Increasing self-protection skills of children staying in women's shelters with body safety training: a child sexual abuse prevention study

Gülsen Çıtak Tunç1, Dilek Eser2, Fatma Elif Kılınç2

1Department of Psychiatric Nursing, Bursa Uludag University, Faculty of Health Sciences Bursa, Turkey; 2Department of Child Development, Ankara Yıldırım Beyazıt University, Faculty of Health Sciences, Ankara, Turkey

ABSTRACT

Objectives: Child sexual abuse is a risk for children living in a happy family environment, as well as for children under state protection who have problems in achieving family unity.

Methods: The study was conducted with 17 children between 3-7 years of age staying at women’s shelters with their mothers and aimed to improve their sexual abuse recognition and self-protection skills. 7 children identified as experimental group were provided with the Body Safety Training program and the effect of the training was evaluated with the “What If” Situation Test. The test results in the experimental group were compared with 10 children in the control group and the test was repeated three weeks later in order to determine the persistence of the training.

Results: The data obtained were evaluated by non-parametric analysis and Kruskal Wallis, Wilcoxon-signed Rank Test were used in addition to Mann Whitney U tests to determine the difference between the groups. As a result of the research, “What If” Situation Test sub-dimension mean scores showed an increase in favor of the post-test in the experimental group, but no significant increase was observed in the control group.

Conclusions: This difference observed in the experimental group shows that the Body Safety Training program is an effective program to increase self-protection skills for preventing sexual abuse in children.

Keywords: Child sexual abuse, prevention, body safety training, women’s shelters

Child sexual abuse (CSA) is defined as all the actual or non-actual sexual abuse behaviors towards both girls and boys who are developmentally mature or not yet matured [1]. Child sexual abuse is still considered to be a widespread problem today and 12-18% of girls and 5-8% of boys are reported to have been exposed to abuse [2-4].

Polat [5] in 2007, states that within legal dimension, evaluations at home, school, social level and are important for prevention of child abuse and that education is the most important of these evaluations. Earlier studies have indicated that child sexual abuse is highest between the ages of 7 and 13 and that 30% of children who have been sexually abused suffer victimization before the age of 9. Thus, it is argued that educational programs for the protection of children from sexual abuse should start especially in preschool years. In a study conducted by Gibson and Leitenberg [6]...
on 825 university students, it was concluded that university students who participated in the school-based sexual abuse prevention program in their childhood were exposed to abuse by less than half compared to those who did not participate in such programs.

Child protection systems are developed in Turkey to protect children from maltreatment like abuse and violence [7]. Protective and supportive measures are implemented by several ministries and local governments for children in need of protection. Women’s shelters, which are one of these units, are also designed as places where women who have been exposed to violence and are at risk can feel safe with their children (if any), receive the services they need for a specified time and receive public boarding services [8]. Sallan and Alican [9] report in their study that 39% of women in the women’s shelters in Turkey stay with their children. For these reasons, services for children should not be overshadowed by the services provided to women [8, 10].

Children staying at the women’s shelters with their mothers have undergone traumatic experiences of their lives. Failure to establish family unity can affect children in many ways and make them more vulnerable or distant to the environment. Since the education provided to these children is considered to be beneficial for their lives, the study focused on the sexual abuse prevention education of children staying at women’s shelters.

This study aims to provide Body Safety Training to children staying with their mothers at women’s shelters in Turkey, thus to increase their self-protection skills against sexual abuse, and secondly aims to determine the effect of the body safety training on children.

METHODS

Type of Research

The study aimed to teach the children staying at the women’s shelters the privacy of their body at the Body Safety Training program and to improve their self-protection skills in case of possible sexual abuse. The study was designed as an experimental study with pre-post-test control group. In the study, two groups consisting of experimental and control groups, were formed and the results obtained from both groups were compared and analyzed.

