

THE INVESTIGATION OF SOCIAL PROBLEM SOLVING ABILITIES OF MOTHERS WITH PHYSICALLY DISABLED CHILDREN BY THE USE OF QUASI-EXPERIMENTAL METHOD

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Abstract: This research is an empirical study aims to develop social problem solving skills of mothers with physical disabilities (cerebral palsy and muscular dystrophy). The study group consist of 30 mothers whose children receive physical treatment in a private rehabilitation center in Kayseri. As a preliminary test, 'Social Problem Solving Inventory Short Form' and general information form were administrated to the study group. Out of 30 participants randomly selected 15 people formed the experiment group and 15 people formed the control group.

Based on the Social Problem Solving Therapy principles, the training program with a psycho-educational content, the cognitive behavioral therapy and including stated and moving games were used in the experimental group for 5 weeks. No training was given to the control group in this process.

When the variables were examined in an integrated way, a significant difference ($p < 0,05$) was observed between the total score of the experiment group after training given to them and their pre-training total score. It can be argued that the education given to the mothers is effective in improving their social problem solving skills.

Key words: Social Problem Solving, Physical Disability, Mother's Education, Rehabilitation Center.

Introduction

As physically handicapped baby enters the family, many problems begin to reflect on the family. Failures in the process of solving problems can cause the balance of the family to be disrupted. Successful resolution of the problems effects the family communication, family unity and psychology of parents and children in a positive way.

Parents of physically disable children have difficulties in daily living. This may cause escaping from society and alienation. Families think that others can not understand them and the ability to communicate with others is deteriorated. Problems such as weakness, insecurity, meaninglessness and value conflicts are at the forefront of families with disabled children and this presents a serious problem for them (Izgar, 2009).

Mothers who are under the obligation to look after the disabled child should be educated for not lowering their quality of life, not catching burnout syndrome and due to the difficulties in life they should be provided with psychological support. Information and support about the treatment and rehabilitation of children with physical

disabilities will also reinforce self-confidence of the mother's and it encourages them in looking after their children (Karataş, 2001).

This experimental study was conducted to investigate whether the Social Problem Solving Skills Training has a positive effect on the problem-solving skills of the mothers with physically disabled children and whether this effect is permanent.

Aim of the Study

The overall objective of the study was to determine the problem solving levels of the mothers with physically disabled children and the effects of the Social Problem Solving Training based on the Five-Step Approach Model for Solving Social Problems given to mothers' through group experience, and decrease the mothers' Impulsivity/Carelessness Style and Avoidance Style Problem Solving Abilities.

Sub-objectives for his general purpose were:

- 1: Determining the social problem solving styles and problem orientations of the mothers participating in the research.
- 2: Decreasing the scores of mothers' ineffective Impulsive Careless Style Problem Solving and Avoidance Style Problem Solving and increasing their Rational Problem Solving scores
- 3: Sustaining the positive problem solving behavior

Method

The study is a quasi-experimental study with single experimental and control group.

Study Group

Mothers who reside in Kayseri, who has physically disabled children and who send their physically disabled children to a private rehabilitation center for physiotherapy form the study group of the research. In the study, the criteria used to select the experimental and control group was; being literate having a child with physical disability and residing in Kayseri. Taken these criteria as a base 30 voluntary mothers were selected and they were randomly attended into experimental and control group.

Data Collection Instruments

In the study, mothers were given the Personal Information Form and the Social Problem Solving Inventory Short Form (Çekici, 2009). The Personal Information Form contained the demographic characteristics and basic family information of the mothers in both groups.

The Social Problem Solving Inventory was developed by D'Zurilla and Nezu (1982) and it was reviewed by D'Zurilla, Nezu and Maydeu-Olivares (1996) and it was adapted into Turkish by Dora (2003). In this study, the researcher used the Social Problem Solving Short Form that was adapted by Çekici (2009)

The Social Problem Solving Inventory Short Form (SPCE-KF) consists of 2 dimensions as Problem Orientation and Problem Solving Styles. Within the Short Form, Problem Orientation has 2 subscales; being Positive and Negative Orientation towards the Problem. Problem Solving Styles are divided into 3 sub-scales, being Rational Style Problem Solving, Impulsive/Careless Style Problem Solving, and Avoiding Style Problem Solving.

The lowest score that can be obtained is 0 and the highest score is 100. High score indicates positive social problem solving skills and low scores indicate negative social problem solving skills (Çekici, 2009).

Application

Personal Information Form and Social Problem Solving Short Form were applied to all of the mothers selected for the study group. Then mothers in the experimental group were given training for 5 weeks with 2-2.5 hours

duration. The control group did not receive any treatment. Posttest was administrated to both groups and a follow up measurement was administrated 6 weeks later.

Data Analysis

SPSS 22 statistics packaged software was used to analyze the data. In descriptive statistics analysis of the data, standard deviation, median, the minimum and maximum frequencies and ratio values were used. The distribution of the variables is measured by the Kolmogorov Simirnov Test, which is used to test whether a theoretical population with two different experimental probability distributions comes from the probability distribution. In the analysis of the repeated measurements, the Wilcoxon Test developed to test whether the distribution of two variables is the same in experimental studies was used.

