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The efficiency of teaching with simultaneous prompting? To children with Autism Spectrum Disorder to acquire the skill of describing people

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Abstract

This study aimed to examine the effectiveness of simultaneous prompting teaching method on children with ASD to acquire the skills of describing people, the level of preserving the skills of the participants to describe the people they gained after the implementation ended, and the level of generalization to different people and different environments. In this study, a multiple probe model with probe phase between participants, which is one of the single-subject research models, was used. Four children with ASD, aged 5-10 years, participated in the study. Inter-observer reliability and application reliability data were collected at each stage of the study. Social validity data were collected from the parents and teachers of the four participants who participated in the study to determine their views on the research. While the inter-observer reliability coefficient of the study was calculated as 97.75%, the coefficient of the application reliability data was obtained as 96.65%. The effect size of the study was calculated with the Tau-U method, which is one of the methods based on non-overlapping data. Accordingly, the effect size Tau-U value of the application was calculated as 0.8131 which indicates a medium effect size. At the end of the research, it was seen that the application performed with simultaneous prompting of the participants was effective in developing the skills of children with ASD to describe people and that they were able to generalize these skills to different environments and to different people, and they were able to maintain these skills 7, 14 and 21 days after the implementation ended.

Keywords

Autism Spectrum Disorder

Describing people

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Introduction

Autism spectrum disorder (ASD) is defined as a neurodevelopmental disorder that occurs in the first three years of early childhood and is characterized by inadequacies in social interaction and interests, as well as obsessive and repetitive behaviors (American Psychiatric Association [APA], 2013). Although there are many characteristics (e.g., lack of eye contact, echolalia, mutism) that distinguish children with ASD from their typically developing peers and other disability groups, children with ASD also perceive dangerous situations in the environment as a result of perceiving stimuli at the same time or being overly sensitive to some stimuli and experience limitations in recognizing (APA, 2013). When

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children with ASD look at any individual, they have limitations in answering questions about these people and reading clues about their physical characteristics (Bradshaw et al., 2010; Chawarska & Shic, 2009; Özer & Özdemir, 2015; Schultz, 2005). These limitations can compromise their safety in social environments by reducing their ability to identify unfamiliar or threatening individuals.

Safety skills are defined as behavior sets developed to help individuals protect themselves from harmful situations such as abduction, harassment, or accidents (Jang et al., 2016; Miltenberger, 2008). While typically developing children acquire these skills naturally through observation and experience, children with ASD often require systematic instruction to develop and generalize these behaviors (Ergenekon & Çolak, 2019; Scheuermann & Webber, 2002; Tekin-İftar et al., 2018). Numerous studies emphasize that individuals with ASD are more likely to encounter life-threatening situations and are often less equipped to respond effectively due to challenges in stimulus discrimination, communication, and generalization (Baruni & Miltenberger, 2022; Celik & Olcay, 2025). Despite these risks, safety skills are often under-prioritized by educators and families (Sirin & Tekin-Iftar, 2016), and many children receive no structured training in this domain (Değirmenci et al., 2022).

Studies indicate that children with ASD can learn safety behaviors through behavioral teaching methods; however, interventions that focus specifically on person identification and description remain sparse. While various strategies such as behavioral skills training, video modeling, and prompting procedures have been used to teach abduction prevention or poison safety (Miltenberger et al., 2020; Morosohk & Miltenberger, 2022), targeted teaching of person description—especially as a verbal reporting safety skill—has not been systematically addressed. Furthermore, it is emphasized in the literature that generalization and maintenance are often overlooked, despite being critical for the effectiveness of safety interventions (Baruni & Miltenberger, 2022).

The person description skill —referring to articulating physical features such as age, height, clothing, and facial characteristics—is critically important in ensuring children can report harmful encounters to caregivers or authorities (MoNE ,2009). The inability to describe a person involved in a harmful incident (e.g., abuse, threat, insult) may prevent timely intervention, and in some cases, expose the child to repeated harm. This concern becomes especially significant for children with ASD, who may face barriers in both perceiving and verbally expressing such descriptions (Miltenberger, 2008). Considering the national and international statistical data, it is stated that although the rate of child abduction has increased, education programs aimed at protecting and avoiding strangers have not been developed sufficiently (Johnson et al., 2005; Kutlu, 2016). Studies reveal that children with ASD can learn safety skills through systematic practices, however, it is seen that the teaching of vital safety skills for children is limited, and this teaching is usually done with individuals during adolescence and adulthood (Değirmenci, 2018; Saiano et al., 2015; Summers et al., 2011; Tekin-İftar et al., 2018; Wiseman et al., 2017).

The ability to describe people, which forms the basis of the research, is defined as the description of a person's physical appearance through characteristics such as age, height, body, hair, eyes, face or clothing (MoNE, 2009). It is thought that it is vitally important for children with ASD to report this situation to their relatives by giving a description of the person concerned, when they encounter any harm (violence, insult, abuse, etc.) from any peers or adults in any social environment. If children with ASD do not report this to their adult relatives and cannot describe the physical appearance of the person concerned, there may be a high probability of encountering a similar danger situation with the same person later on. It is thought that if the child with ASD reports this attempt to an adult by describing the perpetrator with its external appearance characteristics, in the danger situations of which examples are given, it is thought that the people who harm or are likely to harm themselves will also be taken under control (Miltenberger, 2008).

As far as our research on the subject, we did not come across any study that teaches the ability to describe people within the scope of security skills in the national and international literature. Considering this gap, the present study investigates the effectiveness of simultaneous prompting in teaching person description skills to children with ASD as a critical component of safety instruction. In addition to addressing a neglected area of applied research, this study also explores the generalization and maintenance of the acquired skill and includes the perspectives of families and teachers to ensure social validity. It is thought that teaching the skills of describing people to children with ASD in the early period will also form the basis for the teaching of safety skills. In this context, the aim of this research is to determine the effectiveness of simultaneous prompting in the teaching of the ability to describe people in order to protect children with ASD from strangers.

Simultaneous prompting is an evidence-based instructional method proven effective in teaching various academic, self-help, and safety skills to individuals with developmental disabilities, including ASD (Tekin-İftar & Kircaali-İftar, 2006). Despite its documented utility in areas like abduction prevention or street safety, research applying simultaneous prompting specifically to teach person description as a verbal safety skill remains minimal. Moreover, while general education literature includes interventions targeting descriptive language and threat identification, these methods are rarely adapted or validated for use with children on the autism spectrum. Given these gaps, this study aims to contribute evidence regarding the applicability and efficacy of simultaneous prompting in promoting this critical safety behavior. In this context, the following questions were sought to be answered in the research:

1. Is simultaneous prompting effective in teaching the skills of describing people to children with ASD?
2. Do children maintain this skill at follow-up points (7th, 14th, and 21st days post-intervention)?
3. Can the learned skill be generalized across different people and environments?
4. What are the opinions of participant teachers regarding the effectiveness of this instruction?
5. What are the families' views on teaching person description skills through simultaneous prompting?

