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Adaptation in Mothers of Educable Mentally Retarded Children

Taraneh Taghavi ¹, Zahra Aliakbarzadeh-Arani ^{2*}, Majid Khari-Arani ³¹ Department of Psychiatric Nursing, Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, IR Iran² Department of Operating Room, Faculty of Paramedical sciences, Qom University of Medical Sciences, Qom, IR Iran³ Ministry of Education, Kashan, IR Iran

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ABSTRACT

Background: Adaptation is an important process for humans. Children, who are physically or mentally disabled, impose special stresses on their families, parents and in particular on their mothers.

Objectives: This study examines the relationship between the characteristics of mothers who have educable mentally retarded children, and their adaptation based on Roy's adaptation model.

Patients and Methods: This descriptive study was performed on 40 mothers of educable mentally retarded children referred to the single exceptional school in Aran va Bidgol City, Iran, during 2010 - 11. An adaptation questionnaire based on Roy's adaptation model and demographic questionnaire were completed by the subjects. The results were analyzed using SPSS software version 16. Descriptive statistics and a Fisher's exact test were used.

Results: The overall adaptation of mothers was satisfactory. There was a significant relationship between the child's birth order ($P = 0.04$) and the time of awareness of the child's problem ($P = 0.02$), with adaptation levels in mothers who had a mentally retarded child.

Conclusions: The child's birth order and the time of awareness of the child's problem were related to the mother's adaptation level.

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► Implication for health policy/practice/research/medical education:

Results of this research can be used in nursing management programs, consulting centers and other researches.

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1. Background

Adaptation is an important issue for people, and the relationship between adaptations with other variables has been investigated by several researchers, including Manduka, Kahn and Spearman. Ballard began to explore ways to increase people's ability to adapt (1), as adaptation is necessary for their daily lives (2). Significant numbers of families, suffer from the unpleasant effects of having a disabled child (2). Mental retardation is one of the most

difficult problems in modern societies, which affects about 3% of the total population (3). According to statistics announced by Iran's State Welfare Organization in 2006, the country has around 2 800 000 disabled people, of whom 28 795 have mental disabilities (4). Studies concerning the impact of the birth of a child with a disability in the family have produced conflicting results. Kerman-shahi *et al.* showed that many mothers who have a mentally retarded child, use spirituality as a support source

* Corresponding author: Zahra Aliakbarzadeh-Arani, Department of Operating Room, Faculty of Paramedical sciences, Qom University of Medical Sciences, Qom, IR Iran. Tel: +98-2517703738, Fax: +98-2517703788, E-mail: Nursing_aran@yahoo.com

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to accept the situation (5). In contrast, Koohsali *et al.* in their study concluded that mentally retarded children's mothers bear high levels of stress, depressive symptoms and family breakdown (3). When parents are faced with the problems of having a mentally retarded child, they try to obtain resources to guide them, ways to deal with the problem and cope with this phenomenon. Nurses as professional persons in the health care team, play an important role in the diagnosis, care, and rehabilitation process, by supporting people's efforts to cope with new situations and reducing their mental stress (6). Roy is one nursing theorist who said, 'A human is a system that has an adaptation capacity and this can change based on environmental needs' (7). Individual adaptation, is a stimulus versus performance reaction, that determines adaptation levels (8). In America, Ays *et al.* studied adaptation patterns in parents with mentally retarded children, based on Roy's adaptation model and they showed disturbances in parent's adaptation methods (9). Moore *et al.* have also examined the quality of life of mothers with severe cerebral palsy children, based on Roy's adaptation model (10). In Iran, the problems of having children with mental retardation and its impact on families, have been somewhat neglected.

2. Objectives

The present study investigated the relationship between the characteristics of mothers who have mentally retarded children and their adaptation, based on Roy's adaptation model.

