

Privacy Education in Early Childhood: Children With Autism and Shadow Teachers

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ABSTRACT

The primary objective of the study is to raise awareness among shadow teacher candidates working with young autistic children. The researcher designed a privacy training program to teach self-protection and privacy skills to autistic children. This study examines the effectiveness of the researcher-designed materials and presents the reflections of shadow teacher candidates. The research was conducted using a qualitative experimental research method as explained in Lepäa et al. (2025). Qualitative data collection techniques were used to gather data throughout the study. The researcher examines the changes in the participants after an intervention. Data were analyzed using qualitative data analysis software. In qualitative experimental research, changes after an intervention are presented as a whole (Robinson and Mendelson, 2012). Participants completed a pre-intervention study, received privacy training, and then completed a post-intervention study and a retention study. The pre-intervention study, consisting of 10 questions, was designed to determine shadow teacher candidates' current knowledge about privacy training and was administered during the first week. The following week, the researcher delivered the privacy training program titled "Trust from the Shadows (3G)" and conducted practical exercises using the designed materials. The following week, a post-intervention final study consisting of 9 questions was administered to assess the impact of the training and materials. Five weeks later, a retention study was conducted to assess the retention of the acquired knowledge. Following the retention study, semi-structured interviews were conducted with one shadow teacher candidate from each of the two universities. The collected data were analyzed using a qualitative analysis software and coding was performed. This study was conducted with students enrolled in the "Shadow Teaching for People with Disabilities Program" at two universities in Türkiye. The study group consisted of a total of 13 students attending classes at both universities. The materials designed by the researcher were piloted with three children with autism. Following the pilot study, the privacy education was enriched based on the observations obtained and incorporated into the content of the 3G training. At the end of the research, it was observed that the privacy education enriched with the materials had a positive effect on the shadow teachers' views on how privacy education should be conducted for children with autism.

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Keywords:

Privacy, autism, early childhood, shadow teaching

INTRODUCTION

Privacy education is important for children to both understand their own bodies and learn to respect the bodily boundaries of other children/individuals. Furthermore, this education also supports a process that enables children to control their own emotions and behaviors (Çalışkan, 2019). The concept of privacy can be taught to children when toilet training begins, as this age is more appropriate for understanding the concept of privacy (Öztop & Özel Özcan, 2010). Therefore, privacy education should begin at home. However, teachers who will work with children should also be knowledgeable about this subject, as this will enable them to recognize any possible neglect or abuse more quickly and facilitate intervention (Çoban et al., 2021). Through this education, children learn to develop a healthy sexual identity as well as to protect themselves mentally, physically, and sexually and not to violate the boundaries of others (Çalışkan, 2019; Senemoğlu, 2018). Therefore, providing education at an early age is important for children to understand and internalize the concept of privacy (Çalışkan, 2019). Because learning and brain development occur more rapidly during early childhood, education provided during this period also supports children in more quickly grasping skills and behaviors related to privacy (Sapsağlam, 2018). Since the family plays an important role in the child's physical, mental, cognitive, and sexual development, it is important that the foundation of education is laid in the family (Özaslan & Gültekin Akduman, 2018). Additionally, family involvement is also an important factor in supporting children's education (Sarmaşık & Sarmaşık, 2021). During early childhood, development is considered as a whole, and children's social-emotional, cognitive, moral, physical, and language development proceed in parallel. Therefore, development in one area affects development in other areas, forming the basis

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for personality formation (Yılmaz & Gürbüz Yiğit, 2024; Sazak, 2019; Durmuşoğlu Saltalı, 2019; Sivrikaya Tokgöz, 2019; Bulut Pedük, 2019; Şirin Arkoç et al., 2019; Yılmaz, 2019). When providing privacy education, it is important to consider the characteristics of the child's developmental stage, to explain without gender discrimination, to adopt an understanding approach rather than one based on prohibitions and fear, to express rules clearly and explicitly so that they are followed by everyone everywhere, and to remember that family members should serve as role models regarding privacy. (Özaslan & Gültekin Akduman, 2018).

Privacy education must be provided to every child, regardless of whether they are typically developing or have special needs. Through privacy education, children learn about body awareness, personal space, and personal boundaries. They can generalize these learnings to everyone, learn to exhibit acceptable behavior in social settings, set boundaries, protect their boundaries, and learn respect. Within the scope of this research, as there were limited studies on how privacy education should be provided to children with autism in the literature review, the focus was on how privacy could be taught to children with autism with the support of materials. Autism spectrum disorder is considered a neurodevelopmental disorder characterized by deficits in social and communicative domains, along with restricted interests and repetitive behaviors, according to DSM-5 (Karnas & Alpaydın, 2023). However, from the perspectives of neurodiversity and positive psychology, it is viewed as a difference (Baştan, 2025; Temeltürk & Kılıç, 2024; Demir, 2024). The neurodiversity approach considers this situation normal by approaching individuals' different characteristics in a heterogeneous manner (Demir, 2024). Therefore, from this perspective, autism is viewed as a form of diversity and difference (Baştan, 2025; Temeltürk & Kılıç, 2024). The positive psychology approach also accepts that it is right to support people by focusing on their strengths rather than their weaknesses (Baştan, 2025; Demir & Türk, 2020). When evaluated with these approaches, autism is considered a neurodevelopmental difference rather than a disorder. Within the scope of this research, autism has also been considered a difference.

The first person who should teach privacy to children with autism is their family. Subsequently, teachers and shadow teachers should also support the child in this regard in environments outside the home. The guide published by the Ministry of Family and Social Policies on privacy includes teaching children personal boundaries/defining personal space, teaching that the body belongs to the individual/the awareness that "my body belongs to me," teaching boundaries regarding clothing and teaching needs-based dressing, not using the child's genitals as a means of affection, teaching the difference between good and bad touch, teaching permission/the concept of "you are accepted if I give permission.", privacy in the bathroom and toilet, separation of beds and rooms, sensitivity regarding relationships with the opposite sex, privacy education not being based on prohibitions but built on love, answering children's sexually explicit questions in a developmentally appropriate manner, establishing privacy education on a foundation of mutual trust, limiting TV and internet use, and paying attention to the words and behaviors of love that spouses show to each other should be included in privacy education (Eraslan et al., 2023). However, children with autism may need more support and more intensive education than other children, both when receiving privacy education and in other academic areas and social life (İncekara & Ulaş, 2024; Kurtkapan, 2023; Özaydın, 2020). One of the professionals who can provide support to children with autism is shadow teachers. From this perspective, it is important that privacy education is also provided to shadow teachers.

Shadow teaching, a concept that is older globally but new in our country, is a profession that prepares and implements teaching plans in areas that require consideration and support, taking into account the developmental characteristics of children with autism (Montebon, 2016). Every child with autism has different characteristics and needs. Therefore, those who will work with a child with autism must be aware of these differences and take them into consideration (İncekara & Ulaş, 2024). Shadow teachers support children with autism by providing them with the support they need to acquire new skills and behaviors and make these skills permanent. Shadow teachers contribute positively to the child in many skill and developmental areas.

