The effect of avoiding cognitive errors through narrative therapy on depression and dysfunctional attitude of elementary girl students

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Abstract
The purpose of the present study is to investigate the effect of cognitive errors avoidance teaching through narrative therapy on depression and dysfunctional attitude of elementary girl students. This project was an experimental study with pretest-posttest-follow up (1 month) design. To measure depression and dysfunctional attitude, Depression Self-Rating Scale (DSRS) was used and to evaluate dysfunctional attitude of the students, DAS-C and clinical interview was employed. The statistical sample of the study included 36 fourth and fifth grade elementary girl students of Shiraz with depression. The participants were randomly assigned into three groups of experimental (12 people), placebo (12 people) and control (12 people). The experimental group was exposed to narrative therapy during 6 weeks, twice a week; the placebo group was exposed to the implementation of asset of selective stories (without the content of cognitive errors avoidance teaching) for 6 weeks, twice a week and the control group was received no treatment. To analyze the obtained data, co-variance analysis method was used, indicating a significance difference between mean depressions in the three groups in posttest stage. However, this difference was not significant in follow-up stage. Moreover, there was a significant difference between dysfunctional attitude mean in the three groups in post test stage; such a difference was significant in follow-up stage as well. Accordingly, using narrative therapy was found to be effective to decrease depression and dysfunctional attitude of the students.

Keywords: Cognitive error avoidance teaching, Narrative therapy, Depression, Dysfunctional attitude

Background
Depression is one of the most common problems of childhood. In America, the amount of depression prevalence has been estimated about 2-4% and 4-8.3% in children in adolescents, respectively. According to previously reported studies, depression onset occurs earlier compared to the last decades. Also, it has been revealed that in children, depression may predict a more intense disease in adulthood (Weissman, 1999; cited in Rajabi, 2003).

Willingness to depression begins from the early childhood. Beck believes that children, just like depressed ones, have a general and absolutism thinking and these thinking manners are continued till adulthood sometimes; particularly, often these thinking ways have primary and simplistic schemas (Beck et al., 1979; cited in Firouzbakht, 2008).

Based on the studies performed on depressed children and adolescents selected from clinical samples and population samples, compared to psychometric groups with non-emotional disorders and normal groups, cognitive distortions, negative documents, disappointment, willingness to believing in external uncontrollable factors and social skill deficit are more seen in this group (Asaynow & Bates, 1988; Graber & Hilsman, 1993; Glad-
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Further, reviewing previous works conducted on cognitive distortion shows that these cognitive distortions are observed in all the stages of information processing in depressed children.

Story telling-based therapy approaches cause the stimulation of mind and self-discovery activity in children. These approaches can arouse insight and change behavior. Such a therapy can also provide a model to cope with child’s resistance, learning new concepts and a behavioral pattern (Zipes, 1995; Divinyi, 1995).

Since depression is the most common psychological disorder in childhood and adolescence and narrative therapy is a sensitive tool to understand children’s’ thoughts, identify their attitudes, help them to better understand surrounding world and create ability in children to cope with those feelings, thoughts and behaviors about which they cannot directly speak to consultant, and given to flexibility and cognitive therapy enrichment, combining storytelling and a cognitive method can be effective in children’s psychotherapy.

Depression and dysfunctional attitude is characterized by self-devaluation, the innovative moments would be all the instances in which the client values him or herself as person (Ribeiro, Gonçalves, Silva, Brás and Sousa, 2015). The statistical analyses provide substantive statistical support for the primary hypotheses posed in this study and the treatment effectiveness of a Narrative Therapy approach for depression and dysfunctional attitude by new findings of real importance for the psychotherapy treatment literature. Some Scientists researched identifying key narrative process variables that might provide an indepth understanding of how Narrative Therapy effects significant positive change in clients (Lopes, Gonçalves, Fassnacht, Machado & Sousa, 2014). They pointed out meaning-making and enriched story reconstruction (eg landscape of action and consciousness) with narrative process (eg Narrative Process Model and Coding System) and therapeutic alliance research findings to articulate an original conceptualization of narrative process change that they termed “narrative reflexivity a creative, inter-subjective and dialogical process, with interpersonal and intra-personal dimensions, through which individuals engage with theirselves and others that is discernable in individuals dialogues.”

