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The impact of problem-solving skill on the adaptability of physically disabled individuals

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Abstract

Introduction: Problem solving is a coping and practical skill that increases the person's reverence and it has a relation with his good adaptability. Based on high rate of disability in Iran and need to pay attention to it, this research tries to investigate the impact of problem solving skill on adaptability of physically disabled individuals.

Materials and Methods: This research conducted through pre test-past test model with control group. In this research, 30 phisically disabled individuals who attend in Gorgan Welfare Organization in 2016 were divided into two groups of control (15) and experimental (15) randomly. Research instrument included Social Adaptability Questionnaire. Data analyzed by covariance analysis.

Results: The results show that there is a significant difference between two groups in past test group. So problem solving skill has significant impact on adaptability of physically disabled individuals ($F= 941.54, P<0.001$).

Conclusion: Based on the significant difference of adaptability between two groups of control and test, we conclude that problem solving skill increases the adaptability of physically disabled individuals.

Keywords: Adaptability, Disability, Problem solving

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Introduction

Mental pressure is debilitating for some people and has adverse effects on different aspects of their lives, but for others, it is a means to prepare more to achieve their goals. In order to deal with mental pressure and cope with it, skills and abilities are necessary to make the person adapt as much as possible (1).

Various researchers have shown that different educational and therapeutic strategies such as teaching problem-solving skills (2) can effectively reduce anxiety and mental stress.

Problem-solving is one of the components of social cognition and the cognitive-behavioral process in which a person tries to identify and discover compromise and practical solutions for the problematic situations that he/she encounters in his/her daily life. In this definition, problem-solving is considered a purposeful, diligent, and conscious activity (3).

One of the methods of teaching problem-solving skills is to use the problem-solving model of D'Zurilla and Goldfried (1982). This social problem-solving model refers to solving

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problems in the natural environment and the real world (4). D'Zurilla (1990) presented two general and relatively independent components: problem orientation and solving skills. Question. Problem orientation is the motivational part of the problem-solving process, while problem-solving skill is the process in which a person tries to find an effective solution to a particular problem through the logical application of problem-solving strategies and tasks (5).

Adaptation means emotional reactions and cognitions considered desirable, effective, or healthy adaptation; adaptation makes a person really to himself in the sense that he does not deceive himself about his motives and sets achievable goals for himself. Therefore, he avoids unnecessary conflicts and deals with his problems objectively (6).

One of the sections of society that suffer a lot of pain and suffering is disabled. Group counseling is one of the most effective treatment methods to help psychiatric patients, including physically disabled patients suffering from co-morbidities such as depression, anxiety, and physical illness. In Iran, according to the 2017 census, the number of disabled people with visible disabilities is about one percent of the population, and nearly one-third of them are between the ages of 14 and 40 (7). Disability and the problems caused by it have been raised as an issue in medicine since the early stages of human civilization. Physical disability and disability affect social adjustment, mental health, and personal adjustment and cause more psychological problems in physically disabled people than in other people (8).

In problem-solving, finding a specific solution for a specific problem is not considered. However, it is essential that, as a result of problem-solving, an abstract principle or law is obtained that can be generalized to other situations (9).

Problem-solving began in the late 1960s and early 1970s as part of the cognitive-behavioral movement for behavior modification. The founders of this method, D'Zurilla and Goldfried, in an article at the American Psychological Association conference in 1968, emphasized the necessity of teaching problem-solving skills in the social skills training program. Since then, this method has been used in various counseling and psychotherapy clinical situations, and positive

results have been reported (10). Due to the lack of such studies in the country and the importance of this issue, the present research was conducted to explain the effectiveness of problem-solving skills on the dimensions of adaptation (social, personal, family, academic and occupational) of physically disabled people.

Materials and Methods

In the present study, the subjects were randomly replaced in two experimental and control groups; as a result, it can be said that the current research design is a pre-test-post-test design with a control group. The statistical population includes all physically-motor disabled people over 25 years old. There were 1567 people in Gorgan. The sample size in this research is 30 people, divided into two groups of 15 people, experimental and control.

This research used the available sampling method to select the sample. In this way, 45 of these disabled people were given the compatibility questionnaire, and 30 of the 40 people with the lowest scores were randomly selected and randomly and equally divided into two experimental and control groups. These disabled people were in the age group of 25 to 35 years, 36 to 46 years, 47 to 57 years, and 58 to 68 years, gender male and female, and the level of education included bachelor's degree and above, post-diploma, diploma, and sub-diploma. They had brain damage, spinal cord injury, bone and muscle damage, paralysis, and limb or limb imbalance (arm or leg).

Research instrument

A) *Social Adaptability Questionnaire*: It is a social adaptability questionnaire that includes 15 questions and five components named personal, social, occupational, academic, and family adaptability, which evaluates one component in each of the three questions.

The first three questions measure personal adjustment, the second three questions social adjustment, the third three questions are academic adjustment, the fourth three questions are job adjustment, and the fifth three questions are family adjustment. For each question, an 8-point grading scale is set based on the Likert scale. It is intended to be scored from (0 not at all to 8 very severe). Sohrabi and Samani validated

this scale in 2013, and the results indicated the adequacy of this scale. The KMO index is equal to 0.915% and is reported as significant at 0.0001. The intervention was carried out using the problem-solving model of D'Zurilla and Goldfried (1982), which was carried out during eight sessions and as mentioned below (5,10).

The content of the session are below:

First session: introduction and diagnosis of the general situation. This meeting was held to familiarize the disabled people with the researcher and provide the basis for mutual understanding and expressing the researcher's expectations of the disabled people. Second session: choosing a correct approach to the problem. The importance of this stage as the first step in solving the problem in cognitive and emotional dimensions is significant.

