



## The Effectiveness of Teaching Choice Theory to Parents with Psychiatric Disorders and Its Effect on their Children's Self-Concept and Self-Efficacy

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### Abstract

**Background:** Mental illness is the primary reason for disability among young individuals, making up a significant portion of the worldwide health issues experienced by teenagers, and can have lasting effects. This study aimed to determine the effectiveness of the theory of choice for parents with psychiatric disorders and its effect on their children's self-concept and self-efficacy.

**Methods:** This research was a semi-experimental study using a pre-test-post-test design involving two experimental groups and one control group. The study population comprised all parents with psychiatric disorders who were diagnosed and were part of the Aheba Mental Illness Rehabilitation Center, totaling around 1000 in Tehran, Iran, 2024. Thirty parents with psychiatric disorders were randomly selected through a convenience sampling process and subsequently assigned to either an experimental group (n=15) or a control group (n=15). The experimental group participated in an eight-week structured choice theory, including reality therapy by Glaser, with one 90-minute session per week. The control group received no intervention. Data collection was facilitated using Symptom Checklist 90 (SCL-90R), The Self-Efficacy Scale (SES), and The Beck's Self-Concept Test (BST). The inferential statistical method of multivariate analysis of variance was used for data analysis, with SPSS version 20 software being employed.

**Results:** The findings suggest that the theory of choice training allows for a significant increase in self-efficacy and self-concept among children of parents with psychiatric disorders in the experimental group (Pvalue<0.05).

**Conclusions:** Because the theory of choice training within a group supports internal control of people, the increasing internal control is causing increasing accountability, and therefore the increase in self-efficacy and self-concept. Therefore, group theory of choice training can be useful and applicable as a psychological therapeutic intervention for increasing self-efficacy as well as self-concept in children.

**Keywords:** Theory of choice, Self-concept, Self-efficacy, Parents, Psychiatric disorders.

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## Introduction

The concept of mental disorder, much like many concepts in the medical and behavioral sciences, does not have a fixed scientific definition that applies to all situations<sup>1</sup>. The most widely accepted definition of mental disorders is as follows: a

mental disorder is defined as a clinically significant psychological or behavioral syndrome or pattern that occurs in an individual and is characterized by distress (painful symptoms) or disability (impairment in one or more areas of functioning) or an increased risk of death, pain, discomfort, disability, or loss of freedom<sup>2</sup>. Additionally, this syndrome or pattern should not simply be an expected or culturally approved response to a specific event, such as the death of a loved one. Instead, it should be viewed as a manifestation of a biological, behavioral, or psychological dysfunction in the individual<sup>3</sup>. On the other hand, the prevalence of mental disorders in various strata of developing countries is on the rise. This increase may be partially attributed to population growth, social transformations, urbanization, dysfunctional family environments, and economic issues<sup>4</sup>. Furthermore, families with members suffering from mental disorders are often viewed as abnormal, strange, or bothersome by society. Family members themselves may have varied reactions to the individual with a disorder, ranging from anger, hatred, and reluctance to fear and confusion<sup>5</sup>. As a result, there is a strong desire to address the disorder, whether it truly exists or not, due to the disruptive nature of these disorders on the individual and those around them<sup>6</sup>. Parents' mental issues often have a significant impact on children's difficulties. Numerous studies have highlighted the importance of negative parent-child relationships in developing behavioral problems, inconsistencies in children's self-perception, decreased self-esteem, and diminished social interactions<sup>7-9</sup>. Parents with psychiatric disorders may struggle to provide appropriate guidance to their children, leading the children to doubt their abilities and develop a negative self-image<sup>9</sup>. Research suggests that children in families with mental health issues often lack a healthy self-concept, which can be influenced by negative life events and feedback from others, particularly parents<sup>10,11</sup>. Furthermore, children's self-concept is considered a crucial factor in families dealing with mental disorders. A positive self-concept motivates behavior and actions<sup>12</sup>. The perception of oneself is susceptible to change because of various influences, including feedback from parents<sup>7</sup>.

