



## Assessment of Effectiveness of School-Based Child Sexual Abuse Prevention Programs: A Meta-Analysis

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Article Information	ABSTRACT
<i>Received:</i> 12.12.2020	The sexual abuse of the child is a wide-ranging and complex problem with physical, emotional and psychological consequences, with social, moral, cultural and legal dimensions, and when the prevalence rates are analyzed, it is seen that it is a serious problem for all societies. One of the most common strategies used to prevent child sexual abuse is school-based initiatives. So, the purpose of this integrative literature review is to systematically evaluate the evidence of the effectiveness of school-based child sexual abuse prevention programs. In this context, the current study includes 22 articles that meet the criteria for inclusion. The Comprehensive Meta-Analysis (CMA) statistical program was used to calculate the effect sizes of the studies included in the meta-analysis. The mean, standard deviation, sample size, p, t, or f value data reported in the primary studies were used to calculate the effect sizes of the studies included in the meta-analysis. As a result of the analyzes carried out within the scope of the study, it was concluded that school-based education practices aimed at preventing child sexual abuse are highly effective, and that after the prevention programs, the knowledge and skill levels of the children increased widely and these increases were statistically significant. As a result, it can be said that the knowledge and self-protection skills of children can be increased by participating in school-based sexual abuse prevention programs.
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### 1. INTRODUCTION

Child sexual abuse (CSA) is a global problem and it is estimated that about 20% of children in the world are affected by sexual abuse (Senn, Braksmajer, Urban, Coury-Doniger, & Carey, 2017; WHO, 2016). Sexual abuse of a child accompanied by emotional and physical abuse types is a wide-ranging and complicated problem with social, moral, cultural and legal dimensions (Baccino and Martrille, 2016; Mc Killop 2019). CSA is a complex phenomenon occurring for multiple reasons, in various ways, and in different relationships so different definitions are used for CSA and there is no universally accepted definition (American Psychological Association [APA], 2014). According to World Health Organization (2006) CSA defined as “the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared, or else that violates the laws or social taboos of society”.

Generally, and for a variety of reasons it is hidden by the child victim; however, child sexual abuse which has the traumatic effect on the child is a public health problem common around the world (Barth et al., 2013) which needs to be taken seriously. It is understood how serious the situation is, when officially reported data are examined. Various international studies on the prevalence of CSA report a prevalence rate of 13–20% for female victims and 5–8% for male victims (Barth et al., 2013; Stoltenborgh et al., 2015). In the United States of America, 1 in every 10 children reported experiencing sexual victimization, with nearly 15-32% of women and 5-16% of men stating they experienced sexual abuse as children (Whealin and Barnett, 2015). According to a child abuse report in Turkey, the number of child victims was 74,064 in 2014, while this rose to 83,552 in 2016. Generally, a 33% increase in child victims of sexual abuse was found from 2014 to 2016 (ASUMA and IMDAT, 2018). According to the results of research conducted in different countries to determine the prevalence of CSA; the prevalence rate in Italy is 18% (Prino, Longobardi, & Settanni, 2018); 9% in China (Ma, 2018); %20 in Denmark (Strizzi et al., 2021); 9% in Slovakia (Petrikova, Kascakova, Furstova, Hasto, & Tavel, 2021), 2-33% in Iran (Mohammadi, Zarafshan, & Khaleghi, 2014), 4-41% in India (Choudhry et al., 2018) and 10-61% in Japan (Tanaka, Suzuki, Aoyama, Takaoka, & Macmillan, 2017). Additionally, many

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children never disclose sexual abuse they experienced or report it to the authorities (Azzopardi et al, 2019). As a result, it is considered that current data underestimate the actual prevalence rates of CSA.

The childhood period is one where the basic aspects of human development are shaped, with the basis of the adult personality laid in this period (Cohen, 2008). Hence, experiences and relationships in childhood determine how children form relationships with others and how they perceive themselves in adulthood (Doyle & Cicchetti, 2017). Generally, these experiences are internalized in a way that affects a person's daily life experiences. One of the most devastating childhood events is sexual abuse of the child (Hurtado, 2014) and negative outcomes generally encompass the life cycle (Berliner, 2011). Sexual abuse experienced in childhood causes serious mental, emotional and physical harm in the time interval of exposure, but also includes long-term outcomes (Debowska & Boduszek, 2016). Children who have experienced sexual abuse are reported to have high rates of emotional, developmental and behavioral problems including learning problems and poor academic performance (Fry et al., 2018), problems relating to peers, internalizing symptoms, externalizing symptoms, self-harm and suicide attempts (Maniglio, 2011), young pregnancy, high risk sexual activity and sexually-transmitted infections (Fergusson, McLeod, & Horwood, 2013). Additionally, abuse experiences in the childhood period are stated to be associated with substance use (Ulibarri, Ulloa ve Salazar, 2015), personality disorder (Dolan & Whitworth, 2013), depression, anxiety (Berliner, 2011), high physical health difficulty including cardiovascular problems, chronic pain and obesity (Afifi et al., 2016). Considering the prevalence of sexual abuse in the childhood period and related physical and mental health outcomes, effective interventions to prevent CSA have vital importance.

One of the most common strategies used to prevent CSA is school-based interventions (Walsh, Brandon, & Chirio, 2012). School-based prevention is a universal service providing learning access for all children attending primary schools in many countries (Finkelhor, 2009; Wurtele, 2009); children spend a significant amount of time in school which is an unrivaled learning opportunity (Pinheiro, 2006). Due to this status, schools appear to be key organizations to deal with a range of social topics affecting learning and development of children (WHO, 2016). As a result, school-based programs gain more importance within the scope of abuse prevention studies. Effective school policies and curricula have critical importance for appropriate prioritization, sourcing and implementation of sexual abuse prevention in children. However, very little is known about the effects of these programs.

School-based programs for preventing CSA typically are adapted to age and cognitive level and offered to student groups, mainly in classes. There may be a range of differences in prepared programs about what concrete teaching methods are used, the length of the program and what type of teaching material is used within the scope of the program. Topics and concepts taught in these programs may vary; however, generally they have common aims which are to assist children in recognizing possible abusive situations (Kenny & Wurtele, 2010), to ensure children have the skills to use in avoiding and/or reporting abuse and to reduce feeling of negative emotions about abuse experiences such as responsibility and guilty (Finkelhor, 2009). Interventions aim to transfer the knowledge and skills learned by the child or adolescent in the class/learning environment into real life situations. Most prevention programs use a behavioral skill education program and are based on social learning principles and obtaining skills through teaching, modeling, acting, reinforcement and feedback (Smallbone, Marshall & Wortley, 2008). Many studies about prevention programs reported positive effects for children in regard to the knowledge and skills gained about child abuse (Bustamante et al., 2019; Pulido, 2015; Weatherley et al, 2012). Additionally, school-based prevention programs have additional importance to ensure child victims don't blame themselves or feel ashamed and to create a more sensitive environment to assist the child (Finkelhor et al., 2015). On the other hand, these programs have been criticized for putting too much responsibility on children for keeping themselves safe from sexual abuse (Topping and Barron, 2009). Also it is stated in the relevant literature that the prevention approach provided to children has some limitations such as the capacity of children to understand abusive situations when they are perpetrated by people that they know and to enact prevention strategies (Barron & Topping, 2013; Rudolph et al., 2017). There also may be unintended outcomes of CSA education as researches show that some children may exhibit negative emotions such as anxiety and confusion after a prevention program (Zwi et al., 2008). But it is noted that these negative effects are mild and short-lived (Tutty, 2014). Another limitation expressed is that, on average, children only remember CSA information for one year after first intervention (Daigneault et al., 2012).

### **1.1. Purpose of the Problem**

School-based programs are implemented as an important primary prevention strategy in many countries. In the literature review on the subject did not encounter a meta-analysis study evaluating the effectiveness of these programs has been found in Turkiye. Given the traumatic effects of CSA, a review focusing specifically on school-based program was needed for primary prevention of CSA. So this meta-analysis was aimed to determine as "assessment of the efficacy of school-based education programs to prevent child abuse". This study includes a recent literature review on effectiveness of purely school-based CSA prevention programs. Within this scope, studies were investigated with the meta-analysis approach to determine whether they significantly affected the knowledge and awareness levels of children about sexual abuse. In the present study, school-based prevention education groups for CSA were the 'independent variable' and knowledge levels about child abuse were determined as the 'dependent variable'. Within this framework, attempts were made to find the answer to the research question: how effective are school-based prevention education practices implemented to prevent child sexual abuse?

## 2. METHODOLOGY

Meta-analysis is known as one of the most commonly used methods in the process of combining and synthesizing research findings (Lipsey & Wilson, 2001). Meta-analysis is an analysis completed with the aim of bringing findings obtained in primary studies together and integrating them (Glass, 1976). Hence, due to the nature of meta-analysis studies, quantitative data obtained in many studies are combined and a range of statistical procedures performed with the aim of obtaining a general summary or conclusion between studies (Cumming, 2012).