Method

Research Model

In the study, a multiple probe model with probe phase between participants, one of the single-subject research models, was used in teaching the skills of describing people to children with ASD. The multiple probe model with probe phase between participants is a model that is carried out with at least three participants and examines the effect of the independent variable on the dependent variable (Gast, 2009; Tekin-İftar, 2018).

Variables of the Study

The dependent variable, person description skill, was operationalized as the ability to correctly describe at least three physical features of a target individual within 5 seconds after being presented with the instruction. The expected features included height (tall/short), weight (thin/fat), and gender (male/female). A response was recorded as correct (+) only if it matched the predetermined acceptable expressions outlined during the pilot (e.g., “tall” or “bigger than me” for height). Inappropriate or no responses within the allotted time were marked as incorrect (-). The total correct responses were divided by the total number of prompts to calculate accuracy percentages.

Working Group

During the process of recruiting child participants, the officials, teachers and parents of a special education school providing education to children with ASD were interviewed. Institutional and parental permissions were obtained for the research. The prerequisite skills required for the participants to be included in this study are listed in Table 1.

Table 1. Prerequisite Skills Required in Participants.

- Being diagnosed with ASD
- Have no previous training in person describing skills
- Determining the ability to describe people in IEP as a goal
- Be able to imitate three- or four-word sentences
- To be able to distinguish/name the concepts of short and long
- To be able to distinguish/name the concepts of thin and fat
- Be engaged in an activity for at least five minutes
- Not having problem behaviors
- Fulfilling 2-3 word instructions

Four boys with ASD aged between four and 10 participated in the study. Gilliam Autistic Disorder Rating Scale-2-Turkish Version (GADRS-2-TV; Diken et al., 2011) and Adapted Autism Behavior Checklist (A-ABC; Diken et al., 2018) were used to evaluate the ASD levels of the participants. In the study, the average OBI scores were obtained by applying A-ABC in line with the information received from the families of the participants. According to the GADRS-2-TV results, the probability of ASD was found in four of the participants (Ege, Alper, Poyraz and Ozan). Accordingly, the Autistic Disorder Index (ADI) scores of the children included in the GADRS-2-TV results ranged from 70 to 81, and the average ADI score of the children was 75.5. This shows us that there is a possibility of ASD in the participants. The general characteristics of the participants participating in the research are shown in Table 2.

Table 2. General Characteristics of Participants

Name	Gender	Age	Year of Special Education	GADRS Score	A-ABC Score	Education Level
Ege	Boy	5	3 Years	70	5	Kindergarten-Inclusion
Poyraz	Boy	8	5 Years	74	7	2nd Class-Inclusion
Alper	Boy	9	5 Years	81	14	2nd Class- Special Education Class
Ozan	Boy	11	7 Years	77	13	3rd Class-Special Education Class

Ege is a five-year-old boy diagnosed with ASD. According to the evaluation made with GADRS-TV-2, Ege's ASD rating was 70 and there was a possibility of autistic disorder. According to the A-ABC evaluation, his score was five, and the level of support need for ASD level was determined as mild support need. Poyraz is a seven-year-old boy diagnosed with ASD. According to the evaluation made with GADRS-TV-2, Poyraz's OSD rating was determined as 74 and there is a possibility of ASD. At the same time, the score obtained in the evaluation with A-ABC was 7 and was determined at the level of mild support need. Alper is an eight-year-old boy diagnosed with ASD. According to the evaluation made with GADRS-TV-2, the ASD rating was 81 and the possibility of ASD was determined as present, but the score obtained according to the evaluation made with A-ABC was 14 and the need for support was determined as mild. Ozan is a 10-year-old boy diagnosed with ASD. According to the evaluation made with GADRS-TV-2, Ozan's ASD rating was 77 and there was a possibility of ASD. At the same time, the score obtained in the evaluation with A-ABC was 13 and was determined at the level of mild support need.

Environment

The daily probe, entire probe and follow-up sessions of the research were carried out at a foundation's autism school in Şişli, Istanbul, in four sessions per week in the classrooms where the participants received individual education. Generalization sessions, on the other hand, are the school corridor and the playground in the backyard of the school, which are available when you enter through the door.

Materials

In order to teach the skills of describing people, people with different physical characteristics were determined among the school staff. In the generalization sessions, planning was made so that they would be in the designated location in the corridor and garden of the school at the predetermined time and day. In addition, smart phones, detected reinforcers and data forms were used for the videos to be used in the research. It is a visual clue that includes examples of gender, height and weight on the training material to be used in the teaching of the skill of describing the person with simultaneous prompt and covered with lamination. Visual cues were used to enable participants to more concretely notice the features they would describe.

Experiment Process

Pilot Practice

A pilot application was organized in order to identify and prevent possible problems that may arise during the implementation and to better support the internal validity of the research. In the pilot application, another child with the prerequisites who was not a participant in the research was studied in two sessions a day, five days a week. As a result of the pilot application, it was determined that the participant gained the ability to describe people. After the pilot application, the correct response intervals of the participating children were increased. For example, “female, male” answers for the gender variable; It was arranged to cover the reactions of "male, female, guy, girl". For the weight variable, “fat and thin” answers; Definitions such as “large, small, strong, wide” were also accepted as the correct response. In addition, the main directive "describe that person" was expanded and changed to "look at his face, body, feet and describe that person".

Baseline Sessions

The baseline data collection process was collected for at least five consecutive sessions until stable data were obtained for all four participating children separately from each other. Visual materials were not used in the introductory level sessions, and the sessions were held in the classrooms of the participants. Before starting the session, the researcher and the participant first had a short conversation (eg, “Hello!”, “How are you today?”). Afterwards, the researcher said, "We will do a study with you and there will be some rules you have to follow" and explained the rules and the prize he would win if he followed the rules (for Ege, trampoline and/or train toy; for Ege, Poyraz Alper and Ozan, tablet). The researcher pointed to the person entering the classroom and presented the target stimulus by saying "Look at that person's face, body, feet and describe them". Five seconds after the instruction is given responds correctly about the person's gender (male/female, male/female, girl/boy or man), weight (underweight/fat, smaller/bigger than me, stronger/weaker than me) and height (taller/shorter than me) the researcher recorded correctly (+) in the relevant box in the data form. Five seconds after the instruction is given. If the participant did not give any response but simply repeated the instruction or gave an incorrect response, the researcher recorded it as (-) in the data form.

