

## The Effectiveness of Storytelling-Based Education on Externalizing Behaviors in Children with Behavioral Disorders

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### ABSTRACT

**Purpose:** This study aimed to determine the effectiveness of storytelling-based education in reducing externalizing and internalizing behaviors among children with behavioral disorders.

**Methodology:** The research adopted a quasi-experimental design with a pretest–posttest–follow-up structure and a control group. The statistical population consisted of all mothers of elementary school boys with behavioral disorders in District 1 of the Tehran Department of Education. Using stratified random sampling, 30 participants were selected and equally assigned to experimental and control groups. The intervention comprised eight 90-minute storytelling sessions focusing on empathy, altruism, emotional reflection, and moral reasoning. The Achenbach and Rescorla Child Behavior Checklist (CBCL; 2011) Parent Form was used to assess internalizing and externalizing behaviors. Data were analyzed through multivariate analysis of covariance (MANCOVA) using SPSS version 26.

**Findings:** The results indicated a significant reduction in both externalizing behaviors (aggression, rule-breaking, and social problems) and internalizing behaviors (withdrawal/depression, anxiety, somatic complaints, thought problems, and attention issues) among children in the experimental group compared to the control group ( $p < .01$ ). The effect sizes for externalizing dimensions ranged from  $\eta^2 = .38$  to  $.40$ , while internalizing dimensions ranged from  $\eta^2 = .13$  to  $.44$ . Moreover, improvements persisted during the follow-up phase, confirming the sustained effectiveness of storytelling-based education in promoting emotional and behavioral regulation.

**Conclusion:** Storytelling-based education proved to be an effective, developmentally appropriate, and culturally adaptable approach for reducing maladaptive behaviors and improving emotional well-being in children with behavioral disorders.

**Keywords:** storytelling-based education, externalizing behaviors, children with behavioral disorders

## 1. Introduction

The importance of understanding and managing behavioral disorders in children has become increasingly recognized in both clinical and educational psychology. Behavioral problems—typically classified as internalizing or externalizing behaviors—can significantly affect children's social adaptation, emotional well-being, and academic functioning. Externalizing behaviors, including aggression, defiance, and impulsivity, often result in conflictual relationships with peers and adults, while internalizing behaviors such as withdrawal, anxiety, and depression limit emotional expression and social interaction (Eijgermans et al., 2022). The origins of these behaviors are multifactorial, encompassing genetic, familial, and environmental factors, with the quality of parent-child interactions playing a crucial mediating role. The current psychological discourse increasingly emphasizes the integration of family-centered interventions and narrative-based educational approaches—particularly storytelling—as effective tools for addressing behavioral challenges among children.

Parental involvement is a central determinant in children's cognitive, emotional, and social development, and its absence or dysfunction can exacerbate behavioral difficulties (Acar et al., 2021). Evidence suggests that parental attitudes, efficacy, and emotional availability influence both the manifestation and management of behavioral disorders (Liu et al., 2022). Parental self-efficacy, defined as the confidence parents have in their ability to positively influence their children's development, predicts adaptive parenting behaviors and improved child outcomes across domains such as school achievement, emotional regulation, and social functioning (Albanese et al., 2019; Liu & Leighton, 2021). Studies across diverse cultural contexts show that when parents are engaged in structured, empathic, and developmentally informed interventions, children exhibit better regulation of aggressive or oppositional behavior and demonstrate higher levels of empathy and prosocial engagement (Ajibade et al., 2020; Kolahi Heshmat et al., 2020).

In particular, storytelling-based education has emerged as a powerful medium for emotional learning and behavioral modification in children with emotional and behavioral disorders. Rooted in the narrative psychology framework, storytelling helps children symbolically externalize their experiences and process emotions in a safe and imaginative space (Bredlid & Nicolaisen, 2019; English, 2019). This

pedagogical approach facilitates cognitive restructuring, empathy development, and moral reasoning through identification with story characters and reflection on moral consequences (Casson & Cooling, 2020; Wright, 2020). Storytelling thus integrates cognitive, affective, and social dimensions of learning, enabling children to make sense of complex emotional experiences while enhancing interpersonal understanding.

