International Journal on New Trends in Education and Their Implications
January 2015 Volume: 6 Issue: 1 Article: 14 ISSN 1309-6249

THE INVESTIGATION OF PROBLEM SOLVING SKILLS OF MOTHERS WITH AND WITHOUT DISABLED CHILDREN

Lect. Şükran ŞİMŞEK
Ahi Evran University
School of Health
Child Development
Kırşehir- TURKEY

Prof. Dr. Figen GÜRSOY
Ankara University
Faculty of Health Sciences
Child Development
Ankara- TURKEY

ABSTRACT

In this study, it was aimed at investigating the problem solving skills of mothers with and without disabled children. The participants of the study was composed of 258 volunteer mothers in Kırşehir. In the study, "General Information Form" which was prepared by the researchers and "Problem Solving Inventory" (PÇE) (Savaşır and Şahin, 1997) which was adopted into Turkish by Şahin and his colleagues in order to determine the problem solving skills of mothers were used. At the end of the study, it was found that the difference between the problem solving skills of mothers with and without disabled children was significant ($p<.01$). The problem solving skills of mothers with disabled children were found to be lower than the ones of mothers with children without disabilities.

Key Words: Disabled children, mother with disabled children and problem solving.

INTRODUCTION

Parents desiring to have a healthy child do not prepare themselves for the parenting role of a child with different specialties (Aral & Gürsoy, 2007; Yıldırım Sarı, 2007). However, conflicts will arise between expectation and reality upon recognizing that the child is disabled. Families could consider the birth of a disabled child as a punishment for themselves, but there are also families interpreting that the disabled child is given them to gather the family (Ekas, Whitman, & Shivers, 2009). In the face of this unexpected situation, families of disabled children might experience different feelings like shock, refusing, extreme sadness and depression, anger, guiltiness, non-acceptance, reconciliation, adaptation and acceptance, respectively (Aral, Bütün Ayhan, & Aydoğan, 2006; Coşkun & Akkaş, 2009; Gargiulo, 1985; Kim, Greenberg, Seltzer, & Kraus, 2003; Padeliadu, 1998; Sen & Yurtsever, 2007).

Having a disabled child brings along with certain peculiar difficulties including economic problems, life style, relations with family and social environments, educational and nursing problems regardless of the types of disability. Mothers reportedly display more efforts and take more active roles in solving these problems (Bahar, Bahar, Savaş, & Parlar, 2009; Karadağ, 2009; Özşenol et al., 2003; Padeliadu, 1998). Mothers have to spend most of their time, interest and energy to meet daily care of the disabled child, which could gradually drive them apart from their spouse and other children. Therefore, inclusion of a disabled member changes the structure of the family and damages the normal function of the family (Aral & Gürsoy, 2007; Gargiulo, 1985; Okanlı, Ekinci, Gözüağca, & Sezgin, 2004; Padeliadu, 1998; Sen & Yurtsever, 2007). The previous studies reported that mothers of a disabled child have to spend less time with the other members of the family (Sen &

Yurtsever, 2007), and therefore, their relations with other children, relatives, neighbors and colleagues are negatively affected (Reichman, Corman, & Noonan, 2008), they more frequently experience long-term economic problems (Fazıl, Bywaters, Ali, Wallace, & Singh 2002; Sen & Yurtsever, 2007), current family problems are increased with the additional of the disabled child (Aral & Gürsoy, 2007; Okanlı, Ekinci, Gözüağca, & Sezgin, 2004) and family disintegration is more frequently observed due to divorce, living separate or similar events among families with disabled child (Reichman, Corman, & Noonan, 2008).

At the same time, it was reported that mothers of a disabled child do not know how to help their children (Aral & Gürsoy, 2007), their physical and spiritual health is damaged (Özşenol et al., 2003), and they feel less happy (Emerson, Hatton, Llewellyn et al., 2006). In addition, defining their child as disabled ranks first among the reasons that depress parents (Glidden & Schoolcraft, 2003), and it is also stated that families refusing the disability might sometimes adopt negative approaches that could endanger the family itself and impair the development of the child (Gülşen & Gök Özer, 2009).

