

The Effects of The My Body is Safe Education Program on Preschool Children's Sexual Development and Gender Equality Awareness

Hakan Köksal^{1*} & Gülçin Güven²

¹ Ministry of National Education Istanbul, Türkiye

² Atatürk Faculty of Education, Department of Primary Education, Preschool Education Program, Marmara University, İstanbul, Türkiye

*Corresponding author email: koksalthakan97@hotmail.com

ARTICLE HISTORY

Received: 13th April 2026

Revised: 15th May 2026

Accepted: 20th June 2026

Published: 30th June 2026

KEYWORDS

Sexual Development

Sexual Education

Gender

Gender Equality

Preschool Period

SDG

ABSTRACT - Sexuality education during early childhood is increasingly recognised as a fundamental component of holistic child development, contributing to children's understanding of body autonomy, personal safety, gender identity, and respectful interpersonal relationships. Nevertheless, sexuality education remains a sensitive and underrepresented area within early childhood curricula in many countries and empirically validated educational programmes integrating gender equality are scarce. Addressing this gap, the present study examined the effectiveness of the My Body is Safe Education Program, a developmentally appropriate sexuality education programme designed to promote sexual development and gender equality awareness among preschool children. A mixed-methods explanatory sequential design was employed involving 40 preschool children aged 60–72 months, comprising an experimental group ($n = 20$) and a control group ($n = 20$). Quantitative data were collected using the Selçuk Sexual Development Scale, while qualitative evidence was obtained through classroom observations and reflective daily reports documenting children's behavioural responses throughout the intervention. Non-parametric statistical analyses, including the Mann–Whitney U test and Wilcoxon Signed-Rank Test, were performed using IBM SPSS Statistics to evaluate differences between and within groups. The findings revealed no statistically significant differences between the experimental and control groups at the pre-test stage, indicating comparable baseline sexual development knowledge. Following the eight-week intervention, children who participated in the My Body is Safe Education Program demonstrated significantly higher post-test scores in both the Sexual Identity and Gender-Related Behaviour dimensions compared with children in the control group ($p < .05$). Qualitative findings further indicated improvements in children's understanding of body ownership, personal boundaries, emotional expression, gender equality, respect for diversity, and assertiveness in protecting themselves from inappropriate behaviour. Children also exhibited reduced gender stereotyping in play preferences, colours, occupations, and everyday social interactions. The study demonstrates that developmentally appropriate sexuality education incorporating gender equality can effectively strengthen preschool children's sexual development, gender awareness, and personal safety competencies.

These findings contribute to the limited empirical literature on comprehensive sexuality education in early childhood and provide evidence-based recommendations for curriculum developers, teacher educators, policymakers, and preschool practitioners seeking to integrate child-centred sexuality education into early childhood programmes.

INTRODUCTION

Sexuality, which is considered an indispensable part of human development, is expressed as a concept that begins with the birth process, continues throughout life, contains individuals' sense of self, emotions, attitudes and behaviors, body images and perceptions. It is influenced by the society in which it occurs and has biological, psychological and cultural dimensions (Artan, 2019). Sexuality is not only related to physiological structures, but also closely related to mental and emotional development (Tuzcuoğlu & Tuzcuoğlu, 2003). Sexuality continues to develop throughout life by going through specific processes, starting from fertilization. The early childhood period which is known as the critical period. It is expressed as the fastest development period. The child who develops in every aspect from an early age also experiences sexual development. For this reason, this period is considered important as it influences the child's future life (Deniz, 2012; Güngör Aytar, Artan ve Boztepe, 2014).

The child who takes his/her first step into life with birth comes into the world with a biological background and sexual identity (Gürşimşek & Günay, 2005). Sexual identity is a person's perception of femininity and masculinity. Sexual identity is the awareness and acceptance of one's biological existence as a man or a woman (CISED). Sexual identity refers to an individual's learning and perception of their own gender, having an idea about their gender, and accepting their gender (Egan & Perry, 2001). Gender identity reveals itself through the individual's physical appearance and movements. The development of gender identity takes place in the first years of life. Basic gender identity begins in the first two years of childhood, but it is known that the full formation of a sense of gender identity occurs around the ages of three and four (Özsungur, 2010).

In early childhood education, it is emphasized that the child's physical, social-emotional and cognitive development progress in parallel with each other, while development and learning are carried out to the extent appropriate to the child's holistic nature. It is known that sexual development and relations between the genders are a critical element in the overall psychological development and education of children (Menmuir & Kakavoulis, 1999). Early childhood is the period when sexual interest and questions are at their peak. Children's questions about sexual content and getting to know body parts are quite normal and healthy (Artan, 2019). It is necessary for parents and teachers who are in contact with the child's life to give short, clear and accurate answers to questions asked about sexual development in the field of sexual education (Acer & Artan, 2000).