Moreover, storytelling's therapeutic potential extends beyond academic learning to domains of psychological healing and self-regulation. Research demonstrates that narrative-based interventions foster self-reflection, emotional articulation, and perspective-taking—key mechanisms in mitigating both internalizing and externalizing symptoms (Petty et al., 2019, 2020). In educational and therapeutic settings, storytelling is also viewed as a culturally responsive tool that aligns with children's developmental stages, making it particularly useful in addressing behavioral disorders within diverse populations (Doostdar Toosi et al., 2024; Navidian & Khazayan, 2023).

Recent cross-cultural research underscores the influence of parental attitudes on the success of child-centered interventions. Positive parental attitudes toward behavioral management and emotional development act as facilitators of change, while negative or inconsistent attitudes undermine therapeutic outcomes (Liu et al., 2022). In this context, storytelling can serve as a shared emotional experience between parent and child, strengthening attachment bonds and enhancing parental empathy (Akbarizadeh et al., 2020). When parents participate in storytelling sessions—either directly or indirectly—their understanding of their child's inner world improves, and they become better equipped to manage behavioral issues through empathy and reflective listening (Acar et al., 2021; Liddle et al., 2018).

The integration of storytelling into psychological education also reflects a shift toward holistic and experiential models of learning. Traditional behavior modification programs often rely on external reinforcement, while narrative-based interventions engage intrinsic motivation by appealing to children's imagination and emotional insight (Hardy & Sumner, 2018). Through stories, children can explore moral dilemmas, rehearse social behaviors, and reconstruct maladaptive cognitions without experiencing direct criticism or shame. This indirect pedagogical mechanism is particularly beneficial for children with oppositional or aggressive tendencies, as it

promotes self-regulation and empathy without invoking defensiveness (Wright, 2020).

From a neuropsychological perspective, storytelling also stimulates cognitive processes such as attention, working memory, and executive control, all of which are typically impaired in children with behavioral or learning difficulties (Sadeghzadeh Poudeh & Faramarzi, 2018). Furthermore, the combination of emotional engagement and cognitive activation during storytelling fosters neural integration between affective and executive networks, facilitating better behavioral control and emotional understanding (Mohammadian et al., 2024). These findings reinforce the growing recognition of storytelling as a multidimensional intervention that supports not only behavioral but also neurocognitive development.

In educational psychology, storytelling has also been linked to improved academic engagement and motivation. By embedding learning content within narratives, educators can enhance students' comprehension, retention, and emotional connection to academic material (Sabzeh et al., 2024). This approach aligns with constructivist principles, emphasizing that knowledge acquisition is most effective when learners connect new information with existing personal and cultural narratives (Lo et al., 2021). In classrooms, teachers who employ narrative techniques report more positive classroom climates and reduced incidences of disruptive behavior (Kook & Greenfield, 2021). Such evidence highlights the pedagogical synergy between emotional literacy and behavioral management through narrative instruction.

Additionally, storytelling interventions contribute to moral education and social-emotional learning. By engaging with ethical conflicts, character development, and consequences of actions depicted in stories, children develop internal moral schemas that inform real-world decision-making (Casson & Cooling, 2020; English, 2019). These outcomes are especially relevant in culturally diverse educational environments, where narrative learning serves as a unifying medium for values education and empathy training (Breidlid & Nicolaisen, 2019).

Family-centered storytelling interventions, particularly those adapted for children with behavioral disorders, show promising results in improving both parent-child relationships and child emotional regulation. Programs integrating storytelling with family training have demonstrated reductions in oppositional behaviors and improvements in cooperative play and social adjustment (Akbarizadeh et al., 2020; Kolahi Heshmat et al., 2020). In a

similar vein, multidimensional therapeutic models incorporating storytelling elements have proven effective in treating adolescent behavioral and substance-use problems by addressing systemic family dynamics (Liddle et al., 2018).