The previous studies reported that mothers of a disabled child more frequently have somatic complaints, depression, and anxiety (Olsson & Hwang, 2001; Toros, 2002; Uğuz, Toros, Yazgan İnanç, & Çolakkadıoğlu, 2004; Olsson & Hwang, 2008), they feel themselves worse and have higher stress level compared to parents with no disabled child (Oelofsen & Richardson, 2006; Olsson & Hwang, 2008). Furthermore, mothers who have a disabled child and live alone are more affected by depression than mothers living with their spouse (Olsson & Hwang, 2001). Each problem in the family affects the all members of the family. In addition, families perceive the problem they experience as their individuals matters. However, these problems are quite prevalent among all the families with a disabled child. It cannot be thought that families with disabled children experience more problems than families with normally developing children. The only difference is that families with normally developing children can handle their problems more successfully (Aral & Gürsoy, 2007; Canel, 2007; Kazu & Ersözlü, 2008; Reichman, Corman, & Noonan, 2008).

Individuals with problem solving ability are more self-confident and successful in communication and they experience less emotional problems compared to people who ineffective in problem solving (Heppner, Baumgardner, & Jakson, 1985). Studies indicated that problem solving skills are higher in individuals who have good family functions, can empathize and do not have problem in the family (Shanmugham, Cano, Elliott, & Davis, 2009).

It is considered that problems of mothers with disabled child could negatively affect their problem solving abilities. The perception and suitable solution of everyday life problems by mothers with and without disabled child is considered to positively affect the domestic relations, communications and phycology and self-confidence of mothers. From this viewpoint, the present study aims to determine the problem solving abilities of mothers, propose suggestions to improve their problem solving abilities and investigate whether different variables create significant differences in their problem solving abilities.

MATERIAL AND METHOD

Type Of Study

This study is designed in descriptive survey model to investigate the problem solving abilities of mothers with or without disabled child (Büyüköztürk, 2007).

Participants

The study included a total of 258 mothers including the mothers (n:124) of disabled children aged between 7 and 14 years and attending the special education and rehabilitation center in Kırşehir affiliated to Ministry of Education and the mothers (n:134) of children in the same age group, with no disability and attending the primary schools affiliated to ministry of education.

Measures

In the study, "General Information Form" developed by the researchers was used to collect the information about the disabled and non-disabled children and "Problem Solving Inventory" (PSI) developed by Heppner and Peterson (1982) was used to determine the problem solving abilities of mothers with and without disabled child. The internal consistency coefficient of the inventory is .90 (Savaşır and Şahin, 1997). Turkish adaptation, validity and reliability tests of the scale were made by Şahin et al., and its Cronbach Alpha Significance Coefficient was found .88. The reliability coefficient of the scale was determined as .81 by half-division method. In terms of criterion-referenced validity, the correlation with the total score in Beck Depression Inventory was .33 and the correlation with State Constant Anxiety Inventory and Constant Form was determined .45 (Savaşır & Şahin, 1997).

Problem Solving Inventory consists of 35 items. Each answer is scored between 1 and 6 points in the scale. The minimum score that can be obtained from the scale is 32, while the maximum score is 192. Higher total score indicates that person feels incompetence in problem solving.

After obtaining necessary permissions for performing the application in Special Education and Rehabilitation Center and primary schools, PSI was applied on mothers. Mothers were informed about the study, and asked to fill the inventory. It was paid attention during the formation of study sample that mothers should have a whole family composed of mother, father, full brother-sister and one disabled child.

Data Analysis

In analyses of study, it was primarily tested whether the total scores of Problem Solving Inventory had a normal distribution. For this purpose, Kolmogorov-Smirnov One Sample Test was used (Siegel, 1977) and the results indicated that the problem solving ability scores of mothers with and without disabled child did not show normal distribution ($p<.01$). Therefore, it was decided to use non-parametric statistical methods. In this regard, Mann Whitney U Test and Kruskal Wallis Test were applied to investigate whether different variables created differences in mothers' scores of problem solving ability (Green, Salkind, & Akey, 1997; Büyüköztürk, 2007).

