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Comparison of the Parents of Children with and without Hearing Loss in Terms of Stress, Depression, and Trait Anxiety[2]

Abstract

It is hard to claim that the research about long term psychological effects on the parents of children with hearing loss have consistent results. In this sense, the purpose of the study was to compare the parents of children with (n=230) and without (n=230) hearing loss in terms of stress, depression, and trait anxiety symptoms. Assessment tools were Stress Self-Assessment Checklist for stress symptoms, Beck Depression Inventory for depressive symptomatology, and Trait Anxiety Inventory for the symptoms of trait anxiety. The findings of 2 (group) x 2 (sex) Analysis of Variance were in accordance with the assumption documented in the literature: Parents of children with hearing loss, especially the mothers, are at risk for developing psychiatric/psychological symptoms. The results of the research were discussed with a special emphasis on the contradictory findings in the literature and with respect to the social-cultural aspects of having a child with hearing loss. Possible causes of the difference between groups were also taken into account during discussion.

Key words: Hearing-impairment, Turkish children with hearing loss, Parents, Stress, Depression, Trait anxiety.

Introduction

There is an extensive body of literature analyzing the impact of a child with hearing loss on the parents and the family (Fışıloğlu & Fışıloğlu, 1996; Jackson & Turnbull, 2004; Luterman, 1979, 1987, 1997; Quittner, Glueckauf, & Jackson, 1990). It is suggested that the family systems theory should be used to achieve a greater understanding of the impact of hearing loss on parents (Jackson & Turnbull, 2004). In systems theory, family can be conceptualized as a continuing system of interacting personalities bound together by shared rituals and rules even more than biological ties (Feher-Prout, 1996). The

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[2]This study is a part of author's Master thesis carried out at the Institute for Social Sciences at Ankara University in Turkey. The author thanks to all parents who voluntarily participated in the study.

diagnosis of hearing loss and the presence of a child with hearing loss put extremely significant pressures on the family with hearing parents, and can be a continuous source of potential stress (Kurtzer-White & Luterman, 2003). The vital question is "How does the inclusion of a child with hearing loss affect the family system?" From a homeostatic point of view, noted by Luterman (1987), all the families have a consistent balance between change and stability, which is one of the most important characteristics of the family. When a child with hearing loss joins to the family system as a new member, this unexpected situation will become a significant threat for the dynamics of balance process; thus, will be perceived as highly stressful by the other members of the family.

Early attempts to understand the initial responses of parents to the diagnosis of hearing loss in the child, mostly show similarities with the reactions in the grief theory of Kübler-Ross (1969), which was originally developed to explain the emotional reactions of the patients who had malignant disease and of the relatives of patients. The theory suggests some emotional stages in the presence of death or loss, such as denial, ~~rage and~~ anger, bargaining, depression, and acknowledgement. By the time, grief theory was adapted for the families of the children with hearing loss. The main theme in the original theory is death or loss of an intimate person, but the primary theme for the adapted model is death or loss of the dreams of having a perfect child (Sloman, Springer, & Vachon, 1993). Thus, as to the author claimed, the death or loss of a loved one could be conceptualized as *loss of object*, and having a child with disability as *loss of project*. Shock, recognition, denial, acknowledgement/acceptance, and constructive action/adaptation are the emotional stages of parental reactions in the adapted model (Luterman, 1987).

Although the models of grief based on death and loss are commonly used to understand the initial responses of the parents of children with hearing loss, it is important to remember that the model does not explain the life-long emotions of the people who live with an individual with disability. For those whose loss results from a death, there is an expectation that grief will be resolved and the loss will be accepted. Since the child with hearing loss is a continuing member of the family, the successive resolution of grief process related to the diagnosis of hearing loss can be more difficult than grief after death or loss (Kurtzer-White & Luterman, 2003).

Quittner et al. (1990) claimed that many studies continue to assess stressful life events rather than situationally defined stressors, and fail to differentiate acute and chronic stress processes. Living with a child with hearing loss is a source of chronic stress. In the study by Quittner et al., chronic stress was assessed in 96 mothers of children with hearing loss and 118 matched controls. The results indicated that clinical group showed higher levels of stress, depression, and anxiety associated with lowered perceptions of emotional support. Greater symptoms of depression and unresolved grief (Kurtzer-White & Luterman, 2003), anxiety and anger (Quittner et al., 1990), depraved quality of life (Jackson & Turnbull, 2004), decreased perceptions of self-esteem (Konstantareas & Lampropoulou, 1995), alcoholism and suicidal attempts (Şen, 1991) were the other psychological problems documented by the literature associated with the parents of

children with hearing loss. On the basis of the previous literature, it can be concluded that the parents of children with hearing loss are at risk for developing psychiatric/psychological symptoms.

Depending on the assumption that having a child with hearing loss is a source of chronic stress and related problems in the family, in the current study; parents of Turkish children with and without hearing loss were examined in terms of stress, depression, and trait anxiety symptoms.