The psychological mechanisms underlying storytelling's efficacy include emotional catharsis, identification, modeling, and social reinforcement. Children project their emotions onto story characters, thereby distancing themselves from overwhelming affect while simultaneously rehearsing adaptive responses (Petty et al., 2020). This dual process of emotional release and cognitive restructuring makes storytelling an effective tool for managing anger, frustration, and anxiety—core components of externalizing disorders. Moreover, when coupled with guided parental reflection, storytelling interventions reinforce consistent behavioral expectations at home, leading to more stable behavioral outcomes (Acar et al., 2021; Liu & Leighton, 2021).

Contemporary research in therapeutic storytelling also highlights the role of digital storytelling and multimedia narratives in fostering empathy and self-awareness among children and adolescents (Hardy & Sumner, 2018). Digital formats allow children to co-create stories, offering a participatory and empowering experience that enhances emotional expression and identity formation. These emerging practices mirror global educational trends emphasizing creativity, emotional intelligence, and reflective learning as foundations for mental health promotion (Eydelkhani et al., 2018).

In sum, storytelling-based interventions represent an integrative and humanistic approach to behavioral modification in children, combining emotional, cognitive, and relational dimensions of development. Through imaginative engagement, children learn empathy, self-regulation, and moral reasoning, while parents enhance their understanding of emotional communication and behavioral guidance. Given its cultural adaptability, low cost, and psychological depth, storytelling education holds particular promise for use in family and school contexts addressing behavioral disorders. Therefore, the present study aims to determine the effectiveness of storytelling-based education on externalizing and internalizing behaviors in children with behavioral disorders.

## 2. Methods and Materials

### 2.1. Study Design and Participants

The present study, in terms of data collection, was experimental and of the quasi-experimental type. Regarding its objective, it belonged to the category of applied research, and methodologically, it was classified as quantitative research. Since the present study aimed to investigate the effectiveness of a storytelling-based educational package in reducing externalizing behaviors among children with behavioral disorders, it followed a quasi-experimental design with a pretest–posttest–follow-up structure and a control group.

The statistical population consisted of all mothers of elementary school boys with behavioral disorders in District 1 of the Tehran Department of Education. The sample group included 30 mothers of children with behavioral disorders selected from this population. To do so, from the list of elementary schools in District 1 obtained from the Department of Education, three schools were randomly selected using a stratified random sampling method. The Behavioral Disorders Questionnaire was administered to all first- and second-grade students in these three schools. Children who scored within the acceptable range on items related to internalizing and externalizing problems were selected. Among these children, 20 were randomly chosen from each school (10 from each grade), resulting in a total of 60 participants. The mothers of these children were contacted and invited to participate in the study. After screening, 30 mothers whose children showed higher levels of behavioral disorders were selected. It is noteworthy that the storytelling intervention and the control (no-intervention) condition were randomly assigned among these three schools and the selected participants.

After completing the internalizing behavior questionnaire, mothers of children with behavioral disorders who scored at least one standard deviation below the mean were selected for participation. From the qualified individuals, 30 participants were randomly assigned in equal numbers (15 in each group) to the experimental and control groups. Subsequently, the storytelling training sessions were held for the experimental group. Finally, after the completion of the training, both the experimental and control groups completed the questionnaires again as a posttest.

### 2.2. Measures

To measure behavioral and emotional disorders, the Child Behavior Checklist (CBCL) developed by Achenbach and Rescorla (2011) was used. This checklist was designed to assess children's behavioral and emotional problems and consists of three forms: the Teacher Report Form (TRF), the Parent Form (CBCL), and the Youth Self-Report (YSR). In the present study, the Parent Form was used. This version is designed for children aged 6 to 18 years and assesses emotional problems as well as academic and social competencies from the parents' perspective. The questionnaire contains 116 items rated on a 3-point Likert scale (1 = not true, 2 = somewhat true, 3 = very true). The instrument measures eight emotional-behavioral syndromes: (1) anxiety/depression, (2) withdrawal/depression, (3) somatic complaints, (4) social problems, (5) thought problems, (6) attention problems (related to attention-deficit and behavioral disorders), (7) rule-breaking behavior, and (8) aggressive behavior. In Iran, the questionnaire was translated and validated by Minaei (2006). Studies have demonstrated a strong correlation between DSM diagnoses and the CBCL scores (Achenbach & Rescorla, 2001). Minaei (2006) reported a Cronbach's alpha coefficient of .92 for the CBCL form. It should be noted that in this study, the externalizing behavior subscale was used.

