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Effects of Schema Therapy for Children and Adolescents on the Externalizing Behaviors of the Adolescents Referred to the Counseling Centers in Ahvaz, Iran

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Abstract

Background: Internalizing and externalizing behaviors often emerge during adolescence. Early interventions could prevent severe or chronic mental health issues such as depression, suicidal tendencies, crime, and social harm, thereby potentially mitigating their adverse consequences.

Objectives: The present study aimed to investigate the effects of schema therapy for children and adolescents (ST-CA) on the externalizing behaviors of the adolescents referred to the counseling centers in Ahvaz, Iran.

Methods: This quasi-experimental study was conducted with a pretest-posttest design and a control group. The sample population included adolescents aged 12 - 14 years with behavioral, educational, and mood problems who were referred to the counseling centers in Ahvaz, Iran in 2020. In total, 30 adolescents were selected via convenience sampling and randomly divided into two groups of experimental and control (15 per each). The experimental group received 14 sessions of ST-CA (120-minute weekly sessions). Data were collected using the child behavior checklist. Data analysis was performed in SPSS version 26.0.

Results: In the experimental group, the mean scores of externalizing behaviors at the pretest and posttest were 70.52 $\pm$ 6.11 and 58.27 $\pm$ 4.80, respectively. The mean score of aggression in the experimental and control groups at the posttest was 57.60 $\pm$ 3.83 and 64.20 $\pm$ 7.41, respectively. The mean score of rule-breaking in the experimental and control groups at the posttest was 55.53 $\pm$ 6.10 and 61.07 $\pm$ 7.63, respectively. ST-CA could significantly alleviate the externalizing behaviors of the subjects, such as aggression and rule-breaking ($P < 0.001$).

Conclusions: According to the results, ST-CA could effectively decrease externalizing behaviors. Therefore, this approach should be incorporated into the interventions designed for these cases. Our findings could lay the groundwork for further investigation in this regard.

Keywords: Schema Therapy, Problem Behavior, Aggression, Adolescents

1. Background

Behavioral disorders in children and adolescents are prevalent and debilitating, causing numerous issues for parents, teachers, and children, while also giving rise to numerous social issues. These disorders often emerge in the first years of elementary school and surge at the age of 8 - 15 years, considerably impacting the educational, social, and occupational performance of children and adolescents and increasing the risk of psychological diseases in adulthood (1, 2). Behavioral and emotional problems in adolescence are classified into two main categories of internalizing and externalizing behaviors. The former often manifests as anxiety/depression, isolation/depression, and somatic complaints, and the latter encompasses the behaviors that run counter to the wishes and expectations of one's social group and acquaintances and have an external direction (e.g., aggression and rule-breaking) (3, 4).

Problematic behaviors such as impulsiveness or aggression may be regarded as disruptive behavioral disorders, while they are viewed as personality pathologies in adulthood (5, 6). Internalizing and externalizing behavioral problems adversely affect mental health in the long run. According to the literature, the incidence of mental disorders in adulthood is higher in the individuals who had these disorders in adolescence (7, 8).

Internalizing and externalizing behaviors often emerge during adolescence, and early interventions could

prevent severe or chronic issues (9). Moreover, conducting such interventions in the period when personality disorders are more malleable than in adulthood could potentially mitigate the negative outcomes linked to personality disorders (e.g., depression, suicidal tendencies, crime, and social harm) and prevent dysfunctional behavioral patterns from turning chronic (10, 11).

Schema therapy was developed based on the structures of early maladaptive schema, schema coping styles, and schema modes. Early maladaptive schemas are a continuous performance model of emotions, cognitions, memories, and physical sensations affecting one's view of oneself, others, and the world. These often develop in the early childhood through interactions with the child's intrinsic mood and undesirable experiences (e.g., neglect, abuse, hostility, and criticism) (12).