Some studies (Gonçalves et al., 2012; Matos et al., 2009; Mendes et al.,2010, 2011) and case studies (Alves, Mendes, Gonçalves, & Neimeyer, 2012; Gonçalves et al., 2010, Mendes et al., 2010; Ribeiro, Bento, Salgado, Stiles & Gonçalves, 2011; Santos, Gonçalves & Matos, 2011; Santos, Gonçalves, Matos and Salvatore, 2009) have suggested that innovative moments in narrative therapy can be reliably identified (Gonçalves, Ribeiro, Mendes et al., 2011) and are associated with psychotherapeutic change across different models of therapy (Ribeiro et al., 2015). In research did by Seo, Kang, Lee and Chaen (2015) a total of 50 patients (experimental 24, control 26) participated and the experimental group completed eight sessions of the narrative therapy emotional approach programme. There were significant differences in hope, positive and negative emotions, and depression between the experimental and control group.

Therefore, the present study attempts to investigate that to what extent cognitive errors avoidance teaching through narrative therapy can decrease depression and dysfunctional attitudes in children. The purpose of the study is to investigate the effect of cognitive errors avoidance teaching through narrative therapy on depression and dysfunctional attitude of elementary girl students in three groups of pretest-posttest-follow up (1 month).

Methods
The present research was an experimental study with pretest-posttest-follow up (1 month) design using control and placebo groups. The statistical population of the study included all fifth-fourth elementary girl students of Shiraz schools during 2013-2014. To select the statistical sample, convenient sampling method was used. In this method, coordinating with an elementary girl school announced to be ready to participate in the study, all students of the fourth and fifth classes, ranging between 10 to 12 years old (215 people) were evaluated using DSRS and DAS-C inventories. The students diagnosed to have depression (52 people) were clinically interviewed. Finally, 36 people were randomly selected and after obtaining their parents’ permission, they were randomly assigned in a control group (12 people), an experimental group (12 people) and a placebo group (12 people). The experimental and placebo groups were also randomly assigned into three 4-people groups (totally 6 4-people groups). The inclusion criteria of the study were as follow:

1. Depression disorder symptoms belonging to depression disorder based on DSM-V principles. Diagnosis interview was performed based on diagnosis criteria of the fifth diagnosis and statistical guidance of mental disorder (American psychiatric association, 2013) for children’s depression disorder along with DSRS (Taghavi & Mazidi, 2005) to screen children.
2. The fifth and fourth grade of elementary girl school in Shiraz City
3. Lack of the history of brain problems, epilepsy attacks, sensory disability (including vision and auditory problems and like that) and physical and motor problems (genetic or chronic problems)
4. Lack of the history of treatment with cognitive method and lack of taking drug during the research period
5. Lack of comprehensive growth disorder, mental retardedness, behavioral disorder, and learning disorder

**Instrumentation**

**Depression Self-Rating Scale (DSRS):** This scale is one of the most valid self-rating scales including 18 Likert scale-based items (0 to 2) to measure average depression to intense depression in children and adolescents. For the first time, DSRS was proposed by Birleson (1981). In clinical groups, the capability of this scale to more identify depressed children and adolescents is indicated with cut-off score of 15 (Taghavi & Mazidi, 2005). The validity and reliability of this scale has been confirmed using test-retest, internal consistency and two-sectionalization (Taghavi & Mazidi, 2005). In this research, the validity of depression self-rating scale obtained based on correlation coefficient between the scores of depression self-rating and children’s depression scale (short-form) was computed 0.72, 0.61 and 0.79 for all the subjects, female subjects and male subjects. Using test-retest method (with 4 weeks interval), the reliability of this scale was computed 0.74, 0.75 and 0.72 for all the subjects, female subjects and male subjects, respectively. Using Cronbach’s alpha, the internal reliability of the scale was computed 0.81, 0.82 and 0.77 for all the subjects, female subjects and male subjects, respectively.

**Dysfunctional Attitude Scale of Children (DAS-C):** This scale is a 22 Likert scale-based items (0 to 6) proposed by Alessandro and Burton (2006) based on Beck’s depression cognitive theory and using dysfunctional attitudes scale. DAS-C employed to evaluate dysfunctional attitudes in children who study and can read and write. The higher score indicates more dysfunctional attitude in the subject’s thought. Alessandro and Burton (2006) reported the reliability of the scale 87% using Cronbach’s alpha and 80% using test-retest method. To evaluate differential validity of DAS-C, the correlation of the test was measured with other scale. There was an average positive correlation between the test score and the scales of depression, negative emotion, negative attitude towards self, world and future, self-critique, and neuroticism. Additionally, there was a negative correlation between self-esteem and dysfunctional attitudes. No relation was found between dysfunctional attitudes and positive emotion, attachment, and social desirability. Using concurrent implementation with DSRS, construct validity of the scale was evaluated desirable (r=0.37, P ≤ 0.01). In the studied sample, using Cronbach’s alpha, Spearman-Brown bisection, Gutmann, and test-retest (with 10 days interval) methods, the reliability of DAS-C was computed 0.80, 0.76, 0.76, and 0.61.