Due to the limited number of scientific studies available in the literature on children with autism and privacy education, priority was given to studies on children with special needs and privacy education, as well as shadow teaching, which is a new concept in our country.

Within the scope of this research, the researcher provided privacy training to students enrolled in the associate degree program in Shadow Teaching for People with Disabilities at Fatih Sultan Mehmet Foundation University (FSMVU) and Kocaeli Health and Technology University (KOSTU). The aim was to find an answer to the question, "How should privacy training be provided by shadow teachers to children with autism in

early childhood?" The aim was to measure the shadow teacher candidates' level of knowledge about privacy and then observe whether there was any change in their knowledge level after the training provided by the researcher, thereby revealing how the training content should be. In this context, the research question was addressed in terms of the shadow teachers' knowledge levels before and after the training and the effectiveness of the materials used in the training.

METHOD

AIM AND METHODOLOGY OF THE RESEARCH

Within the scope of the research, the qualitative experimental research method was used. In qualitative experimental studies, data is collected using qualitative data collection methods through experimental methods. New situations emerge regarding the changes in participants after an intervention such as training or application (Leplaa et al., 2025; Robinson & Mendelson, 2012). In this type of research, the differences that emerge regarding the event/situation under investigation are interpreted by considering the results together (Robinson & Mendelson, 2012). The data obtained are analyzed using analysis programs such as CAQDAS, MAXQDA, Atlas.ti, and NVivo (Leplaa et al., 2025). In this study, data were collected using pre-intervention, post-intervention, and retention study, and analyses were performed using a qualitative data analysis program.

Privacy education is one of the topics that should be included in the educational planning of children with autism, especially those who have difficulty expressing themselves. Therefore, it is important that the family, teachers, and shadow teachers who will provide this education to the child are also knowledgeable about the subject. Teachers and shadow teachers having knowledge about privacy and a roadmap for how to work with the child will support both a healthier progression of the process and provide guidance to the family when needed. Within this scope, a small-scale needs analysis was conducted with three teachers working in the field of special education at a special education school in the Zeytinburnu district of Istanbul. The aim was to determine how teachers assess their knowledge on the subject and the content of courses on privacy taken during their undergraduate education, and to see how they evaluate the use of materials in teaching. Two of the teachers are male and one is female. One of the male teachers has been working in the preschool education level of the same special education school for 2 years, while the other has been working there for 3 years. The female teacher has been a special education teacher in the field of special education for 11 years. As a result of interviews with teachers, it was stated that the education provided during undergraduate studies generally focused on sex education, that there was no theoretical content on how to teach when working with a child, and that when they started working with a child with special needs, they were unsure where to start and how to proceed with privacy education. It was also noted that both families and teachers and school administrators did not fully understand how to proceed in this regard, and that some families viewed the subject as taboo and kept their distance from it, which complicated the process. However, teachers have stated that the issue of privacy is particularly important when working with children with autism, that training on this subject can protect children from possible neglect or abuse, and that existing content on privacy is generally limited to teaching about private areas and permission-seeking behaviors, using materials such as video models, and is typically geared toward typically developing children, but that these materials need to be diversified. Following interviews with teachers, the researcher designed four separate materials to be presented in the privacy training program titled "Trust from the Shadow (3G)" for shadow teacher candidates.

One of the materials designed is PECS, an alternative communication method aimed at communicating with non-verbal children with autism and teaching them communication skills. This material addresses expressing the need to use the toilet, personal space, and not touching without permission. Another material is a social story titled "Learning the Circle of Trust," which explains the concept of a circle of trust. Other material covering the topic of trust consists of illustrated cards called "Trust Cards" covering topics such as no touching without permission, going with strangers, keeping secrets, etc., and questions related to these cards. This material was designed based on an example from an online study, but with additional sentences added to enrich the topic. The final material designed is called "Yes-No Cards," which consists of sentences describing correct and incorrect situations and events, along with images related to these sentences. The aim of these four materials is to provide enriched teaching on many topics related to privacy for children with autism, using a variety of materials. The materials designed by the researcher were presented to three

experts, including two academics specializing in the field and one special education teacher. The visuals that the experts indicated could be complex for children with autism were removed, and more understandable and simple visuals were added to finalize the materials.

A pilot study was conducted with three children with autism attending the preschool level of a special education school located in the Zeytinburnu district, near the researcher's workplace, in order to observe the effectiveness of the materials in the field and to be able to renew them if necessary. Two of the children are 5 years old and one is 6 years old. The researcher met with the students individually and worked on the materials. The initial material sequence with the first student was PECS, trust cards, yes-no cards, and social stories; however, due to the student's distraction and increased interest in social stories, the sequence was changed for the other students. In the revised sequence, the social story was used first, followed by trust cards, yes-no cards, and PECS. The student who could speak generally examined the pictures carefully and gave one-word answers to questions asked about these pictures. The student who could not speak answered questions by pointing to the picture cards. Short breaks were given during the teaching sessions for all three students to help them maintain their attention for longer periods of time. This is because interest and attention are limited in children with autism during early childhood, so taking short breaks makes the teaching more functional (Diken, 2019).

Following the pilot study, the researcher developed the "Trust from the Shadow (3G)" training content to educate shadow teacher candidates about privacy and explain how to teach children with autism using the designed materials. The training content covers the content of privacy training, how it should be conducted, how it can be explained using the materials, and the effectiveness of the materials. In this context, the headings and the learning outcomes that shadow teacher candidates should achieve at the end of the training were developed using the guide published by the Ministry of Family and Social Policies (Eraslan et al., 2023), as shown in table 1 below. Additionally, the research process is presented in table 2.

	Basic Topics	Main Heading	Achievement
1	Teaching children personal boundaries/definition of personal space	The Child's Body Image/Body Perception	He knows his body and its limits.
2	Teaching that bodies are personal / "My body belongs to me"		
3	Teaching boundaries regarding clothing		
4	Dressing based on need rather than the desire to be liked		
5	Do not use the child's genitals as a means of affection		
6	Teaching the difference between good and bad touch		
7	Permission training / "If I give permission, you will be accepted"	The Child's Personal Space/Boundaries	Knows and respects their own and others' personal space.
8	Privacy in the toilet and bathroom		
9	Separation of beds and rooms		
10	Being sensitive about relationships with the opposite sex		
11	Privacy education should not be based on prohibitions	Approach to Children	When providing privacy education, parents/teachers/shadow teachers know how to approach the child.
12	Building privacy education on love		
13	Answering children's questions about sex in an age-appropriate manner		
14	Building privacy education on a foundation of mutual trust		
15	Limiting TV and internet usage		
16	Spouses should pay attention to the words and actions they use to express their love for each other.		

