

Effectiveness of the Puppet Show and Storytelling Methods on Children's Behavioral Problems

Abstract

Background: The early years of life have an important role in children's growth and development, and training during this period will play a pronounced role in their whole life. Behavioral problems (BPs) that children showed at this age have been a growing concern for those involved in pediatric health. The aim of this study was to compare the effectiveness of puppet show and storytelling methods on BPs among preschool children. **Materials and Method:** This quasi-experimental study was conducted on three groups (puppet show and storytelling as test groups and a control group), in three stages, using a pretest–posttest design. The study was conducted in 2014 on 75 children age 3–5 years selected from three kindergartens in Isfahan, Iran. The subjects were selected using random clusters sampling method. To collect data, Shahim Preschool Children Behavior Problem Questionnaire was used. Data were analyzed using descriptive and inferential statistics in SPSS software. **Results:** The results of the statistical tests including one-way analysis of variance (ANOVA) and repeated measures ANOVA test showed that mean variation in both puppet show and storytelling groups was significantly higher than the control group immediately and 1 month after the intervention ($p < 0.001$). Variation was significantly higher in the puppet show group compared to the storytelling group immediately ($F = 222.5, p < 0.001$) and 1 month ($F = 235.5, p < 0.001$) after the intervention. **Conclusions:** It can be concluded that compared to the storytelling method, the puppet show method has a greater impact on improving behavior problems among preschool children.

Keywords: Behavioral problem, child, narrative therapy, play and playthings

Introduction

Early childhood years are the basis of various stages of an individual's life.^[1] Childhood is the period in which the experiences necessary for the development of the child occur.^[2] In most cases, behavioral inconsistencies occur during this period and eventually result in behavioral problems (BPs) in the child.^[3] BPs are attributed to the behavior of an individual without intellectual disability (ID), whose behaviors are inappropriate and of high intensity and continuity.^[4] The most common types of BPs are lying, temper tantrums, aggression, use of inappropriate words, theft, insolence, and rivalry between siblings.^[5] The incidence of BPs among 3- to 5-year-old children is 14%–52% in advanced countries^[6]; this rate is 20.30% in Iran.^[7] Timely intervention results in a reduction in the treatment cost of such disorders.^[8,9] Play therapy is an example

of effective clinical intervention; play therapy can be mentioned and toys have always been considered as intervention tools by therapists. Dolls are among the toys used by therapists,^[10] which are valuable tools in education. Storytelling is another effective way of preventing and treating children's problems.^[11] Stories are among the education tools used by humans; hence, kindergarten educators can use this tool to establish suitable behaviors among children.^[12] To *et al.* showed that holding a live puppet show, in addition to having a positive impact on students' behavior, also led to a change in attitudes among their families.^[13] However, Rahil and Teglassi showed that using stories changed children's cognitive abilities, but no changes were observed in their behavior.^[14]

In addition, in a study by Braga *et al.* on an intervention using children's stories, it was found that group storytelling could be a beneficial tool for performing nursing measures and improving mental health

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among children.^[15] Moreover, a study by Homaei *et al.*, with the aim of determining the effects of storytelling on children's adaptability, indicated that there was a significant difference between the adaptive behaviors' scores of the children in the experimental and control groups.^[12]

Therefore, considering the role of the pediatric nurse, which is child care in all existential aspects,^[16] the importance of children's BPs, and the limited number of studies on this topic, this research was conducted with the aim to investigate the effectiveness of the puppet show and storytelling on preschool children's behavioral problems (PCBPs). Contrary to previous studies which have separately studied the effectiveness of these two methods on BP, the purpose of this study was to introduce the best choice for the individuals involved in the field of child education through comparing the two methods of puppet show and storytelling.

Materials and Method

This quasi-experimental study was conducted on three groups, in three stages, and using pretest–posttest study design in 2014. The study population included children age 3–5 years selected from kindergartens in Isfahan, Iran. Using random cluster sampling, three kindergartens were selected from among kindergartens of 14 regions of Isfahan. The names of three kindergartens were written on three cards, and then, the cards were placed in a box. Each time a card was randomly taken out of the box to identify the location of one of the groups, and thus, a kindergarten was selected for each of the puppet show, storytelling, and control groups. The number of subjects was determined according to similar studies, in which $Z_{1-\alpha/2}$, $Z_{1-\beta/2}$, and d were 1.96, 0.84, and 0.8 s, respectively. Each group included 25 individuals; a total of 75 individuals were included in three groups. Sampling was performed using convenience sampling method among the subjects in the selected kindergartens.

