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From Fairy Tales to Real-Life Safety: An Educational Drama-Based Intervention for Children's Self-Protection Skills

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Abstract

This study evaluates an educational drama-based intervention that improves children's safety awareness and self-protection skills, using classic fairy tales as the basis for experiential learning activities. Each selected tale (*Little Red Riding Hood, Hansel and Gretel, and Snow White*) featured a protagonist who became entangled in a dangerous situation due to poor self-protection choices, allowing children to analyze risks and explore safer alternatives through dramatic play and role reversal. The study included 79 third-grade students from a school in Northern Greece, divided

into an intervention group (N=40) and a control group (N=39). Children's safety knowledge was assessed using questionnaires, while realistic social experiments measured their actual behavioral responses before and after the intervention. Additionally, the qualitative analysis examined children's perceptions of a "bad" or dangerous person through their written descriptions. Results showed significant improvements in the intervention group, both in their theoretical knowledge and real-life application of self-protection skills. Initially, nearly 90% of children in both groups followed a stranger offering a tempting reward. However, after the intervention, the majority of children in the experimental group resisted deceptive lures, and this effect was sustained in a three-year follow-up assessment. Furthermore, children's conceptualizations of danger evolved, shifting from a reliance on external appearance to an awareness that threats can come from individuals who appear friendly and trustworthy. These findings underscore the long-term impact of experiential learning in self-protection education. Through engaging, interactive experiences, children gained practical self-protection skills with lasting impact, highlighting the effectiveness of experiential learning in early safety education.

Introduction

Children face numerous threats, including stranger luring and social manipulation, which can lead to abduction or exploitation (Miltenberger et al., 2015). According to AMBER Alert Europe, approximately 300,000 children go missing annually—one every two minutes (Missing Children Europe, 2020). While stranger abductions are statistically rare, research highlights a critical vulnerability: 75%–90% of young children willingly follow a stranger when lured with an enticing offer, such as a toy or candy (Goldfarb et al., 2008; Li et al., 2020; Sanchez & Miltenberger, 2015). A recent study conducted in Greece reported similarly alarming findings (Dampa & Giagazoglou, 2023), emphasizing the urgent need for structured self-protection education to help children recognize potential dangers, avoid risky situations, and promptly inform a trusted adult.

Despite the severity of this issue, most prevention programs rely on theoretical instruction, such as videos, discussions, or questionnaires, rather than real-life application (Miltenberger et al., 2009). However, studies indicate a critical gap: verbal knowledge does not always translate into action (Baruni & Miltenberger, 2022; Carroll-Rowan & Miltenberger, 1994; Dampa & Giagazoglou, 2023). Many children confidently state they would not follow a stranger, yet behave differently in real-life situations. This discrepancy underscores the necessity of experiential learning, an approach where children actively practice self-protection behaviors in realistic conditions.

A key psychological factor affecting children's susceptibility to luring is trust. Research indicates that a child's willingness to follow an unfamiliar adult is not always the result of pressure but rather their instinctive trust in others. Children tend to perceive physically attractive, well-dressed, and polite individuals as “good”, while scruffy, threatening, or unusual-looking individuals are more likely to be seen as “bad”. This bias in trust influences their ability to assess potential dangers accurately. Additionally, children often fail to recognize that threats can come from familiar adults, such as family friends, neighbors, or acquaintances (Zakharchenko et al., 2015). Balancing caution with a healthy level of trust is essential to ensuring that children can distinguish safe from unsafe situations without developing excessive fear.

Many prevention programs focus exclusively on sexual abuse prevention (Che Yusof et al., 2022; Czerwinski et al., 2018; Tunc & Yavas, 2022) and rely on passive instruction methods (Beck & Miltenberger, 2009). While these interventions improve children's theoretical knowledge, they rarely provide opportunities to practice self-protection behaviors in realistic scenarios (Johnson et al., 2005, 2006; Miltenberger et al., 2005). Recent studies emphasize that active participation and experiential learning play a critical role in promoting the generalization and long-term retention of safety skills (Baruni & Miltenberger, 2022; Giannakakos et al., 2020).