Also, other people's view of families with mentally disordered members is often abnormal, strange, or annoying, and on the other hand, family members have different reactions to the person with a disorder in the form of anger, hatred, and reluctance<sup>10</sup>. On the other hand, another aspect that evolves and matures within the family dynamic and parental relationships is children's self-efficacy<sup>12-14</sup>. Numerous studies have been



carried out in recent years on the families of individuals with mental health issues, investigating the factors contributing to high or low levels of self-efficacy in children<sup>12-15</sup>. It is commonly believed that a child's low self-efficacy is indicative of underlying family problems, while high levels of self-efficacy may be linked to the presence of mental illness or disorders in their parents<sup>16</sup>. Essentially, the inconsistent behavior displayed by children is often traced back to their formative years and the environment provided by their families<sup>17</sup>. The findings of these studies consistently reveal a strong and positive correlation between self-efficacy and indicators of mental well-being and happiness, as well as a link between self-efficacy beliefs and a reduction in psychological disorders. This is supported by the well-known association between depression and anxiety<sup>16,17</sup>. Additionally, research has demonstrated that intervention programs targeting parental education have proven effective in enhancing communication and emotional interactions between parents and their children<sup>18</sup>. Hence, to promote optimal mental and emotional well-being and foster a positive outlook on children's abilities, it is essential to implement a comprehensive improvement and support program<sup>19</sup>. The choice theory posits that all our actions are behaviors, most of which are conscious decisions. Glaser defines behavior as encompassing performance, thought, emotion, and physiology, with direct control over performance and thought, and indirect control over emotion and physiology. The primary emphasis of choice theory is on behavior and cognition. The concept of choice theory includes techniques designed to motivate individuals to take concrete actions to change undesirable circumstances. Clients are encouraged to make different plans when they understand actions are not helping them achieve their goals<sup>20</sup>. Behmanesh and his colleagues conducted a study to investigate the effects of Choice Theory-Based Group Training on Cognitive Emotion Regulation and Parent-Child Relationship in male adolescents. The findings of the research demonstrated that group training based on choice theory effectively improved cognitive emotion regulation and parent-child relationships among the participants<sup>21</sup>. Hossein et al<sup>22</sup> conducted a study to explore how parent training based on choice theory can improve the relationship between mothers and daughters. The study specifically looked at how this type of training can affect mothers' self-efficacy and reduce conflicts with their daughters. The results indicated that choice theory-based parent training has a beneficial impact on the mother-daughter relationship, increasing the mother's confidence and decreasing conflicts between them<sup>22</sup>. The main issue in these families is the absence of essential skills to address problems that necessitate training. The significance of self-concept and self-efficacy in the well-being and social interactions of children with parents who have psychiatric disorders is crucial. The parent's mental health issues and lack of focus on personality traits like self-concept and self-efficacy in children have been noted in research studies, which highlight the benefits of reality therapy and choice theory in various settings. Therefore, this current study aimed to assess how choice theory impacts the self-concept and self-efficacy of children whose parents have psychiatric disorders. The results could be helpful for psychologists, experts, and other professionals who assist people with mental illnesses in their families

## Materials and Methods

This research was a semi-experimental study using a pre-test-post-test design involving two experimental groups and one control group. The study population comprised all parents with psychiatric disorders who were diagnosed and were part of the Aheba Mental Illness Rehabilitation Center, totaling around 1000 in Tehran, Iran, 2024. Thirty parents with psychiatric disorders were randomly selected through a convenience sampling process and subsequently assigned to either an experimental group (n=15) or a control group (n=15) (figure 1). A priori power analysis using G\*Power indicated that a sample size of 30 would be sufficient to detect a significant difference with an alpha level of 0.05 and a power level of 0.95. Random allocation to the experimental and control groups was conducted using a table of random numbers.

The criteria for participation in the program include children between the ages of 10 and 15, with lower self-efficacy and self-concept scores compared to societal norms. Parents must have completed drug treatment and achieved mental stability. Participants should not be engaged in any other medical, educational, or drug therapy during the training period. Exclusion criteria involve parents currently undergoing psychological treatment or drug therapy, parents who have not completed their drug treatment or achieved mental stability, and missing more than 3 training sessions without a valid excuse (the content and assignments of missed sessions are explained before the next meeting).