Schemas are formed in response to unmet basic emotional needs, including secure attachment (need for love, security, stability, and acceptance), autonomy, sufficiency, identity, freedom of expressing one's healthy needs/emotions, spontaneity, leisure, and realistic limitations (13). Schema coping modes reflect one's method of coping with maladaptive schemas and traumatic childhood experiences. When schemas are activated, an intense distressing state emerges (14). Young et al. (14) refer to these states as schema modes, which are defined as the emotional, intellectual, behavioral, and neurobiological states experienced by an individual at present. These modes could also explain the reasons for the rapid changes in the feelings and behaviors of individuals. Specific combinations of early maladaptive schemas and coping responses lead to schema modes. For instance, the mistrust schema with the surrender coping mode may activate a state in which the individual experiences hopelessness, anxiety, and helplessness (vulnerable child mode). The same schema with the avoidance coping mode may trigger a state in which the individual distances themselves from others and feels boycotted. A combination of the mistrust schema and overcompensation may lead to a state in which the individual threatens, frightens or attacks others (9).

The basic principles of schema therapy for children and adolescents (ST-CA) are altering dysfunctional modes as a basis for behavioral change. In behavioral therapies, the modification and alteration of children's and parents' behaviors are assumed to be superficial and short-term. Nevertheless, it seems that a change in a 'deeper mode' is more effective and stable. Modes form more complex mechanisms such as somatic reactions, thoughts, feelings, and behaviors, thereby leading to a more global and stable change (15). In ST-CA, the mode model is primarily employed as it enables the use of a simpler language and more therapeutic diversity. The idea of schema is often rather abstract for children; therefore, focusing on modes allows the therapist to work with less complexity (16, 17).

ST-CA gradually builds a solution-based bridge between the experience of the child and adolescent and the changes associated with daily life, thereby nurturing positive development and change and preventing the stabilization (continuation) of symptoms and problems (18). The method allows therapists to help adolescents move on from difficult incidents and choose newer and healthier ways of doing activities. As adolescents focus on their peers and accept their responses more than those of their parents' or healthcare specialists', they could benefit from group therapy better than adults (19, 20).

Ample evidence attests to the effectiveness of schema therapy in adult patients as well (21, 22). Recent findings have also provided preliminary evidence that schema therapy is effective in adolescents with personality pathologies, mood disorders, behavioral issues, aggression, and social anxiety (9, 17).

2. Objectives

The present study aimed to investigate the effectiveness of ST-CA on the externalizing behaviors of the adolescents referred to the counseling centers in Ahvaz, Iran.

3. Methods

This quasi-experimental study was conducted with a pretest-posttest design and a control group. The sample population included adolescents aged 12 - 14 years with behavioral, educational, and mood disorders who were referred to the counseling centers in Ahvaz in 2020. In total, 30 adolescents were selected via convenience sampling. The adolescents scoring 60 or more on the total problems of Achenbach child behavior checklist (CBCL) on the first session of the clinical interview, those who were willing to participate in group therapy sessions, and those who signed the consent form for participation were registered in the waiting list.

In total, 15 adolescents with one of their parents (mothers) were assigned to the experimental group, and 15 adolescents remained on the waiting list as the control group. The pretest and posttest were administered to both groups

before and after the intervention, respectively. The inclusion criteria of the study were having/living with at least one parent (intervention involved parents as well) and age of 12 - 14 years. The exclusion criteria were psychological disorders and major/effective changes in the adolescents' life (e.g., death of a close family member/friend). For ethical considerations, the researchers obtained written informed consent from the participants prior to enrollment.

Table 1 shows an overview of 14 two-hour sessions of schema therapy, implemented in Negaresh Psychological and Counseling Service Center in Ahvaz (Iran). The training sessions of the experimental group were conducted by the first author.

3.1. Research Instruments

3.1.1. CBCL

To assess externalizing behaviors, we used items from the CBCL (parents' version) pertaining to externalizing problems. The CBCL has two subscales of rule-breaking and aggressive behaviors. It is based on the Achenbach system of empirically based assessment (ASEBA), which provides forms for the easy and cost-effective assessment of competencies, adaptive action/function, and emotional-behavioral problems. In the ASEBA, a behavior grading system is utilized to obtain data from three sources of parents, teachers, and children. Scores 0 - 240 indicate the range of emotional-behavioral problems, scores 60 - 63 demonstrate the borderline range, and scores > 63 indicate the clinical range (24). Yazdkhasti and Oreyzi (25) reported the Cronbach's coefficient of 0.90 for the entire scale, while the Cronbach's alpha coefficient of the scale was estimated at 0.88 in the present study.