In this context, educational drama techniques have demonstrated to be a promising tool. Research shows that they promote deeper engagement, critical thinking, and social problem-solving skills, helping children internalize safety behaviors more effectively than passive learning methods (Giotaki & Lenakakis, 2016; Hui, 2024; Tunc & Yavas, 2022). Additionally, storytelling has been shown to be an effective primary prevention strategy, increasing awareness, empathy, and problem-solving abilities in young children (Beaudoin et al., 2016; Moreno-Manso et al., 2014; Pulimeno et al., 2020). To support our pedagogical approach, we relied on drama-based experiential learning methods, such as role-play, storytelling, and perspective-taking. Research has shown that these methods help children practice and internalize new skills more effectively, whether they relate to social interaction, empathy, or safety. In our program, the dramatic tension found in fairy-tale conflicts was used as a starting point to discuss choices, risks, and consequences. In this way, symbolic play was transformed into meaningful practice for real-life decision making.

Unlike previous interventions, which typically lasted only 3–4 weeks (Miltenberger et al., 2005), the current study implements a 14-week program, allowing children to repeatedly practice self-protection skills over time. According to the Theory of Planned Behavior, when behaviors are practiced frequently, they become habitual and serve as predictors of future positive actions (Ajzen, 1985). This long-term approach, combined with engaging, child-

centered learning strategies, may significantly enhance the retention and application of safety skills.

The present study adopts an innovative approach by integrating educational drama techniques with classic fairy tales. Unlike traditional programs that rely solely on instruction, this intervention actively engages children in drama techniques, scenario-based learning, and interactive play activities. Fairy tales serve as a starting point rather than the main teaching tool, using their conflicts to introduce drama-based problem-solving activities. Through these activities, children examine the choices of the characters, consider different outcomes, and actively practice safety skills in realistic role-play scenarios.

The study is among the first internationally to combine a long-term intervention with both realistic social experiments and questionnaires, evaluating not just theoretical knowledge but actual behavioral responses before and after the intervention. Previous research has demonstrated that while children can accurately describe what they should do in self-protection scenarios, they often fail to translate that knowledge into action when faced with real-life dangers (Dampa & Giagazoglou, 2023; Goldfarb et al., 2008). Therefore, evaluating children's real-time decisions in a controlled yet realistic environment is essential for understanding the effectiveness of prevention programs.

While previous research has shown that school-based interventions can improve children's safety skills, there is still a need for a more engaging and comprehensive approach to cover the full range of potential risks. This study evaluates an intervention program that incorporates educational drama techniques, specifically designed to help young elementary students develop essential safety skills, recognize potential dangers, and respond effectively. Unlike traditional programs focused on theoretical instruction, this study integrates realistic social experiments with experiential learning, allowing children to practice and apply safety behaviors in real-life situations.

By extending the focus beyond sexual abuse prevention to a broader range of potential dangers, this study seeks to bridge the gap between theoretical knowledge and real-world application, ultimately contributing to the development of more resilient, safety-aware children. Based on these considerations, the present study tested the hypothesis that children who participated in the drama-based intervention would demonstrate greater improvements in their safety knowledge, as measured by the What-If Situations Test (WIST) total and subscales, compared to the control group. It was further expected that the intervention group would show higher rates of refusal, avoidance, and disclosure in Observed Protective Behaviors Test (OPBT)-based in vivo lures. We also hypothesized that these gains would be maintained at the three-year follow-up assessment. Finally, we expected that children's

judgment would change, so that they would rely less on appearance and more on actual behavior when deciding if someone could be a threat.

Methodology

Participants

The study involved 79 third-grade primary school students from a school in a city in Northern Greece. The school was selected using convenience sampling, as the nature of the social experiment required access to a school where the principal and third-grade teachers were willing to participate. Additionally, parental consent was crucial, as the study involved direct assessments of children's behavioral responses in real-life simulations. Class 1 (N = 40) served as the intervention group, while Class 2 (N = 39) acted as the control group. The intervention group followed a structured program that utilized classic fairy tales as a starting point for engaging educational drama techniques, guiding students through scenario-based learning and interactive role-playing for 14 weeks (three sessions per week), while the control group continued with the school's regular curriculum. Written parental or guardian consent was obtained for all participants. To ensure anonymity and data protection, each student was assigned a unique participant code, with names known only to the researcher for research purposes.

Evaluation Procedure

Once participants were selected based on the willingness of their teachers and parents, the evaluation process commenced. A preliminary meeting was held with the parents to provide detailed information about the evaluation procedures and intervention plan. Additionally, parents completed a short questionnaire regarding whether they had previously discussed potential dangers posed by strangers with their children. Following this, an observational test was conducted through a realistic social experiment, designed to evaluate children's willingness to follow an unfamiliar young woman attempting to entice them. The next day (or the same day in a separate room), each child participated in an individual interview using structured questionnaires. All assessments were conducted both before and immediately after the intervention.