### 2.1. Procedure

After determining the research question, all relevant published and unpublished studies in the field were identified and a comprehensive search strategy was created with the aim of including studies. Firstly, systematic investigations dealt with studies included on the reference list when original investigation searches were performed in March and April in 2020. Within this scope, ERIC (EBSCO), SpringerLINK, Taylor & Francis, Wiley Online Library, Science Direct, Proquest Dissertations and Theses Global, ULAKBIM, National Database, Sage Premier, Scopus, Turkish Council of Higher Education Thesis center and Google Scholar databases were used. Screening of the relevant literature used the Turkish words “çocuk istismarı”, “çocuk cinsel istismarı”, “önleme”, “okul temelli önleme” and their English equivalents “child abuse”, “child sexual abuse”, “prevention”, and “school-based prevention”.

Within the scope of the current study, 14121 studies were identified through database searching and 8 from other sources. After the duplicates were removed, the titles and abstracts of the 11280 studies were screened. The 63 original studies that were evaluated for eligibility and whose full texts were reached, were reassessed and 37 records were excluded due to the age of participants, study and intervention type and not being school-based. This review includes a total of 22 studies. The flow diagram of the studies included in the metaanalysis is presented in Figure 1.

For selection of studies meeting the inclusion criteria for the meta-analysis separate selection criteria were defined appropriate to test the hypothesis. Studies were included if they were pretest/posttest one group design, control group experimental and quasi-experimental designs. The study population comprised children and adolescents attending kindergarten (preschool) , primary and secondary schools. Also, included interventions were school-based programs primarily focusing on prevention of child sexual abuse; interventions for preventing relationship violence, and sexually coercive peer relationships were excluded. Studies chosen for meta-analysis comprised intervention programs published in Turkish and English. In addition, the studies included in the metaanalysis conducted between 2010 and 2020, are limited to the ERIC (EBSCO), SpringerLINK, Taylor & Francis, Wiley Online Library, Science Direct, Proquest Dissertations and Theses Global, ULAKBIM, National Database, Sage Premier, Scopus, Turkish Council of Higher Education Thesis center and Google Scholar databases. The meta-analysis includes studies published in English and Turkish.

In line with the aim of this research, the titles and abstracts of articles were investigated by 2 authors independently and if studies did not meet by the inclusion criteria (in other words, study design, participants, intervention type and comparison types) they were excluded from the meta-analysis. In the second stage, two researchers independently investigated the titles, abstracts and methodology sections of articles meeting by the inclusion criteria. The study included 22 research studies meeting by the inclusion criteria according to consensus, with full texts accessible and completed from 2010 to 2020.

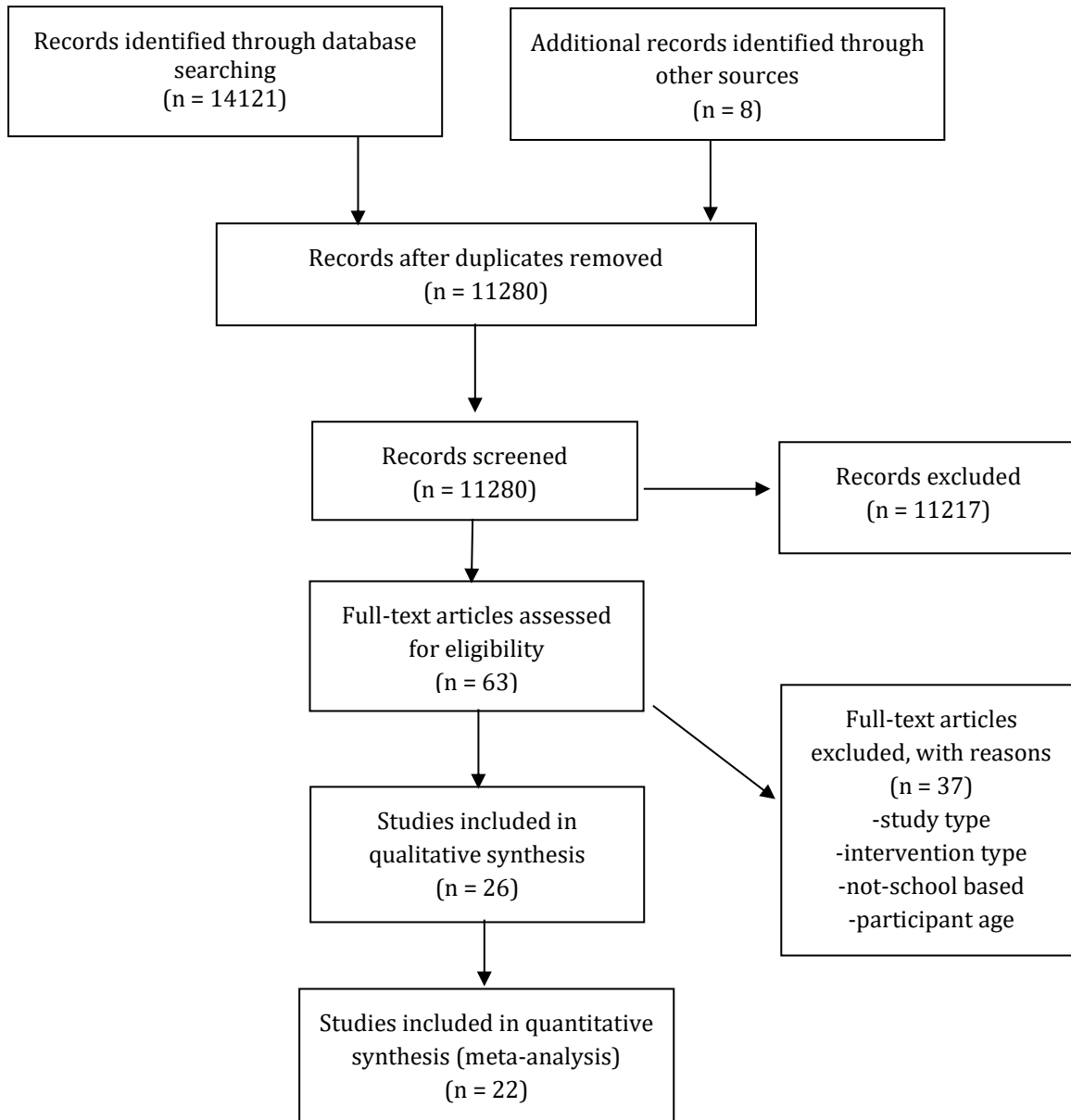


Figure 1. Prisma flow diagram of screening process

### 3. FINDINGS

#### 3.1. Characteristics of Included Studies

A total of 15759 school-aged participants were included in the 22 trials. In all 22 studies, interventions focused specifically on CSA prevention. Contents of the intervention programs included safety rules, body ownership, private parts, distinguishing appropriate and inappropriate touches, distinguishing types of secrets, and whom to tell. The teaching methods used in the programs included instruction, discussion, modelling, rehearsal, social reinforcement, shaping and feedback. Program delivery formats included film, video, theatrical plays, performance, multimedia presentation, cartoons, songs, puppets, workbooks, story books, colouring books, games, brochures, scenarios, newspaper. The duration of the intervention programs in the trials ranged from a single session to 12 sessions, interventions not exceeding 90 minutes. Information about the types of interventions applied in the studies, the content of the application and the results of the program are given in Table 1.

