sexual manner, intercourse, attempted intercourse, oral-genital contact, fondling of genitals directly or through clothing), and nonverbal ways (such as, exhibitionism, exposing or using children to adult sexual activity or pornography [3, 6].

The epidemiological studies conducted by WHO [4], and Centers for Disease Control and the US Department of Justice reported that CSA is a major problem, and although of its low prevalence, unfortunately, a huge number of victims are present and need to be well-thought-out. The main findings of these studies were estimated that (7.9%) of males and (19.7%) of females worldwide faced sexual abuse before the age of 18 years. The highest (34.4%) prevalence rate of CSA was seen in Africa [6, 7]. In the Arab world, the problem of CSA has scarcely been addressed, despite its prevalence worldwide. Many Studies revealed that the increasing phenomenon of sexual harassment against children in the Arab world, despite activists who called for the age of deterrent penalties to curb the phenomenon.

As for Saudi Arabia, statistics revealed that 22.7% of children are subjected to sexual harassment and abuse, 21% of which were abused at home as reported by the Crime Research Center, Ministry of Interior [5]. Moreover, the reason behind this huge percentage is ignoring the issue where the abusers go unpunished [2, 5]. Statistics showed that Jeddah takes 14% of the reported cases [8].

CSA is a common health problem with negative physical and psychological outcomes for children. Zhang, Chen, Liu [9] pointed out the following psychological (depression, anxiety, post-traumatic stress disorders, drugs abuse and behavioral problems), physical (chronic pelvic pain, pelvic inflammatory disease, and sexually transmitted infectious disease), and social consequences (social isolation, poor self-concept and identity, deviant or reckless behavior as prostitution and gambling and interpersonal sensitivity).

Therefore, all community activities have been directed toward primary prevention of CSA by doing programs and campaigns to prevent further cases [10]. Accordingly, parents are in an important position to prevent abuse by educating and protecting their children from becoming victims [11], as suggested that families usually proof the concept of self-educating themselves and their offspring to reduce the risk of a child exposed to sexual victimization [12]. Several pieces of research showed that parents weren't involved in some preventive programs headed by doctors, teachers, and schools, as cited by the National Sexual Violence Resource Center [11] while 27% - 64% had attended CSA risk reduction programs [13].

Numerous studies have viewed the significance of child sexual abuse prevention programs and its effectiveness. Amongst, Topping and Barron [14] reported that most researchers appealed that their findings revealed

noteworthy impact in primary prevention, while others reported some undesirable impacts. Alternatively, various educational interventions revealed a surge in parents' acceptance of the idea of the vulnerability of their children to CSA and enhance successful interaction about it within families. Babatsikos [13] noted that families who shared CSA intervention training had a better consideration of their youngsters' risk of abuse than who had not joined the practicums. Accordingly, the results of the educational preventive program conducted by Fryda, and Hulme [15] showed that there was a successful increase in parents' awareness and knowledge of their children's vulnerability to CSA. Due to little research that exists in Saudi Arabia and the shortage of the content of written materials related to parent and caregiver-oriented educational programs on CSA primary prevention, we envisioned developing our educational program based on identifying the attendees' attitude and knowledge level, and whether they've received any previous training or not.

Significance of the study

Alquazi, Kazi, & Almuneef (16) concluded that those who are at high risk due to lack of knowledge are: school girls less than 15 years' old who do not have sisters, the second child or more, parents with low education level, and their school curriculums inadequate to review sexual health matters. Children with uneducated parents are eleven times at risk of insufficient sexual health awareness. Thus, there is a vital need for an educational prevention CSA program. The authors believe that the results of this study will enrich the literature on child sexual abuse with the views of mothers of children and their need for educational programs to enhance their awareness. Consequently, this mothers' awareness' will motivate them to teach and protect their children and result in decreasing rate of CSA.

For the purpose of this study, the following definitions are used:

Knowledge: "The capacity to acquire, retain, and use the information; a mixture of comprehension, experience, discernment, and skill [17].

Attitude: "Inclinations to react a certain way to certain situations; to see and interpret events according to certain predispositions, or to organize opinions into coherent and interrelated structures [17].

Practice: "The application of rules and knowledge that leads to action [17].

Sexual abuse definition. Sexual abuse is unwanted sexual activity, with perpetrators using force, making threats or taking advantage of victims not able to give

consent. Most victims and perpetrators know each other. Immediate reactions to sexual abuse include shock, fear or disbelief. Long-term symptoms include anxiety, fear or post-traumatic stress disorder [18].