Measurement Tools

Each participant was assessed individually during school hours. The researcher administered the questionnaire in an interview format, with each session lasting approximately 10 minutes per child. The following measurement tools were used:

Realistic Test Based on the Observed Protective Behaviors Test

The Observed Protective Behaviors Test (OPBT; White et al., 2015) is a two-part, in vivo behavioral assessment designed to evaluate children's ability to apply self-protection knowledge and skills. The test captures three key dimensions of safety response: motor reaction to a lure, verbal response, and disclosure of the incident.

For this study, a realistic test was designed under conditions similar to those used in previous research. Two types of lures were incorporated:

> **Incentive lure**: e.g., *"Come see something interesting in my car."* "*Take this candy*," or "*I have a toy for you*."
>
> **Assistance request lure:** e.g., *"Help me find my keys."* or "*Can you help me carry these heavy bags*?"

The primary goal of the test was to measure the child's ability to demonstrate appropriate self-protection skills (*recognize, avoid, inform*). Conducted as a social experiment prior to the personal interviews, the test evaluated whether the child would follow an unfamiliar young woman using an enticing incentive.

Each student was tested individually during school hours. Initially, the child accompanied their teacher to the schoolyard, unaware that an assessment was taking place. The teacher then excused herself, instructing the child to remain in place. Once alone, a young woman unknown to the students approached, requesting help in finding her car keys. As a reward, she offered the child candy and invited them to accompany her to her car, where she promised to show them a puppy. If the child appeared willing to follow her, she quickly provided an excuse to send them back, asking them to keep their meeting a secret. This step aimed to assess whether the child would later disclose the encounter to their teacher.

After the intervention program, a second, similar test was conducted with a different scenario. This time, the unfamiliar woman posed as a mother carrying bags full of treats for her son's birthday. As soon as a child approached, she pretended to drop the bags and asked for help. She then encouraged the child to walk with her to the car, where she claimed to have a cake inside. The goal of this scenario was to measure whether children would resist a seemingly harmless request.

To evaluate the long-term retention of self-protection skills, the social experiment was repeated three years later, just before the children transitioned to middle school. In this follow-up assessment, a modified scenario was used. The teacher instructed the child to

retrieve a folder from her car, which was parked just outside the schoolyard in an area where parking was restricted to school staff. At this location, a young woman wearing a promotional T-shirt from a well-known telephone company awaited. She claimed that by drawing a lottery ticket, the child could win an iPhone, tablet, or electric scooter, reassuring them that every ticket was a winner. However, to collect their prize, the child had to follow her to her car, which was parked a few meters away. This assessment examined whether the intervention's positive effects were maintained over time. Importantly, throughout all three assessments—the pre-test, post-test, and three-year follow-up—at least one familiar person was present in the schoolyard, ensuring that children could seek help if they felt unsafe or uncomfortable.

What-If Situations Test

The What-If Situations Test (WIST) (Wurtele et al., 1998) assesses children's responses to hypothetical dangerous situations. It is a structured interview tool that measures their ability to recognize, avoid, and inform about threats. The test includes three scenarios, each with different response categories:

1. **WIST SAY** – Verbal refusal to comply with an inappropriate request (scored 0 to 3)
2. **WIST DO** – A behavioral response, such as leaving the dangerous situation (scored 0 to 3)
3. **WIST TELL** – Reporting the incident to a trusted adult (scored 0 to 4)

In general, the maximum scores of the three subscales "SAY", "DO", "TELL" were 3, 3, and 4, respectively, and the range of total skills score was from 0 to 10. Scores were evaluated as in a previous study: 0 corresponded to an extremely low level of knowledge, 1 to 5 to knowledge below average, 6 to 9 to knowledge above average, and 10 corresponded to an excellent level of knowledge (Yu et al., 2017). The WIST has demonstrated strong reliability (0.7–0.79) and internal consistency (0.8–0.89) (Jin et al., 2016; Yu et al., 2017), making it a robust tool for evaluating children's safety knowledge and decision-making. The combination of questionnaire-based assessments and realistic social experiments in this study represents an essential methodological advancement in child safety research. Unlike previous interventions that relied solely on self-reported knowledge, this study directly measured children's actual behavioral responses, providing valuable insight into the real-world effectiveness of educational drama-based safety training.