To implement, initially, necessary coordination were made between Shiraz University and Head Education of Fars Province. Then, to select the statistical sample, due to the problems related to implementing experimental plans involving effective cooperation of parents and teachers, convenient sampling method was used. That is, coordinating with an elementary girl school, all the students studying in the fourth and fifth grades (215 people) were firstly measured through DSRS and DAS-C. 52 children taken depression diagnosis inventory were clinically interviewed. Finally, 36 people were randomly selected and after obtaining their parents’ permission, they were randomly assigned in a control group (12 people), an experimental group (12 people) and a placebo group (12 people). The experimental and placebo groups were also randomly assigned into three 4-people groups (totally 6 4-people groups). After implementing narrative therapy in group with 12 sessions of discussion and conversation in the experimental group, lack of administering no treatment in the control group and implementing selective stories during 12 sessions in the placebo group with discussion and conversation (discussion without the content of cognitive errors avoidance), the posttest (DSRS and DAS-C inventories) was administered for all three groups. After one month, for constant therapy follow-up, the inventories were again distributed among the three groups and the results obtained from all three implementations were investigated.

This treatment included 12 therapy sessions held during 12 one-hour sessions in 6 weeks. Meanwhile, an especial task was determined for all the sessions (explaining for two people in home or drawing the picture of the story). Each session was begun with a review on the previous session and investigating children’s assignments.

The placebo group: story telling in the placebo
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The research findings can explain various points. From one perspective, the lack of significance at the posttest stage can be attributed to the factors of creating depression in each child. Since cognitive errors are only one of causes creating dysfunctional attitude in the posttest stage. Further, difference in the means showed that in the experimental group, dysfunctional attitude has been significantly decreased at the follow-up stage.

As the findings revealed, there is a significant difference between the three groups in terms of dysfunctional attitude at the posttest stage (F=4.84, P=0.001). LSE test showed that the difference between the experimental group and the control group (P=0.02) and the experimental group and the placebo group (P=0.006) in terms of dysfunctional attitude at the posttest stage. Moreover, no significant difference was found between the three groups in terms of dysfunctional attitude at the follow-up stage (F=12.08, P=0.0001). According to LSE test, there is a significant difference between the experimental group and the control group (P=0.0001) and the experimental group and the placebo group (P=0.0001) in terms of dysfunctional attitude at the follow-up stage. Again, difference in the means showed that in the experimental group, dysfunctional attitude has been significantly decreased at the follow-up stage.

Moreover, no significant difference was found between the three groups in terms of dysfunctional attitude at the follow-up stage (F=12.08, P=0.0001). According to LSE test, there is a significant difference between the experimental group and the control group (P=0.006) and the experimental group and the placebo group (P=0.0001) in terms of dysfunctional attitude at the follow-up stage. Further, difference in the means showed that in the experimental group, dysfunctional attitude has been significantly decreased at the follow-up stage.

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depression and other causes such as environmental conditions (father, mother and family), social-mental pressures (such as being abandoned by peers and problems in school), lack of support for parents and children, child’s mental damages, strong family difference, high life stress, and low social-economic status (Stark et al., 1996) also cause depression (and they have not been considered by the present study) can be introduced as the factors of lack of decrease in children’s depression.

To explain the role of family to decrease the effects of depression, it should be noted that although therapist discussed with child about his/her considered activities during the therapy session and remind homework, he/she needs extensive support of family for a better result. The considered objectives can be achieved through teaching family such as adding positive interactions of parent-child, increasing the use of positive reinforcement by parents, educating positive training methods to parents, teaching parents who cannot control their emotions to control nervousness, teaching communication and negotiation skills, and teaching necessary skills of problem solving (Stark et al., 1996).