Sex education is defined as an educational activity that begins in early childhood and continues throughout adolescence and adulthood, teaching the cognitive, emotional, social and interactive aspects of sexuality. It aims to support and protect sexual development and sexual health in a way that is appropriate for an individual's age, gender and culture (World Health Organization, 2010). Contrary to popular belief, sexual education is not about teaching children about sexual intercourse (Yağan Güder, 2016). Sex education for children should be aimed at helping them recognize their own body, identify their gender. They should be aware of their sexual identity and raise awareness about abuse (Balter, Rhijn & Davies, 2016). According to Sungur (1998), the components of a good sexual education include knowledge, skills and appropriate attitudes and values.

Gender has both biological and social roots. Although there are significant biological differences between men and women, it is known that the main reason for differentiation in social life is the societal roles and stereotypes assigned to each gender. This situation emerges at every stage of life and it influences individuals' behaviors (Bayramoğlu, 2015). In the human life process, sexuality is shaped by both genetics and environment. While the biological aspect of sexuality creates sexual identity, the environmental aspect establishes gender (Çokar & Nalbant, 2008 akt. İşler, 2017).

The concept of sex addresses the biological aspect of being male or female, while gender refers to the meanings and expectations that society and culture attribute to being male or female. In other words, while sex emphasizes the biological system, gender emphasizes the cultural structure (Dökmen, 2012). It is important to note that the concepts of sex and gender are inseparable, as the cultural system of gender also includes biological sex. Children who are aware of the importance of gender in the socialization process pay more attention to their attitudes and behaviors related to sex. Therefore, it is also important to address all topics in a manner that is appropriate for the child's age and development (Artan, 2019).

As young children grow, they begin to explore gender roles and what it means to be a girl or a boy. Culture provides various expectations for girls and boys. Children start to learn gender roles from their family's norms and cultural background, but they also receive messages about gender from the broader world around them. Through various interactions and the exploration of play, children begin to define themselves and others, including in terms of gender (ECLKC, 2023).

Researchers describe the age of 5-6 years as the period when children's gender identity is most "rigid" (Weinraub et al., 1984; Egan, Perry, & Dannemiller, 2001; Miller, Lurye, Zosuls, & Ruble, 2009). Childhood is a time when ideas about gender stereotypes are developed and shaped, making this stage one of the most critical in terms of education and development (Freeman, 2007). Therefore, sex education programs for preschool children should be designed to address the concept of gender in an inclusive and equality-promoting manner.

A review of studies in the field reveals that there is no sexual development education program specifically focused on gender equality. The aim of this research is to examine the impact of the "My Body Is Safe Education Program," a sex education program designed for preschool children with a focus on gender equality, on children's knowledge of sexual development. The research hypotheses are as follows.

- H1: There is no significant difference in pre-test total scores between the experimental and control groups regarding children's sexual development knowledge.
- H2: A significant difference exists in post-test total scores between the experimental and control groups.
- H3: The experimental group's pre-test and post-test total scores show a statistically significant difference.
- H4: No significant difference is found between the pre-test and post-test total scores of the control group.

Specifically, the study seeks to answer the following research questions:

1. Does participation in the My Body is Safe Education Program significantly improve preschool children's sexual development?
2. Does the programme enhance children's awareness of gender equality and reduce gender-stereotypical behaviours?
3. What behavioural changes are observed during programme implementation regarding children's body safety awareness, interpersonal interactions, and self-protective behaviours?
4. How do qualitative observations complement the quantitative findings in explaining the programme's educational effectiveness?

The findings are expected to contribute to the growing international literature on comprehensive sexuality education by providing empirical evidence supporting the integration of body safety and gender equality education within early childhood curricula. Furthermore, the study offers practical recommendations for curriculum developers, teacher educators, policymakers, and preschool practitioners seeking to implement evidence-based, developmentally appropriate sexuality education that promotes children's safety, well-being, and holistic development while advancing Sustainable Development Goals 3 (Good Health and Well-being) and 4 (Quality Education).

METHODOLOGY

Research Design

This study employed a mixed-methods explanatory sequential design to evaluate the effectiveness of the My Body is Safe Education Program in enhancing preschool children's sexual development and gender equality awareness. The mixed-methods approach was selected because it enables researchers to obtain a comprehensive understanding of educational interventions by integrating quantitative evidence of programme effectiveness with qualitative insights into children's behavioural changes and learning experiences.

The quantitative component adopted a quasi-experimental pre-test–post-test control group design, allowing comparison between children who participated in the intervention and those who received the regular preschool curriculum (Creswell, 2017). The qualitative component complemented the quantitative findings through classroom observations, researchers' field notes, and daily reflective reports documenting children's participation, interactions, and behavioural responses throughout the intervention (Yıldırım & Şimşek, 2013; Köse, 2020). The integration of both datasets strengthened the credibility of the findings through methodological triangulation and provided a richer interpretation of programme outcomes.