Table 1: Analyzed topics and outcomes

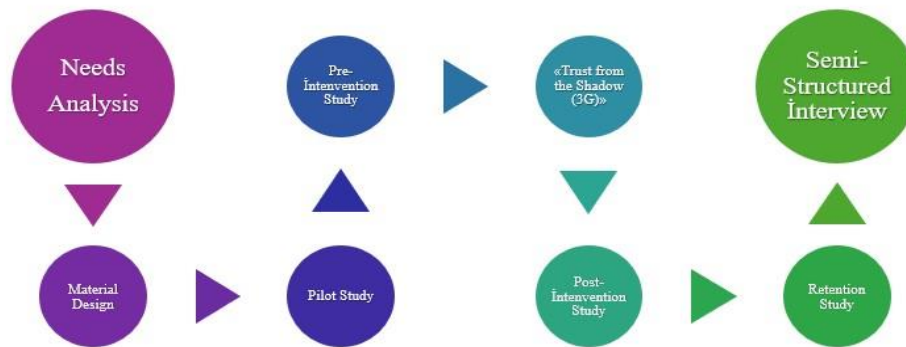


Table 2: Research Process

To observe and analyze changes in shadow teacher candidates' knowledge levels regarding privacy before and after the training provided by the researcher, the researcher created pre-intervention, post-intervention, and retention study, as well as sample case scenarios containing the outcomes listed in Table 1. The pre- intervention consists of 10 questions, including demographic information, Likert-type questions, and open-ended questions, while the post- intervention and retention study consist of 9 questions. There are also three questions about the sample case scenarios. The pre- intervention, post- intervention, and retention study were submitted to two academics who are experts in the field for their opinion and were finalized and used.

As part of the study, a pre- intervention was administered at KOSTU and FSMVU to analyze the current status of shadow teacher candidates prior to training. The following week, 3G training was provided, and a post-intervention was administered the subsequent week to assess what had been learned. To see if the training was lasting, a retention test was conducted five weeks after the retention study. Also, to get a more detailed profile, semi-structured interviews were conducted with one randomly selected student from each university.

WORKING GROUP

In experimental research methods, participants forming the study group are selected for a specific purpose, and certain characteristics of the participants are considered in line with the research (Canbazoglu Bilici, 2023; Tekindal, 2023; Çepni & Kılıç, 2017). In this study, students enrolled in the Shadow Teaching Program for People with Disabilities at two universities in Turkey were interviewed. Looking at the number of students enrolled in the relevant program at both universities, there are 12 students enrolled in the program at KOSTU and 20 students at FSMVU. However, there are students who are enrolled in the program but do not attend classes. The distribution of students who voluntarily participated in the studies at both universities is shown in figure 1 below.

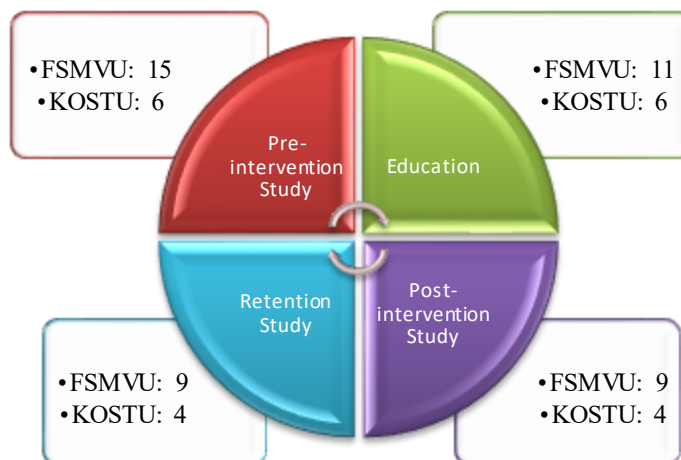


Figure 1: Distribution of participants by university

Students who participated in the pre-intervention but did not participate in the training in the following weeks or in the post- intervention or retention study were not included in the evaluation and analysis. In addition, semi-structured interviews were conducted with one randomly selected student from

each university. The study group consisted of a total of 13 students who were enrolled in the program, attended the course, and participated in the entire data collection process.

DATA COLLECTION TOOLS

As part of the study, a pilot study was first conducted with three children with autism, and the materials were tested. Subsequently, a pre-intervention was administered to assess the knowledge of shadow teacher candidates at two universities regarding privacy education. The following week, the researcher delivered privacy training entitled “Trust from the Shadow (3G)”, providing information about privacy and explaining to the shadow teacher candidates how to teach using the designed materials. The week following the training, a retention study was administered to assess what the shadow teacher candidates had learned. In the final week, data was collected through a retention study and semi-structured interviews with individual students. The materials designed by the researcher and used in the 3G training, which were tested in a pilot study, are presented in table 3.

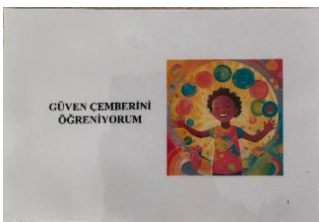
Social Story 	Trust Cards 
Yes No Cards 	PECS 

Table 3: Material samples

DATA ANALYSIS

The data obtained from the pre-intervention, post-intervention, retention study, and semi-structured interview were analyzed using the MaxQda 24 mixed methods data analysis program. While analyzing the data, the participants' responses were coded internally, categories were created, and those that were related or connected were combined to form themes. The themes created were based on the headings and outcomes listed in the Ministry of Family and Social Policies' guide (Eraslan et al., 2023) and table 1. After coding all responses, two separate expert opinions were obtained to finalize the coding and themes. The analysis results were presented using a code cloud and creative coding.

LIMITATIONS OF THE STUDY

The research was conducted with students from Fatih Sultan Mehmet Foundation University and Kocaeli Health and Technology University, who are enrolled in the associate degree program “Shadow Teaching for People with Disabilities.” There are a total of 12 students enrolled in the program at Kocaeli Health and Technology University and a total of 20 students at Fatih Sultan Mehmet Foundation University. However, some of the enrolled students did not attend the classes. As the study was conducted on a voluntary basis, a total of 13 students participated in the study, 4 from KOSTU and 9 from FSMVU. The study, conducted with a sample size representative of the population, was limited to 13 participants.

FINDINGS

During the data collection phase, each participant was asked to assign themselves a pseudonym, and the pseudonym of the relevant participant is also indicated in the quotations. In order to answer the main

question of the study, “How should privacy education be provided to children with autism in early childhood by shadow teachers?”, To answer this question, the researcher compared the shadow teacher candidates' knowledge of privacy before the training with their knowledge after the privacy training provided by the researcher. In addition, the researchers examined whether the candidates considered privacy education important for children with autism and their thoughts on the effectiveness of the materials used.