Child sexual abuse: ' is the involvement of dependent, developmentally immature children and adolescents in sexual activities which they do not fully comprehend, are unable to give informed consent to and that violate social taboos of family roles [19].

Abuser or perpetrator is defined in the dictionary as a person who perpetrates, or commits, an illegal, criminal, or evil act [20].

Theoretical framework:

Knowledge and Attitudes influence how we react to the behavior of other people. The reaction of a mother to the incidents of sexually abusive behavior when the abuser (a person who perpetrates, or commits, an illegal, criminal, or evil act [20]. is attacking their children is to be influenced by their knowledge and attitudes towards the behavior. This relation between knowledge, attitude, and behavior is reflecting in KAP instrument layout based on Bennett's Change Model. The current research evaluates the effectiveness of the educational program (outcome), where researchers assessed the level of knowledge and attitudes of the participants towards sexual abuse. What are the determinant factors that made their children at a high risk for sexual abuse behaviors? Moreover, what are the desired behaviors to change the outcome (decrease incidents of sexual abuse behaviors among children) [21]?

The aim of the study:

To investigate the effectiveness of an educational prevention program in developing Saudi mothers' knowledge and awareness about children sexual abuse and its preventive practices.

Research hypothesis and questions:

The current study examined the effectiveness of an educational program on prevention efforts targeting mothers of elementary school children to support or reject these three hypotheses:

- CSA educational prevention program is effective to increase mothers' knowledge in relation to child sexual abuse.
- This educational prevention program will improve the mothers' attitudes toward CSA so; they can teach and protect their children from it.
- There is no association between mothers' knowledge and attitudes toward CSA and their sociodemographic characteristics.

2. Methodology

2.1. Study subjects: 70 Mothers whose children are learning in the "81 elementary school" affiliated to Ministry of Education selected conveniently with the attrition rate of 38 mothers who completed the questionnaires.

2.2. Study design: A Quasi-experimental, specifically "one group pre-posttest" design was used. The researchers thought about true experimental design but a random assignment of participants wasn't feasible.

2.3. Instrument: The instrument is a questionnaire that was adapted from the following instruments Alrefaei [1], Zhang, Chen, & Liu [9], Mei-Yi, C [22] and was translated to Arabic as follows
The questionnaire comprised of three sections:

I. Demographics/background of the participants

- a. This section included 15 questions derived from Al-Refaei (1 which is: level of mothers' education and their specialty area, parent's job, number of children and their age, etc.
- b. Previous attending Training education: This section included two items added from Zhang, Chen, & Liu, (9). Mothers were asked regarding their previous attendance of CSA prevention education program. (Response options were "yes" (1) or "no" (0). The total score ranged from 0-2.

II. Knowledge related questionnaire: This section consists of 2 subscales as the follows:

• **Sub-scale #1:** consisted of twelve items on CSA knowledge subscale, where question 1-9 are developed and tested for reliability and validity by Zhang, Chen, & Liu(9), alpha was 0.78. However, two questions (10 & 11) were obtained from the internet and adopted by the researchers; the last question (12) was adapted from Al-refaei (1). (Response options were "yes" (1) or "no/unsure" (0). (Range = 0 -12).

• **Sub-scale #2:** consisted of ten questions (Q. 13 – 22) as follows: five questions were derived from Al-Refaei (1) and slightly modified by the researchers, these are questions Q.14-16, 20 and 22. Questions 17, 18, and 19 were obtained from the internet and adapted in terms of related responses by the researchers. Question # 21 was added by the researchers; it was concerned with causes of CSA.

Questions # 23-34 was developed by Mei-Yi [22]. It is a classification of behaviors of sexual abuse. Such as unwanted touching and fondling for legs, hugs in an inappropriate manner, Kissing or writing unwanted text messages or phone calls, etc. The response choices were

simply either “normal or abusive behavior (1) for the correct answer and (0) for the incorrect decision, the total score range = 0 – 12.

III. Attitudes toward CSA prevention education:

Eight English items (Q1-5) were listed depending on the attitudes toward CSA prevention education from Zhang, Chen, & Liu(9) , e.g., “Are you afraid that CSA prevention education may induce the child to know too much about ‘sex?’” and “Do you agree that CSA prevention education curricula should be taught in the preschool?”). However, item number 8 was added by the researchers, it asks about the motivation of mothers to teach their children what they have learned in this educational program. The response choices (Q1-8) were basically “agree,” (1) “disagree” (0). (range = 0-5).

