The Effectiveness of Storytelling on Separation Anxiety in Hospitalized Children with Chronic Diseases

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ABSTRACT
Background and Objectives: Anxiety is a psychological construct that is prevalent in children’s behaviors and predicts their maladaptive behaviors. If anxiety cannot be well managed or treated, it can cause irreparable problems. Hospitalization in children is one of the critical issues for creating separation anxiety. This study aimed to investigate the effectiveness of storytelling on separation anxiety in four to seven-year-old children hospitalized in Ahvaz Shaфа and Golestan hospitals due to the chronic diseases.

Materials and methods: In this clinical trial study, on the basis of Spence’s Preschool Anxiety Scale and using a random sampling, 40 hospitalized children with chronic diseases were selected. After the completion of the questionnaire by the mothers of both groups, the samples were randomly divided into two groups (equally 20 people in each group). In the intervention groups, storytelling was done in four sessions, each session lasting at least 20 minutes (on separate days) and in the control group, only routine conversations were done. At the end of the four sessions, a questionnaire was completed by four mothers in both groups. A month later, also the questionnaire was completed by the mothers in the intervention group.

Results: The results showed a significant statistical difference in anxiety between the two groups after the intervention; furthermore, storytelling decreased significantly anxiety in the children in the experimental group compared with children who have not received the four sessions.

Conclusion: Storytelling could decrease separation anxiety in four to seven-year-old children admitted to hospital.

Key words: Child, Chronic, Hospitalized, Separation anxiety, Storytelling


INTRODUCTION

Childhood is especially important in human life. A child as a human has physical, mental and social needs in the physical and spiritual dimensions. These needs are naturally verified and satisfied at a level consistent with the age and efforts of the child and his or her family. But any disturbance and disease endanger the patient health, resulting in an unstable and abnormal condition. The situation is followed by failure to satisfy the needs of the child [1].

One of these cases is when the child is hospitalized due to the disease. Hospitalizations for children are a crisis in terms of compatibility with the new environment, especially when there is not only the health, but also they are exposed to deal with the unknown and risk factors.

Hospitalization of the child at the hospital causes of separation-induced anxiety, grief, fear of the new environment, fear of the inability and fear of continuing life [2]. Often disease and hospitalization are the first crisis that the child is faced with [1].

In fact, anxiety is an unpleasant emotion that all people occasionally suffer from it, and can affect the psychological, cognitive and emotional states of people, particularly patients with chronic problems, can cause undesirable changes in the physiological states of the body as well, including weakening the immune response, reducing the power of the heal sores, insomnia, depression, intense anger and extreme sensitivity [3].

About 30% of children are hospitalized at least once in childhood and close to 5%, are frequent hospitalized [4]. So, the children’s physical and psychological needs must be of great importance, because the continuation of the
growth and evolution during the disease will prevent the constant and irreversible physical and mental effects of children [5].

Regardless of the particular disease, hospitalization of children in an unfamiliar environment faces them with scary interventions, body pain and discomfort [6]. Causes creating stress during hospitalization of children are: Separation from children’s parents and those who have loved, fear of the unknown, lack of control and autonomy, bodily injury leading to discomfort, pain and fear of death. Children’s reactions to the crisis are affected by various factors, including developmental age, previous experiences (illness, divorce or hospitalization), adaptive innate and adaptive skills, intensity and seriousness of the disease and the available support systems [7].

Among psychological treatments, there are enough research evidence based on the effectiveness of behavioral and cognitive-behavioral interventions for reducing the anxiety and fear [8].

Some of the methods that can be used include music therapy, play therapy, therapeutic story and so on. Storytelling therapy is one of the children’s psychotherapy methods. One of a variety of storytelling therapy techniques is storytelling, which can be one of the effective methods in reducing the anxiety arising from the hospitalization in children.