Table 1.  
*Characteristics of Selected Studies*

Author, Date and Country (Name of programme)	Participants, Age and Grade	Type of intervention	Number of sessions and length	Programme presenter	Content	Results
Baker et al., 2012, Hawaii (My Body, My Boundaries Curriculum)	Age:7-10 Grade: 3-5 (80 students)	*Kinesthetic exercises *Role plays *Discussion *Questions * Writing assignments	4 sessions over a 3-week period	*School staff who had been trained	* Identify types of sexual abuse * Recognize and respond to unsafe *Learn how to identify and tell others if they are victimized *Keep telling if the first person they tell does not believe them about sexual abuse *Understand what personal boundaries are and the importance of respecting them *Learn how to stay safe from Internet predators	Children in intervention schools significantly increased their knowledge of appropriate and inappropriate touch and what to do if they experience sexual abuse.
Barron & Topping, 2013, United Kingdom (The Tweenees program)	Grade: 6-8 (380 students)	*Discussion *Board game	Four sessions lasting 90 min	*Survivor agency workers *Teachers	*Enable students to be aware of potentially abusive situations *To disclose CSA and other abuses *Bullying *Physical and sexual assault/abuse *Domestic violence *Gender issues *Power in society	As a results of the research, grade 6 students made greater knowledge gains in relation to prevention programme. In contrast, high school student gains failed to reach statistical significance. Therefore, the researcher emphasized that programs involving cognitive, social and emotional changes appropriate to the developmental period are necessary. Finally, the education program was found to be effective in explaining the types of abuse to which children were exposed.
Brown, 2017, Florida ("Safer, Smarter Kids" Curriculum)	Age: 5.5- 7.7 Grade: Preschoolers (1169 students)	*Video *Structured learning *Class exercises	Six sessions lasting 30-min over 6 weeks.	*School staff who had been trained	*Understanding safety rules *Introducing the concept of a stranger versus a trusted grown-up 'buddy' *Listening to one's inner guiding voice *Body boundaries *Recognizing safe versus unsafe *Secrets *Knowing the difference between tattling *Reporting	The results indicated that completion of the Safer, Smarter Kids curriculum was followed by a significant increase in students' knowledge of key prevention concepts with a 77 % increase in scores post intervention. However, children failed to identify the mouth as a private part.
Bustamante et al., 2019, Ecuador ("I have the right to feel safe at all times" prevention program)	Age:7-12 (939 students)	*Workshop, participated in an interactive activity *Discussion	Ten one-hour session	*Teachers who had been trained	*Increase self-esteem *Identify a personal safety net of trusted adults *Distinguish between good and bad secrets *Identify appropriate and inappropriate touching *Avoid situations of risk *Practice the right to say 'no' *Disclose abuse *Recognize that abuse is never the child's fault	After participating in this school-based educational program, children substantially improved their knowledge of self-protection strategies against CSA and retained this knowledge six months after completing the intervention. analysis showed that the program was most effective in communicating that not all secrets must be kept. However, children had difficulty with questions related to how to distinguish potential abusers from people they can trust.

Table 1 (continued)

Cecen-Eroğul and Kaf-Hasirci, 2013, Turkey ( School-based Child Sexual Abuse Prevention Training Program)	Grade: 4 (36 students)	*Pictures *Puppets *Videos *Role-playing *Modeling *Rehearsal	A sixty minute sessions were carried out on four consecutive days	*Psychological Counsellor	*Provide children information about personal rights *My body belongs to me *Good touch-bad touch discrimination *Breaking promise *Body safety rules *Say 'no' *Bad secrets *Talking with a grown up who believes the child *Sexual abuse is never a child's fault	As a result, the prevention child sexual abuse program was effective on 4th grade students and this effect was lasting eight weeks later.
Citak-Tunç et al., 2018, Turkey (Body Safety Training Program)	Grade: Preschoolers (83 students)	*Visual education as pictures *Narrative	7 sessions lasting 20 and 25 min in seven consecutive days	*Nurse	*Helping children recognize potentially abusive situations or potential abusers *Encouraging children to refuse sexual requests by saying 'no' *Teaching children to resist by trying to get away from the perpetrator *Encouraging children to report previous or ongoing abuse *Explaining that secret or inappropriate touching is never the child's responsibility	The results of the study showed that the program is effective in raising personal knowledge about protection against CSA in young Turkish children and in developing a positive attitude toward discussing sexuality.
Dunn, 2011, South Africa (The Hands Off Our Children – Your Child is My Child "HOOC " Campaign)	Age: 9-12 Grade:4 (1697 students)	*Drama *Colouring book *Puppet show *Video *Group discussion *HOOC board game	-	-	*Provide a theoretical foundation on prevention strategies *The learning of sexual abuse concepts *Indicate areas for appropriate and inappropriate touching on the body	According to results, there was a significant increase in knowledge on appropriate and inappropriate touching within the experimental group from the pre-test to the post-test. However, The results indicated that there tends to be a decrease of knowledge, especially on the appropriate touch subscale, within a six-week period.
El Aziz, Ismail & Ahmed, 2017, Egypt (Child Sexual Abuse Prevention Program)	Age: 7-12 Grade: 6 (100 students)	*Group discussion *Lectures *Brainstorming *Roleplaying *Behavior modeling *Rehearsal *Brochures, colored posters *Laptop screen Show videos about sexual abuse prevention *Short stories	Five sessions lasting 30-45 min. over six months	*Nurse	*Meaning, signs and symptoms of sexual abuse *Common age of exposure to sexual abuse *Psychological problems associated with sexual abuse *Routes of sexual abuse and *Prevention of sexual abuse *Self-assertion skills *Self-defense yell *Encouraged to ask friends for help and *To tell a trusted adult if an incident of abuse occurs	As a result, the prevention program lead to significant improvement in studied children's knowledge and attitude about sexual abuse prevention.
Holloway & Pulido, 2018, USA ("The Safe Touches" Curriculum)	Age: 7-10 Grade: 2- 3 (411 students)	*Puppets*Role-play *Scenarios	50-minute interactive workshop	*Facilitators who had been trained	* Defining parts of the body that are considered private *The difference between safe and not safe touches *That not safe touches can be given by someone the child knows *That the child is not to blame for receiving a not safe touch.	Results shows that young children increase knowledge of certain CSA prevention concepts after a single 50-minute workshop, which is sustained at short-term follow up. Also it is emphasized that cultural factors may impact how children learn prevention concepts.
Hurtado et al., 2014, El Salvador (My Body Belongs to Me- Museum Exhibit)	Age: 6-14 (247 students)	* Visiting a museum exhibit *Video	-	-	* Body ownership *Types of inappropriate touching *Escaping and reporting skills.	Children's knowledge scores on CSA prevention significantly improved after visiting the exhibit.

Table 1 (continued)

Jin ve dig.,2017, China (Body Safe Training Program)	Grade:1-5 (484 students)	*Interactive learning *Discussions *Role-plays	Three 30-min sessions within 15 days.	*Trained teachers *Parents	*Concept of private parts *Body safety rules *Private parts cannot be seen or touched except for hygiene and cleanliness needs *Recognition of appropriate/inappropriate touch *Strategies for saying 'no' in life situations *Self-protection skills *That is, in potentially abusive situations *Say 'no' *Try to get away *Tell someone	The findings reveal that children in the teacher education group demonstrated the highest level of CSA prevention knowledge and skills, followed by the parent education group, while children in the control group showed the least improvements. The knowledge and skills gains were retained at a 12-week follow-up.
Kenny & Wurtele, 2010, USA (Body Safety Training program)	Age:3-5 (93 students)	*Modeling *Rehearsal *Social and verbal reinforcement *Shaping *Feedback	Twice a week for 1 hour at a time over a 6-week period	*2 counselors who were master-level	*Understanding the concept of body ownership *Identifying and naming private parts *Distinguishing appropriate from inappropriate requests to touch or look at the private parts *Responding to inappropriate requests *Understanding that inappropriate touching is never a child's fault	According to results, After completing the BST program, children improved in their ability to recognize the inappropriateness of requests made by both "good" and "bad" people. Also Post-test findings demonstrated that children as young as 3 years of age can learn the inappropriateness of such requests even when coming from "good" people, although 3 year olds had more difficulty recognizing inappropriate-touch requests compared to 4- and 5-year-old children.
Kenny, Wurtele & Alonso, 2012, USA ('KLAS' Kids Learning About Safety)	Age:3-5 Grade: Preschooler (123 students)	*Workbook *Scripts *Role play *Discussion *Videos	10 one-hour sessions).	*Trained counselor	*Increase knowledge about general safety and sexual abuse *Be better able to distinguish between inappropriate and appropriate touching *Learn the correct names of their genitals *Understand that potential abusers can be people they know and like	Compared with controls, participating children demonstrated enhanced ability to recognize inappropriate touches, learned correct genital terminology, were able to recognize the inappropriateness of touch requests made by "good" people, demonstrated higher levels of personal safety skills, and learned general safety rules. Gains in knowledge were maintained at three-month follow-up testing for all content areas except genital terminology. Although feedback provided by participating families was positive, recruiting participants and maintaining attendance at sessions was difficult.
Kim & Kang, 2017 South Korea (C-Sape Program)	Age: 9-11 Grade: 5 (89 students)	* Lecture * Case presentation * Graphic materials *Group discussion *Game *News related to child sexual abuse *Group study paper *Role playing *Video	Six sessions lasting 40 min. over 6 weeks	*School nurse	*Concept of CSA, *'Good' and 'bad' feelings Identifying unsafe situations *Coping skills *Responding in an appropriate way *Actions to take when sexual abuse has occurred.	Significant differences were found between the experimental and control groups' mean difference (post-pre) in competence scores, especially in the category of self-protective behaviors. It's noted that the education program may be effective in increasing elementary school students' self-protective behaviors related to sexual abuse.
Morris et al., 2016, USA (The 'Safe@Last' program)	Grade:1-6 (1177 students)	*Behavioral skills training *Rehearsal *Role-playing *Music *Games *Stories *An interactive online workbook *Engagementof parents and family outside the classroom	Four sessions, each lasting 35 min, typically delivered on a weekly	*Guidance counselors	*To distinguish safe from unsafe people *To differentiate between safe and unsafe situations *Problem-solving skills *Assertiveness skills *Clear disclosure methods	Results showed that children who completed the education program had significantly better knowledge scores at the post-intervention assessment than did those in the waitlist control condition. By the end of the program, students were better able to distinguish safe from unsafe people, make safe choices when confronted with potentially unsafe situations, engage in problem-solving strategies, utilize clear disclosure methods, and identify assertive responses to inappropriate touch.