Psycho-education Group Training

Mothers participating in this social problem solving skills training were trained for 2 to 2.5 hours on average, once per week for 5 weeks. In this study, no training was given to the control group.

Training program was based on the Problem Solving Therapy (PST; D Zurilla and Goldfried, 1971), which is a systematized approach based on the Cognitive-Behavioral Therapy (CIS) techniques such as ABC teaching, self-monitoring, though stopping, working on the irrational thoughts, cognitive restructuring, giving cognitive and behavioral homeworks, being a model, supportive, directive and indirective interventions, rewarding, humour, exercises based on action and music, table games exercises, small group works were used during the sessions.

Results

Table 1. Mothers' Demographic Characteristics Table

		Experimental G.		Control Grup		p
		n	%	n	%	
Age	26-32	3	20,0%	5	33,3%	p> 0.05
	33-40	5	33,3%	4	26,7%	
	41-47	6	40,0%	3	20,0%	
	48-55	1	6,7%	3	20,0%	
Education	Literate	1	6,7%	1	6,7%	p> 0.05
	Primary sch	10	66,7%	9	60,0%	
	High School	4	26,7%	5	33,3%	
N. of Children	II	6	40,0%	8	53,3%	p> 0.05
	III	5	33,3%	5	33,3%	
	IV	4	26,7%	2	13,3%	
Fathers' education	Primary sch	5	33,3%	7	46,7%	p> 0.05
	Mid. Sch.	3	20,0%	7	46,7%	
	High School	7	46,7%	1	6,7%	
Disability Children N.	I	12	80,0%	12	80,0%	p> 0.05
	II	3	20,0%	3	20,0%	
Fathers Income	Var	13	86,7%	13	86,7%	p> 0.05
	Yok	2	13,3%	2	13,3%	
Occupation	employed	0	0,0%	0	0,0%	p> 0.05
	unemployed	15	100,0%	15	100,0%	
Family Income	low	1	6,7%	6	40,0%	p> 0.05
	medium	13	86,7%	8	53,3%	
	high	1	6,7%	1	6,7%	
School Attandance	yes	8	53,3%	8	53,3%	p> 0.05
	no	7	46,7%	7	46,7%	

Ki-kare test

As seen on the Table 1., nearly half of the participants of the experimental group (% 40) are at the age range of 41-47. The vast majority of participants of the experimental group (% 66,7) graduated from primary school; 40 % of the experimental group have 2 children, 33,3 % of them have 3 and 26,7 % of them have four children. In

the experimental group, 80 % of the mothers have one disabled child and 20 % of them have two disabled children. All of the mothers in the experimental group are not working and almost all of them have medium family income. It was also seen that 33 % of the participants of control group are at the 26-32, 26.7 % of them are at the 33-40, 20.0 % of them are 41-47 and 20 % of them are at the 48-55 age range. The vast majority of control group (%66,7) graduated from primary school. None of the participants of the control group are working like experimental group. Forty percent of participants in control group describe their family income as low, 53.3 of them describe it as medium and 6.7 % of them describe it as high level. In both of two groups, experimental and control, 53 % of the participants' children with disabilities is receiving education and 46 % of them are not receiving regular school education.

Table 2: Experimental Group Pre-Training - Post Training Data – Follow up Data Analysis Table

Sub Scale	Min-Max	Med.	Mean.±s.s.	pre test	post test
Positive Problem Orientation					
Pre-Test	2 - 15	8,0	7,5 ± 4,1		
Post Test	9 - 19	16,0	15,1 ± 2,8	0,001	
Follow up test	7 - 20	17,0	15,3 ± 3,8	0,001	0,724
Negative Problem Orientation					
Pre test	10 - 16	15,0	14,0 ± 2,2		
Post test	0 - 12	5,0	5,3 ± 3,6	0,001	
Follow up test	0 - 14	5,0	5,0 ± 3,3	0,001	0,647
Rational Problem Solving					
Pre test	0 - 13	8,0	8,1 ± 3,6		
Post test	6 - 19	13,0	14,0 ± 3,3	0,001	
Follow up test	5 - 19	14,0	13,4 ± 3,9	0,001	0,329
Careless Impulsive P.S					
Pre test	0 - 17	13,0	10,3 ± 6,1		
Post Test	0 - 11	2,0	3,8 ± 3,7	0,003	
Follow up test	0 - 12	5,0	4,9 ± 3,7	0,006	0,108
Avoiding Problem Solving					
Pre test	1 - 17	8,0	8,9 ± 5,5		
Post Test	0 - 9	2,0	2,7 ± 2,4	0,002	
Follow up test	0 - 8	3,0	3,7 ± 2,9	0,006	0,106
Total					
Pre test	32 - 77	40,0	44,6 ± 12,6		
Post Test	56 - 92	79,0	77,3 ± 10,8	0,001	
Follow up test	54 - 92	80,0	75,1 ± 12,6	0,001	0,255

Wilcoxon test

As seen on the Table 2., the Positive Problem Solving Orientation factor variable had a significant difference in the positive direction ($p < 0,05$) in the post test values.