Participants and Settings

The research was carried out between March 2017- May 2017 on 17 children aged 36-72 months whose mother stay in the three women’s shelters under Turkey’s governmental protection. The children staying at two separate shelters constituted the experimental group and the children in the third shelter constituted the control group. Because the location and name of the shelters is hid for the safety of the mothers and children, two shelters in the experimental group are coded (A) and (B), while the shelter in the control group is coded (C).

Experimental Group

Four children aged 36-72 months in the A-coded shelter, and six children in the B-coded shelter designated as the experimental group live with their mothers. The research was completed with 7 of a total of 10 children in A and B-coded women’s shelters. Of the children in the experimental group, 57.1% were girls. 4 out of 7 mothers (57.1%) predict that their child will not be able to protect themselves from possible sexual abuse. According to the statements of their mothers, only 14.3% have knowledge about sexual abuse. The mothers of all children in the experimental group stated that their children have not been exposed to sexual abuse (Table 1).

Control Group

There were 17 children aged 36-72 months in the C-coded control group shelter. The age and characteristics of the children were taken into consideration as an inclusion criteria. Interviews were completed with 10 children out of 17 because seven children have left the institution for various reasons. Of the children in the control group, 50% were girls. It is foreseen by the mothers that 80% of children cannot protect themselves from possible sexual abuse. 9 mothers out of 10 in the control group stated that their children have not been exposed to sexual abuse while the mother of one child reported that her child was exposed to sexual abuse. 80% of the children witnessed their mothers being subjected to violence from their spouses (Table 1).
Materials
Demographic data were collected through a Parent/Child Information Form developed by the researcher. The children in the experimental group were provided Body Safety Training. The validity and reliability of the effect of the training was evaluated by the WIST developed by Citak Tunc et al. [11].

Research Tools
Parent/Child Information Form
Parent/Child Information Form, which is prepared by the researchers, consists of two different parts. In the first part, information about the child is gathered while the second part consists of questions regarding parents. The questionnaire was completed by participant children’s mothers under the guidance of the researcher.

Body Safety Training (BST)
BST which is a scientific-based education program, was developed by Wurtele in 1986 and took its final form after the revision in 2007 [12]. The BST, developed for pre-school children to prevent child sexual abuse and consisting of information related to basic body safety, has been designed for the use of educators in schools, kindergartens and early childcare centers. The program consisted of 7 consecutive sessions and 30 topics in line with the expert opinions received from the Turkish adaptation studies [13]. The duration of each session is 15-20 minutes and the trainings are conducted in form of group training. The ideal number of children in each group is between 6 and 10 [12].

A training book titled “I am the Boss of My Body-Body Safety Training Program for Pre-school Children” was prepared to be used in the sessions and the stories used in the training were illustrated in this book. There is a total of seventy-two visual designs in the visual book “I am the Boss of My Body”. After reading stories, feedback was received from the child by asking questions on the visuals from the book [14].

“What If” Situation Test (WIST)
WIST was developed by Wurtele, Hughes & Owens (1998) to measure the self-protection skills of pre-school children in cases of sexual abuse [15]. It was revised in 2008. The test, adapted to Turkish by Citak Tunc et al. [11], consists of mini stories that measure the child’s ability differentiate between appropriate and inappropriate touches. The child, who listens to the stories of the “touching” sub-dimension, is expected to respond that his mother, father, nurse, baby sitter or doctor, if necessary, can touch / look at his/her private body part. In the study by Wurtele et al. (1998), the Cronbach’s alpha coefficients of the “What If” Situation Test were found between 0.75 and 0.90. In the adaptation study to Turkish culture by Citak Tunc et al. [13], the Cronbach’s alpha coefficients of WIST were found to be between 0.68 and 0.90.

Ethical Aspects of the Study
This study was conducted in accordance with the principles of the Helsinki Declaration. The study was approved by Social and Humanities Ethics Committee with the decision numbered 22.02.2017/05. Signed consent was obtained from volunteer parents. In order to conduct the research with children staying at women’s shelters, required permissions were obtained from the relevant institution. For security reasons, permissions and institution names are not specified.