Looking at the pre-intervention answers of shadow teacher candidates, it was seen that they had received general education on privacy within the scope of sex education before the “Confidence from the Shadows (3G)” training, that those who had not worked with an autistic child and therefore had no experience did not know how to provide training on the subject, and that those who did have knowledge considered themselves to have a moderate level of knowledge. Looking at their thoughts after the training, they stated that their knowledge on privacy was limited and focused on specific topics before the training, but after the training, they learned more and new information on the subject and acquired new and up-to-date information on topics they had previously misunderstood or lacked knowledge about. However, it is noteworthy that shadow teacher candidates with no experience described themselves as uncertain about teaching. The self-efficacy levels of shadow teacher candidates before and after training are presented in figures 2 and 3 below:

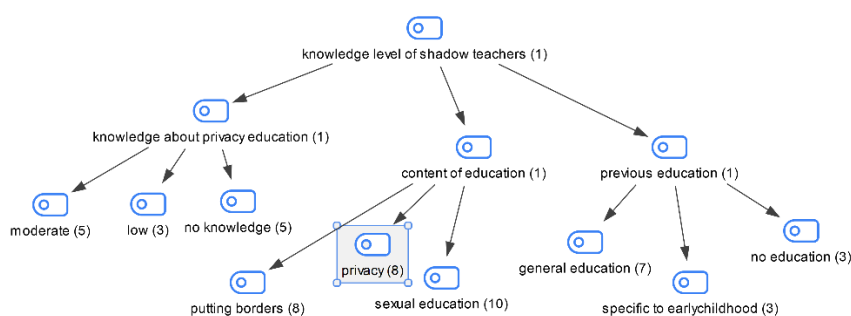


Figure 2: Categories and codes for feeling competent before training

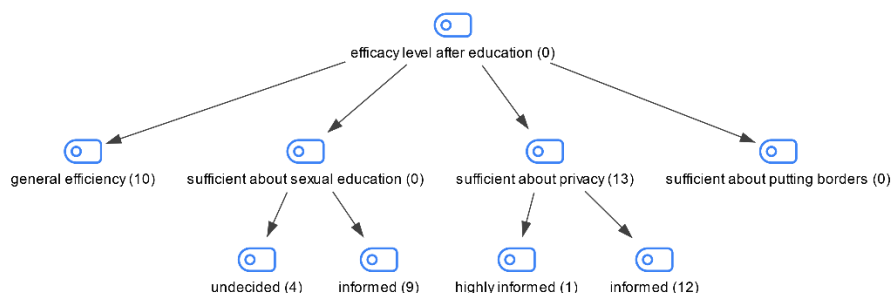


Figure 3: Categories and codes for feeling competent after training

The analysis revealed that all shadow teacher candidates considered it important to provide privacy education to children with autism. They also stated that they felt responsible for providing this education, believed that providing this education to all children would contribute to the child's healthy development, thought that privacy education should be provided to everyone, felt more competent with the education they received, learned practical and functional information, and understood how effective the use of materials was during teaching.

When asked about resources or materials shadow teachers could use when providing privacy education, they generally stated that they were not aware of any such resources, but indicated that they could use the resources, films, or books mentioned during the training. After the training, they stated that they had learned about different resources and materials and that the PECS, social stories, yes-no cards, and trust circle materials, which were designed for privacy education and explained to shadow teacher candidates by the researcher during the training, would be functional and useful and could be included in their training plans. The code cloud related to the pre-intervention and post-intervention responses of the shadow teacher candidates on this subject is provided in figures 4 and 5 below:



Figure 4: Frequency code cloud for the strategy and resources category before training



Figure 5: Frequency code cloud for the strategy and resources category after training

Below are sample excerpts of shadow teacher candidates' thoughts on the effectiveness of the materials:

"The yes-no cards, PECS, and social story used in education. Order: PECS-yes-no cards-social story." (Kelebek)

"I would still prefer the visual story-telling cards." (Samiş)

"If it's done like a game with the yes-no cards, the child works with their family on what we can and cannot do. It reinforces it. I found these cards very effective." (Diloş)

Shadow teacher candidates stated that privacy education should address the child's approach, body image, and boundaries. Therefore, the analysis of the responses was divided into three categories: the child's approach, body image, and boundaries, and interpreted accordingly.

Based on the pre-intervention study analyses, it was determined that the approach to the child should involve an appropriate educational environment, the importance of the language used, avoiding a punitive attitude, and maintaining communication. Analysis of the retention study responses administered after the training provided by the researcher revealed that training should be delivered in an appropriate environment, that the language used and the approach are important, that a solution-focused approach should be adopted

in response to the child's questions, and that spouses' attention to their behavior towards each other is important in terms of the child's role modeling. In the retention study, it was stated that privacy education should be provided to the child through play, that parents should serve as role models, that parental behavior is important, and that spouses should be attentive. In general, shadow teacher candidates in the first category stated that the environment should be suitable for education when teaching privacy to children, that the approach towards the child should be love-based, that the language used is important, and that it is a process that requires cooperation with the family. The code cloud and sample quotes of the answers given by shadow teacher candidates regarding their approach to children are below:

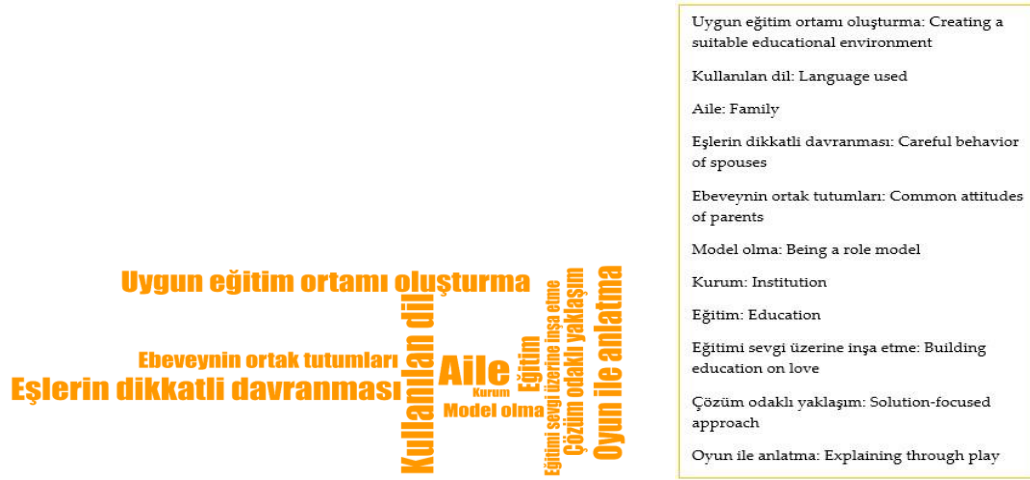


Figure 6: Frequency code cloud regarding the approach to the child

"I also share this process with my family..." (Kedi)

"I would explain it using games that interest them." (Diloş)