As another explanation in the lack of depression decrease at the posttest stage, it can be stated that school-oriented treatments are at diagnosis and remedy of children. School-oriented treatments include temporary decrease of curriculum program, helping children in assignments, encouraging children to use coping skills during holding therapy sessions, and helping children regarding positive thinking about classroom or communicating with peers (Stark et al., 1996).

On the one hand, a successful therapy is a therapy in which various methods, objectives and treatments with high dosage (long term treatments) are used (Marsiano, 1998; cited in Firouzbakht, 2006). Furthermore, there are some studies indicating that those therapies merely equipped to behavioral and cognitive methods cannot be effective for all children with depression disorder. Such a fact refers to the necessity of combining cognitive therapy with other methods to increase the effectiveness to deal with children (Mash & Wolf, 2010).

On the other hand, it was found that the lack of the difference between the experimental group and the placebo group may be due to the fact that in addition to the attraction of story, storytelling, the presence of therapist, and the presence of the child in the group can refer to the selection of children among classmates and their especial attention without positive or negative labeling, causing their distinction from the rest of the students in the class, more attention of the classmates to them as well as reinforcing self-believing and being accepted by friends. All these create identical results in the two groups in the posttest.

The second hypothesis: “there is a significant difference between the narrative therapy based experimental group, the control group and the placebo experiment in terms of depression at the follow-up stage”.

As the research findings showed, with the covariance of 5.53 at the level of 0.009, the effect of narrative therapy on depression was significant in the experimental group, the control group and placebo group at the follow-up stage. That is, the hypothesis indicating the significant difference between the placebo and control groups in terms of dysfunctional attitude at the posttest stage is confirmed.

According LSD follow-up test investigating significance difference in each pair of the experimental-placebo and the placebo-control groups, the difference between the experimental-control groups and the experimental-placebo groups in terms of depression was significant at the follow-up stage. Therefore, it can be concluded that based on the scores obtained from children’s depression scale in the posttest, in addition to the relative decrease of depression level, narrative therapy has not been significantly effective to treat children’s depression. However, the scores obtained from the follow-up test revealed the effectiveness of narrative therapy employed in the experimental group and the lack of effectiveness of storytelling (without cognitive error content) in the placebo group to decrease children’s depression.

To interpret these findings, it can stated that the difference of the scores obtained from the posttest and follow-up tests in the experimental group indicated that in the posttest and follow-up, narrative therapy allowed children to learn new way of coping inefficient thoughts through identification with the story characters and congaing inefficient perceptions. Also, it allowed children to decrease depression through behaving in this manner in long term and generalizing it in their life. It indicted the positive effect of the story content in long term and neutralizing the attraction of storytelling.

These findings are consistent with the results previously reported regarding the effect of narrative therapy to treat children with psychiatric disorders. For instance, it can be referred to the studies performed by Sheybani, Yousefi Loye and
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Also this finding confirms the studies reported by Sligman (2004) about the effectiveness of behavioral-cognitive treatments to change explanation style and depression reduction, Gilham et al. (1995) about the effect of teaching social and cognitive problem solving techniques on the decrease of depression, Jicause et al. (1994) about the efficiency of preventive program of depression symptoms in 10-13 years children at risk, Sligman et al. (1988) about two-polar cognitive depression therapy, and Abramson et al. (1978) about the model of treatment taught in clinical depressed patients Sligman et al. (1988).

An important thing making the present research distinctive from other mentioned studies is that in the present study, narrative therapy model has a cognitive style regulated with the aim of cognitive errors avoidance teaching.

In this study, using cognitive depression therapy, therapist helps child to give up his/her cognitive distortions and attempts to cognitively reconstruct through considering pleasant events and emotions, formulating reasonable objectives and criteria, fighting against improper documents, and learning more compatible thoughts.

Also, children learn to consider thoughts and emotions and change their negative thoughts through their internal whispers. For example, instead of telling “I’m not the right person to do this work”, he/she says that “I should do my best” which is a kind of self-teaching method (Michenbam, 1997; Kendal, 1994; cited in Frouz Bakht, 2006).

In this study, therapist also uses in group therapy to allow children to practice decreasing incompatible behaviors, teaching some skills such as self-expression, communicating, conflict solving, giving feedback, and receiving feedback through being exposed to peers and practicing new skills and behaviors and creating some challenges by asking some questions related with the story goals.