FINDINGS AND DISCUSSION

The following tables show the findings about whether certain variables like having a disabled child, the number of children and education level of mother are effective on problem solving abilities of mothers and the results are discussed with the support of relevant information in literature.

Table 1: The Mean Scores, Standard Deviations And Mann Whitney U Test Results On Problem Solving Abilities Of Mothers With And Without A Disabled Child

Group	PSI Score			Mann Whitney U Test Results			
	N	$\overline{X}$	S	Rank Average	Rank Sum	U Value	p
Having a disabled child	124	91.55	19.95	156.65	19424.00	4.942	**.000***
Not having a disabled child	134	78.30	19.46	104.38	13987.00		

*** p<.01**

The previous table demonstrates that having a disabled child created a statistically significant difference in problem solving abilities of mothers ($U=4.942$, $p<.01$). This result indicates that having a disabled child is effective on problem solving abilities of mothers. The mean score of mothers is closer to the maximum score that can be obtained from the scale, which gives clues that mothers especially with a disabled child might be inadequate in terms of problem solving ability. This situation could be attributed to the fact that mothers with a disabled child have to be more interested in care and education of the child and they don't know what to do due to the lack of knowledge about the disability of the child, and they become more exhausted.

Table 2: The Mean Scores, Standard Deviation And Kruskall Wallis Test Results On Problem Solving Abilities Of Mothers With And Without A Disabled Child In Terms Of The Number Of Children In The Family

Disability Status	Number of children	PSI score			Kruskall Wallis Test Results				
		N	$\overline{X}$	S	Rank Average	Sd	χ^2	P	Sig. Diff.
Mothers with a disabled child	Singleton	49	87.85	17.86	55.88	2	4090	.129	
	2-3 Children	62	95.11	21.58	69.02				
	4 and more children	13	88.53	17.46	56.35				
Mothers without a disabled child	Singleton	16	79.43	41659	69.91	2	8977	**.011***	41700
	2-3 children	67	72.79	14.63	57.87				
	4 and more children	51	85.19	22.70	79.39				

*** p<.01**

Table 2 reveals that the number of children did not create a significant difference in problem solving abilities of mothers with a disabled child ($\chi 2(2)=4.090$, $p>.05$). This could be caused by the domestic relations rather than the number of the children. Bebko, Konstantareas, & Springer (1987) also reported that the number of children in the family did not create a significant difference in stress levels of mothers. However, the number of children created a significant difference in problem solving abilities of mothers without a disabled child ($\chi 2(2)= 8.977$, $p<.05$). The reason of this difference was established with binary Mann Whitney U Test. In the comparisons of the groups in Mann Whitney U Test, the difference was found to be caused by the different problem solving abilities of mothers with 2-3 children and mothers with 4 or more children. There could be certain problems like jealousy etc. between siblings in families with more than one child. In this case, mothers feel themselves in a more problematic environment. On the other hand, the most favorable attitude towards the disabled child was determined as the parental approach in families with a disabled child. Ceylan (2004) reported that the number of children was effective on stress levels of mothers, and having only one child increased the depression levels of mothers with a disabled child.

Table 3: The Mean Scores, Standard Deviations and Kruskall Wallis Test Results on Problem Solving Abilities Of Mothers With And Without A Disabled Child I Terms Of Education Level

Disability status	Education level	PSI Score			Kruskall Wallis Test Results				
		N	$\overline{X}$	S	Rank average	Sd	χ^2	P	Sig. Dif.
Mothers with a disabled child	Primary School	86	95.86	19.18	70.28	2	13155	**.001***	41671
	Secondary School	32	82.03	41900	44.95				
	University	6	80.66	21.55	44.58				
Mothers without a disabled child	Primary School	71	84.84	20.73	81.15	2	23520	**.000***	1-2 1-3 2-3
	Secondary School	54	72.55	15.13	56.49				
	University	9	61.22	15950	35.83				

*** p<.01**

Considering the problem solving ability mean scores of mothers with and without a disabled child in terms of their education level, education level was determined to create a significant difference in problem solving abilities of mothers with a disabled child ($\chi 2(2)=13.155$, $p<.01$). Mann Whitney U Test was carried out to further investigate the significant differences between groups and the difference was determined to be caused by primary or secondary school graduate mothers with a disabled child. In addition, education level also

created a significant difference in problem solving abilities of mothers without a disabled child ($\chi 2(2)=23.520$, $p<.01$). As a result of the Binary Mann Whitney U Test applied to determine the source of the difference between groups, the difference was observed to be caused by all the three groups. In light of these results, it can be concluded that education level is effective on problem solving abilities of mothers.