Teaching Sessions

After obtaining stable data at the baseline level, teaching the skills of describing people with simultaneous prompting was started with the first participant. In the teaching sessions, the stages performed at the introductory level are applied before starting the teaching (short conversation, explaining the rules and reward, presenting a remarkable stimulus). After the person to be described entered the classroom, the researcher presented the control prompt (verbal cue) after presenting the target stimulus. If the participant describes according to the steps in the describing skill, he reinforces the participant's correct responses by describing them with the reward determined before the session. The rules, the purpose of the study, the introduction of the materials, the award and the presentation of the simultaneous prompt were applied in the same way for all participants in the teaching session. Teaching sessions continued until the 100% criterion was met for five consecutive sessions in participants' daily probe sessions. It is acknowledged that some participants reached the mastery criterion in fewer sessions than expected. However, this was anticipated based on pilot testing and the

participants' prerequisite skills, such as verbal labeling and basic concept differentiation (e.g., height, weight). The rapid acquisition is also interpreted as a sign of the efficiency of simultaneous prompting, as it eliminates trial-and-error learning. To control for this, a minimum of five baseline sessions was ensured and generalization/follow-up data were collected to confirm maintenance and transfer, thereby strengthening the internal validity of the instructional impact.

Entire and daily probe sessions

In the entire probe sessions, data were collected by following the process in the baseline sessions. The teaching of the person description skill was organized for all participants after it ended with the first participant. The fourth and last entire probe session was held after the last participant's teaching was terminated and again for all participants. Entire probe sessions were held simultaneously with each participant. Daily probe sessions were held before each teaching session. Daily probe sessions were carried out similarly to the baseline session. The session was terminated when the participant gave 100% correct response three times in a row in the daily probe sessions.

Generalization and follow-up sessions

In the research, generalization sessions were carried out to demonstrate the skill of describing a person in different environments and with different people. In the generalization sessions, the visual clues that the participants used during the teaching session were not used. Generalization sessions were held in the school hallway and playground in the backyard. While the researcher and the participant were in the corridor or in the garden (with Poyraz in the corridor and in the garden with the other participants), people whom the participant hardly knew came to the environment. The correct reactions of the participant in the generalization sessions were reinforced verbally by saying "well done, how well you described it!", "you are very careful, it is great that you can describe it like that!". Incorrect responses were ignored, and the generalization sessions were terminated without saying anything. Follow-up sessions were held 7th, 14th and 21st days after the end of the last probe sessions, held after the end of the teaching sessions, to examine the level of preservation of the skills of describing people. The participants were given instructions on the person description skill without any hints, and they were expected to describe the people they described in the teaching sessions.

Data Collection and Analysis

Data collected in (a) baseline, (b) daily probe, (c) entire probe, (d) follow-up and (e) generalization sessions for the effectiveness of simultaneous prompt instruction in the teaching of the person description skill performed on participants throughout the research, as effectiveness data evaluated. The analysis of the data in the sessions [(Number of Correct Responses/Total Number of Responses) x100] formula was obtained (Bilmez & Tekin-İftar, 2014). The percentages of data obtained are indicated by transferring to the graph. In the graph, the number of sessions on the horizontal axis and the percentages of correct responses in the skill analysis of describing people are given on the vertical axis. Tau-U, one of the non-overlapping data-based methods, was used for effect size calculation. The Tau-U value is defined as the number of overlapping data pairs obtained by comparing the baseline data points with the data points in the teaching session, subtracting the non-overlapping data pairs, and then the ratio of the value obtained to the total number of data pairs compared (Parker et al., 2011). The formula used to calculate the Tau-U value was stated as (Kendall correlation number (S)/Total number of pairs) x 100]. The Tau-U value obtained as a result of the calculations is between 0 and 1. Effect size of 0-0.65 indicates low impact, 0.66-0.92 moderate impact, and 0.93 and higher mean, high impact (Parker et al., 2011; Rispoli et al., 2013). In this study, the effect size Tau-U value was calculated using the calculation engine at the http://singlecaseresearch.org/calculators/Tau-U web address. As a result of the calculation, the effect size of this study was calculated as Tau-U value of 0.8131 which indicates a moderate impact.

In calculating the inter-observer reliability coefficient of the research, 30% of all teaching session with video recordings were evaluated by two observers, and the correct or incorrect responses recorded jointly were accepted as consensus. If the same reaction of the participant was accepted as right or wrong by one observer and did not agree with the other observer, this situation was recorded as a difference of opinion. Consensus/(consensus + disagreement) x 100 formula was used to calculate the inter-observer reliability data. The interobserver reliability findings obtained in the study were calculated as 97% in the baseline sessions, 98% in the daily probe sessions, 97% in the entire probe sessions, 99% in the generalization sessions and 98% in the follow-up sessions.

In calculating the application reliability coefficient of the research, application reliability data from 30% of the sessions were analyzed. While calculating the application reliability data, the formula "observed practitioner behavior/planned practitioner behavior x 100" was used. The steps of collecting application reliability data "Batch Probe, Daily Probe and Follow-ups" were formed by taking the opinions of three experts and consist of eight steps. These steps are "chatting briefly", "explaining rules", "explaining rewards", "giving attention-grabbing cues", "giving target instruction", "waiting for response interval time", "offering associated praise" and "giving rewards". Teaching sessions consist of 11 steps and these steps are; "chat briefly", "explain the rules", "state the purpose of the lesson", "explain the rewards", "give attention-grabbing hint", "give the target instruction", "present the controlling hint", "wait the response interval", "appropriate responding", "giving praise associated with the behavior" and "giving the reward". Generalization sessions application confidence consist of five steps. These steps are; "chatting briefly", "giving the target instruction", "waiting for the response interval time", "reacting appropriately" and "ending the session". The ability to describe people with simultaneous prompting was found to be 97% in baseline sessions, 99% in daily probe sessions, 95% in entire probe sessions, and 97.5% in generalization sessions.

The data were visually graphed using Microsoft Excel with clear vertical phase-change lines to indicate transitions between baseline, instruction, generalization, and follow-up phases. Data points were aligned on the horizontal axis representing sessions, and the vertical axis showed the percentage of correct responses. Care was taken to ensure consistent scaling and spacing to improve readability and phase interpretation accuracy.