2.4. Validity and reliability:

The instrument was translated into Arabic and back-translated into English, verifying whether the translation covers all aspects of the original English version of the questionnaire or not. To ensure the face validity of the final translated Arabic version of the questionnaire it was evaluated by experts who were selected based on their qualifications and experience in nursing research and education. Then, the tool was piloted and tested by 10 participants to identify ambiguities, the time required and any difficulties that might be encountered by the participants in reading or understanding. The reliability of the questionnaires was calculated and Cronbach Alpha for knowledge 0.83, while attitudes questionnaires were 0.87.

Educational program of sexual abuse prevention:

The objectives of the educational program were:

1. Develop mother' knowledge about sexual abuse and harassment
2. Assist mothers to recognize different abusive behaviors in relation to sexual and offensive behaviors
3. Develop mothers' awareness of the situations that may lead to sexual abuse
4. Teach mothers' the appropriate methods which can help them to teach and protect their kids from abusers everywhere.

Empower mothers with the skills of communication, listening, and how to develop a strong relationship with their children to break the silence of their fear and motivate them to talk about any abusive behaviors they may expose to in or outside the home.

Data collection procedure:

Pre-test administration:

1. An approval to conduct the study was obtained from the principle of the 81 elementary school affiliated to Ministry of education, Saudi Arabia.
2. A letter with all details of the educational program was sent for mothers from the principle of the school to motivate them to participate in this study
3. Ethical issues were raised by taking verbal and written consent for participation from every mother after explaining the aim of the study and confirming confidentiality of their data.
4. Participants were asked to fill the questionnaire at the beginning of the first day of data collection (i.e., before the theoretical session starts

Program description:

The Data was gathered during the academic year 2015/2016. The participants were requested to fill up the questionnaires pre and post the educational prevention program. The educational training program consisted of one day (6 consecutive sessions), each part was involving 3 sessions and each session was 45 minutes to 60 minutes.

First part: theoretical part was lecturing about sexual abuse including definition, sexual development of children, and prevalence rate of, manifestations that appear on the victim child, characteristics of abusers, and types of abusive behaviors. Moreover, the importance of sex education and types of sexually abusive behaviors was presented.

The second part:

This part was a demonstration of the different ways of successful communications with our children to build a trust relationship that motivate them to accept learning from mothers and they can inform regarding any incidents without fear. In addition to, the effective methods for parents to protect their children from sexual abuse including:

- a. Encouraging children to report CSA.
- b. Provide knowledge to their children to protect themselves from being abused.
- c. Teaching their children, the skills to avoid child sexual abuse.
- d. Using the system of reward

Methods of instructions: The researchers presented participants with booklets, pamphlets and audio-visual materials pointed to parents of sexually abused children. Mixed techniques of active and passive mothers' participation were used.

Mothers as an active participant: In these methods, the mothers were involved in the learning practice physically, verbally through:

Skills practice/rehearsal or role-play how to offer their offspring with a harmless, non-threatening environment in which they were practiced how to identify probable threats of abusive situations and how to react. These typically are physical and verbal active techniques.

Shaping and reinforcement are behavioral learning methods that are usually used along with skills practice/rehearsal or role-play techniques. In child sexual abuse prevention programs, shaping included rewarding or supporting (i.e., reinforcing) a child's reaction to a situation when it is appropriate, with the aim of eventually getting the child to enact the desired response. Shaping and reinforcement are usually physically and verbally active skills.

Mothers are passive participants: These methods do not require verbal or physical involvement from the mothers such as Modeling, in form of role play was demonstrating a situation and play out how to respond. Movies, Power Point presentation or videos about CSA prevention. As regard to the effectiveness of instructional methods that are used throughout the program, many studies suggested that audio-visual materials, video showing, role play and modeling are effective methods in teaching parents, and care givers in at least influencing their' knowledge of behaviors considered helpful of their children in their protection against CSA (National Sexual Violence Resource Center, 2011).

Post-test administration:

- Questionnaires were fulfilled again by the mothers after implementing the program.

2.5. Data management:

The data were analyzed using SPSS version 20.0. Data were reported using descriptive statistics in the form of frequencies, percentages, means and standard deviations. A paired t-test was used to analyze the total scores of the participants' responses on the pre-test and the post-test. Contributors' sociodemographic and knowledge differences were analyzed using Chi-Square test (χ^2). Pearson R was used to test the correlation between parents' knowledge and sociodemographic variables. The significance level is pre-set at $p<0.05$.

2.6. Ethical considerations:

An official approval from the students Research unit, KAIMRC and IRB were received. In addition to the approval from the 81-elementary school that belongs to the ministry of education, Jeddah for data gathering. The participants were informed about the purpose of the study, and that their participation is voluntary and they can withdraw from the study at any time. A written consent was obtained from all participants. Anonymity was ensured by using identification codes on the questionnaires that facilitated individual comparison of pre-and post-educational program responses.