Intervention Program

Educational drama techniques were selected as key components of this intervention program. Using some of the most beloved classic fairy tales (Little Red Riding Hood, Hansel and Gretel, Snow White), students engaged in interactive activities designed to enhance cognitive processing, oral expression, and exploratory dramatization. The chosen fairy tales shared a

common theme: the protagonists encountered dangerous situations due to poor self-protection responses, resulting in negative, potentially life-threatening consequences. By engaging in dramatized reenactments of these key moments, children actively explored safer alternatives and developed essential self-protection skills.

Initial Engagement Activity: Understanding "Good" and "Bad" Characters

At the beginning of the program, during the researcher's first meeting with the children, they were asked to draw and describe a "good" and a "bad" character. These characters could take any form—human, animal, mythical creature, male, or female—allowing children to use their imagination freely. To guide their thinking, they were provided with two prompting questions regarding the character's appearance and actions. Following this, they completed the sentence: "They are bad because…". This activity served as a preliminary exploration of children's perceptions of safety, trust, and potential dangers.

Implementation of the Intervention

Each fairy tale was introduced by emphasizing a critical moment where the protagonist made a risky decision. For instance, in *Little Red Riding Hood*, the focus was placed on the moment she shared personal information with the wolf. Instead of reading the full story, the intervention centered on dramatizing these key moments through educational drama techniques. Children assumed the roles of different characters, reenacting the crucial scene to experience it firsthand. Following the dramatization, they were encouraged to rewrite the sequence of events by altering the protagonist's response. They collaboratively created an alternative version of the story, in which the protagonist made safer choices leading to a positive outcome. This revised version was then performed using theatrical techniques, reinforcing the impact of different decisions. By stepping into the roles of the characters and exploring alternative behaviors, students developed a deeper understanding of self-protection strategies. To further immerse the children in the learning experience, additional drama techniques were applied, such as perspective-taking activities where they analyzed the thoughts, emotions, and motivations of both the protagonist and antagonist (e.g., Little Red Riding Hood vs. the Wolf). These exercises encouraged children to critically evaluate different choices, enhancing their decision-making and problem-solving abilities.

Hansel and Gretel: A Drama-Based Learning Experience

The intervention program incorporated various educational drama techniques and written reflection activities to immerse children in self-protection concepts. Below is an example of how these techniques were applied using the fairy tale *Hansel and Gretel*.

Exploratory Dramatic Play: The Candy House

The session began with children imagining and describing their ideal candy house. They were encouraged to visualize and articulate the details of their dream house made of sweets. After

this creative exercise, the educator directed their attention to the story's moment when Hansel and Gretel, lost and exhausted, encountered the candy (gingerbread) house. The focus was on how hunger and fatigue influenced their decisions. To deepen the children's understanding of temptation and self-control, a *thought-tracking exercise* was introduced. They were placed in the role of Hansel and Gretel, experiencing the strong desire to eat something they desired while having to resist it. The teacher guided them with reflective questions:*"Are you very tired? Are you hungry?", "Do you like sweets? What is your favorite one?", "Would you like to have a treat like… (naming the child's favorite sweet) right now?","Look at how delicious it is! Would you like to eat it?"* The goal was to help children empathize with the characters and recognize how difficult it can be to resist something tempting, even in an unfamiliar or potentially unsafe situation.

Educational Drama Technique: "The Voice of Conscience"

All children took on the role of Hansel or Gretel. The moment when the siblings, weak and starving, saw the candy (gingerbread) house was "frozen" in place. The educator instructed them to physically express exhaustion as they walked through the imaginary forest. As soon as they "saw" the candy house, their expressions were frozen at the moment of discovery. The teacher then selected a child, "unfroze" them, and led them to interact with the house, beginning to eat its sweets. At this point, the children reflected on their decision, why they chose to eat the sweets despite the unknown dangers. The next stage involved the educator stepping into the role of the old woman who invited the children inside: *"You look so tired. Come into my house to eat and rest."* Stepping out of character, the educator then asked the children thought-tracking questions to assess their reasoning: *"You are truly exhausted. You desperately need food and rest. Will you follow the old woman?", "She seems very kind, doesn't she?", "Besides, she is so old and weak—surely she couldn't harm you!", "You are much faster than her. If she tried to hurt you, would you be able to escape?"* Each child was encouraged to express their decision, debating whether or not they should trust the old woman and enter her house.