Table 1 (continued)

Neherta et al., 2017, Indonesia (Intervention of Sexual Abuse Prevention)	Age: 6-12 Grade:1-6 (1112 students)	*Visual auditory kinesthetic learning modalities *Movies *Presentation *Role play *Discussion using pictorial sketch story *Local language song *Leaflets	4 sessions in a 7-week period	*Teachers *Nurses	*Increasing knowledge about sexual abuse *Increasing assertiveness behaviour	The intervention that given by nurses and teachers, both increased average value of children's knowledge and assertiveness. However, intervention model that given by the nurse was the best model in improving the average knowledge and assertiveness on children.
Ogunfowokan & Fajemilehin, 2012, Nigeria (Sexual Abuse Prevention Education)	Age: 13-24 , Grade: High school (200 female students)	*Instruction *Discussion * Written materials *Newspaper	Over a period of 10 school days at 30 min/day	*School nurse	*Definitions and concept of sexual harassment, sexual exploitation, and rape *Victims and potential victims of sexual abuse *Settings for sexual abuse of school girls *Perpetrators of sexual abuse of school girls *Consequences of sexual abuse on school girls *List of few reported cases of sexual abuse of young girls in Nigeria *Myths about sexual abuse *Prevention strategies for sexual harassment, sexual exploitation, and rape among school girls	Results revealed a significant increase in the knowledge mean scores of the girls at first postintervention stage and this increase was maintained at third and seventh month postintervention. However, no significant shift was observed for the attitude of the girls. It is noted that, education is a significant tool that could be used in improving the knowledge of sexual abuse prevention among high school girls.
Ozdemir,2018, Turkey (Child Abuse Prevention Program)	Age: 8-11 (55 students)	*Games *Instructions *Video *Cartoon *Visual learning *Reinforcement *Questions *Puzzle	Single session lasting about 90 min	*Social worker	*Abuse definition *Safe or dangerous cases and behaviours *Private parts and rules of private parts *Touches *Secrets *Self-protection skills.	According to results of the research, the child sexual abuse prevention program can be said to be effective in terms of increasing the awareness levels of child sexual abuse. Besides, the children in the research were asked about their views on the prevention program being implemented and it was seen that children found the educational program fun, that they felt confidence due to the information received from the program, and that they learned preventative information.
Pulido et al., 2015, USA (Safe Touch Program)	Age: at least 7 Grade: 2 ve 3. (492 students)	*Puppets *Role-play *Scenarios *Activity book	One time 50-minute interactive workshop	*Two master's-level clinical social workers or mental health counselors	* Private parts of the body *The difference between safe and not-safe touches *Secrets versus surprises *The information that not-safe touches can be given by someone the child knows *Children should keep telling an adult until they are believed *The child is not to blame for receiving a not-safe touch	The intervention group showed significantly greater improvement than the control group on knowledge of inappropriate touch especially children in second grade. But no significant change in knowledge of appropriate touch among control or intervention groups. Also it's noted that prevention efforts must be developed across socialecological domains, including families.
Tutty, Aubry & Velasquez, 2020, Canada ("Who Do You Tell?")	Grade:1-6 (6198 students)	*Discussion *Pictures *Short videos *Role-plays * Parental involvement	*Two sessions of 45 to 60 minutes within a week *Over the eight-year time period, five schools received the program twice and two received it three times.	*Two trained educators	*Recognize abusive behaviors *Promote healthy relationships *Learn about body autonomy *Access support in order to reduce the impacts of sexual violence.	Results Show that Students who participated in the education program eight-year monitoring significantly increased their knowledge of core CSA education/ prevention concepts. Also students in higher grades know significantly more core prevention concepts at both pre-test and post-test than younger students. And it is found that girls learn more of the prevention concepts than boys, So, it's emphasized that differential responses suggest the need to research characteristics beyond gender in clarifying best case prevention efforts



Table 1 (continued)

Weatherley et al, 2012, Malaysia ("Keeping Me Safe" Personal Safety Curriculum)	Age: Mostly nine-year olds (444 students)	*Games *Role play	*Six weekly one-hour sessions	*Observations were conducted by volunteers and interns trained for this task, *Interviews by P.S. The Children staff.	*Provide children information about their body *Safe and unsafe situations *Building a support system *To impart safety strategies and skills. *The basic message was to "say no, run, and tell" trusted adults	As a result of comparing the post-test scores, it was determined that there was a significant amount of information gain in the experimental group students compared to the control group and psychological gain (self-confidence) in a small portion of the students, and these gains were preserved in the follow-up studies. However, it was reported that some of students (about 25%) could not receive the basic messages of education.
Zhang et al., 2013, China (The Body Safe Training Program)	Age: 3-5 Grade: Preschooler (150 students)	*Stories included pictures *Instruction *Modeling, *Behavioral rehearsal *Social reinforcement *Feedback	*Five sessions of 15-25 min each, presented on five consecutive days	*The instructor who had experience of school-based CSA prevention education	*Children are the bosses of their own bodies. *Identifying the locations of their 'private parts' *Recognizing the appropriate requests to touch or look at children's private parts *Otherwise, it is inappropriate for children to have their private parts touched or looked at by the bigger person and to be forced to touch the bigger person's private parts. *Understanding that inappropriate touching is never children's fault *Self-protection skills including verbal and behavioral responses in the abusive situations	Chinese preschoolers who participated in the CSA prevention training program had significantly higher levels of knowledge about sexual abuse and scores on their skills that may be helpful in avoiding sexual abuse (e.g., identifying, resisting, and reporting inappropriate touch), than children in the wait-list control group. Also findings support the claim that the CSA prevention program do not have negative effects on the child's attitudes toward sexuality and appropriate touch.

### 3.2. Computation and Analysis of Effect Sizes

To calculate the effect sizes of studies included in the meta-analysis, the mean, standard deviation, sample size,  $p$ ,  $t$  or  $f$  values reported in the primary studies were used. The Cohen  $d$  and Hedge  $g$  indices were chosen for calculation of effect sizes. In this study, the effect size values were interpreted based on criteria stated by Cohen (1988). The obtained  $d$  value is interpreted as small if it is .20, medium at .50 and large at .80. The Comprehensive Meta Analysis (CMA) statistical program was used for calculation of effect sizes.

### 3.3. Research Validity and Publication Bias

One of the most serious problems in meta-analysis studies is publication bias (Copas & Shi, 2000). Publication bias, also known as the "file drawer problem" (Borenstein et al., 2009), states that no matter how few problems a study has in methodologic dimensions, the validity of the meta-analysis is at risk if there is biased selection in the choice of studies included in the meta-analysis (Rothstein et al., 2005). In this context, the funnel plot, Rosenthal's Fail-safe  $N$  test and Orwin's Fail-safe  $N$  method with the aim of calculating the number of studies required to destroy the effect size values or in short to remove significance were used. Firstly, a forest plot is used with the aim of investigating the effect sizes and confidence intervals of every study included in the analysis (Lewis & Clarke, 2001).