3. Patients and Methods

This was a cross-sectional study. The study population included all of the mothers with educable mentally retarded children, referred to the single primary school in Aran va Bidgol City during 2010 - 11. From the 62 educable mentally retarded children in the city, 45 attended an exceptional primary school. After obtaining the necessary permissions, the mothers were selected based on inclusion and exclusion criteria, and five were excluded. Inclusion criteria included; having at least one mentally retarded child in primary school (6 - 17 years) and the capability to read and write. Mothers with mental illness were excluded from the study. Demographic information and adaptation questionnaires were completed by the mothers. The researchers created the questionnaire, which had 50 questions based on the four modes of Roy's model. The assessed modes were; physiological mode (17 items; 0 - 51), self-concept mode (18 items; 0 - 54), independent and dependent mode (six items; 0 - 8), and the role playing mode (nine items; 0 - 27). Each item rated was based on a four-point Likert scale (3 - 0). The adaptation score was calculated based on total numbers in the four modes (0 - 150). Adaptation scores were categorized into three levels; undesirable (0% - 33%), relatively desirable

(34% - 67%) and desirable (68% - 100%). The content validity of the questionnaire was examined by a panel of experts. In order to determine reliability, a test-retest method was used. The reliability was as follows; psychological mode 0.84, self-concept mode 0.84, independent and dependent mode 0.72, role playing mode 0.97 and total adaptation 0.91. Patients signed an informed consent after being provided with detailed information regarding the aims of the study. In addition, this research was approved by the Ethics Committee of the Research Deputy of Tehran University of Medical Sciences. Statistical analysis was performed using SPSS 16 software and nominal variables were compared using a Fisher's exact test.

4. Results

The mean age of the subjects was 28.38 ± 7.95 years, and the age of their spouses was 42.10 ± 8.72 years. The majority of the mothers (67.5%) had 1 - 3 children. The majority of women (77.5%) had a primary education and (92.5%) were housekeepers. Family income in 55% of the subjects was relatively consistent with living expenses. Most of the mothers (55%), noticed the problem of mental retardation, 1 to 15 months after the child's birth. *Table 1* shows the mean scores in four modes of adaptation and total adaptation in the study population. Significant relationships were observed between the child's birth order ($P = 0.04$) and the time of awareness of the child's problem ($P = 0.02$) with adaptation in the mothers (*Table 2, 3*).

Table 1. Mean Scores of Adaptation Dimensions in Subjects

	Mean \pm SD
Dimensions	
Physiologic	25.4 \pm 5.71
Self-concept	29.95 \pm 7.6
Independent/dependent	10.8 \pm 2.63
Role playing	14.88 \pm 5.28
Total adaptation	80.30 \pm 16.42

5. Discussion

Mothers' adaptation levels in this study, in all four modes of Roy's adaptation model, were relatively good. Having a child with mental retardation brings physiological changes to the mother. These changes are created from the special needs of a child who is mentally retarded and the burden that is imposed on the mother. The mothers' psychological profiles, their life goals and their understanding of life were considered in the field of self-concept mode. Barlow *et al.* have shown that education and supporting programs are effective methods for developing and managing psychological health (11). In this study, the mothers' adaptation levels were not completely desirable, and this may lead to role conflict. Moore *et al.* in their qualitative research about the experiences of mothers with children suffering from severe

Table 2. Level of Mothers' Adaptation According to Their Demographic Variables

	Desirable, No. (%)	Relatively Desirable, No. (%)	Undesirable, No. (%)	Total, No. (%)	F (df)	P value
Age, y					3.69 (4)	0.16
25 - 45	3 (7.5)	28 (70)	0 (0)	31 (77.5)		
≥ 45	1 (2.5)	7 (17.5)	1 (2.5)	9 (22.5)		
Time of awareness of the child's problem, mo					11.1 (4)	0.02
1-15	3 (7.5)	20 (50)	0 (0)	23 (57.5)		
15 - 45	1 (2.5)	15 (37.5)	1 (2.5)	17 (42.5)		
Education					1.65 (2)	0.43
Primary	1 (2.5)	26 (65)	4 (10)	31 (77.5)		
Diploma and higher	0 (0)	9 (22.5)	0 (0)	9 (22.5)		
Job					1.91 (4)	0.41
Working	1 (2.5)	3 (7.5)	0 (0)	4 (10)		
Housekeeper	0 (0)	32 (80)	4 (10)	36 (90)		