Participants and Research Setting

The study was conducted in a public preschool located in Türkiye. Forty children aged 60–72 months participated in the study. Twenty children were assigned to the experimental group, while twenty children formed the control group.

Participants were selected using purposive sampling based on the following inclusion criteria:

1. Children were between 60 and 72 months of age.
2. Children were enrolled in the participating preschool throughout the intervention period.
3. Parents or legal guardians provided written informed consent.
4. Children had no identified developmental conditions that would prevent participation in the educational activities.

The experimental and control groups were comparable in terms of age and general developmental characteristics, ensuring that differences observed following the intervention could reasonably be attributed to participation in the educational programme.

The demographic characteristics of the children in the study group are presented in Table 1.

Table 1. Frequency and Percentage Distribution of Personal Characteristics of the Study Group

Personal Characteristics		Experimental Group	Control Group
		<i>f</i>	<i>f</i>
Gender	Girl	11	11
	Boy	9	9
Number of Siblings	Only Child	3	4
	One Sibling	13	9
	2 or More Siblings	4	7
Duration of Attendance at Preschool Education Institution	One Year	14	17
	Two Year	6	3
Mother's Educational Status	Primary School	1	8
	Secondary School	3	5
	High School	11	7
	University	5	0
	Primary School	0	7

continued

Father's Status	Educational	Secondary School	8	3
		High School	11	6
		University	1	4
Mother Age Group		18-25 years old	2	0
		26-33 years old	4	8
		34-41 years old	14	11
		Age 42 and over	0	1
Father Age Group		26-33 years old	4	1
		34-41 years old	16	16
		age 42 and over	0	3
Socio-economic Level		Lower	2	6
		Middle	16	10
		Upper	2	4

Table 1 presents the personal characteristics of the children in the study. Both the experimental and control groups consist of 11 girls and 9 boys. In the experimental group, 3 children are only children, 13 have one sibling, and 4 have two or more siblings, while in the control group, 4 are only children, 9 have one sibling, and 7 have two or more siblings. Regarding preschool attendance, 14 children in the experimental group have attended for one year and 6 for two years, whereas in the control group, 17 have attended for one year and 3 for two years.

Qualitative Data Sources

To complement the quantitative findings, multiple qualitative data sources were collected throughout programme implementation.

These included:

- classroom observations;
- researchers' field notes;
- daily reflective reports;
- children's classroom interactions;
- children's verbal responses;
- children's drawings and classroom products.

Research Instrument

Selçuk Sexual Development Scale

Children's sexual development was measured using the Selçuk Sexual Development Scale, which has been validated for use with preschool children.

The instrument assesses two principal dimensions:

- Sexual Identity
- Gender-Related Behaviour

Responses provide an overall indication of children's developmental understanding regarding body awareness, gender identity, interpersonal relationships, and gender equality. Prior to implementation, the scale demonstrated satisfactory psychometric properties reported by the original developers.

Data Collection Procedure

The study was conducted in four stages.

Stage 1: Preparation

Permission was obtained from the preschool administration and parents. Teachers received orientation regarding programme implementation and data collection procedures.

Stage 2: Pre-test

Both experimental and control groups completed the Selçuk Sexual Development Scale before the intervention commenced.

Stage 3: Intervention

Children in the experimental group participated in the My Body is Safe Education Program over an eight-week period, whereas children in the control group continued following the existing preschool curriculum without additional sexuality education activities.

Throughout programme implementation, researchers conducted classroom observations and recorded children's responses using structured observation forms and daily reflective journals.

Stage 4: Post-test

Following completion of the intervention, both groups completed the post-test assessment. Quantitative findings were subsequently integrated with qualitative observations during interpretation.

My Body is Safe Education Program

The intervention consisted of the **My Body is Safe Education Program**, a structured educational programme specifically designed for preschool children. The programme aimed to strengthen children's understanding of:

- body ownership and body autonomy;
- private body parts;
- safe and unsafe touch;
- personal boundaries;
- emotional expression;
- trusted adults;
- gender equality;
- respect for diversity;
- self-protection strategies.

The programme was implemented over **eight consecutive weeks**, with one structured session conducted each week. Each instructional session lasted approximately **40–50 minutes** and was delivered by the classroom teacher following detailed instructional guidelines prepared by the researchers.

Teaching strategies included:

- storytelling;
- role-play;
- picture books;
- educational games;
- songs;
- group discussions;
- art activities;
- scenario-based learning.

These approaches were selected because they are developmentally appropriate for preschool children and encourage active participation through play-based and experiential learning.