It was reported that anxiety levels of mothers with a disabled child decrease with higher education level (Ahmetoğlu & Aral, 2007; Coşkun & Akkaş, 2009), and education level created a statistically significant difference in methods of coping with stress (Gülşen & Gök Özer, 2009). The previous studies indicated that problem solving ability improves with increasing education level, and mothers feel themselves better in terms of problem solving ability; on the other hand, mothers with low education level suffer more from the responsibility of children care and they are negatively affected by this (Gallegher, Beckman, & Cross, 1983; Quine & Pahl, 1991).

CONCLUSION AND RECOMMENDATIONS

As a result of the study, it was determined that having a disabled child and education level created statistically significant differences in problem solving abilities of mothers. Mothers with a disabled child were observed to have lower problem solving abilities than mothers without a disabled child. The number of children created a significant difference in problem solving abilities of mothers without a disabled child, while social security caused a significant difference in problem solving abilities of mothers with a disabled child.

Difficulties experienced by mothers with a disabled child star with the realization of the problem with their child and the diagnosis. The shock they could suffer is closely related to the approaches of experts they first communicate; therefore, these experts might provide the consultancy needed by parents through correct information about the diagnosis and the disability of the child, and give possibility to get better knowledge about certain issues like medical services and instruments. The participation of families can be obtained in the education of their children. Experts and educators could make home visits to observe the development level of children.

Negative responses of environment and close relatives to the disability of the child could disturb the balance in the family. These attitudes should not be turned into a problem, and suggestions of the experts should be applied without paying attention to the responses of the environment. Mothers could be contacted through educators in the schools, and their knowledge level about the education and condition of their children could be periodically obtained.

Supporting parents of disabled children on economic issues, which are among the biggest problems, could automatically solve many problems. Therefore, it is required to make necessary legal regulations for eliminating the loss of earnings and economic problems. Workers of the institutions where families bring their disabled children for treatment and education should be also informed about the emotions of families in addition to children. In addition, providing family education as well as individual and group consultancy services in these institutions could increase the problem solving abilities parents.

There are a limited number of studies in literature about the problem solving abilities of mothers; for this reason, these studies could be increased especially within Turkey. The future studies might investigate the effects of different variables on problem solving abilities of fathers or other family members.

IJONTE's Note: This article was presented at World Conference on Educational and Instructional Studies - WCEIS, 06- 08 November, 2014, Antalya-Turkey and was selected for publication for Volume 6 Number 1 of IJONTE 2015 by IJONTE Scientific Committee.

BIODATA AND CONTACT ADDRESSES OF AUTHORS

Şükran ŞİMŞEK is lecturer, Ahi Evran University School of Health Department of Child Development, Kırşehir, Turkey.

In 1998, she has graduated from Ankara University School Of Home Economics. Her master degree is finalized at Ankara University on the Institute of Science of Home Economics (Child Development) Department in 2001. She is currently postgraduating at Ankara University Institute Of Science that the department in Home Economics (Child Development). She has served as a lecturer in Ahi Evran University School Of Health Department Of Child Development since 2009. Her research interests are special education, early childhood, family education.

Lect. Şükran ŞİMŞEK
Ahi Evran Üniversitesi Sağlık Yüksekokulu
Çocuk Gelişimi Bölümü Zübeyde Hanım Cad.
40100 Merkez
Kirşehir- TURKEY
E. Mail: ssimsek@ahievran.edu.tr

Figen GÜRSOY is professor, Department of Child Development Faculty Of Health Sciences Ankara University, Ankara, Turkey.