3. Results of the study:

Out of 38 Saudi mothers, Table 1 shows that (55.3%) had 4 -6 children, (89 %) were aged between 20 - 40 years and (57.9%) had a secondary level of education followed by primary (23.7%), and only 18.4% had university level. The majority of their husbands (89.2%) were employed compared with 84.2% unemployed mothers. Participants' children age was ranged between 7 to 15 years. 92.1%, 84.2 % had neither babysitter nor maid respectively. An equal number of participants (55.3%) indicate no regular visitors and none living with them. Additionally, 92.1 % indicate an absence of centers located in their residence area. (Table No 1)

Table No 1: Descriptive data of the sociodemographic characteristics of the participants (n = 38)

Variables		Frequency	%
Mother age	20-30 Years	16	42.1
	30-40 Years	18	47.4
	≥ 40	4	10.5
Educational Background	primary level	9	23.7
	secondary level	22	57.9
	University and Post	7	18.4
Does the father work?	Yes	33	86.8
	No	5	13.2
Does the mother work?	Yes	6	15.8
	No	32	84.2

Variables		Frequency	%
Mother Occupation	Nurse	1	2.6
	Teacher	1	2.6
	Others	2	5.3
	Unemployed	34	89.2
Number of children in the family.	1 to 3	12	31.6
	4 to 6	21	55.3
	≥ 6	5	13.2
Age of the children.	0-6 YEARS	5	13.3
	7-15 YEARS	25	65.8
	≥ 15 years	8	21.1
Does the child have a babysitter?	Yes	3	7.9
	No	35	92.1
Do you have other maids in the house?	Yes	6	15.8
	No	32	84.2
Is there another family member living/always visiting your house?	Yes	17	44.7
	No	21	55.3
family member living in the house	None	21	55.3
	The husband's family	2	5.3
	the husband and the wife's families	5	13.2
Do you know if there are local centers in the region that protect abused children?	Yes	3	7.9
	No	35	92.1
Did you ever attend the training program for CSA prevention education?	Yes	9	23.7
	No	29	76.3
Did you ever attend training programs that may include information on CSA prevention?	Yes	9	23.7
	No	29	76.3

Question (15): asks about participants' reaction when their children were exposed to sexual abuse. Psychological and emotional reaction to the situation such as fear, anger, anxiety, loss of control and going mad was reported by 16 mothers while 8 reported that they will submit an official report. Only one of the participants stated that she will think about the reasons that lead to this abuse and seek support from a psychiatrist to manage the child's psychological trauma. On the other hand, 6 participants did not respond at all.

Table 2 shows that in the pre-program, 97.4% provided an incorrect response regarding who can abuse the child more as compared with (2.6% in post program followed by (94.7%) of participants were not able to realize that some of the children try to discover their genital areas at an early age. Indeed, 63.2% of participants give incorrect response even after the program. Additionally, 92.1% didn't know the definition of sexual harassment, and an equal number (81.6%) didn't know what is sexual assault and violence Meanwhile in post program n= 20 (52.6%), n= 23 (60.5%) and n=17 (44.7%) provided a correct definitions and responses respectively.

Alternatively, 100% provided some correct responses in the necessity of the mother's relationship with her children, and they agreed that boys can also be sexually abused. Moreover, equal number 97.4% answered correctly in identifying the importance of sex education in children's lives. In addition, 94.7% agreed that the CSA is a worldwide problem. Furthermore, participants coincided that the person who has sexually abused a child would probably repeat the felony and the child who had been sexually abused will be in a weak position from disclosing the episode by the abuser in pre-assessment, and they were consistent with their answer in the post program assessment.

Table No 2: Participants knowledge of CSA prevention in Pre/Post program training.