The subjects were not physically disabled, did not use any special medication, and were not undergoing a similar program. Shahim Preschool Children Behavior Problem Questionnaire (SPCBPQ) was used for data collection. This questionnaire consists of 27 items which examine the areas of aggression, inattention, withdrawal, and anxiety. The items are scored based on a 3-point scale ranging from 0 to 2 (*never, sometimes, and most often*). Higher scores in the questionnaire represent the higher possibility of suffering from BP. Therefore, in this study, scores of 39–42 in SPCBPQ have been considered to represent BPs. The reliability coefficient of the questionnaire was significant at 0.64, and Cronbach's alpha coefficient was 0.89, 0.80, and 0.70 for the three factors of aggression, inattention, and childish behavior, and withdrawal and anxiety, respectively. The correlation between the items and the total score of each factor was also significant in all cases.^[17]

After obtaining consent from the children's family, three kindergarten coaches were asked to introduce the children who had the highest scores in SPCBPQ for research. The individuals who gained the highest score from the questionnaire were divided into two test groups of puppet show and storytelling and one control group. For the puppet show test group, musical puppet shows were performed by an art group and the researcher in seven 1-h sessions. Moreover, for the storytelling test group, seven 1-h sessions of storytelling using paintings were held weekly by the researcher. Stories and plays were selected from the collection of stories of the Institute for the Intellectual Development of Children and Young Adults, including seven stories on reprehension of lies, aggression, inattention, withdrawal, and bad temper, and also on discipline, social behavior, and etiquette. Two glow puppets called *MiMi* and *ZiZi* were used to play the puppet shows. Each session, the two puppets performed a story in disapproval of the above-mentioned BPs in a musical way along with question-and-answer with the children present at the session. In the end, with the participation of the children, a conclusion was drawn from the show. In the storytelling group, the researcher used the same stories as the puppet show and performed storytelling with the help of the children present. Then, at the end of the story, the researcher exchanged views with the children and asked them to show what they had understood from the story as a drawing.

For the children in the control group, a storytelling computer program was performed by coaches at the same hour and the same day in which the intervention was conducted for the test groups. Immediately after the intervention and 1 month after its completion, the related questionnaire was completed by the researcher for the subjects and the control group with the help of kindergarten coaches, and the effect of the intervention was measured. At the end of each session, using the question-and-answer process, the children were asked to express their comments and questions about the story. In total, the sampling and completion of the questionnaires lasted 3 months. Data were analyzed using one-way analysis of variance (ANOVA) and repeated measures ANOVA in SPSS software (version 16; SPSS Inc., Chicago, IL, USA).

Ethical consideration

This study was approved by the Ethical Committee of Isfahan University of Medical Sciences, with ethical code IR.MUI.REC.1393.3.240. All the subjects were able to accept or reject participation in the study. The purpose of the study was explained to the officials, staff, and the mothers of the children. In addition, permission was obtained from them to conduct the study. Moreover, in the use of resources, the principles of trust and ethical considerations were respected.

Results

Based on the results of statistical tests, there were no significant differences in the variables of age, occupation of fathers and mothers, and the level of education of fathers and mothers between the two experimental groups and the control group. The groups were statistically similar in the mentioned cases. The mean and standard deviation of the age of children were 4.20 (0.80), 4.10 (0.80), and 4 (0.80) in the puppet show, storytelling, and control groups, respectively. In addition, most of the mothers were housewives (52%) and had a bachelor's degree (44%), and most of the fathers were employees (61%) and had a bachelor's degree (47%). One-way ANOVA test showed that the mean age of children was not significantly different in the three groups ($p = 0.580$). Furthermore, analysis of repeated measures ANOVA indicated that the mean score of BPs of children in the puppet show was not the same in the three times. The mean variation in the puppet show and storytelling groups was significantly higher than the control group immediately and 1 month after the intervention ($p < 0.001$); variations in the puppet show group were significantly higher than the storytelling group immediately ($p < 0.001$) and 1 month after the intervention ($p < 0.001$) [Table 1].

Moreover, the results of data analysis using one-way and repeated measures ANOVA in the three main areas of SPCBPQ showed that the mean score of aggression in the initial test was 2.27, which dropped to 1.76 after seven sessions of puppet show and storytelling, and again reduced to 1.73 through repeating the test. The results showed the effectiveness of the puppet show and storytelling on the reduction of the rate of aggression ($p < 0.001$).

Furthermore, regarding the investigation of the factor of inattention and childish behavior in the three groups, the mean score in the initial test was 1.72, which was the same after seven sessions of the puppet show and storytelling, and increased to 1.74 in the repeated test. This indicates the ineffectiveness of the puppet show and storytelling on the inattention and childish behavior of the children in the test groups ($p = 0.800$).