She has graduated from Home Economics School of Ankara University in 1989. Her master degree is finalized at Ankara University on the Institute of Science of Home Economics (Child Development) Department in 1992. In addition to that, she has completed her Ph.D. degree at the same department in 1996. She deserves the title of professor in 2008. She currently serves as a faculty member of Department of Child Development Faculty Of Health Sciences Ankara University Her research interests are the education of preschool period, child development and education, special education, adolescence and social dezavantage children.

Prof. Dr. Figen GÜRSOY
Ankara Üniversitesi Sağlık Bilimleri Fakültesi
Çocuk Gelişimi Bölümü Plevne Cad. Aktaş Kavşağı No: 5
06340 Cebeci Ankara - TURKEY
E. Mail: gursoy.f@gmail.com

REFERENCES

Ahmetoğlu, E., & Aral**,** N. (2007). A study of the anxiety levels of mothers of children with mental disabilities. *Pakistan Journal of Social Sciences*, 4(4), 513-517.

Aral, N., & Gürsoy, F. (2007). *Children in need of special education and introduction to special education* (1st edition). Istanbul: Morpa Press.

Aral, N., Bütün Ayhan, A.. & Aydoğan, Y. (2006). *A Study on Anxiety Levels of Mothers with Mentally Retarded Children.* M. S. Giannakaki, G. T. Papanikos, Y. Pozios, & J. K. Richards (Eds.), *Research on Education* (pp. 25-35). Athens: Athens Institute for Education and Research.

Bahar, A., Bahar, G., Savaş, H. A., & Parlar, S. (2009). Levels of depression and anxiety among mothers of disabled children and their ways of coping with stress. *Fırat Health Services Journal*, 4(11), 1-12.

Bebko, J. M., Konstantareas, M. M. & Springer, J. (1987). Parent and professional evaluations of family stres associated with characteristics of autism. *Journal of Autism Developmental Disorders,* 17(4), 565-576.

Büyüköztürk, Ş. (2007). *Handbook of data analysis for social sciences.* Ankara: Pegem Press.

Canel, A. N. (2007). *Problem solving in the family, marriage satisfaction and study on a sample group.* Doctoral Dissertation, Marmara University, Institute of education sciences, Istanbul.

Ceylan, R. (2004). *Study on depression and desperateness levels of mothers of disabled children attending and not attending an integrated education*. Doctoral Dissertation. Ankara University, Institute of science, Ankara.

Coşkun, Y., & Akkaş, G. (2009). Relationship between the level of permanent anxiety and perception of social support among mothers with disabled children. *Journal of Kırşehir Faculty of Education of Ahi Evran University (KEFAD)*, 10(1), 213-227.

Ekas, N. V., Whitman, T. L., & Shivers, C. (2009). Religiosity, spirituality, and socioemotional functioning in mothers of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 39, 706-719.

Emerson, E., Hatton, C., Llewellyn, G., Blacker, J., & Graham, H. (2006). Socio-economic position, household composition, health status and indicators of the well-being of mothers of children with and without intellectual disabilities. *Journal of Intellectual Disability Research*, 50(12), 862-873.

Fazıl, Q., Bywaters, P., Ali, Z., Wallace, L., & Singh, G. (2002). Disadvantage and discrimination compounded: the experience of Pakistani and Bangladeshi parents of disabled children in the UK. *Disability & Society,* 17(3), 237-250.

Gallegher, J. J., Beckman, P., & Cross, A. H. (1983). Families of handicapped children: Sources of stress and its amelioration. *Exceptional Children*, 50(1), 10-19.

Gargiulo, R. M. (1985). *Working with parents of exceptional children: a guide for professionals.* Boston: Houghton Mifflin Company.

Glidden, L. M., & Schoolcraft, S. A. (2003). Depression: its trajectory and correlates in mothers rearing children with intellectual disability. *Journal of Intellectual Disability Research*, 47(4/5), 250-263.

Green, S. B., Salkind, N. J., & Akey, T. M. (1997). *Using SPSS for windows: Analyzing and understanding data.* New Jersey: Prentice Hall.

Gülşen, B., & Gök Özer, F. (2009). Stress coping skills of families of disabled children. *TAF Preventive Medicine Bulletin*, 8(5), 413-420.