Following the acquisition of necessary research permits. The researcher received permission from Azad University of Roudehen to implement the choice theory training package as a group for parents with psychiatric disorders at the Aheba Center. They presented the research process to the management of the center and coordinated with the public relations officials to receive approval for the research. Alongside the surveys, a letter containing a brief explanation of the research purpose, the reason for filling out the survey, and the subsequent steps, along with a registration form for parents and their children (including age, education, length of marriage, contact number) were provided for respondents to complete. 278 individuals responded to these surveys. Following the collection of these surveys and the calculation of their self-efficacy and self-concept scores, the researcher conducted meetings with 45 parents whose children scored below one standard deviation from the average in the self-efficacy and self-concept questionnaire. During these meetings, the researcher contacted individuals by phone to explain the course conditions and coordinate their participation if interested. Subsequently, a mental health checklist was administered to these parents, and 30 parents meeting the research criteria and expressing consent to participate in the meetings were chosen. Around 30 parents with psychiatric disorders who scored below the cut-off point on the mental symptom checklist were selected, along with their children who also had lower self-efficacy and self-concept scores. These participants met the research criteria based on their willingness to cooperate and participate in the study. The researcher invited parents to participate in the study, distributed questionnaires on self-efficacy and self-concept, and asked officials to provide them to willing participants. Their children then filled out questionnaires related to self-efficacy and self-



concept. After analyzing the questionnaires, a mental symptoms checklist questionnaire was administered to the parents.

The experimental group received training sessions on choice theory, including reality therapy and a book by Glaser<sup>23</sup> (Table 1). These sessions were conducted by the researcher over eight weeks, lasting ninety minutes each from 10:00 am to 11:30 am at the Aheba Center meeting hall. This schedule continued for approximately two months, with weekly training provided as needed. The contents and goals of every session are outlined at the beginning of each session. The topics covered in the previous meeting and the assigned tasks were revisited during the week, along with instructions on how to complete them. Subsequently, the main subject of the meeting was deliberated among the group members, concluding with assigned homework related to the topic. Following the completion of all research stages, a self-concept and self-efficacy questionnaire was administered as a post-test to the children in both groups. Additionally, an intervention session was conducted for parents

in the control group who opted to participate in the intervention.

After the intervention sessions, the children in both the experimental and control groups were given post-test questionnaires on self-efficacy and self-concept. The results of the two groups were then compared. The data was analyzed using descriptive statistics methods, such as mean and standard deviation. The normality of data distribution and homogeneity of variances were taken into consideration. The inferential statistical method of multivariate analysis of variance was used for data analysis, with SPSS version 20 software being employed. A one-sample Kolmogorov-Smirnov test was conducted for data normality, and Levin's F test was used to check the homogeneity of variances in the research variables. Based on the assumptions made, the data from this research could be subjected to multivariate analysis of variance and covariance analysis to investigate differences in dependent variables between the two groups.