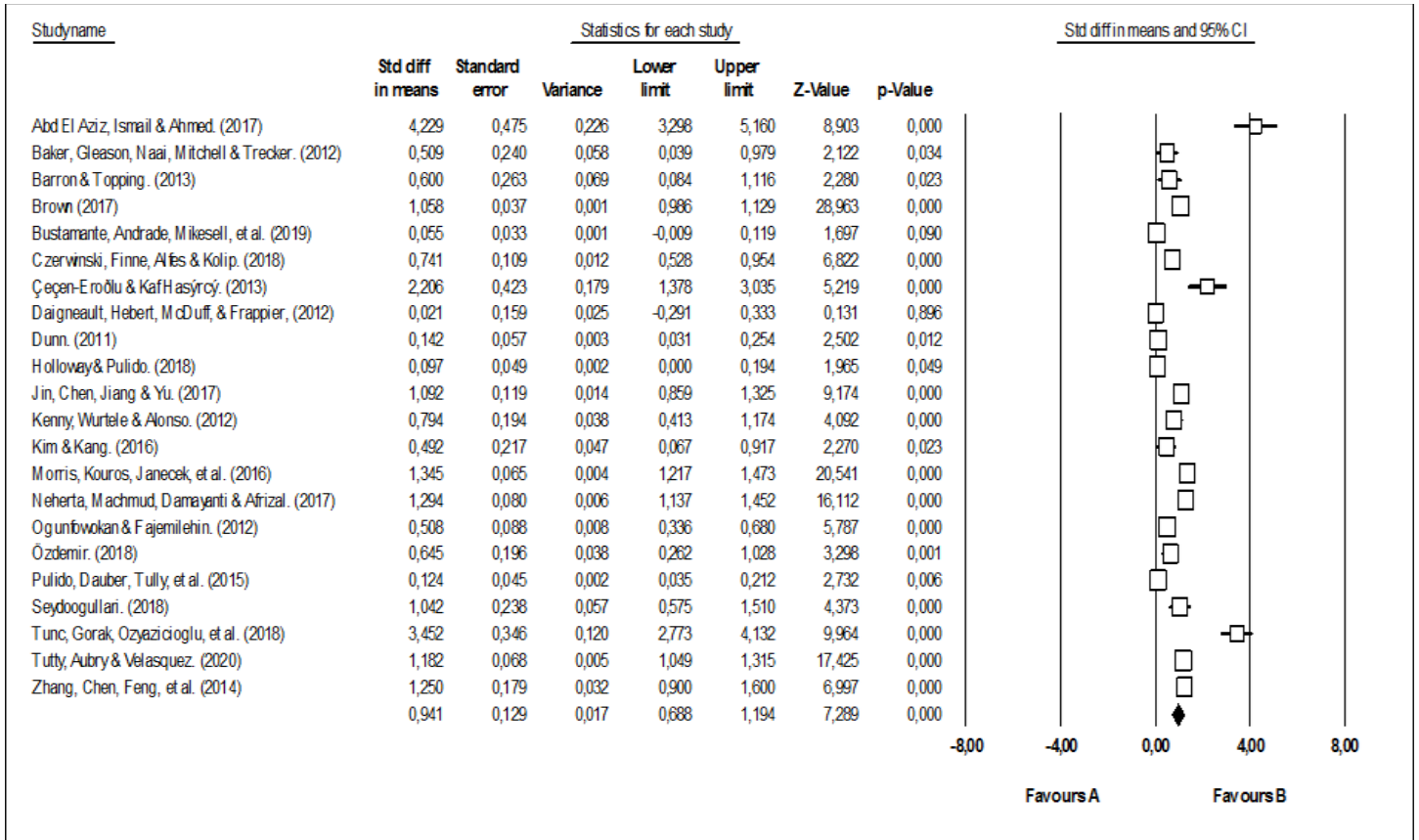


Figure 2. Meta-analysis forest plot

Figure 2 shows the data obtained from 22 articles in the meta-analysis and forest plot. The black boxes on the graph represent the proportion of the sample number in a study to the whole sample size. The horizontal lines in the center of the boxes represent confidence intervals for the study. The diamond shape in the lowest section represents the general effect size. The '0' line in the center is called the ineffective line and for acceptance of meta-analysis studies as significant in a statistical sense, it is necessary that the diamond shape representing general effect size and this ineffective line do not intersect. As a result, according to Figure 2, the diamond shape representing general effect size does not intersect with the '0' ineffective line and the meta-analysis procedure can be said to be statistically significant.

A range of analyses were completed with the aim of determining whether there was publication bias in the study. The first of these investigated the funnel plot (Figure 3).

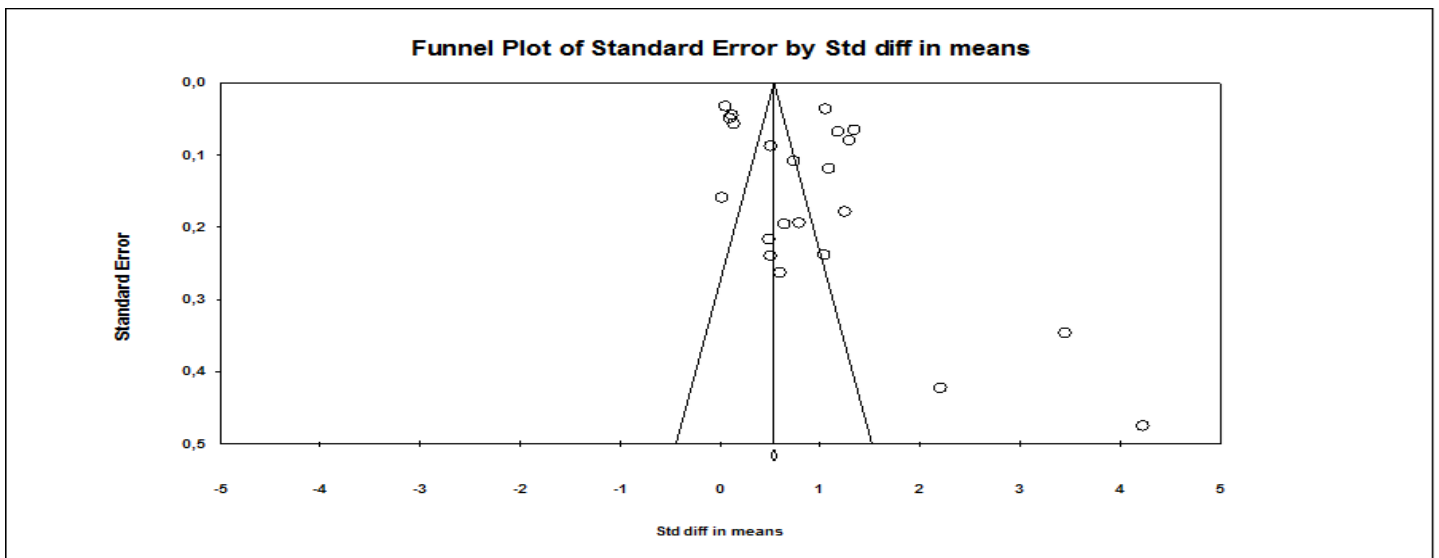


Figure 3. Funnel plot related to publication bias

On the funnel plot, the results for small samples spread over a broad area at the base in the lower section of the plot, while studies with large sample numbers are distributed in the upper section of the plot. In this context, it is expected that the plot will resemble an inverted funnel in situations without publication bias (Rodriguez, 2001). However, when Figure 3

investigated, it appears to be difficult to make a definite conclusion about whether bias exists or not. Additionally, as funnel plots may be misleading to reach definite results in the context of determining publication bias, it is necessary to be skeptical when interpreting the plot (Lau, Ioannidis, Terrin et al., 2006).

Table 2.

*Rosenthal's Fail-Safe N Test Results Showing Publication Bias Status*

<b>Z-value for investigated studies</b>	34.83054
<b>p-value for investigated studies</b>	.000
<b>Alpha</b>	.05
<b>Bias</b>	2
<b>Z-value for alpha</b>	1.95996
<b>Number of investigated studies</b>	22
<b>Fail Safe Number [FSN]</b>	6926

When Table 2 is investigated, the  $p=0.00$  value obtained as a result of the meta-analysis is above the statistical significance level of  $p>.05$ ; in other words, it appears necessary to add 6926 studies to the meta-analysis in order to remove statistical significance and have an effect size of zero. Similarly, with the aim of identifying publication bias, Orwin's Fail-safe N method was used (Table 3) and parallel results were obtained to those for Rosenthal's Fail-safe N test.

Table 3.

*Orwin's Fail-Safe N Test Results Showing Publication Bias Status*

<b>Hedge g for investigated studies</b>	0.53802
<b>Criterion for insignificant Hedge g</b>	0.10000
<b>Mean Hedge g for missing studies</b>	0.00000
<b>[FSN]</b>	97

According to Table 3, 97 studies were required for the Hedge g effect size value to lower to 0.1 and for assessment of general effect size as statistically insignificant, with 38 studies required to lower the Hedge g value to 0.2. Additionally, calculations according to the  $N/(5k+10)$  formula developed by Mullen, Muellerleile & Bryant (2001) obtained a value of 57.71. If this value is over 1, it may be concluded that the meta-analysis results are very resistant in terms of future studies. As a result of the statistical processes completed above, it can be said there is no publication bias among studies included in this meta-analysis to 'assess efficacy of school-based psychoeducation programs to prevent child abuse'.

### 3.4. Heterogeneity Analysis

It is very important to estimate the mean effect size and variance in meta-analysis studies and also to investigate the heterogeneity amount present between studies (Pigott, 2012) (Table 4).

Table 4.

*Findings related to Effect Size of Studies according to Fixed Effects Model*

g	df	Q	$X^2$	SE	$I^2$	p	ES, 95% CI	
							Min.	Max.
0.538	21	1168.25	32.671	0.016	98.202	.000	0.507	0.569

According to Table 4, the Q statistical value was identified as 1168.25. This value is observed to be very high compared to the value of 32.671 defined for 0.05 significance level and 21 degrees of freedom on the chi-square ( $X^2$ ) critical values table for degree of freedom and significance level. Additionally, if there are a limited number of studies in the meta-analysis, the Q statistic value may be insufficient in the stage of determining heterogeneity. As a result, the  $I^2$  value which can interpret the percentage of total variables within an effect size range and is capable of measuring heterogeneity was investigated (Huedo-Medina et al., 2006). As stated in Table 3, the  $I^2$  value was identified as 98.202. This value shows that the variability which can be attributed between the studies comprises 98.2% of the total variability. In other words, 98.2% of the variance is between the studies, while 1.79% is due to variance within the studies linked to random errors. Higgins and Thompson (2002) classified the  $I^2$  value values as 25% low ( $I^2=25$ ), 50% moderate ( $I^2=50$ ) and 75% high ( $I^2=75$ ). The determined 98.2% ( $I^2=98.20$ ) value represents high levels of heterogeneity. All these values ( $Q= 1168.25$ ,  $p<.05$ ,  $I^2= 98.20$ ) indicate the effect sizes have heterogeneous distribution and that the random effects model should be noted when interpreting effect sizes.