Table 3. Level of Mothers' Adaptation According to the Child's Characteristics

	Desirable, No. (%)	Relatively Desirable, No. (%)	Undesirable, No. (%)	Total, No. (%)	F (df)	P value
Birth order					3.93 (1)	0.04
First	1 (2.5)	14 (35)	0 (0)	15 (37.5)		
Second and other	0 (0)	21 (52.5)	4 (10)	25 (62.5)		
Age, y					5.9 (4)	0.19
5-10	0 (0)	18 (45)	0 (0)	18 (45)		
10-15	1 (2.5)	13 (32.5)	1 (2.5)	16 (40)		
15-20	0 (0)	4 (10)	0 (0)	6 (15)		
Gender					2.69 (2)	0.27
Male	0 (0)	17 (42.5)	2 (5)	19 (47.5)		
Female	1 (2.5)	18 (45)	2 (5)	21 (52.5)		
Disorder severity					0.82 (2)	0.66
Low	0 (0)	19 (47.5)	1 (2.5)	20 (50)		
Moderate	1 (2.5)	16 (40)	3 (7.5)	20 (50)		

cerebral palsy, found that the role of the mother with a disabled child changes considerably (10). In this study, the mothers' communications and support systems were considered in independent and dependent modes. Tajeri and Bahiraei (2008) also showed that the mothers, who benefited from a social support network, have more positive reactions to emotional and physical problems (12). Hastings *et al.* (2006) have also shown that lack of support from the mothers' relatives and friends can lead to detachment. Psychological stress may decrease with both positive independence and dependence on others (13). The relationship between the mother's adaptation level and their age in this study, was not statistically significant. Tsai *et al.* focused on using the Roy model in patients with chronic pain and showed that age, and sex affect daily stress (14). The age variation in the current study was limited so that could explain the results.

There was also no significant relationship found between a mother's adaptation level and the age of the child, job, or family history of mental retardation, but a statistically significant relationship was observed between adaptation levels and the child's birth order. In fact; it was found that a mother's adaptation level with a first healthy child was better. It seems that mothers with a first healthy child can tolerate the situation to a greater degree than mothers with only one child with a mental problem. In this study, there were no significant differences between mother's adaptation level and the number of children. Ays found that there is a significant relationship between numbers of children with patterns of family adaptation (9). The child's sex did not have an association with adaptation levels in mothers. Malekpoor *et al.* (15) and Hivadi *et al.* (16) also found that training reduces the stress in mothers who have either mentally. No significant as-

sociation found between the mother's adaptation level and child's sex may be explained by the fact that mothers are more concerned about the education and training of their children and it does not matter if that child is a girl or a boy. Some training programs may help mothers to cope with the situation regardless of the sex of the child (15). In this study, no significant relationship was observed between adaptation levels and education level of the mothers. However, a mother's adaptation level was related to the time of awareness of the child's problem. The mothers who diagnosed the problem at the time of birth had better levels of adaptation. Moore (2005) in his study concluded that the time when the child's problem was diagnosed affects the change in the maternal roles and self-concept modes (10). All of the mothers in this study were living with their husbands and there were no remarriages, divorces or dead spouses in the group. Ilali (2001) showed that there is little difference between the parent's adaptation levels of those who had lost their spouse, or parents who live together (6). The results of this survey suggest that mothers of mentally retarded children generally have a relatively desirable adaptation and there is no significant relationship between mother's age, education, number of children, mentally retarded child's age and sex, mother's job, disorder severity and history of retardation in the family with mother's adaptation. However, the child's birth order and the time of awareness of the child's problem do have an effect on mother's adaptation.

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Authors' Contribution

All authors were responsible for the study's conception and design, data analysis and writing of the article.

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