Storytelling is the art in the form of poetry or prose in which storyteller plays it live for the listener. The stories that can be told, it can be in the form of dialogue, song with or without vocal music, with pictures and other tools [9]. One of the known researchers who have valuable research in the field is Erickson MH. On his opinion, the tale is a healing integration that causes a reduction in anxiety of the child, and by matching with personalities or situations of a tale the children are discovering their emotions and others [10].

From the distant past, The story is considered as an important tool for modification of a behavior [11] and the use of story and narrative for the training and to recognize the truth, The correct manner of life, morals and methods of achieving perfection and success dates back to the human history, so that one of the most important approaches the Holy Book of the Quran and the Bible to teach the correct practices, detection of facts is the use of metaphors, narratives and tales of different peoples and ethnic groups [12]. In the Holy Quran, in several verses, including Surah Al- ‘Imran (These are the verses of Allah. We recite them to you, [O Muhammad], in truth; and Allah wants no injustice to the world.), and in Surahs of Kahf, Al-a’raf, and hood through telling past stories to steer and modifying human behavior [11].

According to Crawford, fundamental values in the use of metaphors, stories, and narratives in psychotherapy included: plan out important points, providing solutions to problems, helping people to identify themselves, developing the ideas and increasing the motivation, the therapeutic relationship management, consolidation of guidelines, reducing resistance, frame working and re-structuring the problems, rebuilding the model, modeling of a way of communication, reminding the capabilities of people and desensitization of people’s fear [12].

Anxiety

Anxiety is an unpleasant and vague emotional state that is accompanied by fear and pressure and discomfort and one or more physical sensations such as palpitations, sweating, headache, and malaise, or can appear with emotional, behavioral mode, mental, psychological or inner [13]. Psychoanalysts believed that an original factor for anxiety among children is separation from the mother and the emotional trauma from separation are the source of a lot of anxieties that stays in the existence of the people [14].

Of the symptoms of anxiety, we can point out symptoms such as the feeling of fatigue, nervousness and restlessness, fear and worry, insomnia or Sleeping difficulty, heart palpitations, irregular and quick breathing, sweating, headache and dizziness, difficulty with concentration and memory, tremor or and muscle twitching and frequent urination. Children's reaction against the anxiety depends on several factors: the ability to overcome anxiety among the children, the intensity of the anxiety factor, and the amount of support from family, friends and the community. The duration and amount of anxiety, it also plays an important role in how the children’s reactions [13].

Among the anxiety disorders that occur mainly in childhood, is the Separation Anxiety disorder (SAD). Children with this disorder, in the absence of the people whose they are very dependent on (usually the mother) or in non-familiar places, will suffer the intense anxiety or even panic.

Separation Anxiety disorder (SAD)

Anxiety disorder that occurs predominantly in childhood is Separation Anxiety disorder (SAD). Children with this disorder experience severe anxiety or even panic in the absence of people supporting them (usually the mother) or in non-familiar places. The main feature of SAD is anxiety and severe fear of separation from the home or those with whom the child is attached. This anxiety is inappropriate for the child’s expected age and growth. SAD is thought to be a natural developmental phenomenon from about seven months to six years of age. The main feature of this disorder is revealed through recurrent distress in the event of a prediction or occurrence of separation, avoidance of social situations, and disturbance in important areas of performance. Early cognitive disturbances that are not separated from distressed children are apparent in an intense fear of being sepa-
rated from the family and relatives due to an accident or disaster. For example, children with SAD often fear that their parents will be harmed by accident, attack, and rape or other catastrophes, or they may be lost or stolen, and therefore they will never be able to see their parents. Often in young children, SAD is reported as a nightmare, whose main characteristic is separation from the parent. Children with SAD show a wide range of similar avoidance behaviors [14].

Some studies have been carried out about the effect of the story therapy on anxiety reduction in Iran, including the study of Ajorloo et al. [15], Momeni et al. [16], Youssefpour et al. [17], Prasko et al. [18] study revealed that story therapy decreases the frustration and anxiety in patients; on the other hand, the preschool and primary school children can imagine and comprehend the concepts of hope and frustration in the story.