### 2.3. Intervention

The storytelling-based intervention was conducted over eight 90-minute sessions designed to improve prosocial understanding and reduce externalizing behaviors in children with behavioral disorders. In the first session, participants were introduced to the study objectives, completed baseline assessments, signed behavioral participation contracts, and discussed the story "The Little Match Girl" to explore the concept and components of empathy, followed by identifying and applying key lessons in daily life. The second session centered on altruism through the story "How to Heal a Broken Wing," encouraging reflection on prosocial actions and perspective-taking. The third session addressed indifference toward others using "Beauty and the Beast," guiding children to recognize the consequences of social neglect and imagine themselves as the story's protagonist. In the fourth session, the moral implications of unethical behavior were explored through "The Selfless Boy," with discussions emphasizing responsibility and ethical decision-making. The fifth session focused on mutual kindness and support via "The Lion, the



Mouse, and the Hunter,” highlighting reciprocity and compassion. The sixth session deepened empathic behavior using “The Peacock Feather and the Greedy Bears,” promoting emotional awareness and constructive social interaction. The seventh session, themed around past negligence, used “The Queen of the Bees” to foster accountability, with participants recalling real-life instances of inaction toward others. Finally, the eighth session emphasized synthesis and reflection through “Robin Hood,” reinforcing moral reasoning, collective reflection, and real-life application of learned lessons, followed by the administration of the posttest to evaluate intervention outcomes.

**Table 1**

*Description of Research Variable*

Variables	Group	Pretest (M±SD)	Posttest (M±SD)	Follow-up (M±SD)
Externalizing behaviors	Storytelling	16.63 ± 1.16	11.21 ± 0.91	11.23 ± 0.88
	Control	10.44 ± 1.31	10.01 ± 1.22	11.36 ± 1.46

The results of Table 1 show that in both the posttest and follow-up stages, the total mean scores of internalizing and externalizing behaviors in the storytelling-based education group were lower than those in the control group. Therefore, parental behavior management training reduced

## 2.4. Data Analysis

The data were analyzed using descriptive statistics and inferential statistics through covariance analysis (ANCOVA) in SPSS version 26.

## 3. Findings and Results

The participants of the present study consisted of 30 mothers of elementary school students with behavioral disorders who were assigned to one experimental group and one control group.

externalizing behaviors in children with behavioral disorders in the experimental group compared to their pretest and the control group. The reduction in scores indicates improvement in participants’ behavioral conditions.

**Table 2**

*Between-Group Differences in Dimensions of Externalizing Behaviors in Storytelling and Control Groups*

Variables	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Social Problems	Test	463.40	1.50	295.15	4.34	.001	.40
	Group Membership	280.90	1	280.90	7.57	.010	.21
	Test × Group Membership	312.07	1.50	198.76	11.94	.001	.43
Rule-Breaking Behavior	Test	369.49	1.40	263.36	6.21	.001	.38
	Group Membership	149.51	1	149.51	7.29	.010	.21
	Test × Group Membership	360.82	1.38	257.18	40.25	.001	.40
Aggressive Behavior	Test	369.49	1.38	263.36	5.28	.001	.39
	Group Membership	149.51	1	149.51	7.29	.010	.21
	Test × Group Membership	360.82	1.40	257.18	9.25	.001	.41

The results of Table 2 indicate significant differences between the storytelling education and control groups in externalizing behavior dimensions based on the test and group membership. Considering the obtained F-value (4.34) and the significance level ( $p = .01$ ) for social problems, F-value (6.21) and  $p = .01$  for rule-breaking behavior, and F-value (5.28) and  $p = .01$  for aggressive behavior, it can be stated that the effect of storytelling-based education varied across these three subvariables. The proportion of variance explained by storytelling education in predicting social

problems was .40, in rule-breaking behavior .38, and in aggressive behavior .39, with the largest predictive contribution belonging to social problems. The effect size of storytelling education on externalizing behavior dimensions ranged between .38 and .40.