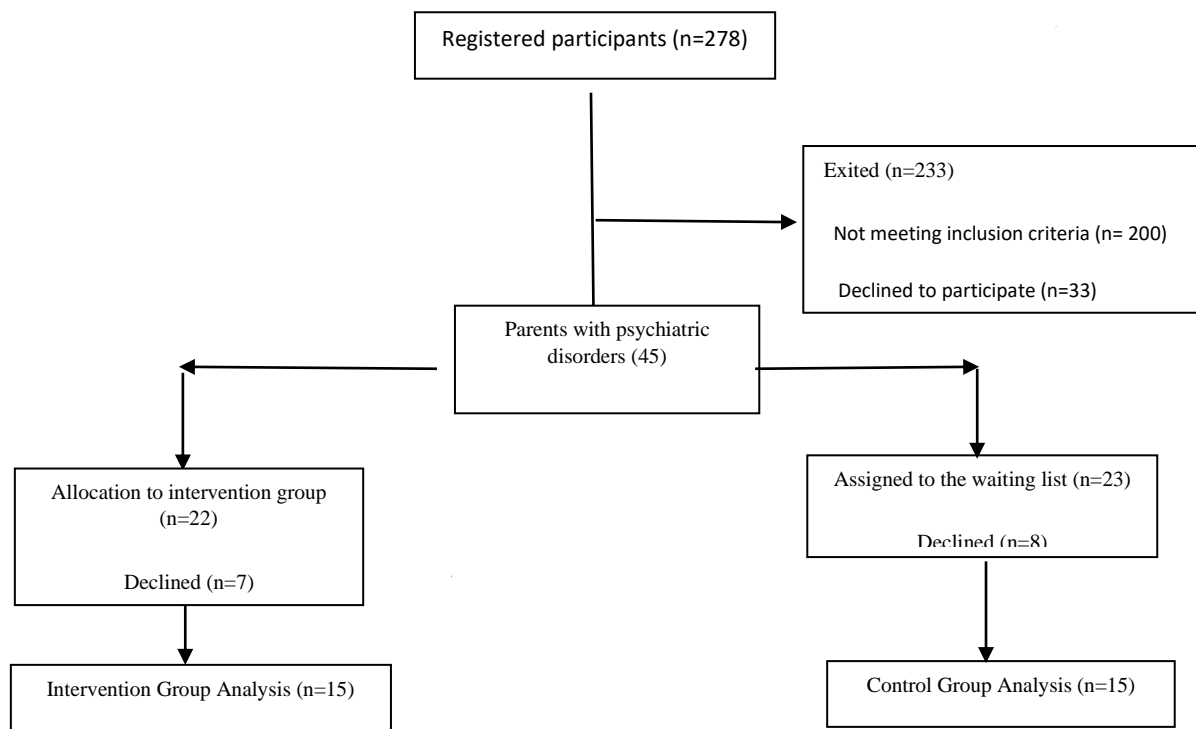


Figure 1. the flow diagram of the study

**The Symptom Checklist 90 (SCL-90R):** The scale is a self-report psychological symptom test consisting of 90 questions developed through clinical psychometric research<sup>24</sup>. This assessment utilizes a 5-point Likert scale ranging from 0 (none) to 4 (strongly) to evaluate various dimensions of psychiatric symptoms such as physical complaints, obsessive-compulsive disorder, interpersonal sensitivity, depression, personality anxiety, aggression, morbid fear, paranoid thoughts, and psychosis. In addition to these dimensions, the test also includes general criteria like morbid symptoms (GSI), distress index (PSDI), and total morbid symptoms (PST), with scoring

and interpretation based on three indicators. The validity coefficients of the nine dimensions of this test, except for the obsessive-compulsive scale, were found to be between 0.36 and 0.73 when compared with the Minnesota Multidimensional Questionnaire (MMPI), all of which were statistically significant at the 1% level<sup>25</sup>. The Cronbach's alpha coefficient for this study was reported as 0.75 and 0.76 for the current study.

**The General Self-Efficacy Scale (GSES):** In the present study, GSES was used to measure perceived self-efficacy in women with breast cancer. The GSES was designed by Sherer



and colleagues (23). It consists of 17 items. Sherer and colleagues<sup>26</sup>, believe that this scale measures three aspects of behavior, i.e., desire to initiate behavior, diligence to complete the behavior, and attempts to overcome obstacles. This instrument is scored on a five-point Likert scale. The score ranges from 17 to 85. High scores indicate high levels of self-efficacy. Farnia and colleagues<sup>27</sup> reported an alpha Cronbach coefficient of 0.94 for the scale. In this study, ten experts were asked to assess the validity of the Persian version of the GSES (Content Validity Ratio (CVR)= 0.89, Content Validity Index (CVI)= 0.92). The reliability of the GSES was also assessed and its Cronbach's alpha coefficient was 0.88.

**The Beck's Self-Concept Test (BST):** Beck introduced the self-concept scale in 1990 to assess individuals' self-concept<sup>28</sup>.

This 25-item scale measures attitudes towards oneself, with factors including mental ability, physical attractiveness, moral issues, work efficiency, and social skills. Respondents are rated on a 5-point Likert scale, with some questions being scored in reverse. Scores range from 25 to 125. Beck et al. found a Cronbach's alpha coefficient of 0.82, test-retest reliability of 0.88 after one week, and 0.65 after three months<sup>28</sup>. Based on the results, four questions were removed and the validity coefficient of the 21-question questionnaire was 0.786 using the general formula of Cronbach's alpha<sup>29</sup>. The Cronbach's alpha coefficient for this study was reported as 0.85 and 0.76 for the current study.

**Table 1. Summary of choice theory sessions**

Sessions	Content
1	Getting acquainted with the group members and building an emotional connection between the members and the therapist
2	Educating on the principles of choice theory, discussing why and how individuals exhibit behavior, emphasizing self-awareness among members, understanding how this impacts themselves and others, recognizing strengths and weaknesses, and striving for a positive self-identity. Also, introducing self-concept and self-efficacy concepts
3	Introducing general behavior and familiarizing group members with the four components of behavior (thought, action, feeling, and physiology), teaching decision-making skills, and exploring changes in thoughts, feelings, actions, and physiology in the present
4	Getting acquainted with the four conflicts and compulsive behaviors, explaining them to the group
5	Exploring emotions, such as anxiety and depression, through the lens of choice theory, teaching relaxation techniques for internal control to enhance children's self-concept and self-efficacy
6	Discussing destructive and constructive behaviors in relationships, and teaching how to live in the moment
7	Educating on the ten principles of choice theory, emphasizing taking responsibility for one's actions
8	Reviewing previous sessions and wrapping up the sessions