Results

Efficacy and Persistence Findings

In this section, the data collected in the baseline, entire probe, teaching, generalization and follow-up sessions regarding the skill levels of Poyraz, Alper, Ege and Ozan are given in Figure 1. The number of sessions are indicated on the horizontal axis of the graph, and the response percentages for the dependent variable (the ability to describe people) are indicated on the vertical axis of the graph. Figure 1 illustrates the session-by-session progress of each participant from baseline through teaching and follow-up phases. It clearly demonstrates the rapid performance increase following the introduction of simultaneous prompting and the maintenance of skills over time. Entire probe data is from the responses of the participants in the entire probe sessions; daily probe data were obtained from their responses in daily probe sessions held before the teaching sessions.

Five baseline data collected before starting the application with Poyraz is at the level of 25%. In the teaching session, 33% in the first teaching session; gave 100% correct response in the second, third, fourth, fifth and sixth teaching session. At the end of the implementation process, it was observed that Poyraz met the 100% criterion for five consecutive sessions. It was measured that Poyraz performed his ability to describe people correctly at the 100% level in a total of four polling phases held after the teaching session. Poyraz also gave a 100% correct response in the follow-up sessions 7, 14 and 21 days after the end of the teaching. These data suggest that Poyraz acquired the person description skill with a high level of accuracy after only two teaching sessions. Maintaining 100% performance throughout follow-up indicates that the acquired skill was both internalized and retained over time, reflecting the effectiveness and permanence of the simultaneous prompting method.

The baseline data in Alper's ability to describe people is at the level of 25%. In five of the first probe sessions held before the teaching session, 25% responded correctly, and then the teaching session was passed. Alper in the teaching session, 67% in the first, second and third teaching sessions; In the fourth, fifth, sixth, seventh and eighth teaching session, five consecutive sessions performed 100% correctly. In the collective polling phase held after the end of the teaching session, Alper performed the skill steps of the person description skill correctly at the 100% level. He gave 100% correct response in the first Follow-up, 88% in the second Follow-up, and 100% in the third Follow-up for Alper. These findings demonstrate that Alper benefited significantly from the simultaneous prompting instruction. Although his performance was stable but low during baseline and probe phases (25% accuracy), he achieved a consistent 100% correct response across five consecutive sessions following instruction. Furthermore, his high performance during generalization and follow-up sessions suggests that the skill was not only learned effectively but also retained over time and applied in novel contexts. This highlights the functional impact of the intervention in supporting real-life communication and safety behaviors.

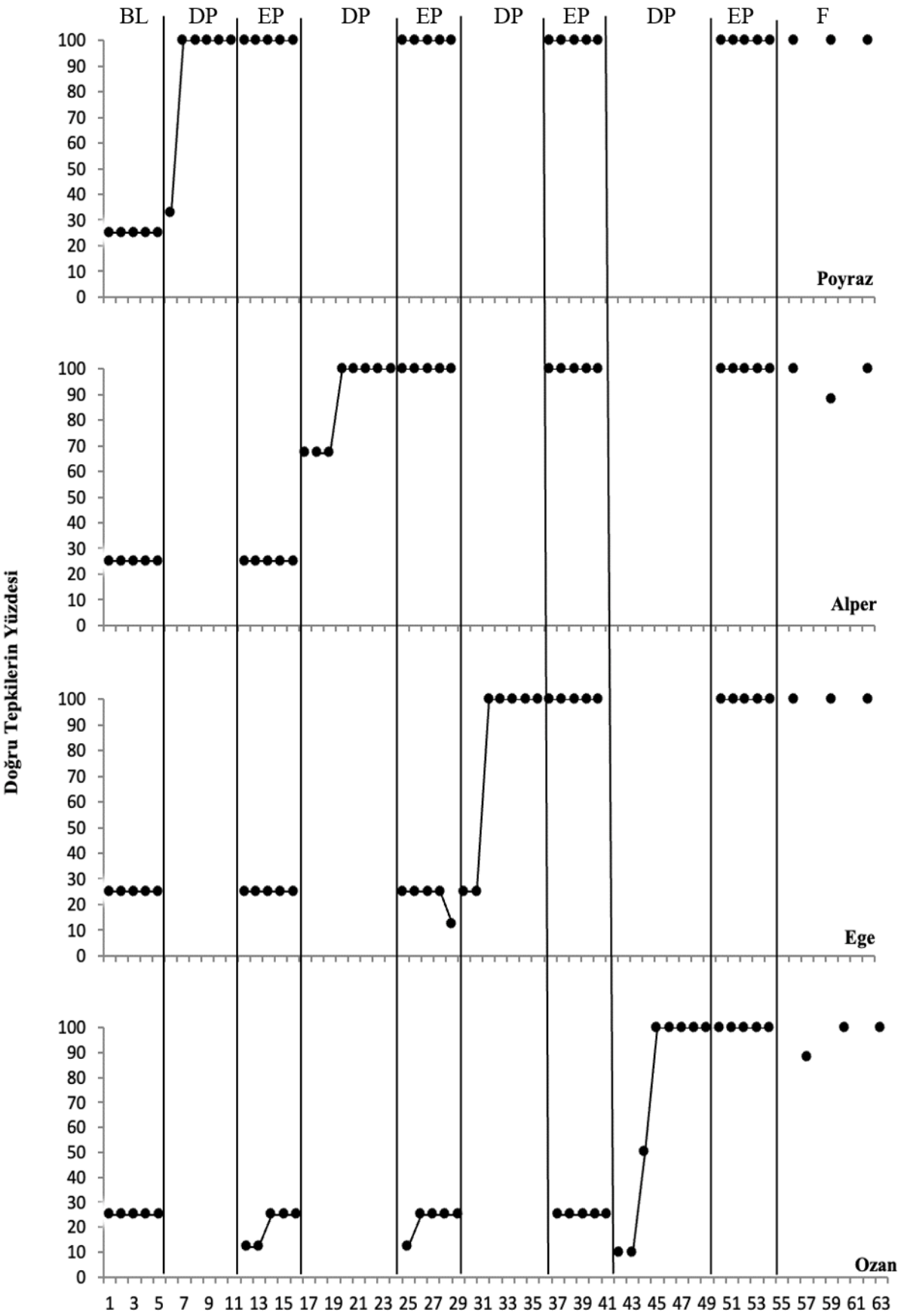

Figure 1. Percentage of Correct Response to Poyraz, Alper, Ege, and Alper in Describing Persons Baseline (BL), Daily Probe (DP), Entire Probe (EP) and Follow-up (F) Sessions

It was noted that Ege's correct response at the level of 25% in the person description skill by responding correctly in the section of the skill steps, only looks at the person to be described, in the baseline session. Ege's performance was the same as at the baseline level in the first entire probe session and five sessions, which was carried out before the teaching session, and a correct response percentage of 25% was recorded. In the second entire probe session, 25% correct response percentage in the first four sessions and 10% correct response percentage in the last session was recorded and the teaching session was started. In the teaching sessions, Ege initially scored 25% but achieved 100% accuracy in the second through sixth sessions. Although Ege's performance level was 100% in five sessions in a row, in the two entire probe sessions held after the teaching session, the performance in the skill steps of describing people was recorded as 100%. Ege's correct response percentage in the first, second and third follow-up sessions was also measured as 100%. Although Ege demonstrated slower progress during baseline and probe phases, he reached 100% accuracy within a short teaching span and maintained this performance during all post-instruction sessions. This outcome highlights the efficiency of individualized instruction tailored to prerequisite skills.