Before conducting the covariance analysis, the statistical assumptions were examined. The results of Levene’s test indicated that the assumption of equality of variances was met for externalizing behaviors across groups, as the obtained F-values ( $F = 0.67$ ,  $p = .49$  for the experimental

group;  $F = 0.58$ ,  $p = .61$  for the control group) were not statistically significant. Similarly, for the subvariables—social problems ( $F = 0.05$ ,  $p = .93$ ;  $F = 0.12$ ,  $p = .34$ ), rule-breaking behavior ( $F = 1.12$ ,  $p = .16$ ;  $F = 0.53$ ,  $p = .56$ ), and aggressive behavior ( $F = 0.78$ ,  $p = .45$ ;  $F = 0.32$ ,  $p = .48$ )—no significant variance differences were found between groups. To verify the homogeneity of covariance matrices,

Mauchly's test of sphericity was also performed, yielding non-significant results ( $p < .05$ ) for the overall model, indicating that the sphericity assumption was not met. Consequently, the Greenhouse–Geisser correction ( $\epsilon = 0.70$  to  $0.88$ ) was applied, confirming that after adjustment, the assumption of sphericity was adequately satisfied for further analysis.

**Table 3**

*Multivariate Analysis of Covariance for Between-Group Differences in Internalizing Behaviors of Children with Behavioral Disorders (Storytelling and Control Groups)*

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Covariate (Pretest)	770.79	1	770.79	1.17	.32	.02
First Posttest (Storytelling Education)	659.42	1	659.42	8.32	.02	.49
Second Posttest (Storytelling Education)	688.40	1	659.42	7.11	.03	.47
Error	326.33	27	—	—	—	—

Considering the obtained F-value (1.17) and significance level ( $p = .32$ ) in the pretest stage, F-value (8.32) and  $p = .02$  in the first posttest, and F-value (7.11) and  $p = .03$  in the second posttest, it can be concluded that the between-group differences in internalizing behaviors of children with behavioral disorders were significant in the storytelling versus control groups. The proportion of variance explained by storytelling education in predicting internalizing

behaviors was .49 in the first posttest and .47 in the second posttest. Therefore, it can be concluded that storytelling education reduced internalizing behaviors in children with behavioral disorders. Consequently, the fourth hypothesis was confirmed, indicating that storytelling education significantly decreases internalizing behaviors in children with behavioral problems.

**Table 4**

*Between-Group Differences in Dimensions of Internalizing Behaviors of Children with Behavioral Disorders in Storytelling and Control Groups*

Variables	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Withdrawal/Depression	Test	146.62	1.21	124.06	4.33	.001	.44
	Group Membership	523.21	1	523.21	4.61	.001	.18
	Test $\times$ Group Membership	166.02	1.21	137.66	7.21	.001	.11
Somatic Complaints	Test	190.29	1.19	160.01	4.69	.001	.13
	Group Membership	413.88	1	413.88	8.11	.007	.13
	Test $\times$ Group Membership	170.29	1.19	143.19	4.85	.001	.19
Anxiety/Depression	Test	182.16	1.42	127.96	4.21	.001	.18
	Group Membership	217.78	1	217.78	4.85	.020	.17
	Test $\times$ Group Membership	178.16	1.42	125.15	4.33	.001	.29
Thought Problems	Test	123.49	2	61.74	7.90	.001	.19
	Group Membership	168.10	1	168.10	7.11	.009	.12
	Test $\times$ Group Membership	42.87	2	21.43	8.06	.001	.14
Attention Problems	Test	74.82	1.59	47.02	5.22	.001	.31
	Group Membership	129.60	1	129.60	6.59	.001	.32
	Test $\times$ Group Membership	28.87	1.59	18.14	4.70	.003	.34