### 3.5. Meta-analysis Results

After determining the effect sizes obtained in the studies had heterogeneous distribution, meta-analysis results were interpreted based on the random effects model (Table 5).

Table 5.

*Findings related to Effect Size of Studies according to Random Effects Model*

Mean effect size (g)	Standard error (SE)	Variance	Z	p	95% confidence interval for effect size (ES, 95% CI)	
					Lower limit (Min.)	Upper limit (Max.)
.941	.129	.017	7.289	<.001	.688	1.194

As seen in Table 5, according to the random effects model for general effect size values calculated in relation to the efficacy of school-based psychoeducation programs about preventing child abuse, a positive significant effect value was documented ( $Z=7.289$ ;  $p<.001$ ; %95 CI= [.688 – 1.194]). Accordingly, the general effect size ( $g=.941$ ;  $SE=.129$ ) was defined as having high level of effect according to Cohen's classification (1988). As a result, group applications in school-based psychoeducation about preventing child abuse were highly effective, with the awareness and knowledge levels about abuse of children increased by high levels after psychoeducation programs and these increases were concluded to be statistically significant.

#### 4. RESULTS, DISCUSSION AND RECOMMENDATIONS

The aim of the study was to systematically assess the evidence related to the efficacy of school-based prevention programs about child sexual abuse. To answer the research question related to the success of these programs, 22 studies meeting the inclusion criteria were investigated and data were obtained. The results of analyses completed within this scope found school-based education implementations completed to prevent child abuse were effective in reducing the risk of abuse, with knowledge and skill levels related to abuse in children significantly increased after prevention and intervention programs and these increases were concluded to be statistically significant. When the literature relevant to the topic is investigated, there appear to be many studies and meta-analyses supporting the findings and results of this study (Baker et al., 2012; Fryda & Hulme, 2015; Kenny et al., 2012; Kim & Kang, 2017). In conclusion, children participating in school-based prevention programs can be said to increase their knowledge and self-protection skills in relation to sexual abuse. However, when the studies included in this meta-analysis are examined, various methodological shortcomings of these studies are noted. For example, in some studies details of the duration of the sessions, who administered the intervention, and education providers' training on child abuse are unclear. This finding highlights the need for improvements in study design and reporting. Also, most studies did not explain the theoretical model underlying the intervention. Limited follow-up times are another limitation of the evaluation. Most studies do not include strategies for monitoring or evaluating how program skills can be applied outside of the intervention setting. Also, in studies that presenting follow-up findings, follow-ups primarily focused on child sexual abuse information. This limits the applicability of the presented programs in the real-life situation and the ability to determine whether they are successful in preventing child abuse. In addition, when the study contents were examined, real-world tests did not seem to be used in research evaluations. This shows that with skill tests rather than knowledge, the ability of children to protect themselves and the difficulties they experience should be adequately addressed. The inclusion of in-vivo behavioral tests supported by longitudinal studies may provide more reliable information about the effectiveness of the studies.

Given the relatively high cost and prevalence of CSA (Clayton et al., 2018), primary prevention and education programs are very important with the goal of preventing abuse before it occurs. School-based prevention programs are included among primary prevention strategies commonly used for prevention efforts (Smallbone et al., 2008). These programs generally provide appropriate information about sexual abuse in developmental terms, and target self-protection skills in situations or attempts at abuse, and make children and adults aware of appropriate aid and abuse reporting (Chen et al., 2012). Nearly 90% of primary schools in the United States of America are known to provide education about preventing sexual abuse (Pulido, 2015). Generally, these education programs given in schools and targeting potential victims allow the maximum numbers of children to be reached, are presented to large groups at low cost and ensure convenience for implementers in terms of assessment. Development of comprehensive sexual abuse prevention programs in every school system and ensuring continuity in terms of preserving knowledge and skills gained may contribute to increasing awareness of sexual abuse among children. In fact, Wurtele (2009) argues that children participating in school-based CSA prevention programs apply this knowledge in their real life situations and that these programs help reduce sexual abuse of children. Additionally, these programs to reduce the defenselessness of children against sexual abuse were stated to also reduce feelings of guilt among children after abuse and increase notification and reporting (Baker et al., 2012). In addition to these benefits of prevention programs, a variety of research has emphasized the importance of children gaining knowledge about their bodies and private parts, and gaining behavior and skills about how to protect themselves against sexual abuse in the preschool period (Kenny, 2009). Additionally, studies have expressed that parents discussed sexual abuse less with their children (Chen, Dunne & Han, 2007). Whereas, most parents are in a good position to discuss CSA risks with their children and to create safer environments for their children against sexual offenders (Rudolph et al., 2017). So, it is recommended that school-based prevention programs for CSA appropriate to the age and development level of the child in sensitive cultural environments should be popularized, this education should start in the preschool period and parenting programs should be made an integral part of prevention efforts.

##### 4.1. Limitations

This meta-analysis reported on the effects of 22 studies examining the effectiveness of school-based programs for the prevention of CSA. However, in the current study, retention of protective behavior and knowledge over time; harm in relation

to children's participation in these prevention programs was not measured. After the program, children's ability to respond to actual threats are also unknown. Longitudinal studies are needed for these. Also prevention programs in the meta-analysis were differences in what concrete teaching method prevention programs use, the length of the program, and what type of learning material and measurement instruments the program uses. In addition, these studies were conducted across different cultural contexts. Finally, meta-analysis is limited to the studies performed in Turkish and English languages. So the results of the current study should be interpreted with these limitations.

#### **4.2. Implications for Policy and Practice**

In this study, it's assumed that school-based CSA prevention programs may help children. It is not recommended that prevention programs for school-age children can replace the responsibility of adults and the community to ensure child safety. Increasing children's information about abuse does not mean that they are responsible for abuse in any way. Programs aimed at children should be part of comprehensive prevention efforts that include multiple prevention goals, such as criminals and potential offenders, risky environments and situations and communities.

#### **4.3. Unanswered Questions and Future Research**

The findings of the present study are only valid for the program types included in this study, and are not valid for programs with different content and methods. Additionally, it is not known whether skills and knowledge gained truly reduce the probability of child sexual abuse victimization. Important questions related to these programs include whether the children remember the prevention concepts over time or not and whether they experience negative effects like fear or nightmares related to these programs. It is recommended that future evaluation studies should follow-up available programs to systematically investigate whether skills and knowledge gains are preserved over time and the negative effects of the prevention programs. In addition, in reporting, emphasis should be placed on expressing the theoretical foundations of the programs, including the conditions for comparison and sufficient details about the training of practitioners. These will be useful to improve reliability in research involving school-based CSA prevention programs. In addition, using a checklist will allow more meaningful interpretation of the intervention effects and increase confidence that the detected effect is due to the intervention itself. Finally, in the current study, the effectiveness of school-based prevention programs on the level of knowledge was examined. As far as we know, this meta-analysis is the first study conducted in Turkey to determine the effectiveness of school-based sexual abuse prevention studies in the child abuse literature. Future studies may examine the possible moderating effect of certain components and techniques of school-based programs (duration and nature of sessions, instructors, presentation techniques, etc.). Examining the impact of these components will increase information that provides insight into the effectiveness of school-based prevention programs and how they can be improved.

#### **4.4. Conclusion**

Our positive results indicate that school-based child abuse prevention programs can be an effective alternative for CSA prevention studies and these programs should be included as a standard part of the curriculum in schools. Public awareness and parenting programs are also important; however, it would be appropriate to inform children about strategies used by perpetrators to groom children and young people.

#### **Research and Publication Ethics Statement**

This study is a systematic literature review examining effectiveness of school-based child sexual abuse prevention programs. Data were not collected from students and teachers in any way, only the researches in the literature were accessed and examined comparatively. Therefore, no application was made to the Ethics Commission in this study.

#### **Contribution Rates of Authors to the Article**

In In this article, each author contributed equally.

#### **Statement of Interest**

There is no conflict of interest between the authors

### **5. REFERENCES**

(\*) Reviewed articles

Acıbadem Mehmet Ali Aydınlar Crime and Violence Prevention Application and Research Center [ASUMA] ve Violence Prevention and Rehabilitation Center [İMDAT]. Child abuse report in Turkey-2. URL: <http://imdat.org/wp-content/uploads/2018/05/RAPOR-%C3%87OCUK-%C4%B0ST%C4%B0SMARI-tam.pdf> 21 Ocak 2020'de erişildi.