3.2. Statistical Analysis

Data analysis was performed in SPSS version 26.0 using descriptive and inferential statistics (mean and standard deviation) and multivariate analysis of covariance (MANCOVA). In addition, Levene's test was employed to assess the equality of the variances, and the Kolmogorov-Smirnov test was used to evaluate the normal distribution of the pretest and posttest data.

4. Results

According to the descriptive statistics, the mean age of the participants in the experimental and control groups was 13.70 $\pm$ 1.30 and 13.33 $\pm$ 0.81 years, respectively. In terms of gender in the experimental group, six participants (40.00%) were female, and nine (60.00%) were male. In the control group, five participants (33.33%) were female, and 10 (66.67%) were male. Table 2 shows the mean pretest and posttest scores of externalizing behaviors (aggression and rule-breaking) in the experimental and control groups.

In the experimental group, the mean score of externalizing behaviors at the pretest and posttest was 70.52 $\pm$ 6.11 and 58.27 $\pm$ 4.80, respectively. In addition, the mean score of aggression in the experimental and control groups at the posttest was 57.60 $\pm$ 3.83 and 64.20 $\pm$ 7.41, respectively. The mean score of rule-breaking in the experimental and control groups at the posttest was 55.53 $\pm$ 6.10 and 61.07 $\pm$ 7.63, respectively.

The assumptions of covariance analysis were evaluated initially, and the obtained results indicated that the assumptions were confirmed regarding the normal distribution of the scores in the sample population (Kolmogorov-Smirnov test; $P = 0.200$), homogeneity of variances in the two groups (Levene's test; $F = 1.21$; $P = 0.828$), and regression slope homogeneity ($F = 3.29$; $P = 0.081$).

According to the information in Table 3, the two groups of adolescents referred to the selected counseling centers had a significant difference in terms of at least one dependent variable (i.e., externalizing behaviors of aggression and rule-breaking) ($F = 37.98$; $P < 0.001$).

According to the information in Table 4, a significant difference was observed between the two groups in terms of externalizing behaviors at the posttest and after controlling the pretest. At the posttest, schema therapy could mitigate the externalizing behaviors of the experimental group ($F = 40.40$; $P < 0.001$). Furthermore, a significant difference was denoted between the experimental and control groups in terms of aggression ($F = 52.37$; $P < 0.001$). A significant difference was also observed between the two groups in terms of rule-breaking ($F = 47.42$; $P < 0.001$).

5. Discussion

The present study aimed to investigate the effects of ST-CA on the externalizing behaviors of the adolescents referred to the counseling centers in Ahvaz. The findings revealed that the mean scores of the externalizing behaviors in the adolescents (aggression and rule-breaking) significantly reduced in the experimental group compared to the control group. This is consistent with the results obtained by Van Wijk-Herbrink et al. (9) and Roelofs et al. (17). In a study, Van Wijk-Herbrink et al. (9) examined the impact of an innovative schema therapy-based treatment on adolescents with destructive behaviors and traits of personal-

Table 1. Overview of Schema Therapy Sessions (23)