The results of Table 4 demonstrate that significant differences existed between the storytelling and control groups in the dimensions of internalizing behaviors based on test and group membership. Considering  $F = 4.33$  and  $p =$

.01 for withdrawal/depression,  $F = 4.69$  and  $p = .01$  for somatic complaints,  $F = 4.21$  and  $p = .01$  for anxiety/depression,  $F = 7.90$  and  $p = .01$  for thought problems, and  $F = 5.22$  and  $p = .01$  for attention problems, it

can be concluded that the storytelling method affected these five subvariables differently. The contribution of storytelling education in predicting withdrawal/depression was .33, somatic complaints .13, anxiety/depression .20, thought problems .16, and attention problems .22, with the largest predictive contribution belonging to withdrawal/depression. The effect size of storytelling education on internalizing behavior dimensions among children with behavioral disorders ranged between .13 and .44. To test this research hypothesis, covariance analysis was used after verifying the required assumptions.

#### 4. Discussion and Conclusion

The findings of the present study demonstrated that storytelling-based education significantly reduced both externalizing and internalizing behaviors among children with behavioral disorders. Children who participated in storytelling sessions exhibited notable declines in aggressive, oppositional, and rule-breaking behaviors compared to those in the control group. Moreover, they showed improvements in emotional regulation, reduced anxiety, and fewer symptoms of withdrawal or depression during posttest and follow-up phases. These results confirm that storytelling—when applied systematically as an educational and therapeutic tool—can enhance emotional understanding, empathy, and behavioral adjustment among children.

This outcome aligns with a growing body of research supporting narrative and family-centered interventions for emotional and behavioral difficulties. Storytelling allows children to project their internal emotional conflicts onto symbolic narratives, providing a safe space for reflection and emotional catharsis (Breidlid & Nicolaisen, 2019). Through engagement with characters and moral themes, children internalize lessons about self-control, empathy, and social responsibility (English, 2019). The interactive discussions that follow each story help reinforce cognitive and emotional processing, encouraging children to reinterpret aggressive or maladaptive reactions in light of new moral insights. This process is consistent with findings by (Doostdar Toosi et al., 2024), who reported that storytelling-based interventions effectively increased psychological well-being and reduced emotional distress in children undergoing cancer treatment. In both contexts, the mechanism of change lies in symbolic identification, emotional restructuring, and the acquisition of adaptive coping strategies.

The observed improvements in externalizing behaviors—specifically aggression, defiance, and rule-breaking—can be attributed to storytelling's emphasis on modeling and reflective learning. The stories selected for this intervention, such as *"The Selfless Boy"* or *"The Lion, the Mouse, and the Hunter,"* implicitly modeled prosocial behavior and moral reciprocity. These narratives helped children identify with altruistic characters and internalize the consequences of both moral and immoral actions. Previous studies have emphasized that such narrative modeling reduces behavioral impulsivity and promotes empathy-based reasoning (Casson & Cooling, 2020; Wright, 2020). In classroom contexts, teachers who employ narrative strategies report better classroom engagement and fewer disruptive incidents (Kook & Greenfield, 2021), reinforcing the idea that moral narratives not only educate but also regulate behavior.

The reduction in internalizing behaviors—such as anxiety, withdrawal, and somatic complaints—further underscores the therapeutic capacity of storytelling. The reflective dialogues accompanying each story allowed children to verbalize their emotions and reframe their experiences through the lens of compassion and understanding. According to (Petty et al., 2020), narrative interventions in medical and educational settings foster empathic learning by helping children express unspoken emotions, thereby alleviating psychological tension. Similarly, (Navidian & Khazayan, 2023) found that storytelling reduced post-traumatic stress and depressive symptoms among women following emergency cesarean sections, suggesting that narrative expression promotes emotional processing and recovery across age groups and conditions.