Table 2. Titles and Types of Activities in the My Body is Safe Education Program

Activity Titles for the My Body is Safe Education Program	Turkish	Music	Art	Movement	Game	Math	Drama	Science	Family Involvement
Exploring Myself	+	+	+						+
I am a Girl, I Am a Boy		+			+	+			
Emotional Awareness (Family, Friendship, and Love)	+		+						+
Making Decisions	+	+	+						+
Learning and Protecting My Private Area	+		+				+		+
What Are Healthy Behaviors?	+	+						+	+
Respect for Diversity and Differences	+		+					+	+
What Are My Roles?	+			+	+				
Being Tolerant	+		+				+		
Refusal – The Ability to Say No	+						+		
Assertiveness Skills	+			+	+				
What Is Gender Equality?	+		+						+
Gender Equality Colors	+				+				+
Gender Equality	+	+					+		+

continued

Home and Daily Chores

Gender Equality / Professions	+	+	+
-------------------------------	---	---	---

Data Analysis

Quantitative analyses were performed using IBM SPSS Statistics.

Given the relatively small sample size and distribution characteristics, non-parametric statistical procedures were employed.

The following analyses were conducted:

- descriptive statistics (mean, standard deviation, frequency, percentage);
- Mann–Whitney U test;
- Wilcoxon Signed-Rank Test.

Statistical significance was established at $\alpha = .05$.

Qualitative data were analysed using Braun and Clarke's (2006) thematic analysis.

Analysis followed six systematic stages:

1. familiarisation with data;
2. initial coding;
3. searching for themes;
4. reviewing themes;
5. defining themes;
6. producing the final report.

Themes emerging from classroom observations and reflective journals were subsequently integrated with quantitative findings to provide comprehensive interpretation of programme effectiveness.

RESULTS

Quantitative findings of the study

In this section, the data obtained in accordance with the research hypotheses are analyzed. First, the results of the Mann-Whitney U test, conducted to determine whether there was a significant difference in the mean pre-test scores of the Selçuk Sexual Development Scale between the “experimental and control groups” are presented in Table 3.

Table 3. Mann-Whitney U Test Results for the Pre-Test Scores of the Selçuk Sexual Development Scale for the Experimental and Control Groups

Sub-dimension	Group	N	Mean Rank	Sum of Ranks	U	Z	p
Sexual Identity	Experimental	20	17,25	345,00	135,000	-1,790	,081
	Control	20	23,75	475,00			
Gender-Related Behavior	Experimental	20	21,48	429,50	180,500	-,549	,602
	Control	20	19,53	390,50			

p>.05

In Table 3, when examining the mean ranks for the sub-dimensions of the “Selçuk Sexual Development Scale,” the mean rank for the “Sexual Identity” sub-dimension was 17.25 for the “experimental group” and 23.75 for the control group. For the “Gender-Related Behavior” sub-dimension, the mean rank was 21.48 for the “experimental group” and 19.53 for the control group. When examining the table, it was found that there were no significant differences in the mean ranks for the “Sexual Identity” and “Gender-Related Behavior” sub-dimensions of the “Selçuk Sexual Development Scale” between the experimental and control groups ($p > 0.05$).

The results of the Wilcoxon Signed-Rank Test for the "Selçuk Sexual Development Scale" scores before and after the implementation of the My Body is Safe Education Program for the "experimental group" are presented in Table 4.

Table 4. Wilcoxon Signed-Rank Test Results for the Selçuk Sexual Development Scale Scores Before and After the My Body is Safe Education Program for the Experimental Group

Sub-dimension	Post-test - Pre-test	n	Mean Rank	Sum of Ranks	z	p
Sexual Identity	Negative Rank	0	,00	,00	-3,768	,000*
	Positive Rank	18	9,50	171,00		
	Ties	2				
Gender-Related Behavior	Negative Rank	0	,00	,00	-3,854	,000*
	Positive Rank	19	10,00	190,00		
	Ties	1				

*p<.05

Upon examining the Table 4, it was found that the mean scores for the "Sexual Identity" and "Gender-Related Behavior" sub-dimensions of the "Selçuk Sexual Development Scale" increased significantly in favor of the post-test scores for the children in the experimental group who participated in the My Body is Safe Education Program. In the "Sexual Identity" sub-dimension, it was observed that 18 children in the experimental group had increased post-test scores, while the pre-test and post-test scores for 2 children remained the same. In the "Gender-Related Behavior" sub-dimension, 19 children in the experimental group showed increased post-test scores, and the pre-test and post-test scores for 1 child remained the same. The Wilcoxon Signed-Rank Test results for the "Selçuk Sexual Development Scale" scores before and after the implementation of the My Body is Safe Education Program, which was applied to the experimental group, are presented in Table 5 for the control group.