Knowledge									
Variables		PRE				POST			
		Number of the incorrect response	%	Number of the correct response	%	Number of the incorrect response	%	Number of the correct response	%
1	The problem of CSA exists around the world.	2	5.3	36	94.7	1	2.6	37	97.4
2	Preschool-aged children can be sexually abused.	6	15.8	32	84.2	4	10.5	34	89.5
3	Children are most often sexually abused by familiar persons.	8	21.1	30	78.9	2	5.3	36	94.7
4	Children can be sexually abused by females.	15	39.5	23	60.5	6	15.8	32	84.2
5	A person who has sexually abused a child will likely repeat the offense	2	5.3	36	94.7	2	5.3	36	94.7
6	The child who was sexually abused will be held back from disclosing the episode by the abuser.	2	5.3	36	94.7	1	2.6	37	97.4
7	CSA is the child's fault.	11	28.9	27	71.1	10	26.3	28	73.7
8	If a child has been sexually abused, there can usually be obvious physical evidence.	8	21.1	30	78.9	4	10.5	34	89.5
9	Boys can also be sexually abused.	0	0	38	100	0	0	38	100
10	The discovery of the opposite sex that occurs between children processes are natural things have to let it pass without symbolizing the «defect» as deal with some families.	30	78.9	8	21.1	21	55.3	17	44.7
11	You must remove the red lines for sexual topics at home to provide correct information to the child according to age and mental abilities	4	10.5	34	89.5	2	5.3	36	94.7
12	The mother building a strong relationship with her children as a basis to protect their children from sexual harassment.	0	0	38	100	0	0	38	100
13	Is there a difference between harassment and assault and sexual violence?	15	39.5	23	60.5	6	15.8	32	84.2
14	Sexual harassment	35	92.1	3	7.9	18	47.4	20	52.6
15	Sexual assault	31	81.6	7	18.4	15	39.5	23	60.5
16	Sexual violence	31	81.6	7	18.4	21	55.3	17	44.7
17	How important is sex education in children's lives.	1	2.6	37	97.4	1	2.6	37	97.4
18	From what age to start sex education for children?	30	78.9	8	21.1	16	42.1	22	57.9
19	Some of the children discover the genital area at an early age and their gestures or touches the genital areas at an early age, how you can act with this?	36	94.7	2	5.3	24	63.2	14	36.8
20	Who do you think can abuse the child more?	37	97.4	1	2.6	37	97.4	1	2.6

Knowledge									
Variables		PRE				POST			
		Number of the incorrect response	%	Number of the correct response	%	Number of the incorrect response	%	Number of the correct response	%
21	What are the causes that lead children to sexual harassment	17	44.7	21	55.3	13	34.2	25	65.8
22	Ability to identify that adult behavior makes you suspect that the person is an abuser	23	60.5	15	39.5	16	42.1	22	57.9
23	Unwanted pressing or caressing your leg.	3	7.9	35	92.1	0	0	38	100
24	Unwanted hugging.	4	10.5	34	89.5	1	2.6	37	97.4
25	Unwanted kissing.	1	2.6	37	97.4	1	2.6	37	97.4
26	Unwanted letters or phone calls which are of a sexual nature.	0	0	38	100	0	0	38	100
27	Unwanted putting his or her arms around your waist.	8	21.1	30	78.9	1	2.6	37	97.4
28	Unwanted leaning over or cornering.	4	10.5	34	89.5	1	2.6	37	97.4
29	Unwanted sexually suggestive looks or gestures.	3	7.9	35	92.1	1	2.6	37	97.4
30	Unwanted display of visual materials of a sexual nature, e.g. Slides, photos, poster	1	2.6	37	97.4	1	2.6	37	97.4
31	Unwanted putting his or her arm. Around your shoulders or taking your hand.	12	31.6	26	68.4	1	2.6	37	97.4
32	Unwanted pressing or caressing your hands.	4	10.5	34	89.5	1	2.6	37	97.4
33	Making remarks about bodily or other features relating to your sex.	2	5.3	36	94.7	1	2.6	37	97.4
34	Talking or joking about your gender.	2	5.3	36	94.7	1	2.6	37	97.4
	What are the signs that can appear on the abused child?	23	60.5	15	39.5	14	36.8	24	63.2
36	What should you do when your child is exposed to sexual harassment?	29	76.3	9	23.7	24	63.2	14	36.8
37	Any of the following acts is effective to protect children from sexual harassment?	20	52.6	18	47.4	10	26.3	28	73.7

Table (3) shows that the majority of the participants agreed to teach their kids what they have learned in the program, and they agreed to develop a CSA prevention programs in the local living area such as schools in pre-assessment (97.4%), compared with 100% in post-assessment. In addition, 94.7%, 89.5% of participants reflected their positive attitude in their agreement that CSA education will help to prevent it, and education curricula should be taught in the preschool. While, 78.9% consented that the cases of sexual violence against children are very few, and it is not necessary for children to learn how to prevent it in the pre-assessment data compared with 84.2% of them changed their mind by giving correct responses in post-program assessment. 34.2% provided a correct response regarding their attitude toward their fear that CSA prevention education may induce their children to know too much about sex as compared with 44.7% who responded correctly to post-assessment.