Data Collection Procedure
Before the start of the education in the A and B-coded shelters, the children were individually given the WIST at the first day; then, the seven-days of Body Safety Training was started. The training was informed to be held in the children’s play rooms in the women’s shelters between 09:00 and 09:30 in the morning. The actual training of the day was applied by showing children relevant pages from the book called “I am the boss of my body”, which is the educational material of BST and contains colorful visuals for children. After the completion of seven sessions, the children were re-given the WIST as the post. After three weeks, the same test was repeated to check the permanence of the training. In the control group, the WIST was applied as pre-test to the children whose mothers approved the participation in the study. After the pre-test application, Body Safety Training was not provided. Then, after 7 days, the same children in control group were given the WIST as post.
RESULTS

The results of the pre-test, post-test and follow-up test as a result of Shapiro-Wilk Test at the sub-dimensions of WIST applied to the children in the experimental and control groups were found not to be normally distributed. Moreover, non-parametric statistics were used for the intra- and inter-group differences due to the sample size being less than thirty.

Table 2 shows the pre-test and post-test distribution of the WIST and mean scores of the children in the experimental and control groups across WIST’s sub-dimensions. According to the results of Wilcoxon test, the difference between the pre and post-application scores related to the “Appropriate Touch”, “Inappropriate Touch”, “Report Skill” and “Personal Safety Questionnaire” sub-dimensions of the WIST obtained by the children in the experimental and control groups were not found to be significant. But, when the mean scores in the sub-dimensions of the children in the experimental group were examined, a significant increase was observed in favor of the post-test.

According to the Wilcoxon test results related to the sub-dimension of WIST, “Say Skill”, “Do Skill”, “Tell Skill” and “WIST Total Skill”, a significant difference was found between pre and post-application test.
Table 2. The Wilcoxon-signed rank pre-test and post-results of the children in the experimental and control groups related to the “what if” situation test sub-dimensions.

<table>
<thead>
<tr>
<th>“What if” situation test</th>
<th>Pre-test (n = 7)</th>
<th>Post-test (n = 7)</th>
<th>z</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>SD</td>
<td>$\bar{x}$</td>
<td>SD</td>
</tr>
<tr>
<td>Appropriate touch</td>
<td>Experimental</td>
<td>2.42</td>
<td>0.97</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.50</td>
<td>1.08</td>
<td>2.50</td>
</tr>
<tr>
<td>Inappropriate touch</td>
<td>Experimental</td>
<td>1.71</td>
<td>1.60</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.30</td>
<td>1.15</td>
<td>1.70</td>
</tr>
<tr>
<td>Say skill</td>
<td>Experimental</td>
<td>1.57</td>
<td>2.69</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>1.20</td>
<td>2.14</td>
<td>1.80</td>
</tr>
<tr>
<td>Do skill</td>
<td>Experimental</td>
<td>0.85</td>
<td>1.57</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0.80</td>
<td>1.68</td>
<td>0.40</td>
</tr>
<tr>
<td>Tell skill</td>
<td>Experimental</td>
<td>1.42</td>
<td>2.50</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0.60</td>
<td>0.69</td>
<td>1.10</td>
</tr>
<tr>
<td>Report skill</td>
<td>Experimental</td>
<td>0.28</td>
<td>0.75</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>0.40</td>
<td>1.26</td>
<td>0.30</td>
</tr>
<tr>
<td>WIST total skill</td>
<td>Experimental</td>
<td>4.14</td>
<td>7.12</td>
<td>19.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>3.00</td>
<td>4.02</td>
<td>3.60</td>
</tr>
<tr>
<td>Personal safety questionarie</td>
<td>Experimental</td>
<td>2.42</td>
<td>0.97</td>
<td>3.57</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.00</td>
<td>0.94</td>
<td>2.40</td>
</tr>
</tbody>
</table>

WIST = “What If” Situation Test

Table 3. The Wilcoxon-signed rank post-test and follow-up results of the children in the experimental group related to the “what if” situation test sub-dimensions.