Table 5. Wilcoxon Signed-Rank Test Results for the Selçuk Sexual Development Scale Scores Before and After the My Body is Safe Education Program for the Control Group

Sub-dimension	Post-test-Pre test	n	Mean Rank	Sum of Ranks	Z	P
Sexual Identity	Negative Rank	6	4,33	26,00	-1,155	,248
	Positive Rank	2	5,00	10,00		
	Ties	12				
Gender-Related Behavior	Negative Rank	6	5,83	35,00	-,832	,405
	Positive Rank	4	5,00	20,00		
	Ties	10				

*p<.05

When Table 5 is examined, it was found that the mean scores of the "Sexual Identity" and "Gender-Related Behavior" sub-dimensions of the "Selçuk Sexual Development Scale" of the children in the control group did not differ significantly before and after the implementation of the My Body is Safe Education Program applied to the experimental group ($p>.05$). In the "Sexual Identity" sub-dimension, it is observed that the mean post-test scores of six children in the control group decreased compared to their pre-test scores, the scores of two children increased, and the scores of twelve children remained the same. In the "Gender-Related Behavior" sub-dimension, it is seen that the mean post-test scores of six children in the control group decreased compared to their pre-test scores, the scores of four children increased, and the scores of ten children remained the same.

This result can be interpreted as indicating that there was no significant change in the sexual development of the children in the control group before and after the education program. However, in the "Sexual Identity" sub-dimension, more than half of the children in the control group had equal pre-test and post-test scores, and in the "Gender-Related Behavior" sub-dimension, half of the children in the control group had equal pre-test and post-test scores. This result can be interpreted as indicating that the sexual development knowledge levels of the children in the control group did not change and remained the same due to the lack of any educational program being applied to them.

The Mann-Whitney U test results, which evaluate whether there is a significant difference between the post-test mean scores of the Selçuk Sexual Development Scale for the experimental and control groups, are presented in Table 6.

Table 6. Mann-Whitney U Test Results for the Post-Test Scores of the Selçuk Sexual Development Scale for the Experimental and Control Groups

Sub-dimension	Group	n	Mean Rank	Sum of Ranks	U	z	p
Sexual Identity	Experimental	20	26,63	532,50	77,500	-3,598	,001*
	Control	20	14,38	287,50			
Gender-Related Behavior	Experimental	20	30,48	609,50	,500	-5,468	,000*
	Control	20	10,53	210,50			

In Table 6, upon examining the post-test rank means of the sub-dimensions of the "Selçuk Sexual Development Scale," it was found that the rank mean for the "Sexual Identity" sub-dimension for the children in the experimental group is 26.63, while the rank mean for the children in the control group is 14.38. For the "Gender-Related Behavior" sub-dimension, the rank mean for the "experimental group" is 30.48, while the rank mean for the control group is 10.53. Upon examining the table, it was found that there were significant differences in the rank means of the "Sexual Identity" ($U = 77.500$) and "Gender-Related Behavior" ($U = 0.500$) sub-dimensions of the "Selçuk Sexual Development Scale" between the experimental and control groups ($p < .05$). Therefore, the significant differences in both sub-scales are in favor of the children in the experimental group.

Qualitative findings of the research

The Application Process of the My Body is Safe Education Program : Qualitative Research Findings from Reflective Daily Reports and Observations

Qualitative Findings of the Research

3.2.1. Implementation of the *My Body Is Safe* Education Program: Insights from Reflective Reports and Observations

This section presents qualitative findings based on reflective daily reports and observations collected throughout the implementation of the My Body Is Safe Education Program. The program played a crucial role in increasing children's awareness of gender identity and personal boundaries. They understood that being a girl or a boy is determined by biological differences at birth and that private areas should remain unseen and untouched by others, except in specific situations. Through interactive activities, children reinforced this understanding by confidently expressing their boundaries, asking questions, and demonstrating more self-protective behaviors. Activities such as Recognizing and Protecting My Private Area and What Are Healthy Behaviors? further enhanced their sense of personal responsibility and bodily autonomy. As the program progressed, children became more articulate in expressing their emotions, standing up for their rights, and making reasoned decisions, particularly following the Decision-Making activity. Their choices in toys, games, and playmates shifted away from traditional gender norms, embracing a more inclusive perspective. They selected activities based on their own interests rather than societal expectations. Girls became more involved in sports and construction-based play, while boys showed increased enthusiasm for creative activities such as drawing, music, and dance. Additionally, stereotypes related to colors and career aspirations weakened, with children showing curiosity toward a broader range of professions and hobbies.

By the end of the program, cooperation, empathy, and support among children had noticeably increased. They frequently encouraged themselves and their peers with affirmations like "I can do this!" and "I believe in you!" Expressions of fairness, equality, and kindness became more prominent, while boys engaged more openly in affectionate behaviors, such as hugging and verbal expressions of care, which are often associated with girls. Overall, the program successfully fostered a deeper

understanding of gender equality and personal boundaries, helping children develop more inclusive, respectful, and confident attitudes.