Ozan responded correctly at the level of 25% in the skill level of describing people by responding correctly in the section of the skill steps, he only looks at the person he will describe. Considering Ozan's performance in three entire probe sessions held before the teaching session, it is listed as follows. In the first entire probe session held after the baseline level, 10% correct response percentage in the first two sessions and 25% in the next three sessions was determined. In the second entire probe phase, it performed 10% correctly in the first session and 25% in the four sessions. It showed the same performance as at the baseline level in the five sessions of the follow-up probe phase, which was held before the teaching session, and a 25% correct response percentage was recorded. Ozan in the teaching session, 10% in the first and second teaching sessions; 50% in third teaching session; 100% accurate performance level was measured in the fourth, fifth, sixth, seventh and eighth teaching session. It was noted that Ozan achieved 100% correct response percentage in a row in the last five sessions of the teaching. In a entire probe session held after the end of the teaching session, it was measured that Ozan's ability to describe people correctly performed the skill steps at the 100% level. It was determined that Ozan responded correctly at the level of 100% in the first follow-up session, 88% in the second follow-up session, and 100% in the third follow-up session. It was determined that Ozan maintained his ability to describe people in the follow-up sessions held 7, 14 and 21 days after the teaching sessions ended. Ozan's data illustrate a more gradual acquisition pattern compared to the other participants. His low and inconsistent baseline performance (10-25%) and slower progress in the early teaching sessions indicate that more instructional exposure was initially required. However, he reached 100% correct responses in the final five teaching sessions and maintained this accuracy throughout follow-up and generalization phases. This suggests that once the instructional content was internalized, Ozan was able to generalize and retain the skill effectively. His improvement exemplifies the adaptability of simultaneous prompting to different learning paces and profiles within the ASD population.

Generalization Findings

It was tested with the pre-test, post-test model whether the effect of simultaneous prompting instruction on different interpersonal and inter-environmental generalizations was realized in teaching the person description skill. Generalization data were collected after starting the teaching session and reaching the target criteria in the teaching session. Generalization sessions were planned with people whom the participants hardly knew. While Poyraz was chatting with his educator from the corridor of the school, an educator he barely knew came to the environment. Then, the researcher presented the target instruction (describe that person) to Poyraz for describing the person. It was noted that Poyraz performed 25% in the pre-test generalization session regarding his ability to describe people. In the post-test generalization session, it was noted that Poyraz was able to generalize his skills to different people and different environments at 100% performance level. While Alper was chatting with the researcher in the garden of the school, an educator he did not know well, came to the garden at the planned time. Then, the researcher presented the target instruction (describe that person) to Alper to describe the person. The pre-test generalization performance level of Alper's ability to describe people was determined as 25%. The performance in the post-test generalization session was measured as 100% and it was noted that the acquired skill was generalized to different people and different environments.

While Ege and the researcher were chatting with the educator in the garden of the school, an educator he knew little came close by the researcher and Ege. Afterwards, the researcher gave the target instruction (describe that person) to Ege to receive discription from Ege. While Ege's correct response percentage was 25% in the pre-test generalization session, his performance level in the post-test generalization session was measured as 100%. This situation reveals that Ege generalizes his describing skills to different people and different environments. While Ozan was chatting with his educator in the garden of the school, an educator he barely knew came to the environment. Then, the researcher presented the target instruction (describe that person) from Ozan to describe the person. Ozan's performance level in the pre-test generalization performance was recorded as 0%. The data obtained in the post-test generalization session was determined as 100% and it was noted that Ozan's ability to describe the people he gained generalized to different people and different environments. These findings indicate that the person description skill, once taught through structured prompting, can be effectively transferred to naturalistic settings. The ability to apply the skill outside the training environment suggests that the instruction was functionally meaningful and contextually relevant. As shown in Figure 2, each participant successfully generalized the acquired skill to different individuals and settings, confirming the instructional method's effectiveness beyond the original learning context. The generalization data of Poyraz, Alper, Ege and Ozan's ability to describe people are presented in Figure 2.

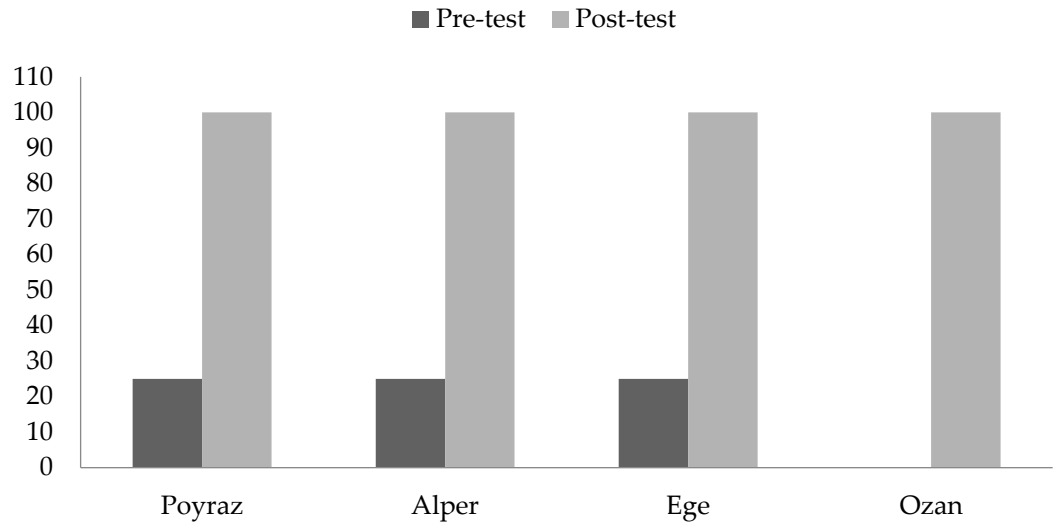

Figure 2. Percentage of Correct Response to Poyraz, Alper, Ege and Alper in the Generalization Sessions of Describing People

Social Validity Findings

In this research, social validity data were collected from families and teachers of the participants in order to get their opinions about the research. All of the teachers of the participants included in the study answered "Yes" to all questions in the social validity form. The teachers stated their positive opinions about the suitability of the students for teaching life, the applicability of the teaching method used, the support for safety skills, and the significance of the research findings, which was conducted with children with ASD. The parents of the participants in the study also answered "Yes" to all questions in the social validity form. Parents stated that this study, which was conducted with children with ASD, was positive about their children's suitable for their social life, supporting their safety skills for the risks they might experience in daily life, the applicability of the teaching method used, supporting safety skills, and the significance of the research findings. The positive evaluations from both teachers and families further reinforce the social importance of this intervention. Participants' ability to describe unfamiliar individuals is not only academically relevant but also a critical safety behavior with real-world implications, especially for children with ASD who are more vulnerable in public spaces.