<table>
<thead>
<tr>
<th>“What if” situation test</th>
<th>Post-test (n = 7)</th>
<th>Follow-up test (n = 7)</th>
<th>z</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>SD</td>
<td>$\bar{x}$</td>
<td>SD</td>
</tr>
<tr>
<td>Appropriate touch</td>
<td>3.00</td>
<td>0.00</td>
<td>3.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Inappropriate touch</td>
<td>3.00</td>
<td>0.00</td>
<td>2.83</td>
<td>0.40</td>
</tr>
<tr>
<td>Say skill</td>
<td>6.00</td>
<td>0.00</td>
<td>5.66</td>
<td>0.81</td>
</tr>
<tr>
<td>Do skill</td>
<td>6.00</td>
<td>0.00</td>
<td>5.66</td>
<td>0.81</td>
</tr>
<tr>
<td>Tell skill</td>
<td>5.00</td>
<td>1.15</td>
<td>3.00</td>
<td>1.67</td>
</tr>
<tr>
<td>Report skill</td>
<td>2.00</td>
<td>2.38</td>
<td>1.50</td>
<td>2.07</td>
</tr>
<tr>
<td>WIST total skill</td>
<td>19.00</td>
<td>3.36</td>
<td>15.83</td>
<td>4.62</td>
</tr>
<tr>
<td>Personal safety questionarie</td>
<td>3.57</td>
<td>0.53</td>
<td>2.83</td>
<td>0.40</td>
</tr>
</tbody>
</table>

WIST = “What If” Situation Test
scores of the experimental and control groups.

Table 3 reveals that post-test and follow-up test scores of WIST showed no difference and the mean scores were very close to each other ($p > 0.05$). In the “Tell Skill” sub-dimension ($z = -2.12, p < 0.05$), there was a significant difference between post-test and follow-up test scores.

According to the Table 4, the mean gain scores of the experimental and control groups related to the “What If” Situation Test “Say Skill”, “Do Skill”, “Tell Skill” and “Report Skill” sub-dimensions scores and total score before and after the application were found to be significantly different. WIST “Total Skill” gain score was 14.00 in the experimental group and 5.50 in the control group. There was a significant difference between the scores ($U = 00.00, p < 0.05$).

DISCUSSION

The Effect of Body Safety Training Program on Recognition of “Appropriate Touching”

In the study, an increase was found in the appropriate touch pre- and post-test mean scores of the experimental group, but it was found that this increase was not statistically significant (Table 2). The increase in the average of the experimental group can be explained as the effect of the training provided. In the questions measuring the appropriate touch skill, children are asked whether it is appropriate for a mother, father or a doctor to touch private body parts during an injury. Most of the children considered it normal and correct for these individuals to touch the private parts during an injury and responded accordingly during their pre-tests. The increase in the mean of the post-test after the training, but not reaching a statistically significant value suggest that children’s pre-knowledge might be sufficient for appropriate touch skill.

In the study by Kenny, Wurtele and Alanso [16] no significant difference was found between the pre-and post-test mean scores of WIST’s appropriate touch recognition. These results support the findings of the research. However, there are studies in the literature that mean scores of appropriate touch recognition showed an increase and were statistically significant [13, 17].

Table 4. U-test results of gain scores of the children in the experimental and control groups regarding the “what if” situation test sub-dimensions