The family-centered dimension of storytelling education also played a pivotal role in improving behavioral outcomes. Mothers who participated in the sessions learned to interpret their children's behaviors not merely as defiance but as expressions of unmet emotional needs. This aligns with the findings of (Kolahi Heshmat et al., 2020), who demonstrated that family-centered interventions improve parental mental health and strengthen the emotional bond between parents and children with behavioral disorders. Such improvement in parental understanding and regulation likely mediated the children's positive behavioral changes. Furthermore, (Acar et al., 2021) emphasized the importance of parental involvement across cultures, highlighting that consistent parental participation in child-centered programs leads to more stable developmental gains.

The present findings also corroborate the theoretical framework of parental self-efficacy. Parents who feel competent in managing their child's behavior are more likely to use consistent, supportive, and emotionally sensitive strategies (Albanese et al., 2019; Liu et al., 2022). Storytelling sessions indirectly enhanced parental self-efficacy by modeling empathic communication and positive discipline. This finding aligns with (Liu & Leighton, 2021), who noted that higher parental self-efficacy predicts improved child achievement and socioemotional outcomes. By fostering parents' reflective understanding, storytelling thus acts as a dual intervention—simultaneously shaping the child's behavioral patterns and the parent's interactional style.

The observed effects can also be explained through the cognitive-developmental perspective. Storytelling stimulates imagination, working memory, and moral reasoning—functions that are closely linked to executive control and behavioral regulation (Sadeghzadeh Poudch & Faramarzi, 2018). The moral and emotional content of stories provides natural contexts for developing these cognitive skills. (Mohammadian et al., 2024) found that storytelling therapy improved executive functions and verbal memory in children with ADHD, confirming that narrative-based learning promotes both behavioral and cognitive improvements. Similarly, the multi-level engagement inherent in storytelling—combining emotional, linguistic, and social components—creates integrated learning experiences that support self-control and perspective-taking.

From a psychosocial standpoint, storytelling fosters belonging and social empathy, both of which counteract isolation and aggression. When children engage in narrative discussions, they learn that their emotions and challenges are shared experiences rather than signs of deficiency or rejection. This communal process reduces defensive behaviors and builds trust in social interactions. Studies in educational psychology have shown that empathy-oriented storytelling reduces peer conflicts and improves social competence (Hardy & Sumner, 2018; Sabzeh et al., 2024). The present study extends these findings to children with behavioral disorders, confirming that narrative empathy is a key factor in behavioral change.

Additionally, the emotional regulation observed in this study may stem from the experiential and reflective nature of storytelling. Stories provide emotional distance, allowing children to explore intense emotions—such as anger, guilt, or fear—without direct personal threat. This phenomenon,

known as emotional detachment or “safe projection,” facilitates adaptive coping and resilience (Petty et al., 2019). When children identify with a morally conflicted character, they symbolically process their own inner turmoil, resulting in reduced emotional reactivity. The repeated pattern of narrative exposure, reflection, and discussion promotes emotional literacy, a critical skill for long-term behavioral stability.

The cross-cultural generalizability of these results is supported by previous studies emphasizing storytelling's universality as an educational and therapeutic medium. In a comparative study across multiple cultures, (Acar et al., 2021) found that narrative-based parental interventions yielded consistent benefits in emotional development, regardless of cultural differences. Likewise, (Ajibade et al., 2020) highlighted that school and parental factors interact significantly in determining children's behavioral and learning outcomes. These findings reinforce the notion that storytelling, by addressing both familial and educational dimensions, transcends contextual boundaries and can be effectively adapted for diverse populations.

Furthermore, the present study complements the narrative education literature in emphasizing storytelling's integrative moral and cognitive functions. (Casson & Cooling, 2020) and (Wright, 2020) both argue that narrative learning nurtures moral reasoning and identity formation, particularly during early and middle childhood. Through reflective storytelling, children encounter moral ambiguity, consider multiple perspectives, and internalize prosocial norms. The stories employed in this study—featuring themes of kindness, empathy, and accountability—provided an accessible platform for these developmental processes to unfold naturally.