In terms of the appropriate age group for therapeutic story, the studies suggest that both adults and children can benefit from therapeutic story method; however, children due to certain circumstances in terms of cognitive abilities, proximity and closeness to the interpersonal events in everyday life and being immersed in sensory and objective aspects of the experiences can use more this. The therapeutic approach [19]. On the same basis, the aim of the present study was to use the storytelling to reduce separation anxiety in children with chronic diseases admitted to the hospital.

METHODS

Population, sample and sampling method

In this clinical trial study (registration code: IRCT2011091775721N1), the researcher has investigated the effectiveness of storytelling on anxiety of children admitted to hospital. It is assumed that storytelling reduces the separation anxiety in child admitted to hospital and the results stay nearly constant until a later month. In this study, the dependent variable is separation anxiety, and the independent variable is storytelling that was done by the researcher for preschool children admitted to the hospital.

In this study, the research population included all children 7-4 years admitted in Ahvaz Golestan and Shafa hospitals due to chronic disease and were anxiety based on Spence's preschool scale. Regarding the non-evaluation of the duration of the chronic disease, it can be said that all cases were either hematological or nephrological, who were frequently admitted and none of the patients were hospitalized for the first or second time.

In this study for calculation of the samples, based on the general formula of the sample estimation and the pilot carried out, a maximum of 40 patients in two groups of 20 were considered. The population of the study was already piloted and the number was determined by the sample size formula.

The children, who were included in the study, were patients hospitalized in the Hematology ward of Shafa hospital, and children's internal and angiography wards in Ahvaz Golestan Hospital.

Data gathering methods

In this study, the data were collected through completing the demographic profile form and Spence preschool anxiety scale (PAS) (Parental form) by mothers. Based on a test of Spence preschool anxiety scale (PAS) the children participated in the study, had an anxiety score higher than the average. They were eligible for enrollment in the study and had inclusion criteria, including age range between 4-7 years; after at least 24 hours of hospitalization; an introduction to Persian language; the lack of impairment of consciousness; the child’s senses and perceptions; the lack of implementation of a specific medical procedure during the intervention to the patient (e.g. dialysis); being relative rest of the children; forecasting at least five days in the continuous presence of the child in the ward; and the tendency toward cooperation with researcher by the parent and child as well as the lack of clearance before the intervention. These criteria play an effective and important in replication of the group. So, certainly patients were selected for participating in the study, who were without severe disease symptoms and admitted in order to diagnose, treat, or follow-up of their chronic condition; therefore, all of the examples, both in the intervention group or the control group, were selected from the ages of preschool children admitted in the children's internal wards. On the other hand, due to the nature of the research, the need for several days of the continuous child hospitalization for at least four storytelling sessions in the group that generally, it created a kind of replication among the samples, but no particular chronic disease was considered in this research and also the sample allocation has been completely randomized, as well.

One of the questionnaires has been produced in the children's anxiety, is Spence children anxiety scale (parent form), which in a study by Bassak-Nejad et al., psychometric characteristics of the questionnaire have been revised for the Iranian society [20]. Therefore, the researcher has used the hedged portion of the scale (separation anxiety subscale). The new scale was given to the 10 faculty members of the University and was used after verification. After conducting a pilot, the Cronbach’s alpha coefficient for separation anxiety in the scale was calculated as 0.715.

In this clinical trial study, after obtaining permission from the relevant authorities and patients (parents), using random sampling method and based on the characteristics of the unit, was conducted on all children 4-7
years, who were admitted in Ahvaz Golestan and Shafa hospitals due to chronic disease. At first, five patients in two groups of 10 were selected as experimental and control groups. Then, a storytelling intervention was done for them and the results were analyzed statistically.