Looking at the analyses of the child's body image, another category, it was observed that in the pre-intervention, the responses of the shadow teacher candidates focused more on good-bad touch, clothing selection, boundaries of the body, and private areas in relation to the issue of privacy. Looking at the post-intervention and retention studies, the shadow teacher candidates' answers were concentrated on the topics of the body being private, clothing selection, and boundaries. Based on the post-intervention and retention study answers, it was determined that they paid attention to the topics and subjects covered in the training. The code cloud created regarding the child's body image and sample excerpts are provided below:

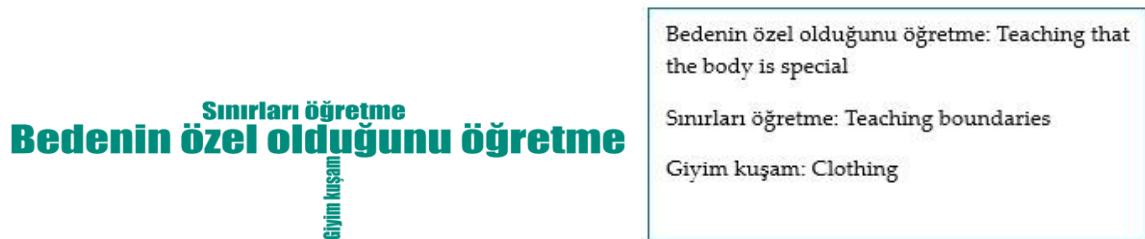


Figure 7: Frequency code cloud regarding the child's body image

"...it helps him set boundaries with his friends and thus pay attention to privacy." (Samiş)

"It plays an important role in him being aware of his own body and its boundaries." (Minik)

Another category that emerged in the analysis of how privacy content should be presented was that shadow teacher candidates focused on permission-seeking and granting, setting boundaries, and privacy in the bedroom in the pre-intervention analysis regarding children's boundaries. In the post-intervention and retention study, attention was paid not only to good-bad touch, boundaries, and private body parts, but also to private areas, the fact that the toilet/bathroom/bedroom are private areas, and the need to instill permission-seeking and permission-giving behaviors. Examples of the code cloud from the analysis of children's boundaries are provided below:

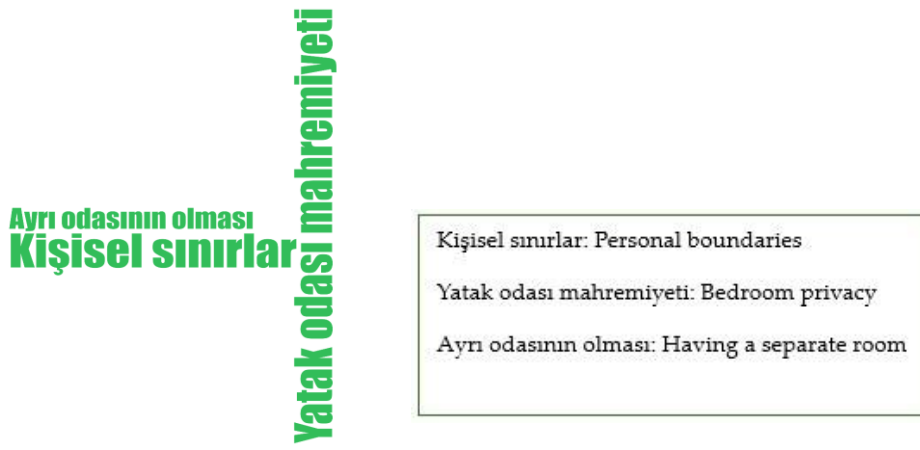


Figure 8: Frequency code cloud regarding the child's boundaries

"I would time it minute by minute so he could slowly get used to his own room." (Papatya)

"It's wrong to let them come to their beds at night." (Diloş)

Based on the analysis following semi-structured interviews conducted with one shadow teacher candidate from KOSTU and one from FSMVU as part of the study; The shadow teacher candidate from KOSTU, with the pseudonym Diloş, stated that before the training, she had general and theoretical knowledge about privacy in relation to sex education, that she could use books, films, and video examples covered in class if she needed to do the work, and that she felt hesitant about providing training because she had no experience working with children with autism. However, after the training, she stated that in addition to theoretical knowledge, she had acquired new and practical information on how to provide education using materials, that she had gained knowledge on more topics, that privacy was a broader issue rather than just a specific framework such as permission-seeking behavior, and that she had ideas on where to start when it came to providing education. They also mentioned during the interview that children should be approached by teaching them in a language they can understand and on topics appropriate for their age, and that teaching them about private areas and zones is necessary to address the topic of the body and boundaries. The other student interviewed is a shadow teacher candidate from FSMVU with the pseudonym Gul. Gul states that her knowledge of privacy prior to the training was limited to the information provided in the course and specific topics, and that when working with a child with autism, she planned to use this knowledge to develop a plan but was unsure how to proceed due to her lack of experience. After the training, she stated that she understood privacy to be a broader topic within the scope of the new information, that she could more easily develop a teaching plan and provide training using the materials introduced when planning, and that her awareness of the subject had increased due to her lack of knowledge. He also emphasized that children should be approached with love during education, that it is important for families to pay attention to their attitudes and behaviors, that the body is private and everyone should treat it with respect, and that it is important to teach children that boundaries are important and must be protected not only in terms of asking for and giving permission, but also in private areas such as the bedroom.

In general, analyses of what the content of privacy education provided by shadow teachers to children with autism should be indicate that the education should be conducted in an appropriate environment, within the scope of topics and boundaries appropriate to the child's age, approaching the child with love and understanding, avoiding a punitive attitude, and that it should be a process carried out in cooperation with the family. Furthermore, it is emphasized that the child's own body and the bodies of others are important and private, that these private areas and boundaries must be mutually respected, that they should dress appropriately for their age and needs, that privacy is important not only in terms of space or subject matter but also in areas such as the bedroom, toilet, and bathroom, and that the behavior of asking for and giving permission to enter these areas is important. It was concluded that education for children with autism should be planned with attention to these issues. Furthermore, the researcher emphasized the importance of the content of the education provided, stating that privacy education is essential for everyone and that the topics covered in the education expand their knowledge. The researcher designed PECS, social stories, and yes/no cards, which were explained to shadow teacher candidates in training, believing that these materials would be important and effective when working with an autistic child. They emphasized the importance of visual

aids in education and the concept of privacy. -no cards, and trust circle materials would be important and effective when working with a child with autism. They also stated that they better understood the importance of visual use in education and the importance of the concept of privacy, and that privacy education would support the child's healthy development. When all analysis results are considered and the responses from the pre-intervention, post-intervention, and retention study are compared, it can be stated that after the 3G training and material introduction, the shadow teacher candidates paid attention to the topics and learning outcomes expressed in the training and approached the sample scenarios created from these perspectives.