Table No 3: Participants' attitude toward CSA prevention in Pre/Post program training

Variables	Attitude							
	Pre				Post			
	Number of the incorrect response	%	Number of the correct response	%	Number of the incorrect response	%	Number of the correct response	%
Do you agree that CSA prevention education curricula should be taught in the preschool?	4	10.5	34	89.5	2	5.3	36	94.7
Are you afraid that CSA prevention education may induce the child to know too much about "sex"?	25	65.8	13	34.2	21	55.3	17	44.7
Do you agree that it is appropriate to develop CSA prevention programs in the local area such as school?	1	2.6	37	97.4	0	0	38	100
Do you agree that CSA education will help prevent CSA?	2	5.3	36	94.7	1	2.6	37	97.4
There is no need to conduct a preventive education program against sexual harassment of children because the child will gain knowledge when he grows up	6	15.8	32	84.2	5	13.2	33	86.8
I think that the cases of sexual violence against children, very few, it is not necessary for children to learn how to prevent it.	8	21.1	30	78.9	6	15.8	32	84.2
I accept the idea that my son \ daughter is the aggressor (the harasser) instead of being a victim of the harasser.	4	10.5	34	89.5	3	7.9	35	92.1
After attending the program is to teach my kids what I learned in the program.	1	2.6	37	97.4	0	0	38	100

Table (4) shows the presence of a highly significant difference between knowledge in pre/post-assessment interventions (p-value is 0.000). Besides, there is no significant difference between the attitude of the participants in pre /post program ($p = 0.22$)

Table No 4: Wilcoxon signed ranks test between pre /post program knowledge and attitudes of the participants (n= 38)

Variables	Mean	Wilcoxon Signed Ranks Test
Pre-knowledge	20.52	0.000**
Post knowledge	29.65	
Pre-attitude	6.710	0.226
Post attitude	7.000	

** $p < 0.001$

Figure (1)

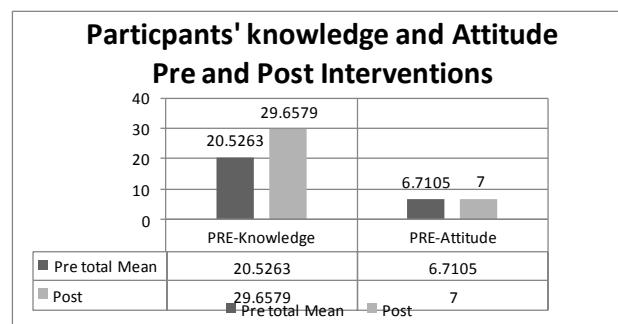


Table (5) shows that a highly significant correlation was found between the total score of pre/post knowledge assessment and the mothers' work state as $P= .000$ and $.037$ respectively. However, there is no statistically significant difference between pre/post knowledge and attitude total score with mothers previously attended an educational program, the presence of family member in the home as well as who have babysitters' $P \leq 0.05$ level.

Table No 5: Relationship between demographic characteristics of the participants, their knowledge, and attitude pre/post program.

Item	Does the mother work?			Did you ever attend the training program for CSA prevention education?			Does the child have a babysitter?			Is there another family member living/always visiting your house?		
PRE knowledge	Yes	No	Sign	Yes	No	Sign	Yes	No	Sign	Yes	No	Sign
	27.50	24.40	.000**	24.77	24.39	.899	25.66	24.82	.578	25.35	24.52	.511
POST Knowledge	31.83	29.25	.037*	30.66	29.34	.134	27.33	29.85	.258	29.82	29.52	.812
	6.66	6.71	.934	6.44	6.79	.539	6.33	6.74	.767	6.58	6.80	.609
POST Attitude	7.16	6.96	.717	7.44	6.86	.174	7.00	7.00	1.000	6.70	7.23	.198

Table (6) shows that there is no significant difference between mother's age and educational background in the pre/post knowledge and attitude at $P<0.05$. Alternatively, the results showed a negative significant (-.001) correlation between a number of children and pre-attitude total score. However, a significant difference in the participants posts knowledge total score ($P=.006$) with the number of children $P\leq 0.05$ level was found. As regard to their age and total score of pre/post knowledge and attitude, only a negative significant difference was found in pre-knowledge total score ($P=-.001$)

Additionally, the results of the current study revealed a highly significant correlation between pre/post knowledge total score as $P=.000$ and pre-attitude total participants score with post knowledge and post attitude $p=.005$, and .001 respectively. Moreover, results revealed a significant difference between participants' post knowledge total score and their pre-knowledge $p=.000$, pre-attitude total score $p=.005$ as well with post attitude total score $P=.004$. Moreover, there was a significant correlation and difference between total score of participants' pre- attitude $p=.001$ and the participants' post knowledge $P=.004$.