Afifi, T.O., MacMillan, H.L., Boyle, M., Cheung, K., Taillieu, T., Turner, S. et al., (2016). Child abuse and physical health in adulthood. *Health Report*, 27(3), 10-8.

American Psychological Association. (2014). *Understanding Child Sexual Abuse: Education, Prevention and Recovery*. URL: <http://www.apa.org/pubs/info/brochures/sex-abuse.aspx>

Azzopardi, C., Eirich, R., Rash, C. L., MacDonald, S., & Madigan, S. (2018). A meta-analysis of the prevalence of child sexual abuse disclosure in forensic settings. *Child Abuse & Neglect*, 93, 291-304.

Baccino, E., & Martrille, L. (2016). Children: Sexual Abuse – Epidemiology. *Encyclopedia of Forensic and Legal Medicine*, 528–530. doi:10.1016/b978-0-12-800034-2.00072-0

\*Baker, C. K., Gleason, K., Naai, R., Mitchell, J., & Trecker, C. (2012). Increasing knowledge of sexual abuse: A study with elementary school children in Hawai'i. *Research on Social Work Practice*, 23, 167-178.

\*Barron, I. G. & Topping, K. J. (2013) Exploratory Evaluation of a School- Based Child Sexual Abuse Prevention Program. *Journal of Child Sexual Abuse*, 22(8), 931-948.

Barth, J., Bermetz, L., Heim, E., Trelle, S., & Tonia, T. (2013). The current prevalence of child sexual abuse worldwide: A systematic review and meta-analysis. *International Journal of Public Health*, 58(3), 469-483.

Berliner, L. (2011). Child sexual abuse: Definitions, prevalence, and consequences. In J. E. B. Myers (Ed.), *The APSAC handbook on child maltreatment* (3rd ed., pp. 215–232). Los Angeles, CA: Sage.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. West Sussex, UK: John Wiley and Sons, Ltd.

\*Brown, D.M. (2017). Evaluation of Safer, Smarter Kids: Child Sexual Abuse Prevention Curriculum for Kindergartners. *Child & Adolescent Social Work Journal*, 34, 213–222.

\*Bustamante, G., Andrade, M. S., Mikesell, C., Cullen, C., Endara, P., Burneo, V. et al. (2019). "I have the right to feel safe": Evaluation of a school-based child sexual abuse prevention program in Ecuador. *Child Abuse & Neglect*, 91, 31-40.

\*Cecen-Eroğul, A.R. & Kaf-Hasırcı, Ö. (2013). The effectiveness of psycho-educational school-based child sexual abuse prevention training program on turkish elementary students. *Educational Sciences: Theory & Practice*, 13(2), 719-729.

Chen, J., Dunne, M. P., & Han, P. (2007). Prevention of child sexual abuse in China: Knowledge, attitudes, and communication practices of parents of elementary school children. *Child Abuse & Neglect*, 31(7), 747-755.

Chen, Y.C., Fortson, B.L., Tseng, K.W. (2012). Pilot evaluation of a sexual abuse prevention program for Taiwanese children, *Journal of Child Sexual Abuse*, 21, 621-645.

Choudhry, V., Dayal, R., Pillai, D., Kalokhe, A. S., Beier, K., & Patel, V. (2018). Child sexual abuse in India: A systematic review. *PLoS ONE*, 13(10). <https://doi.org/10.1371/journal.pone.0205086>. e0205086.

\*Citak Tunc, G., Gorak, G., Ozyazicioglu, N., Ak, B., Isil, O. & Vural, P. (2018) Preventing Child Sexual Abuse: Body Safety Training for Young Children in Turkey, *Journal of Child Sexual Abuse*, 27(4), 347-364.

Clayton, E., Jones, C., Brown, J., & Taylor, L. (2018). The aetiology of child sexual abuse: A critical review of the empirical evidence. *Child Abuse Review*, 27, 181-197.

Cohen J. (1988). *Statistical Power analysis for the behavioral sciences* (2nd. Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, P. (2008). Child Development and Personality Disorder. *Psychiatric Clinics of North America*, 31(3), 477–493.

Copas, J. & Shi, J. Q. (2000). Meta-analysis, funnel plots and sensitivity analysis. *Biostatistics*, 1(3), 247-262.

Cumming, G. (2012). *Understanding the new statistics*. New York: Routledge, Taylor & Francis Group.

Daigneault, I., Herbert, M., McDuff, P., & Frappier, J.Y. (2012). Evaluation of a sexual abuse Prevention workshop in a multicultural, impoverished urban area, *Journal of Child Sexual Abuse*, 21, 521-542.

- Debowska, A., & Boduszek, D. (2016). Child abuse and neglect profiles and their psychosocial consequences in a large sample of incarcerated males. *Child Abuse & Neglect*, 65, 266–277.
- Dolan, M., & Whitworth, H. (2013). Childhood sexual abuse, adult psychiatric morbidity, and criminal outcomes in women assessed by medium secure forensic service. *Journal of Child Sexual Abuse*, 22(2), 191–208. doi:10.1080/10538712.2013.751951
- Doyle, C., & Cicchetti, D. (2017). From the Cradle to the Grave: The Effect of Adverse Caregiving Environments on Attachment and Relationships Throughout the Lifespan. *Clinical Psychology: Science and Practice*, 24(2), 203–217. doi:10.1111/cpsp.12192
- \*Dunn, M. (2011). The learning of sexual abuse prevention concepts and the reliability of the CKAQ-RIII in South African context. *Social Work / Maatskaplike Werk*, 47(2), 155–175.
- \*El Aziz, M.S., Ismail, S. S., & Ahmed, H. M. (2017). Sexual Abuse Prevention Program for School Age Children. *American Journal of Nursing Science*, 6(1), 1-10.
- Fergusson, D. M., McLeod, G. F. H., & Horwood, L. J. (2013). Childhood sexual abuse and adult developmental outcomes: Findings from a 30-year longitudinal study in New Zealand. *Child Abuse & Neglect*, 37(9), 664–674.
- Finkelhor, D. (2009). The prevention of childhood sexual abuse. *Future Children*, 19(2), 169-194.
- Finkelhor, D., Vanderminden, J., Turner, H., Shattuck, A., & Hamby, S. (2015). Youth exposure to violence prevention programs in a national sample. *Child Abuse & Neglect*.
- Fry, D., Fang, X., Elliott, S., Casey, T., Zheng, X., Li, J., et al., (2018). The relationships between violence in childhood and educational outcomes: a global systematic review and meta-analysis. *Child Abuse & Neglect*. 75, 6–28.
- Fryda, C. M., & Hulme, P. A. (2015). School-based child sexual abuse prevention programs: An integrative review. *Journal of School Nursing*, 31, 167-182.
- Glass, G. V. (1976). Primary, secondary, and meta-analysis of research. *Educational Researcher*, 5(10), 3-8.
- Higgins, J. P., & Thompson, S. G. (2002). Quantifying heterogeneity in a meta-analysis. *Statistics in medicine*, 21(11), 1539–1558. <https://doi.org/10.1002/sim.1186>
- \*Holloway, J. L., & Pulido, M. L. (2018) Sexual Abuse Prevention Concept Knowledge: Low Income Children Are Learning but Still Lagging. *Journal of Child Sexual Abuse*, 27(6), 642-662.
- Huedo-Medina, T. B., Sánchez-Meca, J., Marín-Martínez, F., & Botella, J. (2006). Assessing heterogeneity in meta-analysis: Q statistic or I 2 index?. *Psychological Methods*, 11(2), 193-206.
- \*Hurtado, A., Katz, C. L., Ciro, D., Gutfreund, D., & Nosike, D. (2014). Children’s knowledge of sexual abuse prevention in El Salvador. *Annals of Global Health*, 80(2), 103-107.
- \*Jin, Y., Chen, J., Jiang, Y. and Yu, B. (2017). Evaluation of a sexual abuse prevention education program for school-age children in China: a comparison of teachers and parents as instructors, *Health Education Research*, 32(4), 364-373.
- Kenny, M. C. (2009). Child sexual abuse prevention: Psycho educational groups for preschoolers and their parents. *The Journal for Specialists in Group Work*, 34(1), 24-42.
- \*Kenny, M.C., & Wurtele, S.K. (2010). Children’s abilities to recognize a “good” person as a potential perpetrator of childhood sexual abuse. *Child Abuse & Neglect*, 34, 490-5.
- \*Kenny, M. C., Wurtele, S. K., & Alonso, L. (2012). Evaluation of a personal safety program with Latino preschoolers. *Journal of Child Sexual Abuse*, 21, 368-385.
- \*Kim, S. J., & Kang, K. A. (2017). Effects of the child sexual abuse prevention education (CSAPE) program on South Korean fifth-grade students’ competence in terms of knowledge and self-protective behaviors. *The Journal of School Nursing*, 33(2), 123-132.
- Lau, J., Ioannidis, J. P. A., Terrin, N., Schmid, C. H., & Olkin, I. (2006). Evidence based medicine: The case of the misleading funnel plot. *British Medical Journal*, 333, 597-600.