RESULTS, DISCUSSION and SUGGESTIONS

Within the framework of the research question, coding revealed and examined categories related to educational content, namely "approach to the child," "the child's body image," and "the child's boundaries." The results show that the approach to the child is important in the content of privacy education, that education should be provided based on love, away from punitive attitudes and in an appropriate language, that an appropriate environment should be created for education and explained in a way that the child can understand according to their age, and that it is important to involve the family in the process. Additionally, the teaching of appropriate and inappropriate touch behavior should not compromise privacy, while also emphasizing boundaries regarding the body, that everyone's body is private and these boundaries must be protected for everyone, that parents' behavior is very important in role modeling for children, that separate rooms for children and parents are necessary for children to learn and internalize private spaces, that bedrooms and areas such as toilets and bathrooms are private spaces, and that entering these areas requires permission-seeking and permission-giving behavior.

Before the training, it was observed that the knowledge of shadow teacher candidates focused on specific topics such as good-bad touch and boundaries. Similar results were obtained in Bostan's (2024) study with special education teachers. In his study, Bostan (2024) revealed that special education teachers focused on private areas and boundaries regarding privacy. In this study conducted by the researcher, it was observed that shadow teacher candidates knew similar topics before the training but learned different topics after the training, that privacy training is extremely important, and that the knowledge and awareness of shadow teacher candidates changed and developed after the training provided by the researcher.

It is important for shadow teacher candidates to feel knowledgeable and competent when providing privacy education to children with autism in early childhood, both to conduct the education effectively and to support families. The study found that shadow teacher candidates who had not worked with an autistic child before the training felt inadequate and experienced anxiety, but this anxiety decreased after the training because they acquired new knowledge and believed the materials would be useful. Kurtuluş (2022) also found in his study with teachers at a special education high school that teachers who did not consider their knowledge of privacy sufficient felt inadequate. A similar situation may also apply to families. Öcal (2021)'s study with families indicated that after privacy education, families felt better about themselves and a positive development regarding the subject was observed.

When asked whether privacy is important for children with autism as part of the research question, all participants stated that this training is particularly important for children with autism. This is similar to Çalışkan's (2019) study with teachers. Teachers consider privacy training in early childhood to be important. It is also important that studies conducted with children with autism in early childhood are presented with visuals (Diken, 2019). Because teaching is more functional with children who focus their attention on the task at hand with visual support. In this context, shadow teacher candidates who were unsure about which visual aids or materials to use when working with children before the training and who had reservations about this issue stated that they learned new resources beyond what they learned in class after the training. In particular, they stated that they could use the PECS, social stories, confidence cards, and yes-no cards used and introduced during the training themselves, and even adapt these materials to the autistic child by working with new topics and sentences. Bolat (2022) concluded that the use of materials was important and effective in his study with children aged 14-24 who had been diagnosed with mild intellectual disability. Similarly, Kaya (2021) stated that he achieved positive results in education supported by materials in his teaching with three children with autism using video modeling. Another study demonstrating the effectiveness of material use, conducted by Süzer (2015), involved three children with autism. After working on unacceptable touching behaviors using social stories, the children acquired the targeted skill. These studies concluded that children

with special needs acquired and generalized the targeted skill. In this study conducted with shadow teacher candidates, the candidates also stated that the materials would be effective and could be included in their educational planning with the children.

In interviews conducted with two randomly selected students from each university, shadow teacher candidates stated that their feelings of anxiety and inadequacy before the training had decreased after the training and that they were able to plan how to proceed. Due to their lack of experience, Karahan and Uyanık Balat (2011) found that special education teachers who rated their education level as low also rated their self-efficacy as low. Another study by Burak and Ahmetoğlu (2020) indicated that teachers' self-efficacy increased as their knowledge about children with autism increased. Looking at studies in the field on this subject, it can be said that providing shadow teachers with training on privacy is beneficial.

The study was conducted on a voluntary basis with a total of 13 students from the Shadow Teaching Program for People with Disabilities at FSMVU and KOSTU. The aim was to reach the entire population by interviewing students at both universities; however, due to some students not continuing their courses, the study group was limited to 13 participants. For future studies, it is recommended that other professional groups working with children with autism be included in the study to enrich the field. In addition, since shadow teaching candidates may feel inadequate due to a lack of training, studies providing practical knowledge through in-service training could be conducted.

Reviewing the results of the study again, it was concluded that shadow teacher candidates consider privacy education for children with autism in early childhood to be very important, that this education will support the healthy development of children, that education should be provided and supported with the family, that the approach to the child is important, and that the child needs to recognize their own body and the bodies of others and learn boundaries. It was also stated that teaching materials are important and effective, and that the use of various materials with children with autism supports teaching and enables generalization. This study also showed that privacy education is important and necessary for individuals with autism who have difficulties in communication, self-expression, and social skills to learn to protect themselves against possible neglect or abuse. Future studies could enrich the field by exploring different situations and characteristics related to this topic.

Declarations

Conflict of Interest

No potential conflicts of interest were disclosed by the author(s) with respect to the research, authorship, or publication of this article.

Ethics Approval

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Research and Publication Ethics Statement

Hereby, we as the authors consciously assure that for the manuscript "Privacy Education in Early Childhood: Children With Autism and Shadow Teachers" the following is fulfilled:

- This material is the authors' own original work, derived from the thesis titled "Privacy Education for Children with Autism and Shadow Teachers in Early Childhood" and presented as a paper at the 6th International Congress on Educational Research. However, it has not been published elsewhere before.
- The paper reflects the authors' own research and analysis in a truthful and complete manner.
- The results are appropriately placed in the context of prior and existing research.
- All sources used are properly disclosed.

Contribution Rates of Authors to the Article

The authors provide equal contribution to this work.