Educational Drama Technique: "Hot Seating"

Following this, the *Hot Seating* technique was used with the old woman as the central character. This technique allowed participants, whether in or out of role, to ask questions to better understand the character's background, motivations, and hidden intentions. The tone of questioning influenced the atmosphere. Children were encouraged to interrogate the old woman from different perspectives, such as an investigator, journalist, or psychologist. This technique was particularly effective with the educator assuming the role of the old woman, helping young children engage more deeply in the process.

Educational Drama Technique: "Character Outline"
At the final stage, children created a *character outline* of Hansel and Gretel. Inside the outline, they wrote what they believed the character would express if they had the chance to talk about their experience. Outside the outline, they wrote their own advice and guidance to the character, offering suggestions on how to avoid danger or make safer choices. This activity encouraged students to think critically about decision-making and risk assessment.

Reflections Through Writing
To further reinforce learning, children engaged in creative writing activities related to the dramatic experiences they had participated in. Writing became a natural extension of their engagement with the story, helping them solidify the self-protection concepts explored through drama. Examples of written tasks included:

- Writing an *Amber Alert-style* missing person announcement for Hansel and Gretel.
- Creating a *newspaper article* about Little Red Riding Hood's encounter with the wolf.
- Conducting a *fictional interview* with the hunter who saved Little Red Riding Hood.
- Composing an *alternative ending* to one of the fairy tales, where the protagonist made a safer decision.
- Drafting a *persuasive letter* to Snow White, advising her against trusting strangers, no matter how kind they seemed.

By integrating educational drama techniques with reflective writing, the intervention provided a dynamic and immersive learning experience. Through role-playing, discussion, and storytelling, children internalized self-protection strategies in a meaningful and lasting way. The intervention was implemented by the first two authors, who followed a structured session plan to ensure consistency throughout the program.

Results

Mauchly's Test of Sphericity (Mauchly, 1940) for the questions and tests ("candy" and "car"), using repeated- measures ANOVA to compare the two groups, indicated a violation of the sphericity assumption. Consequently, the non-parametric Kruskal-Wallis H test was applied. For comparisons between time points within each group, the non-parametric Related-Samples Friedman's Two-Way Analysis of Variance by Ranks was used.

In addition to the quantitative findings, a qualitative analysis was conducted to gain a deeper understanding of children's perceptions of potential threats and their cognitive processing of self-protection strategies. Specifically, the open-ended question "How do you imagine a person who might want to harm you?" was analyzed using thematic analysis (Braun & Clarke, 2006). This approach allowed for an in-depth exploration of recurring patterns and emerging

themes across the children's written and visual responses. The data were coded to identify distinct themes regarding children's conceptualizations of "good" and "bad" characters, including general characteristics, physical appearance, and behavioral attributes. This analysis was complemented by triangulation, integrating both quantitative and qualitative methodologies to enhance the reliability and validity of the findings (Creswell, 2011). The qualitative data provided insights into the underlying thought processes behind children's behavioral responses in the realistic test, offering a more holistic perspective on the intervention's impact.

First Scenario: Accepting the Lure as a Reward

Before the intervention, both groups demonstrated similar theoretical knowledge regarding the risk of accepting a reward from an unfamiliar person, with 75%–80% of children scoring in the highest category ($H = .58$, $df = 1$, $p = .45$). However, after the intervention, the experimental group showed a significant improvement ($H = 6.57$, $df = 1$, $p = .010$), achieving higher scores than the control group. All children in the intervention group demonstrated excellent knowledge, while 85% of the control group reached the same level (Table 1).

Second Scenario: Following a Stranger into a Car

Similarly, in the second scenario—assessing whether children would follow a stranger into a car—the intervention group exhibited significantly higher scores after the intervention ($H = 8.99$, $df = 1$, $p = .003$), indicating a stronger ability to resist potentially dangerous situations (Table 1).