Session	Contents	Participants
1	Establishing therapeutic relationship; explaining the goals of the next sessions; distributing the questionnaires and the adolescents' strengths and weaknesses worksheets; defining the basic psychological-emotional needs of humans (illustrated)	Joint
2	Examining the positive points; explaining the schemas and their roots based on the concept of unmet needs (illustrated); using the glasses tool	Joint
3 and 4	Implementing an imaginary interview with parents (with the adolescent playing the parent's role); positive schemas; chair work and treasure bag techniques	Adolescents
5	Explaining the concept of the 'inner house' (experiences, schema, mode); explaining and drawing the modes; explicating the sore points and their roots; delineating coping modes; distributing the mode flashcards	Joint
6	Interviewing the dysfunctional mode technique; examining the flashcards	Adolescents
7	Conducting the dysfunctional mode interview; examining the flashcards; mode flashcards and parents' version	Parents
8	Conceptualizing the problem with modes (illustrated); practicing the clever and wise driver's license technique	Adolescents
9 and 10	Conceptualizing the problem; limitations of the vicious cycle; explaining the stimulus-organism-response-consequences (SORC) model; drawing a genogram for parents; working with mode flashcards; training and practicing self-compassion with the vulnerable child and assertive behavior	Parents
11 and 12	Walking with the mode's technique; working with mode flashcards; self-compassion training with the vulnerable child and assertive behavior	Adolescents
13	Reviewing and practicing the assignments; fantasy trip to the clever and wise mode (hypnosis) and its congruence with the aroma of lemon	Joint
14	Answering questions about the instructed concepts; checking the assignments; discussing the effect of listening to the audio file about clever and wise imagery; completing the questionnaires	Joint

Table 2. Mean Variables in Experimental and Control Groups at Pretest and Posttest[a]

Variables	Experimental Group	Control Group
Externalizing behaviors (total)		
Pre-test	70.52 ± 6.11	66.73 ± 8.20
Post-test	58.27 ± 4.80	64.40 ± 7.45
Aggression		
Pre-test	70.33 ± 5.76	67.33 ± 9.06
Post-test	57.60 ± 3.83	64.20 ± 7.41
Rule-breaking		
Pre-test	68.00 ± 7.03	62.93 ± 8.81
Post-test	55.53 ± 6.10	61.07 ± 7.63

[a]Values are expressed as mean ± SD.

ity disorder, reporting that early maladaptive schemas and schema modes improved in the patients with behavioral disorders.

Inner child therapies have become widely popular in recent years, while they have a limited horizon. By considering this dimension of experience, schema therapy has introduced childish modes, which are mostly known as complex experiences that could become pervasive or even take control for a short period (19). When schema therapy discusses the inner child, it mainly highlights a transient state resulting from emotional functions, bringing hope for change through schema therapy.

As mentioned earlier, schemas are formed due to unmet needs during childhood. The effectiveness of schema therapy in mitigating externalizing behaviors could be justified by the fact that the traits of individuals with externalizing behaviors are associated with their distorted understanding of the world and a perceived unfair environment. This cognitive factor contributes to the emergence of disruptive behaviors (15). Researchers have also demonstrated a correlation between perceived unfairness and anger with other negative outcomes (26, 27).

Several studies have confirmed the correlations between early maladaptive schemas (especially rejection/disconnection), realistic limits, and externalizing behaviors (9, 12, 16). Early maladaptive schemas are formed based on the early experiences of children with parents, classmates, and significant others, distorting their view of the environment (28). If early maladaptive schemas are activated in an undesirable situation and accompanied by dysfunctional coping mechanisms, an inefficient mode (e.g., an angry and impulsive child) emerges in children, adolescents, parents, or others around them. As a result of the conflicts between modes and inappropriate interaction, the basic emotional-psychological needs of adolescents and parents are not met, thereby leading to more damage (14).

Our findings regarding the effectiveness of the inter-

Table 3. Results of Multivariate Analysis of Covariance (MANCOVA) on Posttest Scores of Research Variables in Experimental and Control Groups

Variables	Value	df	Error df	F	P	Partial η^2	Power
Pillais trace	0.75	2	25	37.98	< 0.001	0.75	1.00
Wilks lambda	0.25	2	25	37.98	< 0.001	0.75	1.00
hotelling's trace	3.03	2	25	37.98	< 0.001	0.75	1.00
Roy's largest root	3.03	2	25	37.98	< 0.001	0.75	1.00

Table 4. Results of Univariate Analysis of Covariance on Posttest Scores of Research Variables