## Results

The mean age of the experimental group was 35 years and five months, while the control group had an average age of 36 years and three months. For ethnicity, six individuals in the experimental group spoke Farsi, 4 spoke Turkish, 2 were Lor, and three did not disclose their ethnicity. In the control group, 7

were Fars, 5 were Azari, 1 was Ler, and 2 mentioned their ethnicity. The highest proportion of women was seen in the experimental group (66.7%) and the control group (33.3%). Economically, most members in both groups fall into the middle-income bracket.

**Table 2. Mean and standard deviation of self-efficacy and self-concept variables of children in the experimental group**

Statistical index	Assessment stage	Mean	Standard deviation
Self-efficacy	Pre-test	51.02	10.7
	Post-test	59.73	8.27
Self-Concept	Pre-test	57.03	7.40
	Post-test	70.20	8.27

In Table 2, it is evident that there was a significant improvement in the average self-efficacy scores of the experimental group from the pre-test to the post-test stage.

Additionally, there was an increase in scores for the self-concept variable at the post-test stage.

**Table 3. Mean and standard deviation of self-efficacy and self-concept variables in the control group**

Statistical index	Assessment stage	Mean	Standard deviation
Self-efficacy	Pre-test	51.40	5.25
	Post-test	52.00	6.38
Self-Concept	Pre-test	58.30	6.12
	Post-test	58.06	6.10



In Table 3, it is evident that the control group did not experience a significant decrease in self-efficacy and self-

concept variables during the post-test stage compared to the pre-test.

Table 4. Results of multivariate analysis of variance test

Variables		(MS)	df	(SS)	F	Pvalue	eta
Self-Concept	Training Effect	2384.46	1	2384.46	12.26	0.001	0.28
	Error	1401.30	28	64.27	-	-	-
Self-efficacy	Training Effect	853.46	1	853.46	7.26	0.001	0.14
	Error	518.30	28	136.27	-	-	-

Table 4 exhibits that based on the F coefficients for self-concept and self-efficacy variables are 12.26 and 7.26, respectively, the groups show differences in overall test outcomes ( $P < 0.05$ ). This confirms the research hypothesis with 95% confidence and rejects the null hypothesis. The effect sizes reported indicate that self-concept and self-efficacy were significantly impacted by choice theory training, with 28% and 14% respectively. Specifically, 28% of the variance changes in self-concept and 14% in self-efficacy can be attributed to choice theory training. This highlights the correct rejection of the null hypothesis at a 95% probability.

## Discussion

The current research aimed to investigate the impact of teaching choice theory to parents with psychiatric disorders on their children's self-concept and self-efficacy. The study results represented a notable difference in the self-concept scores between the experimental and control group participants after the intervention. Specifically, the findings revealed a growth in the self-concept of children whose parents received choice theory education compared to those in the control group. The effect size procedure demonstrated that 42% of the changes in the self-concept variance could be attributed to the choice theory training. Thus, it can be inferred that teaching choice theory has enhanced the self-concept of children with parents suffering from psychiatric disorders.

The results of the current study did not align directly with any previous research findings in the literature. However, the findings of this study indirectly correlated with studies by Abadi et al<sup>20</sup>, Behmanesh et al<sup>21</sup>, and Hosseini et al<sup>22</sup>. Additionally, the findings were focused on the effectiveness of the self-esteem and self-concept of female high school students. Khatiri found that counseling sessions based on choice theory did not improve the self-esteem and self-concept of the students<sup>30</sup>.

When discussing the effectiveness of this approach, it can be noted that individuals with low self-esteem often have negative thoughts about their lack of control over their life situations. The choice theory, however, introduces a clear understanding of behavior, guiding individuals towards making choices, self-regulation, achieving success, behaving responsibly, and feeling valuable<sup>22</sup>. Consequently, individuals with low self-esteem learn to recognize their ability to make choices and understand their impact on life, leading to significant changes in their lifestyle and mindset. This method is especially effective in promoting self-acceptance and growth on a personal level. The Choice theory places a strong emphasis on facing reality and taking accountability for past actions and

needed adjustments, which sets it apart from other therapies<sup>21</sup>. Group instruction in the study allowed participants to establish connections within the group, which resulted in a transformation in their self-perception and approach to challenges. In a group setting, attitude changes occur more readily because of the influence of relationships with others. Glaser identifies poor communication as the root of all human issues addressed through group choice theory training, resulting in changed attitudes as evidenced by Marshall<sup>10,12</sup>