REFERENCES

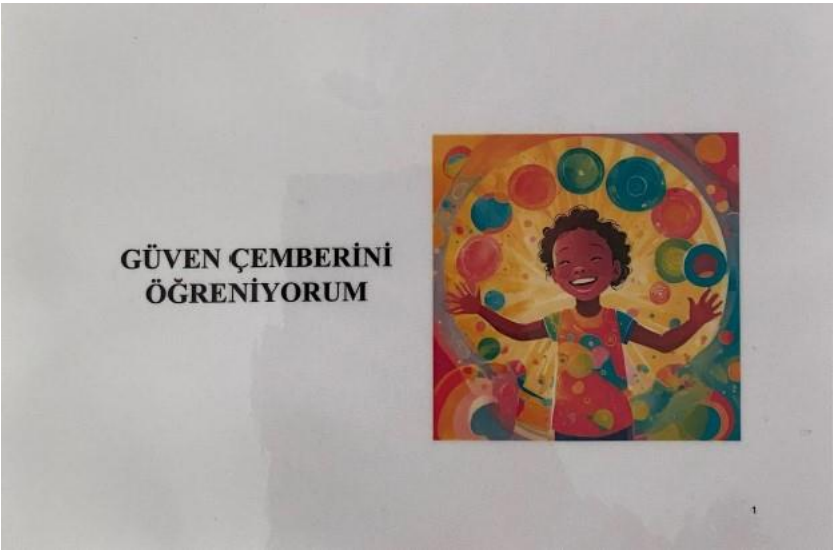
- Baştan, E. (2025). Otizm araştırma perspektifinden katılımlı araştırma yöntemleri [Participatory research methods from an autism research perspective]. *Yaşam Becerileri Psikoloji Dergisi*, 9(1), 83–95. <https://doi.org/10.31461/ybpd.1679305>
- Bolat, C. (2022). *Zihinsel yetersizliği olan gençlerin bedenlerinde, konuşmalarında, davranışlarında ve ortamlardaki mahremiyet sınırlarının belirlenmesi* [Determining the boundaries of privacy in the bodies, speech, behaviors, and environments of young people with intellectual disabilities] [Unpublished master's thesis, Marmara University].
- Bostan, M. (2024). *Erken çocukluk dönemindeki özel gereksinimli bireylerle çalışan öğretmenlerin mahremiyet eğitime ilişkin görüşlerinin belirlenmesi* [Determining the views of teachers working with children with special needs in early childhood regarding privacy education] [Unpublished master's thesis, Anadolu University].
- Bulut Pedük, Ş. (2019). Erken çocuklukta duygusal gelişim [Emotional development in early childhood]. In Y. Fazlıoğlu & H. Şengül Erdem (Eds.), *Özel gereksinimli çocuklar: Erken çocuklukta gelişim ve eğitim* [Development and education of children with special needs in early childhood] (pp. 75–111). Vize Akademik.
- Burak, Y., & Ahmetoğlu, E. (2020). Otizm spektrum bozukluğu olan çocukların kaynaştırılması ve bütünleştirilmesinde öğretmenlerle ilgili değişkenlerin incelenmesi [Examining variables related to teachers in the inclusion and integration of children with autism spectrum disorder]. *Elektronik Sosyal Bilimler Dergisi*, 19(73), 478–503. <https://doi.org/10.17755/esosder.598005>
- Canbazoglu Bilici, S. (2023). Örneklem yöntemleri [Sampling methods]. In H. Özmen & O. Karamustafaoğlu (Eds.), *Eğitimde araştırma yöntemleri* [Research methods in education] (pp. 56–78). Pegem Akademi. <https://doi.org/10.14527/9786052417867.04>
- Centers for Disease Control and Prevention. (n.d.). *Data & statistics on autism spectrum disorder*. <https://www.cdc.gov/ncbddd/autism/data.html>
- Çalışkan, H. (2019). *Okul öncesi dönemde çalışan öğretmenlerin mahremiyet eğitimi konusunda bilgi düzeylerinin belirlenmesi* [Determining the knowledge levels of preschool teachers regarding privacy education] [Unpublished master's thesis, Necmettin Erbakan University].
- Çepni, O., & Kılınç, A. Ç. (2017). Deneyisel ve yarı deneyisel araştırma [Experimental and quasi-experimental research]. In O. Köksal (Ed.), *Eğitimde araştırma yöntemleri* [Research methods in education] (pp. 177–218). Eğitim Yayınevi.
- Çoban, T., Doğan, B., Kavaklı, D., Korkmaz, A. C., Bahadır, B., Has Akdağ, F., Deniz, A., Banko Bal, Ç., İlhan İyi, T., Güler Yıldız, T., Turan, F., Esen Çoban, A., & Gönen, M. (2021). Bir eğitim fakültesi öğrencilerinin çocuk hakları, çocuk ihmal ve istismarı ile ilgili bilgi ve görüşlerinin değerlendirilmesi [Evaluation of education faculty students' knowledge and opinions regarding children's rights, child neglect, and abuse]. *ESTÜDAM Public Health Journal*, 6(3), 281–295. <https://doi.org/10.35232/estudamhsd.919458>
- Demir, G. (2024). Otizm spektrum bozukluğu olan çocukların eğitimi ve sosyalleşmesinde kütüphanelerin rolü: Kuramsal bir çerçeve [The role of libraries in the education and socialization of children with autism spectrum disorder: A theoretical framework]. *RumeliDE Journal of Language and Literature Studies*, 39, 525–542. <https://doi.org/10.29000/rumelide.1469432>
- Demir, R., & Türk, F. (2020). Pozitif psikoloji: Tarihçe, temel kavramlar, terapötik süreç, eleştiriler ve katkılar [Positive psychology: History, basic concepts, therapeutic process, criticisms, and contributions]. *Humanistic Perspective*, 2(2), 108–125.
- Diken, İ. H. (2019). Otizm spektrum bozukluğu (OSB) olan öğrenciler [Students with autism spectrum disorder]. In İ. H. Diken (Ed.), *Özel eğitime gereksinimi olan öğrenciler ve özel eğitim* [Students with special education needs and special education] (pp. 431–466). Pegem Akademi. <https://doi.org/10.14527/9786055885267.13>
- Durmuşoğlu Saltalı, N. (2019). Erken çocukluk döneminde gelişim [Development in early childhood]. In S. S. Yıldırım Doğru (Ed.), *Erken çocukluk döneminde özel eğitim* [Special education in early childhood] (pp. 3–36). Maya Akademi.