According to the general formula of the sample size calculation, maximum sample size was determined to be 40 patients that for a better conclusion, the maximum sample size was allocated. So the number of 40 patients eligible for entry into the pilot study was selected and the subjects were divided randomly into two groups of 20 people (the intervention and control groups). Before the start of the intervention, in order to participate in the study, consent form was given to patients’ mothers and how to do the work was explained to them. Then, at the beginning of the work, demographic information form and Spence children anxiety scale (parent form) were completed by mothers in both groups. In the intervention group, storytelling was done in a four-session, at least 20 minutes for each session (on separate days) and in the control group, the storytelling intervention was not done and only salutation and typical edition was done. Of course, simultaneously they were with the intervention group in confinement.

The storytelling program was done so that the story was told for children using a book or without it and then talk with the child about the story, and based on his or her age and relative knowledge, questions were raised. At the end, the opportunity was given to the child to play a role or express his or her opinion and comments; so, the child’s comments were heard patiently by the storytelling nurse and then nurse handsomely approved or modified them. It should be noted that the storytelling was done in the hours of the day when that the baby was comfortable and was not during the meet or rest hours and the end night shift. As well as the storytelling was done in a location that the baby was comfortable and was not during the meeting of health personnel. In this study, stories and tales that contained topics regarding health and safety issues of children were used. Books were also standard for children, and all were about nutrition and health topics.

For example, books such as: Ghegheli did not eat his breakfast because he has been sick and stayed at home; Dani and small Sparrow; everyone has a job, and so on. At the end of four sessions, the questionnaire was completed by both groups of mothers. And about a month later also the questionnaire was completed again by mothers in the intervention group. In the end, the results of the collected questionnaire were compared in order to compare the average score of it in the experimental and control groups, and then analyzed statistically.

In this study, data were analyzed by SPSS 20. In addition, we used the descriptive statistics methods such as frequency tables, percentage, mean, standard deviation and linear chart to determine of the trend of changes resulting from the intervention, and inferential statistics methods, including the independent t-test for the difference between the intervention and control groups, the intra group variance with repeated measurements for investigating the difference between the mean of the experimental group at the end of the intervention and a month later.

**RESULTS**

The findings obtained from this study show the positive impact of storytelling on separation anxiety of patients in the intervention group compared with the control, and shows that the storytelling has been able to decrease the separation anxiety in children four to seven years old admitted to hospital.

In terms of demographic characteristics (Table 1) two studied groups in terms of age were homogeneous, and no significant differences existed between the two (p=0.92), while the mean age in both groups was about four and a half years and both groups were homogeneous. The study group as well as two homogeneous in terms of gender, and the difference is significant between the two groups (p=0.525) and prevalence of male gender was high between the two groups.

| Table 1: Comparison of the frequency and frequency percentage distribution in terms of gender and age of studied units among the two intervention and control groups |
|-----------------|----------------|----------------|----------------|
| Frequency distribution | Intervention group | Control group | Total |
| **Age** |  |  |  |
| (4-5) | frequency 4 | 5 | 9 |
| percentage 20.00% | 25.00% | 22.50% |
| (5-6) | frequency 5 | 10 | 15 |
| percentage 25.00% | 25.00% | 25.00% |
| (6-7) | frequency 11 | 21 | 32 |
| percentage 55.00% | 50.00% | 52.50% |
| **Gender** |  |  |  |
| Female | frequency 10 | 8 | 18 |
| percentage 50.00% | 40.00% | 45.00% |
| Male | frequency 10 | 12 | 22 |
| percentage 50.00% | 60.00% | 55.00% |

In terms of anxiety (Table 2) there was a significant difference between separation anxiety scores of patients in the intervention group, before and after the intervention (P<0.001). But there was no significant difference between separation anxiety scores of the patients in the control group before and after the intervention (P=0.541).

The findings also show that there was a significant difference between separation anxiety scores of patients in the two groups, before the intervention (P=0.016), while there was a significant difference between separation
anxiety scores of patients in in the two groups, after the intervention (P<0.067).

Therefore, due to the lack of homogeneity of the separation anxiety levels of samples between the two groups at baseline, the mean difference scores of separation anxiety of patients were counted and shown in Table 3 and represent that this difference between the two groups has been significant (p<0.001).