Heppner, P. P., & Peterson, C. H. (1982). The development and implications of a personal-problem solving inventory. *Journal of Counseling Psychology*, 29, 66-75.

Heppner, P. P., Baumgardner, A. H., & Jakson, J. (1985). Depression and attributional style: Are they related? *Cognitive Therapy and Research*, 9, 105–113.

Karadağ, G. (2009). Difficulties experiences by mothers of disabled children and their levels of desperation and perceived social support from family. *TAF Preventive Medicine Bulletin*, 8(4), 315-322.

Kazu, H., & Ersözlü, Z. N. (2008). Investigating problem solving skills of teacher candidates in terms of sex, department and SSE scores. *Abant Izzet Baysal University Journal of the Faculty of Education,* 8(1), 161-172.

Kim, H. W., Greenberg, J. S., Seltzer, M. M., & Kraus, M. W. (2003). The Role of coping in maintining the psychological well-being of mothers of adults with intellectual disability and mental ilness. *Journal of Intellectual Disability Research*, 47(4/5), 313-327.

Oelofsen, N., & Richardson, P. (2006). Sense of coherence and parenting stress in mothers and fathers of preschool children with developmental disability. *Journal of Intellectual & Developmental Disability,* 31(1), 1-12.

Okanlı, A., Ekinci, M., Gözüağca, D., & Sezgin, S. (2004). Psychosocial problems experienced by families with mentally incompetent children. *Journal of International Human Sciences,* ISSN: 1303-5134, 1-8.

Olsson, M. B., & Hwang, C. P. (2001). Depression in mothers and fathers of children with intellectual disability. *Journal of Intellectual Disability Research*, 45(6), 535-543.

Olsson, M. B., & Hwang, C. P. (2008). Socioeconomic and psychological variables as risk and protective factors for parental well-being in families of children with intellectual disabilities. *Journal of Intellectual Disability Research*, 52(12), 1102-1113.

Özşenol, F., Işıkhan, V., Ünay, B., Aydın, H. İ., Akın, R., & Gökçay, E. (2003). An evaluation of family functions in families with disabled children. *Gülhane Medical Journal,* 45(2), 156-164.

Quine, L., & Pahl, J. (1991). Stress and coping in mothers caring for a child with severe learning difficulties: A test of Lazarus' transactional model of coping. *Journal of Community & Applied Social Pyschology*, 1, 57-70.

Padeliadu, S. (1998). Time demands and experienced stress in Greek mothers of children with down's syndrome. *Journal of Intellectual Disability Research*, 42(2), 144-153.

Reichman, N. E., Corman, H., & Noonan, K. (2008). Impact of child disability on the family. *Matern Child Health Journal*, 12, 679-683.

Savaşır, I., & Şahin, N. H. (1997). *Assessment in cognitive-behaviorist treatments: Common Scales.* Ankara: Publications of Society of Turkish Psychologists.

Sen, E., & Yurtsever, S. (2007). Difficulties experienced by families with disabled children. *Journal for Specialists in Pediatric Nursing,* 12(4), 238-252.

Shanmugham, K., Cano, M. A., Elliott, T. R., & Davis, M. (2009). Social problem-solving abilities, relationship satisfaction and depression among family caregivers of stroke survivors. *Brain Injury*, 23(2), 92-100.

Siegel, S. (1977). *Non-parametric statistics for behavior types.* (Interpreter: Topsever, Y.) Ankara University, Publication of Faculty of languages, history and geography. No: 274. Ankara: Ankara University Press.

Toros, F. (2002). Evaluation of anxiety, depression, marital adjustment and perception of children of mothers with mentally and/or physically disabled children. T Clin J Psychiatry, 3, 45-52.

Uğuz, Ş., Toros, F., Yazgan İnanç, B., & Çolakkadıoğlu, O. (2004). Determination of anxiety, depression and stress levels of mothers with mentally and/or physically disabled children. *Clinical Psychiatry*, 7, 42-47.

Yıldırım Sarı, H. (2007). Family loading in families of mentally disabled children. *Cumhuriyet University Journal of Nursing High School,* 11(2), 1-7.