As various studies showed, depressed children are more abandoned; they are not so pleasant and show more negative social behaviors (Schuartz et al., 1977). Also, less speaking with friends and high abandoning by peers cause the intensification of depression symptoms. In this study and in composing stories, therapist has attempted to strengthen children’s self-confidence and self-believing through encouraging to compatible relations, participating in group and attracting their attention to their achievements. Moreover, therapist has tried to provide the opportunity in which children learn more appropriate social behaviors through participating in discussion sand targeting treatment through appropriated created challenges, show more pleasant and reasonable behaviors by changing their thoughts and actions to be involved in other children’s communities.

Typically, treatments performed for children are mostly derivatives of adults’ therapy approaches and one reason of their failure can be attributed to this factor (Stark et al., 1996) since only child is treated. But, here, formulating stories related to children’s’ needs and interests with daily content, therapist has tried to perform a different therapy.

Investigating the Third and Fourth Hypotheses

The third hypothesis: “there is a significant difference between the narrative therapy based experimental group, the control group and the placebo experiment in terms of dysfunctional attitude at the posttest stage”.

As the research findings showed, with the co-variance of 4.84 at the level of 0.001, the effect of narrative therapy on dysfunctional attitude was significant in the experimental group, the control group and placebo group at the posttest stage. That is, the hypothesis indicating the significant difference between the placebo and control groups in terms of dysfunctional attitude at the posttest stage is confirmed.

According LSD follow-up test investigating significance difference in each pair of the experimental-placebo and the placebo-control groups, the difference between the experimental-control groups and the experimental-placebo groups in terms of dysfunctional attitude was significant at the posttest stage.

The fourth hypothesis: “there is a significant difference between the narrative therapy based experimental group, the control group and the placebo experiment in terms of dysfunctional attitude at the follow-up stage”.

As the research findings showed, with the co-variance of 12.08 at the level of 0.0001, the effect of narrative therapy on dysfunctional attitude was significant in the experimental group, the control group and placebo group at the posttest stage. That is, the hypothesis indicating the significant differ-
ence between the placebo and control groups in terms of dysfunctional attitude at the posttest stage is confirmed.

According LSD follow-up test investigating significance difference in each pair of the experimental-placebo and the placebo-control groups, the difference between the experimental-control groups and the experimental-placebo groups in terms of dysfunctional attitude was significant at the follow-up stage.

According to the research findings, it can be explained that cognitive errors avoidance teaching has significantly decreased dysfunctional attitude in the experimental group. Also, investigating follow-up scores revealed a desirable stability in the decrease of dysfunctional attitude as a result of the treatment, confirming the third and fourth hypotheses.


The obtained results of the study can be differently explained. In the present work, it was attempted to apply storytelling at the service of understanding cognitive errors, their sources and identifying their negative aspects in the primary stages. In other words, in the primary stages, the plan of storytelling was to arouse children to change. At the second stage, in storytelling method, the hero acted as a pattern and children learned new though during the learning process or identification with the story hero and selected his/her thinking style (Heffner, 2003). Therefore, the stories allowed children to experience issues from various aspects and perspectives. At a very wonderful level, the story acted as a wizard tool which could evolve the current prejudicial framework and directed them from the limited injected thought to a new discovery, learning and understanding.

It can be concluded that in narrative therapy, story can be useful for references to convey fundamental concepts and main components of treatment. For example, a good story can well explain to references that how thinking errors are basically created, how they are generalized, abstracted, distorted, and how they arouse a familiar reaction pattern in a new event (Sahebi, 2010).

This finding is also consistent with the result obtained by Shapiro (2003) referred to the importance of discussion, exploration and querying after story. To explain such a fact, the ambiguous nature of story and literature can be referred, indicating that everyone can interpret some certain points based on his/her understanding level. In fact, the interpretation of each child about story can be completely individual. Additionally, it should be noted that the information transferred to reader or audience may be wrongly understood or even distorted and changed through individual experiences of reader or audience (Cowboy, 1992), particularly when this method is applied for a clinical children population. But when it is discussed in group, therapist help child to understand what he/she cannot individually understand while discussing provides a safe opportunity for active knowledge teaching (Gersie, 1997).

With respect to the necessity of treatment to decrease depression and dysfunctional attitude in children and the importance of adopting intervention methods to turn children back to social space and decrease destructive effects of such thoughts as well as applying an effective and flexible and inters resting method, the present project was conducted to decrease depression. It was attempted to introduce an appropriate tool to be used by therapists to prevent dysfunctional attitudes in parents and even children through creating a new method in the content of therapeutic stories.

**Conflicts of interest:** None declared.

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