- Eraslan, E., Koçi, Z., Korkut, N., & Ertem, E. (2023). Çocuklarda mahremiyet bilinci [Awareness of privacy in children]. Republic of Türkiye Ministry of Family and Social Services. <https://www.aile.gov.tr/media/129755/cocuklardamahremiyetbilincikitabi.pdf>
- İncekara, H. İ., & Ulaş, E. (2024). Yeni bir kavram: Özel gereksinim temelli dezavantajlı bireylere yönelik kolaylaştırıcı kişi [A new concept: Facilitator for individuals with special needs-based disadvantages]. *Journal of Special Education, Ankara University Faculty of Educational Sciences*, 25(4), 403–417. <https://doi.org/10.21565/ozelegitimdergisi.1270055>
- Karahan, Ş., & Uyanık Balat, G. (2011). Özel eğitim okullarında çalışan eğitimcilerin öz-yeterlik algılarının ve tükenmişlik düzeylerinin incelenmesi [An examination of the self-efficacy perceptions and burnout levels of educators working in special education schools]. *Pamukkale University Journal of Education*, 29(1), 1–14.
- Karnas, M., & Alpaydın, B. (2023). Otizm spektrum bozukluğu (OSB) olan çocuklar [Children with autism spectrum disorder]. In A. Simsar & B. Alpaydın (Eds.), *Erken çocuklukta risk altındaki çocuklar: Öğretmenler ve aileler için öneriler* [Children at risk in early childhood: Recommendations for teachers and families] (pp. 69–83). Nobel Publishing.
- Kaya, G. (2021). Otizm spektrum bozukluğu olan bireylere yabancı kişilerden korunma becerisinin kazandırılmasında uzaktan eğitim yoluyla sunulan video modelle öğretimin etkililiği [The effectiveness of video modeling delivered through distance education in teaching individuals with autism spectrum disorder protection skills against strangers] [Unpublished master's thesis, Uludağ University].
- Kurtkapan, H. (2023). Özel gereksinimli bireyler için okullarda gölge öğreticilik [Shadow teaching in schools for individuals with special needs]. *Muhakeme Journal*, 6(2), 50–57. <https://doi.org/10.33817/muhakeme.1393589>
- Kurtkapan, H., Ertürk Uzunoglu, G., & Coşkun, Ş. (2024). Otizm spektrum bozukluğunun yönetiminde multidisipliner yaklaşımlar ve gölge öğreticilerin rolü [Multidisciplinary approaches in the management of autism spectrum disorder and the role of shadow teachers]. *PESA International Journal of Social Studies*, 10(2), 167–177.
- Kurtuluş, M. (2022). Lise düzeyindeki özel eğitim okullarında çalışan öğretmenlerin mahremiyet eğitime ilişkin görüşlerinin belirlenmesi [Determining the views of teachers working in special education high schools regarding privacy education] [Unpublished master's thesis, Uludağ University].
- Leplaa, H. J., Tönjes, J. A., Bouterse, M., Soppe, K. F. B., & Klugkist, I. (2025). Applying qualitative methods to experimental designs: A tutorial for the behavioral sciences. *PLoS ONE*, 20(6), Article e0324936. <https://doi.org/10.1371/journal.pone.0324936>
- Montebon, D. R. T. (2016). Shadow education: Effects on students' self-efficacy in science. *International Journal of Research Studies in Education*, 5(1), 31–40. <https://doi.org/10.5861/ijrse.2015.1212>
- Öcal, H. (2021). Zihinsel yetersizliği olan çocukların ebeveynlerine verilen mahremiyet eğitiminin ebeveynlerin bilişsel ve duyuşsal özellikleri ile becerilerine etkisinin incelenmesi [Examining the effects of privacy education provided to parents of children with intellectual disabilities on parents' cognitive and affective characteristics and skills] [Unpublished master's thesis, Necmettin Erbakan University].
- Özaslan, H., & Gültekin Akduman, G. (2018). Ailelerin mahremiyet eğitime ilişkin görüşlerinin incelenmesi [An examination of families' views on privacy education]. *SETSci Conference Indexing System*, 3, 1363–1369.
- Özaydın, L. (2020). Kaynaştırma uygulamalarında öğretmen yardımcısının görevlerine ilişkin paydaş görüşleri: Karma yöntem çalışması [Stakeholder views on the roles of teaching assistants in inclusive education: A mixed-methods study]. *Journal of Special Education, Ankara University Faculty of Educational Sciences*, 21(3), 561–587. <https://doi.org/10.21565/ozelegitimdergisi.563242>
- Öztop, D. B., & Özel Özcan, Ö. (2010). Cinsel istismar vakalarının sosyodemografik ve klinik özelliklerinin değerlendirilmesi [Evaluation of the sociodemographic and clinical characteristics of sexual abuse cases]. *Yeni Symposium*, 48(4), 270–277.
- Robinson, S., & Mendelson, A. L. (2012). A qualitative experiment: Research on mediated meaning construction using a hybrid approach. *Journal of Mixed Methods Research*, 6(4), 332–347. <https://doi.org/10.1177/1558689812444789>

- Sapsağlam, Ö. (2018). Okul öncesi dönem çocuklarının değişen oyun tercihleri [Changing play preferences of preschool children]. *Ahi Evran University Journal of Education Faculty*, 19(1), 1122–1135. <https://doi.org/10.29299/kefad.2018.19.031>
- Sarışık, S. (2021). Examining the factors affecting family participation in preschool education: The teachers' views. *The Universal Academic Research Journal*, 3(2), 58–69. <https://doi.org/10.17220/tuara.2021.02.12>
- Sazak, E. (2019). Erken çocuklukta bilişsel gelişim [Cognitive development in early childhood]. In Y. Fazlıoğlu & H. Şengül Erdem (Eds.), *Özel gereksinimli çocuklar: Erken çocuklukta gelişim ve eğitim* [Development and education of children with special needs in early childhood] (pp. 4–27). Vize Akademik.
- Senemoğlu, N. (2018). *Gelişim, öğrenme ve öğretim: Kuramdan uygulamaya* [Development, learning, and teaching: From theory to practice]. Anı Publishing.
- Sivrikaya Tokgöz, N. (2019). Erken çocuklukta fiziksel ve motor gelişim [Physical and motor development in early childhood]. In Y. Fazlıoğlu & H. Şengül Erdem (Eds.), *Özel gereksinimli çocuklar: Erken çocuklukta gelişim ve eğitim* [Development and education of children with special needs in early childhood] (pp. 30–54). Vize Akademik.
- Süzer, T. (2015). *Otizm spektrum bozukluğu olan bireylere cinsel istismardan korunma becerilerinin öğretiminde sosyal öykü yönteminin etkililiği* [The effectiveness of social story-based instruction in teaching sexual abuse prevention skills to individuals with autism spectrum disorder] [Unpublished master's thesis, Anadolu University].
- Şirin Arkoç, E., Öztürk, C., & Keskin, S. (2019). Erken çocuklukta sosyal gelişim [Social development in early childhood]. In Y. Fazlıoğlu & H. Şengül Erdem (Eds.), *Özel gereksinimli çocuklar: Erken çocuklukta gelişim ve eğitim* [Development and education of children with special needs in early childhood] (pp. 57–74). Vize Akademik.
- Tekindal, S. (2023). Araştırma problemi [Research problem]. In *Nicel, nitel, karma yöntem araştırma desenleri ve istatistik* [Quantitative, qualitative, and mixed-methods research designs and statistics] (pp. 224–235). Nobel Publishing.
- Temeltürk, R. D., & Kılıç, B. G. (2024). Nöroçeşitlilik ve otizm [Neurodiversity and autism]. In K. Karabekiroğlu (Ed.), *Çocuk psikiyatrisinde nörobilim ve felsefe* [Neuroscience and philosophy in child psychiatry] (pp. 54–60). Türkiye Klinikleri.
- Yılmaz, O., & Gürbüz Yiğit, D. (2024). Erken çocukluk dönemi ebeveynlerinin ailede karakter eğitimine ilişkin görüşleri: Fenomenolojik bir araştırma [Early childhood parents' views on character education in the family: A phenomenological study]. *Journal of Bingöl University Faculty of Theology*, 24, 187–214. <https://doi.org/10.34085/buiid.1543738>
- Yılmaz, Ş. (2019). Erken çocuklukta dil ve konuşma gelişimi [Language and speech development in early childhood]. In Y. Fazlıoğlu & H. Şengül Erdem (Eds.), *Özel gereksinimli çocuklar: Erken çocuklukta gelişim ve eğitim* [Development and education of children with special needs in early childhood] (pp. 113–141). Vize Akademik.

MATERIAL VISUAL SAMPLES*

SOCIAL STORY



TRUST CARDS



YES NO CARDS



PECS



* Detailed data and materials can be supported upon request