Variables	SS	df	MS	F	P	η_p^2	Statistical Power
Externalizing behaviors (total)							
Pre-test	577.98	1	577.98	43.37	< 0.001	0.67	1.00
Group	538.40	1	538.40	40.40	< 0.001	0.65	1.00
Error	279.80	21	13.32				
Aggression							
Pre-test	635.91	1	635.91	34.38	< 0.001	0.56	1.00
Group	545.17	1	545.17	52.37	< 0.001	0.66	1.00
Error	270.62	26	10.40				
Rule-breaking							
Pre-test	658.01	1	658.01	52.66	< 0.001	0.66	1.00
Group	592.62	1	592.62	47.42	< 0.001	0.64	0.995
Error	324.87	26	12.49				

Abbreviations: df, degrees of freedom; MS, mean squares; SS, sum of squares.

vention in the presence of parents in the therapy process highlight the importance of parents' participation in treatment. Parents learn to be aware of their own dysfunctional schemas and schema models and how and when they clash with those of their children. They also learn to act as a coach in regulating their children's emotions. Individual differences were observed in the magnitude of change among the participants of the present study, and the most significant progress was made by the participants whose parents partook in the intervention and became more sensitive to their children's needs. Through the process of therapy, adolescents learn to respond primarily based on the healthy adolescent mode and refrain from dysfunctional modes. With the instructed techniques, adolescents begin to think about themselves, the world, and the future differently (17).

Group work helps children establish relationships and develop social skills, which will assist them in school and other social settings, thereby alleviating the sense of isolation. When children talk about similar problems, they benefit from listening to others. By encouraging children to share their problems, their sense of isolation and alienation often diminishes. A schema therapy group is a capsule of the family and society. A friendly and accepting environment is formed in this group, thereby enabling children to express their feelings to their peers and therapists. Furthermore, schema therapy allows children to receive feedback in a safe space, correct their behaviors, and discover their modes. This group also helps its members understand, cope with, and identify issues with more than one person (19). In this method, parents' tasks are not merely focused on their children, and they consider their personal basic needs as well. As such, positive training experiences (i.e., healthy models of caring parents) should be activated, while punitive and demanding parent modes should be mitigated.

In the psychological training of parents, it would be beneficial for them to realize that it is for parents to experience remorse or even childish feelings. As a result, the fact that making a mistake is part of learning parenting is normalized, and the idea that their children's behavior proves their failure as parents is challenged. ST-CA is primarily focused on the fact that parents identify their children's modes and recognize the response patterns they

create. When parents refrain from showing noticeable reactions, they will be able to deal with their children more effectively by taking care of their own vulnerable or angry child mode. Parents are also aided in recognizing the interaction between their emotional states and those of their children. The goal is to reinforce parents' healthy adult mode (care and guidance) through understanding and respect. The key point in this therapy is that parents and adolescents both become aware of their modes, learn to name these modes so that they could be easily identified later, and realize that they could distance themselves from their dysfunctional mode so as to observe and diminish these modes; this is similar to the diffusion technique in the acceptance and commitment therapy. Finally, they will be able to use modes and functional coping styles to meet their psychological-emotional needs, which is the ultimate goal of schema therapy.

The current research was performed on adolescents in Ahvaz city, and the generalization of the findings to other communities should be with caution. One of the limitations of our study was the lack of follow-up, and the reported results during the therapy or on the last day of the intervention could not be interpreted as stable behavioral changes. Moreover, the evaluations were carried out by a therapist, which might have increased the risk of biased responses.

5.1. Conclusions

According to the results, ST-CA could effectively decrease externalizing behaviors. Therefore, it is recommenced that this approach be incorporated into the training programs of adolescents, parents, and teachers. Our study could motivate further investigation on similar interventions.

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Footnotes

Authors' Contribution: Afaf Karimipour did study concept and design, acquisition of data, analysis and interpretation of data, and statistical analysis. Parviz Asgari did administrative, technical, and material support, study supervision. Behnam Makvandi and Reza Johari Fard did critical revision of the manuscript for important intellectual content.

Clinical Trial Registration Code: The clinical trial registration code was IRCT20200423047180N1.

Conflict of Interests: No conflict of interest to declare.

Ethical Approval: The study was approved by the Ethical Committee of Islamic Azad University-Ahvaz Branch (code: IR.IAU.AHVAZ.REC.1399.042).

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