Choice theory encourages individuals to embrace internal control psychology over external control psychology<sup>30</sup>. Individuals can enhance their circumstances and perspectives by choosing appropriate methods to satisfy their desires for pleasure, authority, independence, affection, and inclusion. All person's distinct actions are selected to fulfill fundamental needs, considering that facing reality and taking responsibility are subjective to each individual, which helps them cultivate a more accountable and optimistic attitude toward themselves<sup>21,22</sup>.

The study revealed a notable contrast in the self-efficacy scores between the experimental and control group participants after the intervention. Specifically, the children of parents with psychiatric disorders in the experimental group exhibited higher self-efficacy levels compared to those in the control group. Additionally, the effect size analysis indicated that half of the variance in self-efficacy could be attributed to the intervention training. It can be inferred that teaching choice theory has enhanced the self-efficacy of children whose parents have psychiatric disorders, consistent with findings from studies<sup>20,22,26,27</sup>. However, Abadi et al's research (2024) on the impact of group counseling based on choice theory on self-efficacy and occupational identity of male high school students revealed conflicting results. The investigation showed that group counseling using choice theory resulted in higher levels of self-efficacy in students, even though the statistical analysis did not reveal any significant variations<sup>20</sup>.

When discussing how choice theory training can impact the self-confidence of children whose parents have psychiatric disorders, it is necessary to note that how parents communicate with their children is a key factor in shaping family dynamics, particularly during crucial stages of a child's mental development<sup>30</sup>. Due to the mental health issues of parents, the dynamics within the family, including relationships between parents and children as well as children's relationships with others, are affected. This results in parents with psychiatric disorders withdrawing from social interactions due to fear of judgment from others. This avoidance of communication by



parents with mental health issues is a consequence of the impact on family dynamics and relationships with society members<sup>20,22</sup>.

The training sessions in this study allowed members of the experimental group to openly discuss their issues and emotions without fear of judgment. Many individuals with psychiatric disorders believed they were alone in struggling to communicate with their children and facing constant problems<sup>30,31</sup>. Group therapy helped create a communication network by enhancing group cohesion and the shared experience of challenges. Participation in group therapy fostered hope, altruism, and peace through mutual support, leading to parents with disorders breaking and fixing negative patterns in their interactions with children. As a result, there was an improvement in children's self-concept and self-efficacy<sup>31</sup>.

Research has indicated that individuals with low self-efficacy often illustrate a lack of motivation, ineffective beliefs, and minimal effort. By educating individuals on choice theory, they can develop a proper and logical way of thinking. Choice theory helps individuals in problem-solving by fostering a rational outlook on life, promoting information and logical awareness, and encouraging them to strive harder to gain success. This increased effort can lead to a greater sense of control over their lives for individuals with ineffective beliefs and low motivation, thus motivating them to put in more effort to succeed. The idea that more effort leads to more success can instill beliefs such as "I can succeed in my work" and "I have control over my life," as well as accepting responsibility for one's life. Parents who participated in the sessions found that this approach was effective in boosting the self-efficacy of their children<sup>20</sup>.

Pointing out the limitations at each stage of the research helps us understand the results of the current study and brings attention to the challenges and shortcomings of similar studies. It is important to note that because of the limited number of eligible participants, random assignment to groups was not possible, preventing the generalization of the research. It is crucial to be cautious in interpreting the findings. The study only used self-report measures to assess self-concept and self-efficacy, overlooking a more comprehensive evaluation from various perspectives such as teachers and family members. The lack of a follow-up test to assess long-term effects also hinders the ability to generalize the results over time.

This study found that teaching parents with psychiatric disorders about choice theory after completing their drug therapy can boost their children's self-confidence and self-image. Studying children's behavior at various stages in similar research also helps provide more detailed information and better explain the research results. It is recommended that educational workshops be conducted for all parents with psychiatric disorders and their children to help them understand and apply the concepts of this theory in their lives, ultimately enhancing their self-confidence and self-image.

## Ethical Considerations

The research involving human subjects followed the ethical guidelines set by the Roudehen Branch of Islamic Azad University under the designation IR.IAU.R.REC.1403.126.

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## Conflict of Interest

The authors declared no conflict of interest.

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