DISCUSSION

This section presents the conclusion and discussion based on the findings obtained in relation to the hypotheses developed for the research objectives.

Examining the Difference in Pretest Total Scores of Sexual Development Knowledge Levels Between Children in the Experimental and Control Groups

Table 3 shows that the mean rank of the "Sexual Identity" subscale is 17.25 for the experimental group and 23.75 for the control group, while the "Gender-Related Behavior" subscale scores are 21.48 and 19.53, respectively. Statistical analysis indicates no significant difference between the pretest scores of both groups ($p > .05$), confirming their equivalence before implementing the My Body is Safe Education Program.

Examining the Difference Between the Post-Test Total Scores of Sexual Development Knowledge Levels of Children in the Experimental and Control Groups

Table 6 shows that the post-test mean rank for the "Sexual Identity" subscale is 26.63 in the experimental group and 14.38 in the control group, while the "Gender-Related Behavior" subscale scores are 30.48 and 10.53, respectively. Statistical analysis indicates a significant difference between the groups ($p < .05$), favoring the experimental group. These findings confirm that the My Body is Safe Education Program effectively supports children's sexual development.

Examining the Difference Between the Pre-Test and Post-Test Total Scores of Sexual Development Knowledge Levels of Children in the Experimental Group

Table 4 shows a significant increase ($p < .05$) in post-test scores for the "Sexual Identity" and "Gender-Related Behavior" subscales in the experimental group after participating in the My Body is Safe Education Program. Specifically, 18 children showed improvement in "Sexual Identity" scores, while 19 improved in "Gender-Related Behavior." These findings confirm that the program effectively supports children's sexual development.

Examining the Difference Between the Pre-Test and Post-Test Total Scores of Sexual Development Knowledge Levels of Children in the Control Group

Table 5 indicates no significant difference in the Selçuk Sexual Development Scale scores for the control group before and after the My Body is Safe Education Program ($p > .05$). In the "Sexual Identity" subscale, 6 children's post-test scores decreased, 2 increased, and 12 remained unchanged. Similarly, in the "Gender-Related Behavior" subscale, 6 scores decreased, 4 increased, and 10 stayed the same. These findings suggest that the sexual development of children in the control group remained largely unchanged.

A review of the relevant literature suggests that sexual education programs significantly contribute to children's sexual development and enhance their knowledge of sexuality. Several studies support this conclusion: Özuslu-Açıkgöz (1999) found that a sexual education program designed for children aged 3-6 had a positive impact on their sexual development. Özgün (2017) examined the effects of a sexual education program for preschool children aged 60-72 months. The study revealed a significant difference in post-test scores between the experimental and control groups, demonstrating the program's lasting impact. Acer and Artan (2005) conducted an experimental study on sexual education activities for children aged 4-6. Their results showed that post-test responses in the experimental group were significantly higher compared to pre-test responses. Setyarini, Dewanti, and Kurniawati (2021) analyzed the effectiveness of singing and demonstration methods in early childhood sexual education. Their findings indicated that the experimental class had a better understanding of sexual education than the control class, highlighting the effectiveness of these methods.

The results of various studies in the literature focusing on preschool age groups indicate that the developed sexual education programs positively contribute to children's sexual development and education. Thus, these findings in the literature support the conclusion in the current research that the "My Body is Safe Education Program" is an effective program in contributing to children's sexual development and education. While there are studies on parental perspectives regarding sexuality education and various sexual education programs for different age groups, it can be stated that there are very few studies focused on sexual development and education programs specifically for preschool-aged children in the relevant literature.

CONCLUSION

The present study evaluated the effectiveness of the My Body is Safe Education Program in promoting preschool children's sexual development and gender equality awareness through a mixed-methods explanatory sequential design. By integrating quantitative and qualitative evidence, the findings demonstrate that the programme significantly enhanced children's understanding of body ownership, personal boundaries, self-protection strategies, and gender equality while simultaneously reducing stereotypical gender-related behaviours.

The quantitative findings revealed statistically significant improvements among children who participated in the intervention compared with those who followed the regular preschool curriculum. These improvements were particularly evident in the dimensions of Sexual Identity and Gender-Related Behaviour, indicating that developmentally appropriate sexuality education can positively influence children's holistic development during the preschool years. The qualitative findings further strengthened these results by demonstrating meaningful behavioural changes in children's communication, emotional expression, assertiveness, interpersonal interactions, and understanding of body safety concepts during authentic classroom activities.

It should be noted that research and educational initiatives on the topic are quite limited, and studies related to sexual development have primarily been conducted on adolescents rather than children, often focusing on the transition to sexual maturity and sexual behavior. There are no lessons or practices related to sexual education and sexual health in the national education curriculum. Instead, there are some projects carried out in collaboration with various private institutions and the Ministry of National Education (Çok, 1999; İnsan Kaynağı Geliştirme Vakfı, 2006 akt. Yücesan Alkaya, 2017).