Table 2: Comparison between the average scores of separation anxiety of patients before and after the intervention among the studied group

<table>
<thead>
<tr>
<th>The study groups</th>
<th>Intervention</th>
<th>Control</th>
<th>The mean difference</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation anxiety</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Before</td>
<td>2.628</td>
<td>9.8</td>
<td>1.41</td>
<td>8.1</td>
</tr>
<tr>
<td>After</td>
<td>1.804</td>
<td>7.1</td>
<td>1.124</td>
<td>8</td>
</tr>
<tr>
<td>P-value</td>
<td>p&lt;0.001</td>
<td>0.541</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Comparison between the difference the average scores of separation anxiety of patients before and after the intervention in the group studied

<table>
<thead>
<tr>
<th>Group / Anxiety</th>
<th>Intervention</th>
<th>Control</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation anxiety</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Difference between before and after</td>
<td>1.66</td>
<td>2.7</td>
<td>0.718</td>
</tr>
</tbody>
</table>

In connection with being the same as the amount of separation anxiety after the same amount of storytelling and a month after it in the intervention group (Table 4) the results show that There was a significant difference between the mean separation anxiety scores of patients in the intervention group before and after the intervention and one month later (P<0.001).

Table 4: Comparison between mean scores of separation anxiety in patients in the intervention group before and after intervention and one month later

<table>
<thead>
<tr>
<th>Intervention group</th>
<th>Number</th>
<th>Mean</th>
<th>SD</th>
<th>Degrees of freedom</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before intervention</td>
<td>20</td>
<td>9.8</td>
<td>2.62</td>
<td>9</td>
<td>0.001</td>
</tr>
<tr>
<td>After intervention</td>
<td>20</td>
<td>7.1</td>
<td>1.8</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

DISCUSSION AND CONCLUSION

Preschool age has special sensitivity and work with this age group requires the understanding of the stages of growth and development of the child. The use of storytelling therapy as a medical technology just cannot be led to treat the psychological problems of children, but it is assumed that the change in language and literature of tales of the life creates new opportunities for behavior and relationships with others, and this is very important, because when the child is hospitalized, can be faced with high anxiety. In this study, the distribution of frequency and age percentage of the patients in the study groups indicates that these two groups are homogeneous (p=92/0) and the highest age group in this study were children six-seven years (52.5%). The mean age of those participants in research was 5.7 years, as well as in both groups, higher percentage (55%) was male and less percentage (45%) was female. In the study by Hudson et al, often anxious children were male; so, in this respect, that study was consistent with the present study [21].

In Yousefpour et al. study, on the story telling’s effect in the leukemia patients in the Tabriz hospital; the boy gender percentage was more, which is consistent with the current study [17]. Generally, it has been proven that the young boys have higher sensitivity against stresses caused by hospitalization than the young girls [7].

In Mohammadi et al. study, on the hospitalized children’ anxiety in the Ardabil hospital, the girl gender percentage was more [22].

The results of this study expressed that there was not a significant difference between the average scores of separation anxiety of patients in the control group before and after the intervention (P=0.541), but there was a significant difference between the average scores of separation anxiety of patients in the intervention group before and after the intervention (P<0.001). In addition, there was a significant difference between the average scores of separation anxiety of patients in the two groups before and after the intervention (P<0.001); however, the results of the average differences of two groups confirm that the difference between the average scores of separation anxiety of patients before and after intervention showed that there have been significant differences between the two groups in favor of the intervention group (p<0.001). So storytelling can reduce separation anxiety of children admitted to the hospital.

The largest children’s stress during hospitalization is separation anxiety that in babies can be accompanied by symptoms such as anorexia, sleep disorders, crying softly, teasing other kids and the lack of interest to collaborate in caring themselves. Nurses must be sensitive to the occurrence of symptoms of separation anxiety and do by the appropriate interventions [7].