Table 1

Children's level of knowledge about the two scenarios

	Children's knowledge	**1st Scenario Accepted the Lure**		**2nd Scenario Followed to the Car**	
		Pre	Post	Pre	Post
Intervention Group (N=40)	Extremely low	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Below average	8 (20%)	0 (0%)	1 (2.5%)	0 (0%)
	Above average	2 (5%)	0 (0%)	0 (0%)	0 (0%)
	Excellent	30 (75%)	40 (100%)	39 (97.5%)	40 (100%)
Control Group (N=39)	Extremely low	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	Below average	2 (5.1%)	2 (5.1%)	4 (10.3%)	4 (10.3%)
	Above average	6 (15.4%)	4 (10.3%)	4 (10.3%)	4 (10.3%)
	Excellent	31 (79.5%)	33 (84.6%)	31 (79.5%)	31 (79.5%)

Children's Behavioral Response in Realistic Test: The Candy Lure

In the "candy" test, no significant differences were found between groups prior to the intervention ($H = .00$, $df = 1$, $p = 1.00$). However, three months later, the intervention group

showed a statistically significant improvement ($H = 46.52$, $df = 1$, $p < .001$), as a greater number of children refused the lure compared to the control group. The follow-up assessment after three years revealed that these results were maintained over time ($H = 23.61$, $df = 1$, $p < .001$). While the intervention group sustained a high level of resistance, the control group also showed a statistically significant improvement between the second and third measurements ($p = .007$), likely due to natural maturation effects (Table 2).

Table 2

Percentages of children according to their reactions to the realistic test (candy lure)

Candy	Pre	Post 3 Months Later	Follow- up 3 Years Later
		Intervention Group (N = 40)	
Yes	40 (100%)	4 (10%)	1 (2.5%)
No	0 (0%)	36 (90%)	39 (97.5%)
		Control Group (N = 39)	
Yes	39 (100%)	34 (87.2%)	35 (89.7%)
No	0 (0%)	5 (12.8%)	4 (10.3%)

Children's Behavioral Response in Realistic Test: The Car Lure

In the "car" test, the pre-intervention assessment revealed no significant differences between groups ($H = .129$, $df = 1$, $p = .720$). However, after three months, the intervention group demonstrated a significant improvement ($H = 59.83$, $df = 1$, $p < .001$), which persisted in the follow-up assessment three years later ($H = 23.61$, $df = 1$, $p < .001$). Notably, while the control group showed a delayed but significant improvement over time ($p = .004$), the intervention group consistently demonstrated greater resistance to this lure (Table 3).

Table 3

Percentages of children according to their reactions to the realistic test (car lure)

Car	Pre	Post 3 Months Later	Follow- up 3 Years Later
		Intervention Group (N = 40)	
Yes	36 (90%)	1 (2.5%)	0 (0%)
No	4 (10%)	39 (97.5%)	40 (100%)
		Control Group (N = 39)	
Yes	36 (92.3%)	35 (89.7%)	18 (46.2%)
No	3 (7.7%)	4 (10.3%)	21 (53.8%)

Qualitative Analysis: Changes in Children's Perception of "Bad" and "Good" Characters

The qualitative findings revealed a notable shift in children's conceptualization of "bad" characters following the intervention. Prior to the program, children described bad characters as visibly threatening—typically male, unattractive, and wearing dark or tattered clothing. Their responses indicated a strong reliance on external appearance as an indicator of danger. Post-intervention, children displayed a more nuanced understanding, recognizing that threats can come from individuals who appear kind, well-dressed, and even friendly.

Table 4

Themes and Codes Associated with the Image of the "Bad or Good Characters"

Themes	Sub-themes	Codes
General Characteristics	Sex	Male/ Female
	Age	Young/Old
Physical Appearance	Body Features	Tall/short Overweight/Thin
	Face Features	Facial Scars
Clothing & External Appearance		Black Clothes
		White Clothes
		Torn-Dirty Clothes
		Elegant Clothes
		Tattoo and Piercings

Pre-Intervention Perceptions: The "Bad Character"

Before the intervention, children's written descriptions revealed that the "bad character" was predominantly depicted as a man with specific physical traits and behaviors.

"He is a man, ugly, tough, and a thief. He has earrings, his face looks terrible, and he is bad because he eats people."

"The bad guy is very scary. He has a round nose and a painted red face. He waits for children, kidnaps them, and kills them."

Post-Intervention Perceptions: A Shift in Understanding

After the intervention, children's responses changed significantly—not only in their attitudes toward potential threats but also in the depth and complexity of their descriptions.

"She is a mermaid—very beautiful and sweet. She speaks kindly, dresses nicely, but inside she

is evil and kidnaps children."

"Yesterday, I saw a beautiful fairy. She had a sparkling green dress. She told me to go with her. But then I got scared because my mom doesn't allow me to leave with a stranger—even if it's a fairy."

These responses suggest that the intervention effectively reshaped children's understanding of potential dangers, moving beyond stereotypical assumptions to a more realistic awareness of deceptive threats.