When examining studies conducted in Turkey regarding preschool-aged children from 1975 to the present, it can be observed that there was no mention of sexual development and education in the early years. However, research conducted after the 1980s indicates that some studies on these topics have been carried out, showing a gradual increase over time (Haktanır, 2005).

After reviewing the relevant literature, it can be concluded that sexual education programs addressing topics such as "sexual development, sexual health, physical, emotional and sexual abuse, gender, self-efficacy in controlling dangerous situations, interpersonal communication skills, self-esteem, body image, and the ability to say no" have increased children's knowledge of sexuality, contributed positively, and supported their sexual development. In the current study, the content of the "My Body is Safe Education Program" shows parallelism with the topics found in the literature, suggesting that it contributes to children's sexual development and education.

Topics related to sexuality are still considered taboo, treated as if they don't exist, and are generally avoided in discussions. According to Foucault (2012), prohibiting sexuality to children, stopping them when they try to express it, leaving their questions unanswered, or completely ignoring them are seen as indicators of adults dismissing children's sexuality. As a result, children are unable to develop a healthy sexual identity. Considering this information, we can say that creating a sexual development education program for children is very important. Another significance of the study is that the sexual education program developed by the researcher includes gender equality.

The results obtained from the study are expected to serve as a guide for preschool teachers, families, and researchers on how to deliver sexual development education that includes gender equality, which methods, techniques, activities, and content to use, and how to approach sexuality education and gender equality for children.

FUNDING

The authors have stated that there are no personal or financial conflicts of interest affecting this study. This research received no external funding.

ACKNOWLEDGEMENT

This study is derived from a master's thesis. The thesis was supported as a Marmara University BAP project with the code SYL-2024-11195.

AUTHORS' CONTRIBUTIONS

Hakan Köksal contribute conceptualization, methodology, investigation, data collection, formal analysis, writing the original draft and Gülçin Güven help in supervision, validation, and review the writing.

DATA AVAILABILITY STATEMENT

The datasets generated and analysed during the current study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The study was conducted in accordance with institutional ethical guidelines governing research involving young children.

DECLARATION OF GENERATIVE AI

During the preparation of this manuscript, the authors used ChatGPT (OpenAI) to assist with language editing, academic writing refinement, manuscript organisation, and improvement of clarity and readability. The AI tool was not used to generate research data, perform statistical analyses, interpret findings independently, or formulate scientific conclusions. All research design, methodology, data collection, data analysis, interpretation, and final approval of the manuscript were undertaken and critically reviewed by the authors. The authors accept full responsibility for the accuracy, originality, and integrity of the manuscript.

REFERENCES

- Acer, D. ve Artan, İ. 2005. Okul öncesi eğitim kurumlarında 4-6 yaş grubu çocuklar için cinsel eğitim etkinliklerinin etkisinin incelenmesi. *Çocuk Gelişimi ve Eğitimi Dergisi*, 2(1-2), 12-19.
- Acer, D. ve Artan, İ. 2000. Üç ve dört yaş grubu çocukların annelerine yöneltmiş oldukları cinsellikle ilgili sorular ve annelerin verdikleri cevapların incelenmesi. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi*, 13(1), 191- 204.
- Alptekin, A. ve Tepeli, K. 2019. Development of Selcuk Sexual development scale (36-72 months). *Eğitimde ve Psikolojide Ölçme ve Değerlendirme Dergisi*, 10(3), 249-265. doi: 10.21031/epod.505352
- Artan, İ. 2019. Cinsel gelişim ve eğitim. Hedef CS Yayıncılık.