Discussion and Conclusion

When the national literature is examined, no previous study has been found on the ability to describe people with children with ASD. This skill is one of the most important skills for children with ASD to ensure their own safety and protect themselves from abuse. These outcomes are especially significant when considering the real-world importance of enabling children with ASD to verbally describe potentially dangerous individuals. As emphasized in the introduction, this skill may help children report unsafe encounters, thus potentially preventing recurring risks. For this reason, the results of this study demonstrates the importance of acquiring these skills for children with ASD. In this context, the results of the research will make significant contributions to the national and international literature and will lead to further research on these issues.

Although there is no research on the skills of describing people, there is only one research conducted in Turkey within the scope of security skills with simultaneous prompting. In this study carried out by Tekin-İftar et al. (2003), the effectiveness of teaching with simultaneous prompting in teaching the ability to say the names of first aid tools, one of the safety skills, was examined. At the end of the research, they concluded that simultaneous prompting is effective in the ability to say the names of first aid materials. In addition, the results of this research are similar to the results of other studies conducted with the simultaneous prompt processing process (Akmanoglu & Batu, 2002; Akmanoglu & Tekin-Iftar, 2011; Altunel, 2007; Genc-Tosun & Kurt, 2017; Kanpolat, 2008; Karşıyakalı, 2011; Kılıç, 2019; Özer, 2018; Pennington, 2010; Ramirez et al., 2014; Williams et al., 2000).

The results of the research show that the children with ASD who participated in the study retained the ability to describe the person taught with the simultaneous prompting teaching method 7th, 14th and 21st days after the end of the teaching. The current findings directly address gaps highlighted in the literature regarding the insufficient focus on generalization and maintenance in safety skill interventions (Baruni & Miltenberger, 2022). By including structured follow-up and generalization sessions, this study demonstrates that person description skills can not only be acquired but also sustained and transferred to different people and settings when taught through systematic instruction. The follow-up findings of the study revealed that Poyraz, Alper, Ege and Ozan maintained their skills of describing people taught by simultaneous prompting teaching method at an average rate of 100%, 96%, 100%, and 96%, respectively, 7, 14 and 21 days after the end of the instruction. These results coincide with the findings of different studies conducted with the simultaneous prompting method of teaching children with special needs (Akmanoglu & Batu, 2002; Akmanoglu & Tekin-Iftar, 2011; Altunel, 2007; Genc-Tosun & Kurt, 2017; Kanpolat, 2008; Karşıyakalı, 2011; Kılıç, 2019; Özer, 2018; Pennington, 2010; Ramirez et al., 2014; Williams et al., 2000).

It is seen that after the end of the education, children with ASD can generalize their skills of describing the people gained by the simultaneous prompting teaching method to different environments and people. The data obtained in the generalization sessions show that Poyraz, Alper, Ege and Ozan were able to generalize their personal describing skills to 100%. When the literature is examined, there is no research that tests the generalization of the skills of describing people with the simultaneous prompting teaching method. Considering the generalization results of this study, it is similar to the generalization data results of studies conducted with simultaneous prompting teaching method (Akmanoglu & Tekin-Iftar, 2011; Collins et al., 1992; Gunby et al., 2010; Gunby & Rapp, 2014).

The findings revealed that the parents and teachers of the children with ASD who participated in the study had positive views on the importance of the aims of the research, the suitability of the method used in the research, the applicability of the method used in the research, and the functionality of the research findings. The opinions of all parents and teachers on whether the ability to describe people within the scope of safety skills is a priority skill is that it is a priority skill. This result is in line with the studies in the literature on the importance of teaching safety skills (Değirmenci, 2018; Saiano et al., 2015; Summers et al., 2011; Tekin-İftar et al., 2018; Wiseman et al., 2017).

The efficiency and consistency of participant learning outcomes further reinforce the value of simultaneous prompting as a structured, errorless teaching method. Its capacity to reduce confusion and facilitate quick acquisition of complex skills has been echoed in previous studies and is once again supported here through high follow-up retention. As a result, it is seen that the practice carried out with the simultaneous prompting method of gaining the skills of describing people to children with ASD is effective, permanent and generalizable. In order to determine this effectiveness, the graphs of the data collected systematically throughout the research were created and analyzed by visual analysis. As a result of these analyzes, it has been concluded that the simultaneous prompting method is effective in teaching person describing skills. In addition, in order to support the results obtained and to reveal the effect size, the effect size value of the intervention was calculated with the Tau-U calculation method, which is one of the techniques based on non-overlapping data. As a result of the Tau-U calculations, the application was found to be effective. In the study, it was also concluded that as a result of the social validity data collected from the teachers and parents of the children, the views on the effectiveness of teaching with simultaneous prompting, the applicability of teaching with simultaneous prompts and the importance of research in teaching the skills of describing people were positive. Another result that emerged from the answers of parents and teachers is that teaching the skills to describe people can inform their relatives in detail about the risk situations that may arise in daily life. From a practical standpoint, these findings highlight the potential of integrating structured person description instruction into individualized education plans (IEPs) for children with ASD. Future research may expand on these findings by exploring more diverse attributes, including emotional expressions or contextual details. In addition to its contributions, the study has two limitations. The first of these is that the research was carried out with four male students with ASD who received individual education in a special education school in Istanbul, and the second was that only the dependent variables of "gender, weight and height" were studied from person describing skills.