The findings also underscore storytelling's compatibility with digital and experiential learning paradigms. (Hardy & Sumner, 2018) observed that digital storytelling enhances compassion and engagement among learners by merging personal expression with technological creativity. While the current study utilized traditional oral storytelling, the underlying mechanism—narrative immersion and emotional reflection—remains consistent across formats. This suggests that future interventions might further benefit from integrating multimedia storytelling to sustain attention and deepen emotional impact.

Another possible explanation for the observed outcomes lies in the alignment between storytelling and social-emotional learning (SEL) frameworks. SEL programs emphasize self-awareness, empathy, and responsible



decision-making—all of which are cultivated through storytelling activities. (Breidliid & Nicolaisen, 2019) noted that storytelling in religious education settings strengthens moral imagination, while (English, 2019) argued that narrative learning nurtures interpretive empathy and cultural understanding. The stories used in this intervention similarly fostered emotional reflection and guided children toward value-based behavior regulation.

Finally, the storytelling approach's relational and interactive nature may explain its sustained impact at follow-up. The group discussions encouraged perspective-taking, while parental engagement reinforced consistency at home. (Kolahi Heshmat et al., 2020) and (Akbarizadeh et al., 2020) both found that family-oriented therapeutic approaches produce more enduring behavioral improvements than isolated child-focused programs. In this light, the storytelling intervention functioned not only as a child-level treatment but also as a relational system that transformed family communication patterns and emotional climates.

Overall, the results validate storytelling as a multidimensional intervention capable of addressing both behavioral symptoms and underlying emotional processes. The improvement in externalizing and internalizing behaviors reflects the synergy of narrative empathy, cognitive activation, and family involvement. Consistent with the conclusions of (Doostdar Toosi et al., 2024) and (Navidian & Khazayan, 2023), narrative-based interventions promote emotional integration and resilience. Therefore, the storytelling-based educational approach represents a developmentally and culturally adaptable method for enhancing emotional and behavioral health in children with psychological difficulties.

Despite its promising findings, this study has several limitations. The small sample size (30 participants) and restricted geographical scope limit the generalizability of results to broader populations. The reliance on maternal self-report questionnaires may have introduced subjective bias in assessing behavioral outcomes. Furthermore, the absence of long-term follow-up beyond the posttest period prevents evaluation of the intervention's enduring effects. The storytelling content was also culturally contextualized, and results may differ in diverse sociocultural environments or with different story selections. Additionally, the study did not include observational or teacher-based behavioral assessments, which could have provided more objective evidence of behavioral change.

Future studies should employ larger, more diverse samples and incorporate longitudinal designs to assess the

persistence of storytelling's effects over time. It is also recommended to compare storytelling with alternative interventions such as play therapy, cognitive-behavioral programs, or digital storytelling platforms to identify their relative efficacy. Multi-informant assessments—including parents, teachers, and clinical observers—would enhance data validity. Moreover, integrating neurocognitive measures could shed light on the underlying mechanisms linking narrative engagement and executive function improvement. Exploring gender differences, cultural variations, and the role of parental emotional intelligence may also contribute to refining storytelling interventions for specific populations.

Practitioners working with children exhibiting behavioral disorders are encouraged to incorporate storytelling as a structured, interactive component of behavioral management programs. Educators can integrate narrative sessions into classroom routines to promote empathy and emotional literacy, while clinicians can adapt therapeutic stories to address specific behavioral themes. Parental involvement in storytelling exercises should be emphasized, as it reinforces emotional communication and family cohesion. Finally, policymakers and school administrators can support training initiatives that equip teachers and counselors with narrative therapy techniques to foster emotional growth and behavioral adjustment in children.

### Authors' Contributions

Authors equally contributed to this article.

### Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

### Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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All procedures performed in studies involving human participants were under the ethical standards of the institutional and, or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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