Discussion

The present study aimed to strengthen students' self-protection skills by equipping them with the ability to recognize potential dangers, avoid risky situations, and inform a trusted adult. This was achieved through an experiential learning program that combined classic fairy tales with educational drama techniques, creating an engaging and interactive approach to safety education. To our knowledge, this is the first study to combine a long-term intervention with the simultaneous use of questionnaires and realistic testing both before and after the intervention. This is particularly significant, as previous research has shown that while children may know the correct answers in theory, they often fail to apply this knowledge when faced with real-world danger (Dampa & Giagazoglou, 2023; Miltenberger et al., 2009).

Furthermore, this intervention is among the few internationally that have been conducted over such an extended period and relied exclusively on experiential methods, ensuring that children were at the center of the learning process. Unlike traditional programs primarily focusing on sexual abuse prevention (Che Yusof et al., 2022; Czerwinski et al., 2018; Tunc & Yavas, 2022), our intervention expanded its focus beyond a singular threat, aiming to help children recognize and respond to various potential dangers. By emphasizing the ability to assess and avoid risky situations, the program equipped students with self-protection strategies applicable to different scenarios, addressing a critical gap in prevention education.

The realistic testing before and after the intervention provided compelling evidence of its effectiveness. In the initial test, nearly 90% of children in both the intervention and control groups followed an unknown young woman who attempted to lure them with attractive incentives. This finding aligns with previous international research indicating that 75%–90% of young children are likely to follow strangers when offered an appealing lure (Dampa & Giagazoglou, 2023; Goldfarb et al., 2008; Marchand-Martella et al., 1996). The high rate of willingness to follow was likely influenced by the stranger's harmless and friendly behavior. Children often expect dangerous individuals to look messy and scary, rather than polite, well-dressed adults offering rewards.

In contrast, children's responses to the safety questionnaires were consistently high, indicating that they could verbally articulate the correct safety responses. However, this discrepancy between what children said they would do and what they actually did in the realistic test reinforces previous findings (Dampa & Giagazoglou, 2023; Miltenberger et al., 2009). These results underscore that theoretical knowledge alone is insufficient without practical, experiential learning.

Immediately following the intervention, a second realistic test revealed a marked improvement: the majority of children in the experimental group refused to follow the lure, indicating that the experiential methods had successfully transformed their theoretical knowledge into appropriate behavior. The integration of role-play and creative dramatization enabled the children to practice and internalize the safety skills in a controlled yet dynamic environment.

To assess the long-term durability of these outcomes, a follow-up evaluation was conducted three years later, just before the children transitioned from elementary to middle school. In this assessment, a new scenario was introduced involving an unfamiliar young woman wearing a promotional T-shirt from a well-known mobile phone company. She attempted to entice the children by promising expensive electronic gifts, such as an iPhone, tablet, electric scooter, and other valuable prizes. Despite these highly attractive incentives, none of the children in the experimental group succumbed to the lure. Interestingly, nearly 50% of the children in the control group also refused to follow her at this stage. This outcome likely reflects the natural maturation process, which helps children develop a more critical perspective on potentially deceptive situations. This trend aligns with previous research showing that younger children, typically those aged 4 to 10, are significantly more susceptible to deceptive lures (Beck & Miltenberger, 2009; Brenick et al., 2014; Johnson et al., 2005, 2006; White et al., 2018).

While natural cognitive development plays a role in children’s increasing awareness of risks, the significantly higher resistance rate among the intervention group suggests that structured, experiential training played a decisive role in their ability to make safer choices. Ultimately, while it is reassuring that children develop critical thinking skills over time, the goal of prevention programs should be to ensure that no child is ever deceived, regardless of age.

Through educational drama techniques and interactive activities, children participated actively in the learning process. They rewrote the plot of the fairy tale to prevent negative outcomes for the heroes and then dramatized their revised version, creating an alternative storyline where the protagonists’ fate changed for the better. Previous research using experiential teaching methods and drama techniques has shown that such approaches enhance students’

understanding of the subject matter (Antonelli et al., 2014; Giagazoglou & Papadaniil, 2018; Joronen et al., 2011; Kempe & Tissot, 2012; Mages, 2008; Szecsi, 2008).