In addition, the result of the analysis of the withdrawal and anxiety factor showed that the mean score of the groups in this factor was 2.41 in the initial test, which dropped to 1.59 after seven sessions of puppet show and storytelling, and again reduced to 1.58 through repeating the test. The

obtained results indicate the effectiveness of the puppet show and storytelling on reducing the rate of withdrawal and anxiety in the studied children ($p < 0.001$).

Discussion

The results of this study showed a significant difference in BP in experimental and control groups after seven sessions of intervention and after the 1 month follow-up period. In this study, new techniques, such as play therapy, were used to improve PCBP, rather than the usual methods of education. It seems that the use of this technique has engaged the child's imagination; hence, the training has occurred unconsciously. Therefore, the expected behaviors begin to develop in the child. The results of this study showed that the scores of children in the puppet show group were significantly different compared to the storytelling group, and the behaviors favored by the community were more pronounced in this group. The above results may be due to the identification of children with the characters of the show and expression of correct behaviors by the puppets in a childish language.

The results of this study are consistent with the findings of the studies by To *et al.*^[13] and Hashemi *et al.*,^[18] which indicated the efficacy of art therapy and puppet show on the reduction of the BPs of children age 3–5 years. In addition, the results of this study are in line with those of the studies by Braga *et al.*,^[15] Nasirzadeh and Roshan,^[8] and Homaei *et al.*,^[12] which examined the effectiveness of storytelling on PCBP among children age 3–5 years.

In a study by To *et al.*,^[13] puppet show led to a change in the knowledge and attitudes of students and their families. Furthermore, in the research by Hashemi *et al.*,^[18] puppet show reduced aggression among mentally retarded educable girl students. In the research by Braga *et al.*,^[15] storytelling was a good tool for performing nursing measures and improving the mental health of children. Moreover, Nasirzadeh and Roshan^[8] and Homaei *et al.*^[12] have considered storytelling as effective in reducing aggression and increasing the compatibility of children.

Furthermore, the results of the research by Rahil and Teglasi showed a significant difference in the actions taken in the cognitive process; however, there were no significant differences in behavioral responses, and the level of recognition in the story group was higher than the trained group.^[14] These findings are in contrast to the findings of this study. To explain this contradiction,

Table 1: Comparison of mean score of variation of children's behavioral problems

Variation score	Mean (SD)			One-way ANOVA		
	Storytelling group	Puppet show group	Control group	F	df	p
Immediately before the intervention	21.30 (4.90)	24.60 (5.10)	1.00 (2.10)	222.50	2,00	<0.001
One month after the intervention	19.60 (5.10)	26.50 (5.10)	0.20 (2.60)	235.50	2,00	>0.001

ANOVA: Analysis of variance; SD: Standard deviation; df: degree of freedom

it can be said that the two studies differ in terms of the age group of the subjects and the number of subjects of the research community. Moreover, in the study by Rahil, the impact of story-based processes and outcomes and social-oriented programs on children with emotional disability was examined; however, puppet shows were not used to improve children's behavior. Regarding the results of this study and previous researches, the use of innovative, attractive, and artistic methods can be suggested to nurses to improve PCBP.

In addition, considering the areas of SPCBPQ, the results obtained on the inattention and childish behavior factors, and the ineffectiveness of the puppet show and storytelling on the scores obtained by children in the above areas, it can be said that this ineffectiveness may be the result of the lack of attractiveness of the story used to disapprove inattention and childish behaviors. These results illustrate the need for more actions and the use of methods with a greater diversity to increase focus and teach behaviors suitable for children with BPs.

The limitation of this study was the parents' desire for their children's participation in extracurricular classes rather than this study, which can be effective on the outcome of the study. In this regard, the benefits of the study were explained to them, and the families assisted in the implementation of the research; in addition, the parents were actively involved in the research. The times of the extracurricular classes were also changed through coordination with the officials.

Conclusion

In this research, the researchers tried to eliminate the typical techniques of behavior training existing in kindergartens and establish community-approved behaviors among children using a new manner and expression. Children's passion for dolls and stories and active participation of children in storytelling and puppet shows have increased their attention. Hence, the conditions for experiential learning and establishment of training in the natural environment were provided in the best way possible. In this study, the training provided during storytelling and puppet shows and the participation of children in the processes through role-play and question-and-answers improved their behaviors.

In the puppet show, the children accepted the dolls as if they were alive and had discussions with them through question-and-answer. In addition, in the storytelling group after the story got finished, the children began to retell and analyze it. According to the results, the puppet show method was more successful than the storytelling method in PCBP improvement and can be used in kindergartens to improve children's behaviors. Given that the method, tool, format, and structure of the stories of the research are different from those of the above studies, it can be

concluded that puppet show and storytelling methods are suitable replacements for drug therapy in improving PCBP.

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Conflicts of interest

Nothing to declare.

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