Table 6: Correlation of participants' age, educational background, number and age of children in Pre /Post Program

Variables		Pre Knowledge Score	Pre Attitude Score	Post Knowledge Score	Post Attitude Score
Mother age	Pearson Correlation	.156	.145	-.020	-.119
	Sig. (2-tailed)	.349	.384	.905	.477
	N	38	38	38	38
Educational Background	Pearson Correlation	.378	-.109	.203	.147
	Sig. (2-tailed)	.019	.516	.222	.379
	N	38	38	38	38
Number of children in the family.	Pearson Correlation	.180	-.001**	.006**	-.170
	Sig. (2-tailed)	.281	.996	.971	.308
	N	38	38	38	38
Age of the children.	Pearson Correlation	-.001**	.155	.261	.115
	Sig. (2-tailed)	.995	.352	.113	.494
	N	38	38	38	38
Total pre knowledge score	Pearson Correlation	1	.250	.601	.395
	Sig. (2-tailed)		.129	.000**	.014
	N		38	38	38
Total pre attitude score	Pearson Correlation	.250	1	.445	.523
	Sig. (2-tailed)	.129		.005**	.001**
	N	38		38	38
Total post knowledge score	Pearson Correlation	.601	.445	1	.451
	Sig. (2-tailed)	.000**	.005**		.004**
	N	38	38		38
Total post attitude score	Pearson Correlation	.395	.523	.451	1
	Sig. (2-tailed)	.014*	.001**	.004**	
	N	38	38	38	

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tail

Discussion

The current study results revealed that there is a highly significant ($P = 0.000$) difference between pre-and post-program assessment in the mothers' knowledge. An extensive body of research is supporting the findings from the current study (23, 24, 25) in which they found that their programs were effective in harming children and their parents with knowledge and skills to prevent CSA. The intervention program in the current study was developed based on Family-centered practice model which focuses on children's safety and needs within the context of their families and communities and builds on families' strengths to attain ideal outcomes. According to literature, parent-focused prevention goals have historically been aimed at increasing the knowledge and skills of parents and their children to help them protect themselves against victimization [26]. Therefore, collaborating with mothers to prevent such abuse seemed to have many advantages [27]. In fact, primary prevention is vital because it requires shifting societal norms, beliefs, and structures to stop allowing such abuse to occur [28].

The results revealed that there is no statistically significant (0.2) difference between pre-and post-participants' attitude toward teaching or training children about sexual abuse despite the change in their attitudes in post-assessment, as Julia and Eggeraat [29] found in her study. According to Tennfjord [30] & Sjoberg [31] attitude is defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor and is environmentally regulated. One main element of the environment to affect the establishment of attitudes is the public sociocultural standards and politics (such as individuals' context, education, experience, etc.). Despite the program of the current study is short term, the mothers' attitudes were changed in relation to the importance of their knowledge to decrease the sexual abuse incidence to their children. Accordingly, Gorard, et al. [32] stated that the effectiveness of educational interventions depends on the evaluation methodologies that provided definite evidence of impact both on attitudes and educational achievement.

Additionally, a highly statistically significant correlation was found between the total score of pre/post knowledge assessment and the mothers' work state as $P= .000$ and $.037$ respectively. Unfortunately, a few public quiet believe that a "good mother" is the one who leaves the job to keep on with her children. Nevertheless, there is no practical verification could state that youngsters are abused because their caregivers are at work. While a youngster's growth is affected more by the way of family communication, feelings, and the quality of childcare. A child who is psychologically well regulated, being appreciated, and feels liked will be healthy regardless of whether the mother works outside or stayed

the home. However, an employed mother who provides a model for her children can effectively manage both an outside job and parenthood. According to the American Academy of Pediatrics [33] children lean towards looking after one another and support either inside or outside the home.

Interestingly, in relation to the comparison between mothers' awareness and their educational level on post-intervention, the result revealed that there is no noteworthy difference between mother's awareness and their educational level. This is because nearly two-third (57.8%) of the participants were a secondary level which made them uninformed and responsive to their children's needs and problems and unable to educate themselves through various resources to promote the health and well-being of their children. This finding was supported by (Neanaa, et al) [34] who also found that younger parents had a high level of knowledge and are eager to learn, while elderly parents are less keen to learn new concepts. Meanwhile, the current study showed no significant difference between mothers' age and their pre\post knowledge and attitude.