<table>
<thead>
<tr>
<th>Group (n = 17)</th>
<th>Experimental (n = 7)</th>
<th>Control (n = 10)</th>
<th>U</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gain Score Rank average</td>
<td>Gain Score Rank average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriate touch</td>
<td>10.43</td>
<td>8.00</td>
<td>25.00</td>
<td>0.36</td>
</tr>
<tr>
<td>Inappropriate touch</td>
<td>10.00</td>
<td>8.30</td>
<td>28.00</td>
<td>0.53</td>
</tr>
<tr>
<td>Say skill</td>
<td>12.50</td>
<td>6.55</td>
<td>10.50</td>
<td>0.01*</td>
</tr>
<tr>
<td>Do skill</td>
<td>14.00</td>
<td>5.50</td>
<td>0.00</td>
<td>&lt; 0.01*</td>
</tr>
<tr>
<td>Tell skill</td>
<td>12.79</td>
<td>6.35</td>
<td>8.50</td>
<td>&lt; 0.01*</td>
</tr>
<tr>
<td>Report skill</td>
<td>12.07</td>
<td>6.85</td>
<td>13.50</td>
<td>0.03*</td>
</tr>
<tr>
<td>WIST total skill</td>
<td>14.00</td>
<td>5.50</td>
<td>0.00</td>
<td>&lt; 0.01*</td>
</tr>
<tr>
<td>Personal safety questionnarie</td>
<td>10.71</td>
<td>7.80</td>
<td>23.00</td>
<td>0.27</td>
</tr>
</tbody>
</table>

WIST = “What If” Situation Test

The Effect of Body Safety Training Program on Recognizing “Inappropriate Touching”

In the study, no statistically significant difference was found between the mean scores of inappropriate pre- and post-test scores in the experimental group (Table 2). In the study by Tuttke [8] where “to whom can I tell?” program was applied, 117 children in the experimental group were compared with 114 children in the control group. As a result of the assessment
using the “child abuse information” scale, no significant difference was found between the experimental and control groups in recognizing inappropriate touch. While pre- and post-test mean scores of inappropriate touch in the control group were close to each other, pre- and post-test mean scores of inappropriate touch showed an increase in the experimental group. This difference can be explained as the effect of the Body Safety Training Program in which the children in the experimental group were involved.

**The Effect of Body Safety Training Program on Gaining Self-Protection Skills**

When the pre-test and post-test mean scores of the experimental group were compared, an average four-fold increase was found. The comparison of the mean gain scores of WIST Total Skill between the groups also supports the same result (Tables 2 and 4). BST program has been shown to be very effective in acquiring the skills of “Say”, “Do”, “Tell” and “Report” in preschool children staying with their mothers in women’s shelters. The results of several studies using the BST program are similar to the findings of the present study [11, 15, 17, 19].

In the WIST’s “Say Skill” sub-dimension, the score that the children will receive is in the range of 0-6. The difference between the pre and post-test mean scores of the experimental group (pre-test: 1.57, post-test: 6.00) was found to be statistically significant (Table 2). The mean scores of achievement scores between the WIST groups were found to be statistically significant (Table 4). In the BST program study conducted by Zhang et al. [19], post-test mean scores of “Say Skill” was found to have increased compared to the pre-test scores. In the study by Kenny et al. [16], the KLAS training program was applied to preschool children of Latin origin and an increase was observed in the “Say Skill” pre-test mean score. The results show that the BST program is effective in teaching children to say “no” against possible sexual abuse cases. However, although it is very important for the child to show the ability to say “no” against a potential sexual abuse case, it is not sufficient alone [16].

The score that the children will receive from the WIST “Do Skill” sub-dimension is in the range of 0-6. In the study, the difference between the pre-test and post-test mean scores of the experimental group (pre-test: 0.85, post-test: 6.00) was found to be statistically significant and similar to the results obtained in the study by Wurtele et al. [15].

Studies conducted show that children exposed to sexual abuse show shyness and confidentiality in telling an adult about their experiences. Schaaf and Mccanne [20] emphasize that 5.7% of 475 university students were exposed to sexual abuse in childhood period and 33.7% of this abuse lasted for days, 31.6% for months and 34.7% for years [20]. Thus, in sexual abuse prevention programs the children are taught the skill to explain the case to a reliable adult in order to avoid the recurrence of the abuse. When the WIST “Tell Skill” sub-dimension scores were examined, a significant difference was found between the pre-test and post-test mean scores of the children in the experimental group (Table 2). In the study by Citak Tunç et al. [11], “Tell Skill” pre-test mean scores of the children in the experimental group were found to also have increased from 1.32 to 4.97 in the post-test. In the section where the persistence of the training was evaluated, it was determined that the persistence of the training applied only in the “Tell Skill” sub-dimension was not achieved. It is possible the children might feel the need to hide their life experiences and prefer to communicate less with their environment because of the fragmentation in the family unity, the scarcity of the father in the child’s life, the psychological traumas experienced by the mother and the child’s past negative experiences.