- Ata Doğan, S., Atış-Akyol, N., & Güney Karaman, N. (2018). Beş Yaş Çocuklarının Cinsiyet Kalıp Yargı Düzeyleri ve Evdeki Cinsiyet Rollerine İlişkin Görüşleri. *Gazi Eğitim Bilimleri Dergisi*, 4(3), 53-65. <https://doi.org/10.30855/gjes.2018.04.03.004>
- Aytar, A.G., Artan, İ. ve Boztepe, H. 2014. *Her yönüyle okul öncesi eğitim*. Hedef Yayıncılık.
- Balter, A. S., van Rhijn, T. & Davies, A. 2016. The development of sexuality in childhood in early learning settings: an exploration of ontario early childhood educators' perceptions. *Canadian Journal of Human Sexuality*, 25(1), 30-40
- Bayramoğlu, L. 2015. *Okul öncesi dönem çocuklarının cinsiyet rollerine ilişkin algılarının incelenmesi* (Yayımlanmamış yüksek lisans tezi). Doğu Akdeniz Üniversitesi.
- CİSED, Cinsel Sağlık Enstitüsü Derneği. *Cinsel Kimlik Gelişimi* <https://www.cised.org.tr/sayfa214.html>
- Creswell, J. W. 2017. *Araştırma deseni: nitel, nicel ve karma yöntem yaklaşımları*. Selçuk Beşir Demir (Çev. Ed.) Eğiten Kitap.
- Creswell, J. W. 2019. *Karma yöntem araştırmalarına giriş*. Mustafa Sözbilir (Çev. Edt.) Pegem Akademi.
- Deniz, Ü. 2012. Okul öncesi dönemde cinsel kimlik gelişimi ve eğitim, N. Aral (Ed.) Aile ve Çocuk Prof. Dr. Mine Mangır'ın Anısına içinde. Ankara Üniversitesi Basımevi.
- Dökmen, Z. 2012. *Toplumsal cinsiyet*. Remzi Kitabevi
- ECLKC. Healthy Gender Development and Young Children A Guide for Early Childhood Programs and Professionals.
- Egan, S., Perry, D., G. & Dannemiller, J.L. 2001. Gender identity: a multidimensional analysis with implications for psychosocial adjustment. *Developmental Psychology*, 37(4), 451-463.
- Freeman, N. K. (2007). Preschoolers' perceptions of gender appropriate toys and their parents' beliefs about genderized behaviors: miscommunication, mixed messages, or hidden truths? *Early Childhood Education Journal*, Vol. 34, No. 5, April 2007
- Foucault, M. 2012. The care of the self. Volume 3: the history of sexuality (R.Hurley, Translator). New York: Vintage Books.
- Gürşimşek, I. ve Günay, V. D. 2005. Çocuk kitaplarında cinsiyet rollerinin işlenişinde kullanılan dilsel ve dılışlı göstergelerin değerlendirilmesi. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, 18, 53-56
- Haktanır, G. 2005. Çocuk cinselliği. Oktay ve Unutkan (Edt). *Okul öncesi eğitimde güncel konular*. Morpa Yayınları.
- İşler, S. 2017. *Okul öncesi dönem çocuğu olan ebeveynlerin cinsel gelişime ve cinsel eğitime yönelik bilgi düzeylerinin ve tutumlarının incelenmesi* (Yayımlanmamış yüksek lisans tezi). Doğu Akdeniz Üniversitesi.
- Köse, E. 2020. *Bilimsel araştırma modelleri*, bilimsel araştırma yöntemleri. Edt: Kıncal, R.Y. Nobel Yayınları 6.Basım
- Menmuir, J. & Kakavoulis, A. 1999. Sexual development and education in early years: a study of attitudes of pre-school staff in Greece and Scotland. *Early Child Development and Care*, 1999, Vol. 149, pp. 27-45
- Miller, C. F., Lurye, L. E., Zosuls, K. M., & Ruble, D. N. 2009. Accessibility of gender stereotype domains: Developmental and gender differences in children. *Sex Roles*, 60(11-12), 870-881.
- Özgün, S. 2017. *60-72 aylık çocuklara yönelik hazırlanan cinsellik eğitimi programının çocukların cinsel gelişimine etkisi* (Yayımlanmamış yüksek lisans tezi). Mersin Üniversitesi.
- Özuslu-Açıkgöz, N. 1999. *3-6 yaş çocukları için hazırlanan bir cinsel eğitim programı ve etkileri* (Yayımlanmamış yüksek lisans tezi). Marmara Üniversitesi.
- Özşunur, B. 2010. Cinsel kimlik gelişimi ve cinsel kimlik bozukluğunda psikososyal değişkenler: gözden geçirme. *Çocuk ve Gençlik Ruh Sağlığı Dergisi*: 17 (3)
- Setyarini, N., Dewanti, S. S., Kurniawati, Y. 2021. The effectiveness of singing methods and demonstration methods to improve understanding of sexual education in early childhood. *Journal of Primary Education* 10 (2) (2021): 207-217
- Sungur, M. Z. 1998. Cinsel eğitim. *Klinik Psikiyatri Dergisi*, 1998;2:103-108
- Tuzcuoğlu, N. & Tuzcuoğlu, S. 2003. *Çocuğun cinsel eğitimi "anne ben nasıl doğdum"* (1.). Morpa Kültür Yayınları. 13.
- World Health Organization 2010. World health statistics 2010. World Health Organization.
- Yağan Güder, S. 2016. *Cinsel eğitim ve toplumsal cinsiyet*. Eğiten Kitap. 4.
- Yıldırım, A. ve Şimşek, H. 2013. *Sosyal bilimlerde nitel araştırma yöntemleri*. Seçkin Yayınevi
- Yücesan, A. ve Alkaya, A.S. 2017. Okullarda göz ardı edilen bir konu: cinsel sağlık eğitimi. *Med J SDU/SDÜ Tıp Fak Derg* 2018;25(2):200-209 DOI: 10.17343/sdutfd.342828