Furthermore, the results revealed that there is a negative significant (-.001) correlation between the number of children and pre-attitude total score as the increased number of children, the negative the attitude of the mothers toward sexual abuse training program and vice versa. However, there was a significant difference in the participants post knowledge total score ($P=.006$) with the number of children in the family $P \leq 0.05$ level. According to Dushi [35], attitude usually affected by the individual level of education, employment, socioeconomic status, and cultural customs at resident area either urban or rural. In the same line, the findings showed that the majority of the participants were a secondary level of education, unemployed and had a big number of children (table 1) and consequently, have lower socioeconomic state reflected in teaching their children in a governmental school. All these variables made that the correlation is negative significant in relation to the attitude toward CSA training program and a positive significant difference in their knowledge in pre /post program intervention.

As regards the age of children and the total score of pre/post mothers' knowledge and attitude, only a negative significant difference was found in pre-knowledge participants' total score ($P =-.001$). This negative correlation could be explained as the younger the child, the more the knowledge about CSA the mothers have. According to DeGeyn [36], 75% of all sexually abused cases were children younger than 11, and 69% were girls. The situation in the current study is that the school is single-sex (female) education and therefore, the mothers usually worry about their younger daughters' safety especially when the kids start playing outside the house, meet their friends, or strangers at school. In Saudi Arabia, girls of a specific age are not

anticipated to go shopping, or play outside the house as boys often do, which increases the liability to physical and sexually abusive behaviors as they lack the self-reliance, competencies, and awareness.

Moreover, the findings of the current study are in line with Yosef and Elbahnasawy [37], who revealed that there was a highly statistically significant association between the full knowledge, and attitudes total scores in the pre-and post-child sexual harassment preventive program. Furthermore, results revealed a significant difference between participants' post knowledge total score and their pre-knowledge $p= .000$ and pre-attitude total score $p= .005$ as well with post attitude of participants total score $p= .004$. Additionally, the table indicated that there is a significant relationship between an overall score of participants' pre-attitude $p= .001$ and the total score of the participants' post knowledge $P= .004$. Also, Zhang et al. [9] highlighted that teachers or parents who attended the training programs had higher scores on CSA prevention and a positive attitude towards CSA. Therefore, an extensive body of researchers concluded that acquiring knowledge usually affecting the attitudes of the participants.

Limitation of the study

Despite the insight that the current study provides on the mothers' knowledge, and attitudes toward CSA, some methodological concerns need to be addressed such as using a quasi-experimental design, no control group, no randomization, small size of the sample and using convenience sampling technique that may affect the generalizability of the findings.

Research highlights

- This study is conducted to investigate the effectiveness of an educational prevention program in developing Saudi mothers' knowledge and awareness about CSA.
- The educational intervention is effective in changing the knowledge and attitudes in post assessment
- The mothers' work state and number of children were highly affecting total score of pre/post knowledge assessment as well as between participants' pre/post knowledge and pre-attitude total score with post knowledge and post attitude
- Mother's age, educational, and previously joined program showed no significant difference between the pre/post knowledge and attitude
- The more the children number the more the negative of mother attitudes toward CSA training and the younger the child the more the knowledge total score.

Conclusion and recommendation:

The current study findings evidenced the effectiveness of the educational intervention in changing the knowledge of the participant significantly, and change their attitude in post-assessment. Additionally, a highly significant difference was found between the total score of pre/post knowledge assessment, the mothers' work state, and a number of children. Besides, a highly significant correlation was found between participants' pre-and post-knowledge total score as and pre-attitude total participants score with post knowledge and post attitude. Additionally, there was a significant difference between the total score of participants' pre-attitude and post knowledge, However, mother's age, educational level, previously joined an educational program, and who have babysitter showed no significant difference between the pre/post knowledge and attitude. Moreover, the more the children number the more the negative of mother attitudes toward CSA training and the younger the child the more the knowledge score. Therefore, there is an urgent need to conduct more CSA prevention programs for parents and children, to increase their knowledge, and to change their attitude regarding CSA teaching program. Integration of CSA awareness subject within the curriculum contents given to children to help them to protect themselves and ensure safe knowledge, school, and home environment. Besides, replication of the current study with longitudinal design might help in identifying the change of attitudes.

Research's clinical implications:

• The children of 81 school affiliated to Ministry of Education are at greater risk for CSA since their mothers have inadequate knowledge and holding unfavorable attitudes toward CSA.

Communication of the results to the principles of the school is necessary to coordinate how mothers regularly attend sexual abuse prevention program and teach their children the protective measures of CSA.

A booklet was developed by the researchers based on the educational program and was approved by Student Research Unit College of Nursing, Jeddah, KAIMRC and IRB office.

It is recommended to provide this booklet copies to the school principal who can distribute to the children' mothers and encourage them to apply CSA knowledge to protect their children from the risk of sexual abuse.

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