Suggestions

. In the light of the findings of the study, some suggestions can be made for both practice and future research. Suggestions for practice can be listed as follows: (a) using simultaneous prompting to parents of children with ASD and teachers working with children with ASD in teaching challenging skills such as describing people, (b) Teachers, administrators in all educational institutions interacting with children with ASD. In-service trainings can be organized to inform people about describing skills within the scope of security skills, (c) parent training programs for teaching safety and avoidance of abuse to parents with children with special needs, and vocational training programs for teaching security and protection from abuse skills to teachers with special needs students development programs can be arranged. Suggestions for future research can be listed as follows: (a) when we look at the literature, we could not find any research that aimed to teach the skills of describing people to children with ASD. Therefore, in order to generalize the findings obtained in the study, similar studies were repeated with different participants, (b) all stages of this study were carried out by the researcher. In further research, studies in which different practitioners (e.g., siblings, mothers, teachers, peers) teach teach skills within the scope of security skills. Further research can examine the effectiveness of other practices (e.g., basic response teaching, embedded teaching) in teaching these behaviors, (c) more research can be conducted on teaching safety and protection from abuse skills in children with ASD, (d) physical education, which is included in the skills of describing people, can be investigated. Applications in which characteristics are taught (eg, eye color, hair color and clothing attributes) can be performed.

References

Akmanoglu, N., & Tekin-Iftar, E. (2011). Teaching children with autism how to respond to the lures of strangers. *Autism, 15*(2), 205-222. https://doi.org/10.1177/1362361309352180

Akmanoğlu, N., & Batu, E. S. (2002, November). *Otistik bireylere adı söylenen rakamın gösterilmesi becerisinin öğretiminde eşzamanlı ipucuyla öğretimin etkililiği*. Paper presented at the 12. Ulusal Özel Eğitim Kongresi, Ankara.

Altunel, M. (2007). *Otistik özellik gösteren öğrencilere soru cevaplama becerilerinin öğretiminde küçük grup düzenlemesi ile sunulan eşzamanlı ipucuyla öğretimin etkililiği* (Thesis No. 205762) [Master's thesis, Anadolu University]. Council of Higher Education National Thesis Center.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-V)* (5th ed.). American Psychiatric Publishing. https://doi.org/10.1176/appi.books.9780890425596

Baruni, R. R., & Miltenberger, R. G. (2022). Teaching safety skills to children: A discussion of critical features and practice recommendations. *Behavior Analysis in Practice*, *15*(3), 938-950. https://doi.org/10.1007/s40617-021-00667-4

Bilmez, H., & Tekin-İftar, E. (2014). Veri toplama. In E. Tekin-İftar (Ed.), *Uygulamalı davranış analizi* (pp. 99-144). Vize Yayıncılık.

Bradshaw, J., Shic, F., & Chawarska, K. (2010). Brief report: Face-specific recognition deficits in young children with autism spectrum disorders. *Journal of Autism & Developmental Disorders, 41*(10), 1429-1435. https://doi.org/10.1007/s10803-010-1150-4

Celik, K., & Olcay, S. (2025). The effectiveness of cool versus not cool procedure in teaching chemical safety skills to Children With Autism Spectrum Disorder. *Behavioral Interventions*, *40*(2), e70011. https://doi.org/10.1002/bin.70011

Chawarska, K., & Shic, F. (2009). Looking but not seeing: Atypical visual face scanning and recognition of faces 2 and 4-year-old children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 39*(12), 1663-1672. https://doi.org/10.1007/s10803-009-0803-7

Collins, B. C., Schuster, J. W., & Nelson, C. M. (1992). Teaching a generalized response to the lures of strangers to adults with severe handicaps. *Exceptionality*, *3*(2), 67-80. https://doi.org/10.1080/09362839209524798

Değirmenci, H. D. (2018). *Koçluk içeren ve içermeyen web-tabanlı mesleki gelişim uygulamalarının otizmli öğrencilere çalışan öğretmenlerin öğretim becerilerini ve öğrencilerinin güvenlik becerilerini edinmeleri açısından karşılaştırılması* (Thesis No. 524169) [Doctoral dissertation, Anadolu University]. Council of Higher Education National Thesis Center.

Değirmenci, H. D., Olçay, S., Fidan, A., & İftar, E. T. (2022). Parental views and experiences on the ınstruction of safety skills to Children with ASD. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, Advance online publication. https://doi.org/10.21565/ozelegitimdergisi.1506345

Diken, İ. H., Aksoy, V., & Özdemir, O. (2018). *Otizm Spektrum Bozukluğu Kapsamlı Değerlendirme Seti (IVO-ODS).* Maya Akademi.

Diken, İ. H., Ardıç, A., & Diken, O. (2011). *Gilliam Otistik Bozukluk Derecelendirme Ölçeği-2-Türkçe Versiyonu (GOBDÖ-2-TV).* I'm Ar-Ge Eğitim-Danışmanlık.

Ergenekon, Y., & Çolak, A. (2019). Bağımsız yaşama güvenli bir adım: Gelişimsel yetersizliği olan bireyler için güvenlik becerileri. *Kalem Eğitim ve İnsan Bilimleri Dergisi, 9*(1), 295-320. https://doi.org/10.23863/kalem.2019.128

Gast, D. L. (2009). *Single subject research methodology in behavioral sciences.* Routledge.

Genc-Tosun, D., & Kurt, O. (2017). Effects of video modeling on the instructional efficiency of simultaneous prompting among preschoolers with autism spectrum disorder. *Education and Training in Autism and Developmental Disabilities, 52*(3), 291-304. https://www.jstor.org/stable/26420401

Gunby, K. V., & Rapp, J. T. (2014). The use of behavioral skills training and in situ feedback to protect children with autism from abduction lures. *Journal of Applied Behavior Analysis, 47*(4), 856-860. https://doi.org/10.1002/jaba.173

Gunby, K. V., Carr, J. E., & Leblanc, L. A. (2010). Teaching abduction-prevention skills to children with autism. *Journal of Applied Behavior Analysis, 43*(1), 107-112. https://doi.org/10.1901/jaba.2010.43-107

Jang, J., Mehta, A., & Dixon, D. R. (2016). Safety skills. In *Handbook of evidence-based practices in intellectual and developmental disabilities* (pp. 923-941). Springer. https://doi.org/10.1007/978-3-319-26583-4_36

Johnson, B. M., Miltenberger, R. G., Egemo-Helm, K., Jostad, C. M., Flessner, C., & Gatheridge, B. (2005). Evaluation of behavior skills training for teaching abduction-prevention skills to young children. *Journal of Applied Behavior Analysis, 38*(1), 67-78. https://doi.org/10.1901/jaba.2005.26-04

Kanpolat, E. (2008). *Otistik bireylere adı söylenen giysiyi gösterme becerisinin öğretiminde bilgisayar aracılığıyla sunulan eşzamanlı ipucuyla öğretimin etkililiği* (Thesis No. 215668) [Master's thesis, Abant İzzet Baysal University]. Council of Higher Education National Thesis Center.