In this regard, a study by Toyserkani that was a single case study for investigating the effect of storytelling techniques in the decrease of behavioral problems of eight-year children also showed that storytelling can be one of the effective strategies in reducing children’s behavioral problems [23]. Also Rhodes et al. examined the impact of storytelling therapy in the recovery from anorexia nervosa in children and they believed that the use of storytelling therapy is effective as one of a variety of methods of family therapy to improve children’s anorexia nervosa [24]. A study by Gagalis-Hoffman, about the effect of family stories among the members of a family also showed that storytelling by parents can play a positive role in changing the overall view of children.
about the beliefs of parents, increased intimacy of family members and reduce anxiety in children. The results of this study are consistent with the study [25]. The results of the study indicate that there was not a significant relationship between the mean scores of separation anxiety in the patients before and after the intervention in the intervention group (P=0.541), which is consistent with Yousefpour et al. study [17]. In this study, since the control group has not received the story telling, their pain and behavioral disorder rate has not been controlled compared with before intervention (P<0.001); this is while in the Yousefpour et al. study [17], the intervention group by receiving the story; in addition, according to the results of Ajourloo et al. study [15] on the story therapy's effect in the amount of health anxiety in children with cancer, who have been treated, the amount of anxiety and sleep habits in the intervention group has been improved than the control group.

It should be noted that according to the results, the average scores of the sample separation anxiety after the intervention and a month later in the intervention group were stable and there was a significant difference between the average scores of separation anxiety of patients before and after the intervention and one month later (P<0.001). Therefore, the amount of separation anxiety after the storytelling and a month later had been the same in the intervention group and this stability indicates that the results of the intervention of storytelling therapy on separation anxiety of child admitted at the hospital also remained constant nearly a month after the intervention.

In explaining the above results it can be stated that when an adult is hospitalized his or her normal life and everyday activities is also disturbed, but when his or her health is retrieved, he or she is capable of resuming his or her normal life and daily activities would be naturally continued. While children do not have a state and the growing child cannot stop the process of his or her normal life and development. When the child is in the hospital, the task of hospital staff is that in addition to restore the health of the child, pay attention to his or her needs and natural growth [26].

In this regard, in recent years, storytelling therapy as one of the techniques of Psychotherapy-Psychodynamics, has obtained a certain place and numerous researchers pointed out on the effectiveness of storytelling for various groups of patients with mental disorders and increasing self-consciousness, and especially anxiety reduction and Increase the feeling of competence of children, and so on. Through tales usually children correct distortions and false impressions of their abilities and are ready with an active reaction in completing and creating the story and experience a positive impression of their features. In fact, working on the story increases self-confidence, self-esteem and decreases anxiety in children. However, the effectiveness of storytelling on child’s preschool age anxiety admitted in hospital was proven after four storytelling sessions, but according to no so much history of the use of storytelling in treatment, no doubt, a better evaluation of the effect and obtaining more efficient storytelling ways requires more research particularly on children and on the headboard.

In total, it can be concluded that if the storytelling method is used in order to reduce the anxiety of the hospitalized children with chronic diseases, the method can be used as an optimal and safe method. While the reduction of anxiety with a positive impact on increased learning of the child makes the tutorials given on current diseases and other health issues more effectively; in addition, it decreases visit (s), hospitalization and imposed costs to family and health centers.

The results of this study can be used in order to prevent permanent and irreversible mental effects caused by multiple hospitalizations of children with chronic diseases, prevention of perceptual alteration and association in the child, helping the care training program during hospitalization, gratification of mental, emotional and evolutional needs of the child in the hospital and help to continue the treatment. Similarly, this method can exhibit more prominently the nurse’s role as one of the most effective members of the treatment team in reducing the anxiety of the admitted children. On the other hand, since reduce anxiety can be challenging to the child’s family and other hospitalized children, also the final elevation of the level of collaboration and increase in the child’s learning coefficient during the hospitalization period, reduces the health and medical costs of family and helps more promotion of the community health level.

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CONFLICT OF INTEREST

All authors declare that there is no conflict of interest.

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