The child needs to provide some important details in communicating his experiences to the trusted adult. These are the answers to the questions “who did?” and “what did he try to do?”. In “Report Skill”, the child is expected to demonstrate the behavior to tell a trusted adult about the person who was requesting an inappropriate touch and what he was trying to do. In the study, no statistically significant difference was found between the “Report Skill” pre-test and post-test mean scores in the experimental group; however, a significant increase in the post-test mean score in the experimental were recorded (Table 2). The increase in favor of the post-test in the experimental group (pre-test: 0.28, post-test: 2.00) can be explained with the effect of training. During the trainings, sincere and warm relations were established with the children, and they were made to keep their attention on the subject. How-
ever, since the training was seven days, it was not possible for the trainer to integrate and share the same amount of time for each child. Moreover, because the children were required to respond in long sentences to the questions measuring the WIST “Report Skill”, and identifying the abuser and explaining what they were doing required mutual interaction, all children did not choose this relationship with the trainer, some children chose to remain silent or expressed themselves in short words even if they had acquired the skills. The fact that the increase in the mean scores of WIST “Report Skill” was not statistically significant can be explained by the fact that the children were required to identify the event and the abuser in detail and that not all children preferred to engage into such an interaction with the trainer.

With the BST considered as a sub-dimension of WIST, children’s personal knowledge about protection against sexual abuse and personal attitudes towards sexuality are evaluated. Related to personal safety, the pre-test and post-test mean scores of the WIST “Personal Safety Questionnaire” sub-dimension of the children in the experimental group were compared and no statistically significant difference was found (Table 2). In their study conducted with pre-school children in China, Zhang et al. [19] found an increase in the “Personal Safety Questionnaire” pre-test and post-test mean scores (pre-test: 2.04, post-test: 3.50) [19].

Of the mothers in the experimental group, 85.7% and 70% in the control group stated that their children have after did not any knowledge about sexual abuse. Positive changes that occurred as a result of the trainings are important in terms of the impact of the training.

**CONCLUSION**

It was concluded that the experimental and control group children included in the study had similar characteristics in terms of age and development, and the groups were homogeneous. 57.1% of the children in the experimental group included in the study were female, and 42.9% were male while 50% of the children in the control group were female and 50% were male. According to the information given by the mothers about the children, none of the children in the experimental group were exposed to sexual abuse and it was reported that one child in the control group had a history of sexual abuse. 85.7% of the mothers in the experimental group and 90% of the mothers in the control group reported that they were exposed to violence from their spouses. Of these women, 71.4% in the experimental group and 80% in the control group stated that their child witnessed this violence.

In line with aims and hypotheses the research; The BST Program is an effective educational tool to provide the children staying at women’s shelters with the skills to protect themselves from sexual abuse. As the results of the research also indicate, the majority of the children staying with their mothers at women’s shelters have experienced or witnessed violence for a part of their lives. This negative process hinders their healthy development and might cause them to show problem behaviors or be vulnerable to abuse. Therefore, the measures to be taken are very important for the integration of these children to society.

**Authors’ Contribution**

Study Conception: GÇT, DE, FEK; Study Design: FEK; Supervision: GÇT; Funding: N/A; Materials: N/A; Data Collection and/or Processing: FEK, DE; Statistical Analysis and/or Data Interpretation: FEK, GÇT; Literature Review: DE; Manuscript Preparation: DE, GÇT and Critical Review: GÇT.

**Conflict of interest**

The authors disclosed no conflict of interest during the preparation or publication of this manuscript.

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REFERENCES

4. Martin EK, Silverstone PH. How much child sexual abuse is "below the surface" and can we help adults identify it early. Front Psychiatry 2013;4:58.