As for the positive problem solving orientation scores, there is a significant difference ($p < 0,05$) between the follow-up scores and pre-test values, but not a significant difference ($p > 0,05$) between the follow-up and post-test scores.

For negative problem solving orientation scores, post-training scores decreased significantly ($p < 0,05$) as compared to the pre-test scores.

When the negative problem orientation's follow up score is compared with the pre-test score, a significant difference ($p < 0,05$) is observed but there is not a significant difference ($p > 0,05$) between the follow up and post-test values.

In the rational problem solving factor, it was observed that the post-training score, test values for rational problem solving factor has increased significantly. Follow up scores showed a consistency. Careless Impulsive Problem Solving values also decreased as post test values show and also follow up values show a constancy. Avoiding style problem solving scores were also significantly decreased as post test values have shown. Additionally, follow up values show a constancy of change.

The same pattern was also observed for the total score comparison.

Table 3. Control Group Pre-Training - Post-Monitoring Data Analysis Table

Sub Scale	Min-Max	Median	Ort.±s.s	Eğitim Öncesine Göre Değişim p
Positive Problem Orientation				
Pre Test	2,0-11,0	8,0	7,5±2,6	
Post Test	0,00-10,0	7,0	6,8±3,1	0,068
Negative Problem Orientation				
Pre Test	2,0-19,0	12,0	12,3±5,2	
Post Test	3,0-20,0	12,0	12,8±5,6	0,138
Rational Problem Solving				
Pre Test	2,0-11,0	8,0	6,8±3,3	
Post Test	2,0-11,0	6,0	6,7±3,3	0,539
Careless-Impulsive P.S.				
Pre Test	4,0-18,0	13,0	11,2±5,0	
Post Test	3,0-18,0	11,0	10,5±5,4	0,085
Avoiding Problem Solving				
Pre Test	0,00-20,0	6,0	9,2±7,6	
Post Test	0,00-20,0	6,0	9,3±7,7	0,053
Total				
Pre Test	21,0-52,0	43,0	41,6±8,8	
Post Test	18,0-53,0	42,0	40,4±9,9	0,066
Wilcoxon test				

As seen on the Table 3., control group's pre and post test scores did not reveal any significant difference.

Results and Discussion

To sum up, there is a significant increase in the experimental group's positive orientation towards 'problems' and a significant decrease in their negative orientation towards problems. The consistency of the positive effect in the problem solving orientation of the participants is observed in the follow up values.

In the control group, as was predicted there is not any significant positive or negative change in the orientation of the participants who did not receive training. The main obstacle, which makes it difficult for the participants to solve their problems and see their problems rationally, the participants have is their negative feeling situations and negative orientation towards problems. In the process of problem solving, emotions need to be governed because negative feelings make problem solving difficult. Therefore, it is suggested that the individuals should be thought to govern their feelings through intervention programs (D'Zurilla ve Nezu, 2007).

The program was planned to make the participants recognize their negative emotional situations and change them and to develop positive attitudes, activities such as playing various games, written exercises, making experiential sharing by participating in small groups and they were given homework and then they were required

to submit these assignments. The post-test values showed that the negative orientations of the mothers against the problem decreased significantly and their positive orientations towards the problem increased respectively.

Also mothers' Ineffective Careless-Impulsive Style Problem Solving and Avoiding Style Problem Solving Skills scores decreased significantly. In the experimental group, it was also observed that the scores of Rational Style Problem Solving skills, which are the positive style problem solving skills of mothers, increased significantly and remained persistent after 6 weeks in follow-up studies. In the final test scores of the control group, it was observed that there was no change or improvement in the negative style problem solving skills of the untrained mothers.

These research results are in accordance with the literature (Çekici 2009, Söylemez 2002, Yıldız 2003, Canel 2007). Therefore results are supported significantly: For example studies by Çekici and Söylemez revealed similar outcomes in their experimental studies.

When the social problem-solving skills development training researches (Heppner and Peterson, 1982; Gommon and Roze, 1991; Chinaveh, 2010) conducted abroad are evaluated, it is seen that the results obtained in these studies are similar to our research findings and support the findings of our study.

The research conducted by Yıldız (2003) was aimed to train the experimental group being mothers of preschool children for problem solving, decision making, conflict resolution and effective communication skills. Results of the study reveal similar results with the present study.

Canel's (2007) study which was done with couple's also revealed similar results same as the present study. Also a group of problem solving skills training researches done by numerous researchers (Heppner and Peterson, 1982; Gommon and Roze, 1991; Chinaveh, 2010) revealed similar outcomes.

Suggestions

In general problem solving skills training seems to be effective for different populations. Therefore this sort of training can be suggested for different groups of mothers and fathers such as those having mental, hearing and visually disable offspring.

Another suggestion can be to have training programs for some other negative emotions such as anger, failure in conflict resolution and such. Also similar trainings can be given to husbands, fathers and siblings of disabled children.

A 'trainer education program' can be developed for social problem solving skills for parents, siblings and other related groups.

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