The analysis of the results revealed that combining educational drama techniques with exploratory writing significantly increased children's engagement. These methods encouraged independent and critical thinking and proved highly effective in teaching them to recognize risks and make decisions in high-risk situations. Additionally, children's written narratives reflected that their heroes managed to escape difficult situations, mirroring the statistically significant reduction in the number of intervention group children who were deceived in the second realistic test compared to the control group.

Beyond immediate behavioral changes, the qualitative analysis of children's written responses revealed a notable shift in their perception of danger. Initially, children associated "bad characters" with specific physical features, describing them as shabby, unattractive, or frightening. However, following the intervention, their understanding evolved.

Before the intervention, children described "bad" individuals based on stereotypically threatening physical features. Their descriptions emphasized external appearance, associating "badness" with specific facial traits, clothing, and an overall menacing look. One child stated, "*He is a man, ugly, tough, and a thief. He has earrings, his face looks terrible, and he is bad because he eats people."* Another described*, "The bad guy is very scary. He has a round nose and a painted red face. His eyes are blue. He waits for children, kidnaps them, and kills them.*"

Following the intervention, these rigid stereotypes shifted, and "bad" characters were no longer defined solely by their external appearance. Instead, children began to recognize that a seemingly friendly or attractive person could still pose a danger. One child described, "*She is a mermaid—very beautiful and sweet. She speaks kindly, dresses nicely, and is tall, but inside she is evil and kidnaps children. She tells them, 'I have something for you—a puppy, a kitten, chocolate, and other things*.'" Another wrote, *"Yesterday, I saw Tinkerbell the fairy. She was very beautiful. She wore a sparkling green dress and had her hair tied in a bun. She was sweet, kind, and friendly. She told me to go with her. Then I got scared because my mom doesn't allow me to leave with a stranger, even if it's a fairy*." Similarly, a child depicted a "bad character" as, "*He is an elf. He is tall, thin, and handsome, with a small nose, small ears, a beard, and green eyes. He behaves well and speaks kindly. But he can kill me with poison, which is why I don't trust him at all*." This transformation suggests that the intervention successfully challenged pre-existing stereotypes, helping children understand that a "bad character" does not always appear dangerous.

In conclusion, the findings of this study demonstrate that the intervention significantly enhanced both children's knowledge and their ability to resist deceptive lures. Beyond immediate behavioral improvements, the study revealed an important change in how children perceive danger. Initially, they relied on superficial judgments based on appearance. However, after the intervention, they developed a deeper and more thoughtful understanding of potential threats. This transformation highlights the importance of incorporating experiential learning into self-protection education. Passive instruction alone is not enough to equip children with the skills needed to navigate real-world risks effectively.

This study confirms that experiential learning methods, particularly those utilizing educational drama techniques, play a crucial role in reinforcing immediate safety behaviors while also fostering the long-term maintenance of self-protection skills. The most convincing evidence of the program's success is that, even three years later, none of the children in the intervention group were deceived during the follow-up assessment. While natural maturation may contribute to improved critical thinking, structured prevention programs provide essential early training that ensures all children, regardless of age, develop the necessary skills to recognize, avoid, and respond appropriately to potential dangers.

Ultimately, this study highlights the critical role of immersive, child-centered education in equipping young children with the ability to protect themselves in real-world situations. By demonstrating that structured experiential interventions can have a lasting impact, this research makes a strong case for incorporating drama-based safety education into early childhood curricula. Future research should continue exploring the effectiveness of these methods across diverse cultural contexts and age groups, ensuring that all children receive the foundational skills needed to navigate an increasingly complex and unpredictable world.

Despite the encouraging findings, some limitations should be acknowledged. The study was conducted with a relatively small, convenience sample from a single school, which may limit the generalizability of the results. As for the control group, a slight improvement was observed from pre- to post-test. This change cannot be attributed to natural maturation, since the time span was only three months. It is more likely that the repetition of the realistic experiment itself had an impact: children went through the same test twice, which may have led to some discussion with their parents or teachers and to a small increase in awareness. In contrast, the improvements noted in the control group at the three-year follow-up are more consistent with the effect of natural maturation. By that time, the children had grown older, developed new relationships, and gained broader life experience, which may have influenced the way they evaluated potentially risky situations. A major strength of this study, however, is precisely this three-year follow-up, which showed that the effects of the intervention were not only immediate but also long-lasting. Future studies should therefore include intermediate

follow-up assessments to capture how skills develop over time and evaluate the program with children of different ages, in order to explore how developmental stage may influence the way they perceive and respond to potential risks.

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