Third session: precise definition of the problem. The purpose of this stage aims to teach the prioritization of issues to identify the main issues and leave less essential and unrelated issues aside. Fourth session: Finding multiple solutions. After identifying the main problem using brainstorming.

Fifth session: implementing the solution and reviewing it. At this stage, disabled people were

taught to implement the best-identified solution. In case of success, they should reinforce and reward themselves, and in case of failure, the steps will be reviewed to determine which step was the problem.

Sixth session: According to the problem-solving model, some examples of the problems of the people in the class were explained. At this stage, hypothetical social situations were practiced using role-playing.

Seventh session: Expressing the real situations that disabled people have faced, group feedback and reinforcement methods were used, and the problem-solving model was generalized in all stages of life.

Eighth session: choosing several problems and possible solutions, examining them, choosing the best solution, and evaluating the possible results.

Results

To analyze the research data, the covariance test was used to compare the post-test averages and to follow up the two experimental and control groups after adjusting the pre-test scores.

Table 1. Comparison of statistical indicators of pre-test and post-test consistency in two control and experimental groups

Source	Square set	Freedom degree	Square mean	Test statistics	P	Coefficient	Test exponent
Pre-test	197.099	1	197.099	11.607	0.000	1.590	1.000
Group	680.109	1	680.109	941.540	0.000	1.549	1.000
Error	23.168	27	7.895				

The covariance analysis indicated that according to the value (F= 941.54) and the significance level (P< 0.001), it can be concluded that after removing the effect of the pre-test, there is a significant difference between the average of the two groups in the post-test.

There is an adaptation, so problem-solving skills significantly affect the adaptation of physically motor disabled people in a meaningful way. Also, the skill of solving problems in the way of meaning therapy has a significant effect on the dimensions of adaptation (social, academic,

occupational, personal, and family) of the physically-motor disabled.

According to the above tables and f values for each dimension, it can be concluded that after removing the effect of the pre-test, there is a significant difference in the social, academic, occupational, personal, and family dimensions of compatibility, so it can be said that teaching problem-solving skills has led to an increase in the adaptation of disabled people in various dimensions.

Table 2. Analysis of covariance test of different dimensions of adaptability in two control and experimental groups

Source	Square set	Freedom degree	Square mean	F	P
Social dimension	153.124	1	153.124	31.641	0.000
Group	485.432	1	485.432	305.20	0.000
Error	131.410	27	56.118		
Academic dimension	428.342	1	428.342	23.978	0.000
Group	122.457	1	122.457	62.834	0.000
Error	131.410	27	56.118		
Occupation dimension	55.041	1	55.041	4.984	0.034
Group	458.972	1	458.972	134.563	0.000
Error	298.159	27	298.159		
Personal dimension	16.835	1	16.835	5.610	0.250
Group	519.548	1	519.548	6.319	0.000
Error	81.032	27	3.001		
Family dimension	97.867	1	97.867	18.839	0.000
Group	799.162	1	799.162	346.323	0.000
Error	140.226	27	1.980		

Discussion

Adaptability plays a powerful and surprising role in life and brings benefits in various fields, from academic status to enduring hard work. Problem-solving skill sessions and debates about death, acceptance of responsibility, and attention to values and desires in life helped disabled people to create a different perspective on their disability. This can make them enjoy life's moments and pursue their goals. Hence, the goals of the exercises ultimately increase their compatibility and improve their conditions. Also, the approach of problem-solving skills is practical on the dimensions of adaptation (social, personal, family, academic, and occupational) of physically disabled people.

One of the prominent symptoms of physically-motor disabled people is that they are very disappointed about their future and do not adapt, and this disappointment causes them to fuel other feelings such as worthlessness, loneliness, and helplessness. Therefore, disappointment and lack of adaptation are significant. Moreover, it is the root of many problems (11). Considering that a high score on the adaptability scale indicates the ability to motivate oneself, the feeling of good cooperation and the necessary flexibility to find

ways to achieve the goal, and the strength to give oneself under challenging conditions, increasing adaptability can be very beneficial for disabled people. During research on teenagers with cerebral palsy and physical disabilities aged 9-19 years, using the Rosenberg Adaptability Scale, Manuel and his colleagues found that they have high adaptability. Gender and people's understanding of their disabilities significantly impact their adaptation, so in this research, women and people who had a greater understanding of the effects of their disabilities showed lower adaptation (12).

Using the group intervention method is also a helpful method. In his equations, Kaplan pointed out the effect of social support in reducing the symptoms of depression in cases of increased psychological pressure and believes that social support reduces the effect of psychological pressure by increasing the correct understanding of stressful events.

Disability is one of the major problems of human societies, and despite scientific, industrial, and technological advances, humanity has not yet been able to master disabilities and their effects. Every year, many accidents and incidents occur in the world, often associated with the mixing of

social systems and the disruption of social balance and harmony (13). In the outdoor environment, disabled people have to face people with different attitudes and views. These views may be pleasant or painful for them. A person's perception of himself and his abilities is affected by the attitudes of others in such a way that it may lead to the healthy growth of a disabled person or his isolation, depression, and failure (14). Learning to solve problems as a social skill helps a person deal with existing problems correctly and offer different solutions to solve the problem (15). According to the present research, it can be said that the implementation of group problem-solving skills training classes for different types of disabilities can be a practical step in the degree of adaptation and self-esteem and improvement

of the psychological condition of disabled people, also training families who have physical-motor disabilities can be a good action. This is because it aims to improve the mental health of all family members, and group problem-solving skills counseling with these families can play an influential role in reducing the anxiety and depression of family members.

Conclusion

Considering the significant difference in the level of adaptation in the two experimental and control groups after the intervention, it can be concluded that problem-solving skill training increases the level of adaptation of physically disabled people.

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