Karşıyakalı, D. M. (2011). *Otistik bir öğrenciye adı söylenen çalgıyı gösterebilme öğretiminde eşzamanlı ipucuyla öğretimin etkililiği* (Thesis No. 298565) [Master's thesis, Marmara University]. Council of Higher Education National Thesis Center.

Kılıç, Y. (2019). *Orff yaklaşımı ile hazırlanan müzik etkinliklerinin otizm spektrum bozukluğu olan öğrencilere öğretiminde eş zamanlı ipucuyla öğretimin etkililiği* (Thesis No. 560445) [Master's thesis, Marmara University]. Council of Higher Education National Thesis Center.

Kutlu, M. (2016). *Otizmli bireylere yabancı kişilerden korunma becerilerinin öğretiminde sosyal öykülerin yalnız sunumuyla video modelle birlikte sunulmasının karşılaştırılması* (Thesis No. 432438) [Doctoral dissertation, Anadolu University]. Council of Higher Education National Thesis Center.

Miltenberger, R. G. (2008). Teaching safety skills to children: Prevention of firearm injury as an exemplar of best practice in assessment, training, and generalization of safety skills. *Behavior Analysis in Practice, 1*, 30-36. https://doi.org/10.1007/BF03391718

Miltenberger, R. G., Sanchez, S., & Valbuena, D. (2020). Pediatric prevention: Teaching safety skills. *Pediatric Clinics of North America, 67*(3), 573-584. https://doi.org/10.1016/j.pcl.2020.02.011

Ministry of National Education. (2009). *İlköğretim Türkçe dersi öğretim programı ve kılavuzu (1-5. sınıflar)*. Milli Eğitim Basımevi.

Morosohk, E., & Miltenberger, R. (2022). Using generalization-enhanced behavioral skills training to teach poison safety skills to children with autism. *Journal of Autism and Developmental Disorders*, *52*(1), 283-290. https://doi.org/10.1007/s10803-021-04938-5

Özer, E., & Özdemir, S. (2015). Otizm spektrum bozukluğu olan çocuklarda yüz işleme ve göz izleme becerileri. *International Journal of Early Childhood Special Education*, *7*(1), 1-23. https://dergipark.org.tr/tr/download/article-file/91579

Özer, O. (2018). *Erken çocuklukta otizmli bireylere acil telefon numaralarını söyleyebilme becerisinin kazandırılmasında eşzamanlı ipucuyla öğretimin etkililiği* (Thesis No. 523727) [Master's thesis, Bahçeşehir University]. Council of Higher Education National Thesis Center.

Parker, R. I., Vannest, K. J., Davis, J. L., & Sauber, S. B. (2011). Combining nonoverlap and trend for single-case research: Tau-U. *Behavior Therapy, 42*(2), 284-299. https://doi.org/10.1016/j.beth.2010.08.006

Pennington, R. C. (2010). *Using simultaneous prompting and computer-assisted instruction to teach narrative writing skills to students with autism spectrum disorders.* University of Kentucky.

Ramirez, H., Cengher, M., & Fienup, D. M. (2014). The effects of simultaneous prompting on the acquisition of calculating elapsed time in children with autism. *Journal of Developmental and Physical Disabilities, 26*(6), 763-774. https://doi.org/10.1007/s10882-014-9394-0

Rispoli, M., Lang, R., Neely, L., Camargo, S., Hutchins, N., Davenport, K., & Goodwyn, F. (2013). A comparison of within-and across-activity choices for reducing challenging behavior in children with autism spectrum disorders. *Journal of Behavioral Education, 22,* 66-83. https://doi.org/10.1007/s10864-012-9164-y

Saiano, M., Pellegrino, L., Casadio, M., Summa, S., Garbarino, E., Rossi, V., Dall'Agata, D., & Sanguineti, V. (2015). Natural interfaces and virtual environments for the acquisition of street crossing and path following skills in adults with Autism spectrum disorders: A feasibility study. *Journal of Neuroengineering and Rehabilitation*, *12*(17), 1-13. https://doi.org/10.1186/s12984-015-0010-z

Scheuermann, B., & Webber, J. (2002). *Autism: Teaching does make a difference.* Wadsworth Thomson Learning.

Schultz, R. T. (2005). Developmental deficits in social perception in autism: The role of the amygdala and fusiform face area. *International Journal of Developmental Neuroscience, 23*(2), 125-141. https://doi.org/10.1016/j.ijdevneu.2004.12.012

Sirin, N., & Tekin-Iftar, E. (2016). Opinions of Turkish parents and teachers about safety skills instruction to children with autism spectrum disorders: A preliminary investigation. *Journal of Autism and Developmental Disorders, 46*, 2653-2665. https://doi.org/10.1007/s10803-016-2809-2

Summers, J., Tarbox, J., Findel-Pyles, R. S., Wilke, A. E., Bergstrom, R., & Williams, W. L. (2011). Teaching two household safety skills to children with autism. *Research in Autism Spectrum Disorders, 5*(1), 629-632. https://doi.org/10.1016/j.rasd.2010.07.008

Tekin-İftar, E. (2018). Çoklu yoklama modelleri. In E. Tekin-İftar (Eds.), *Eğitim ve davranış bilimlerinde tek-denekli araştırmalar* (pp. 220-231). Anı Yayıncılık.

Tekin-İftar, E., & Kırcaali-İftar, G. (2006). *Özel eğitimde yanlışsız öğretim yöntemleri*. Nobel Yayın Dağıtım.

Tekin-İftar, E., Acar, G., & Kurt, O. (2003). The effects of simultaneous prompting on teaching expressive identification of objects: An instructive feedback study. *International Journal of Disability, Development and Education*, *50*(2), 149-167. https://doi.org/10.1080/1034912032000089657

Tekin-İftar, E., Olcay-Gül, S. Sirin, N., Bilmez, H., & Değirmenci, H. D. (2018). *Otizm spektrum bozukluğu olan bireylere güvenlik becerilerinin öğretimi çalışmalarının kapsamlı değerlendirilmesi ve meta analizi.* Anadolu Üniversitesi Bilimsel Araştırma Projeleri [Anadolu University Scientific Research Projects].

Williams, G., Donley, C. R., & Keller, J. W. (2000). Teaching children with autism to ask questions about hidden objects. *Journal of Applied Behavior Analysis, 33*(4), 627-630. https://doi.org/10.1901/jaba.2000.33-627

Wiseman, K. V., McArdell, L. E., Bottini, S. B., & Gillis, J. M. (2017). A meta-analysis of safety skill interventions for children, adolescents, and young adults with Autism spectrum disorder. *Review Journal of Autism and Developmental Disorders*, *4*(1), 39-49. https://doi.org/10.1007/s40489-016-0096-7