- Lewis, S., & Clarke, M. (2001). Forest plots: Trying to see the wood and the trees. *BMJ: British Medical Journal*, 322, 1479-1480.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. California: Sage Publications.
- Ma, Y. (2018). Prevalence of Childhood Sexual Abuse in China: A Meta-Analysis. *Journal of Child Sexual Abuse*, 27(2), 107-121.
- Maniglio, R. (2011). The role of child sexual abuse in the etiology of suicide and non-suicidal self-injury. *Acta Psychiatrica Scandinavica*, 124(1), 30-41.
- Mc Killop, N. (2019). Understanding the Nature and Dimensions of Child Sexual Abuse to Inform Its Prevention. *Child Abuse and Neglect*, 241-259.
- Mohammadi, M. R., Zarafshan, H., & Khaleghi, A. (2014). Child Abuse in Iran: A systematic review and meta-analysis. *Iranian Journal of Psychiatry*, 9(3), 118-124.
- \*Morris, M. C., Kouros, C. D., Janecek, K., Freeman, R., Mielock, A., & Garber, J. (2016). Community-level moderators of a school-based childhood sexual assault prevention program. *Child Abuse & Neglect*, 63, 295-306.
- Mullen, B., Muellerleile, P., & Bryant, B. (2001). Cumulative meta-Analysis: A consideration of indicators of sufficiency and stability. *Personality & Social Psychology Bulletin*, 27(11), 1450-1462.
- \*Neherta, M., Machmud, R., Damayanti, R., & Afrizal (2017). The difference in intervention of sexual abuse prevention by two variance professions on primary school children in Padang. *Indian Journal of Community Psychology*, 29(1), 118-122.
- \*Ogunfowokan, A. A., & Fajemilehin, R. B. (2012). Impact of a school-based sexual abuse prevention education program on the knowledge and attitude of high school girls. *The Journal of School Nursing*, 28(6), 459-468.
- \*Ozdemir, S.G. (2018). Investigation influence on children's awareness levels of the child sexual abuse prevention program developed on the basis of school social work for 8-11 age group. Master Thesis, Kocaeli University, Institute of Social Sciences, Department of Social Work.
- Petrikova, M., Kascakova, N., Furstova, J., Hasto, J., & Tavel, P. (2021). Validation and Adaptation of the Slovak Version of the Childhood Trauma Questionnaire (CTQ). *International Journal of Environmental Research and Public Health*, 18(5), 2440. doi:10.3390/ijerph18052440
- Pigott, T.D. (2012). *Advances in meta-analysis*. New York: Springer.
- Pinheiro, P.S. (2006). *World Report on Violence Against Children*. Retrieved from. URL: <http://www.unicef.org/violencestudy/reports.html>.
- Prino, L. E., Longobardi, C., & Settanni, M. (2018). Young Adult Retrospective Reports of Adverse Childhood Experiences: Prevalence of Physical, Emotional, and Sexual Abuse in Italy. *Archives of Sexual Behavior*, 47(6), 1769-1778.
- \*Pulido, M. L., Dauber, S., Tully, B., Hamilton, P., Smith, M., & Freeman, K. (2015). Measuring knowledge gains following a child sexual abuse prevention program among urban students in a cluster randomized evaluation. *American Journal of Public Health*, 105,1344-1350.
- Rodríguez, M.D. (2001).Glossary on meta-analysis. *Journal of Epidemiol Community Health*, 55, 534-536.
- Rothstein, H. R., Sutton, A. J., & Borenstein, M. (2005). Publication bias in meta-analysis. In H. R. Rothstein, A. J. Sutton and M. Borenstein (Eds.), *Publication bias in meta-analysis: Prevention, assessment and adjustments*. West Sussex, England: John Wiley and Sons.
- Rudolph, J., Zimmer-Gembeck, M. J., Shanley, D. C., & Hawkins, R. (2017). Child Sexual Abuse Prevention Opportunities: Parenting, Programs, and the Reduction of Risk. *Child Maltreatment*, 23(1), 96-106.
- Senn, T. E., Braksmajer, A., Urban, M. A., Coury-Doniger, P., & Carey, M. P. (2017). Pilot test of an integrated sexual risk reduction intervention for women with a history of childhood sexual abuse. *AIDS Behaviour*, 21, 3247-3259.
- Smallbone, S., Marshall, W. L., & Wortley, R. (2008). *Preventing child sexual abuse: Evidence, policy & practice*. Portland, OR: Willan.



- Strizzi, J.M., Mortensen, E.L., Hegelund, E.R., Wimmelmann, C.L., Folker, A.P. & Flensburg-Madsen, T. (2021). Experience of sexual violence and satisfaction with life: a 20-year prospective cohort study. *Journal of Sexual Aggression*, DOI: 10.1080/13552600.2021.2013964
- Stoltenborgh, M., Bakermans-Kranenburg, M. J., Alink, L. R. A., & van Ijzendoorn, M. H. (2015). The prevalence of child maltreatment across the globe: Review of a series of meta-analyses. *Child Abuse Review*, 24(1), 37–50.
- Tanaka, M., Suzuki, Y. E., Aoyama, I., Takaoka, K., & Macmillan, H. L. (2017). Child sexual abuse in Japan: A systematic review and future directions. *Child Abuse & Neglect*, 66, 31–40.
- Topping, K. J., & Barron, I. G. (2009). School-Based Child Sexual Abuse Prevention Programs: A Review of Effectiveness. *Review of Educational Research*, 79(1), 431–463.
- Tutty, L.M. (2014). Listen to the children: Kids impressions of who do you tell. *Journal of Child Sexual Abuse*, 23, 17-37.
- \*Tutty, L. M., Aubry, D., & Velasquez, L. (2020) The “Who Do You Tell?” Child Sexual Abuse Education Program: Eight Years of Monitoring. *Journal of Child Sexual Abuse*, 29(1), 2-21.
- Ulibarri, M. D., Ulloa, E. C., & Salazar, M. (2015). Associations between mental health, substance use, and sexual abuse experiences among Latinas. *Journal of Child Sexual Abuse*, 24(1), 35–54. doi:10.1080/10538712.2015.976303
- UNICEF. (2014). Hidden in plain sight. URL: [http://files.unicef.org/publications/files/Hidden\\_in\\_plain\\_sight\\_statistical\\_analysis\\_EN\\_3\\_Sept\\_2014.pdf](http://files.unicef.org/publications/files/Hidden_in_plain_sight_statistical_analysis_EN_3_Sept_2014.pdf)
- Walsh, K., Brandon, L., & Chirio, L. (2012). Mother-child communication about sexual abuse prevention. *Journal of Child Sexual Abuse*, 21(4), 399–421.
- \*Weatherley, R., Siti Hajar, A. B., Noralina, O., John, M., Preusser, N., & Yong, M. (2012). Evaluation of a school-based sexual abuse prevention curriculum in Malaysia. *Children & Youth Services Review*, 34, 119-125.
- Whealin, J, and Barnett, E. (2015). Child sexual abuse. US Dept of Veterans Affairs, National Center for PTSD. [http://www.ptsd.va.gov/professional/trauma/other/child\\_sexual\\_abuse.asp](http://www.ptsd.va.gov/professional/trauma/other/child_sexual_abuse.asp).
- World Health Organization [WHO]. (2006). World Health Organization and International Society for Prevention of Child Abuse and Neglect. Preventing child maltreatment: A guide to taking action and generating evidence. Geneva, Switzerland: WHO. URL: [http://www.who.int/violence\\_injury\\_prevention/publications/violence/child\\_maltreatment/](http://www.who.int/violence_injury_prevention/publications/violence/child_maltreatment/).
- World Health Organization [WHO]. (2016). Inspire: Seven strategies for ending violence against children. Geneva, Switzerland: Author.
- Wurtele, S. K. (2009). Preventing sexual abuse of children in the twenty-first century: Preparing for challenges and opportunities. *Journal of Child Sexual Abuse*, 18(1), 1-18.
- \*Zhang, W., Chen, J., Feng, Y., Li, J., Liu, C., & Zhao, X. (2013). Evaluation of a Sexual Abuse Prevention Education for Chinese Preschoolers. *Research on Social Work Practice*, 24(4), 428-436.
- Zwi, K., Woolfenden, S., Wheeler, D., O'Brien, T., Tait, P., & Williams, K. (2008). Cochrane review: School-based education programmes for the prevention of child sexual abuse. *Evidence-Based Child Health: A Cochrane Review Journal*, 3, 603–634. doi: 10.1002/ebch.264