Method

Design

A causal-comparative research design, described by Gay, Mills, & Airasian (2006), was conducted in order to compare (stress, depression, and trait anxiety symptoms of) two groups of parents.

Participants

The sample consisted of 460 parents of children with (n=230) and without (n=230) hearing loss (ages 4 to 18) living in Eskişehir, Turkey. Participants in the first group included hearing parents of the children with hearing loss from Education and Research Center for Hearing-Impaired Children; and the second group were the parents of hearing children enrolling in various residential schools. The mean age of the participants were 35.84 (SD=6.55) for mothers, 40.85 (SD=6.80) for fathers, 10.57 (SD=4.17) for the children of the first group; and 36.00 (SD=5.13) for mothers, 40.50 (SD=6.90) for fathers, 10.04 (SD=3.23) for the children of the second group. All the children in the first group had profound hearing loss. Groups were matched for parent age, $t_{(2,458)} = .175$, $p>.05$ and child age, $t_{(2,458)} = 1.49$, $p>.05$. Variables such as child's sex, psychiatric treatment condition (for parents), and having an additional disability (for the children with hearing loss) -which were considered to have potential effects on the stress, depression, and anxiety symptoms of the parents- distributed similarly for both groups.

Measures

The adapted forms of Stress Self-Assessment Checklist (SSC) for stress symptoms (Hovardaoğlu, 1997), Beck Depression Inventory (BDI) for depressive symptomatology (Hisli, 1989, cited in Savaşır & Şahin, 1997), and Trait Anxiety Inventory (TAI) for the symptoms of trait anxiety (Öner & Le Compte, 1985) were used to measure each variable; and Demographic Information Form (DIF) developed by the author was used for basic socio-demographic variables.

Procedure

The data of this study were collected in two ways. First, the parents of the children with hearing loss were invited to Education Research Center for Hearing-Impaired Children and the scale battery was administered in group sessions that consisted of 15-20 participants on average. Second, the parents of the hearing children were sent the

assessment battery, and asked to complete the scales. Both groups were informed that the data will only be used for research purposes rather than individual use.

Results

The data were analyzed in two steps. First, the means and standard deviations of the total scores of scales for each group of parents were calculated. Second, 2 (group) *x* 2 (sex) Analysis of Variance was conducted for between-groups comparison. Table 1 presents the means and standard deviation scores of both groups of parents from each scale.

Table 1
Means and standard deviations of the scores for both groups of parents

	Parents of children with hearing loss						Parents of children without hearing loss					
	Mothers		Fathers		Total		Mothers		Fathers		Total	
	$\overline{X}$	*S*	$\overline{X}$	*S*	$\overline{X}$	*S*	$\overline{X}$	*S*	$\overline{X}$	*S*	$\overline{X}$	*S*
SSC	65.96	11.10	56.88	10.43	61.42	11.67	59.24	12.03	54.75	9.66	57.00	11.11
BDI	13.11	7.67	9.26	6.18	11.19	7.22	8.04	6.77	7.53	6.80	7.78	6.77
TAI	46.41	7.53	42.02	7.09	44.22	7.63	43.07	8.09	40.59	7.26	41.83	7.77

SSC: Stress Self-Assessment Checklist; BDI: Beck Depression Inventory; TAI: Trait Anxiety Inventory

The findings of the Analysis of Variance indicated that there were statistically significant main effects of group and sex on the mean scores of the SSC, BDI, and TAI. The findings of the *group main effect* showed that the parents of children with hearing loss had higher mean scores than the parents of hearing children for each of the three scales ($F_{(4,456)}$=19.12, p<.05 for SCC; $F_{(4,456)}$=28.11, p<.05 for BDI; $F_{(4,456)}$=11.64, p<.05 for TAI, respectively) (See Table 1).

According to the findings of *sex main effect*, there were also statistically significant differences between the mean scores of the three scales of parents in both groups: Mothers showed greater levels of stress ($F_{(4,456)}$=45.07, p<.05 for SSC), depression ($F_{(4,456)}$=11.56, p<.05 for BDI), and anxiety ($F_{(4,456)}$=24.13, p<.05 for TAI) (See Table 1).

Finally, the results of the *interaction effect* indicated that the mothers of children with hearing loss had significantly higher mean scores of stress ($F_{(4,456)}$=5.16, p<.05 for SSC), depression ($F_{(4,456)}$=6.86, p<.05for BDI) than the mothers of the comparison group (See Table 1).

Discussion

One of the estimated findings of this study was that parents of children with hearing loss and the mothers of both groups had greater levels of stress, depression, and trait anxiety than did the parents of hearing children and the fathers of both groups. This result is consistent with the studies in literature (e.g. Adams & Tidwell, 1989; Konstantareas & Lampropoulou, 1995; Kurtzer-White & Luterman, 2003; Quittner et al., 1990) with two exceptions (Henggeler et al., 1990; Mapp & Hudson, 1997). In their study with a sample of African American and Hispanic parents (*N*=98) of children with hearing loss, Mapp and Hudson (1997) investigated the relationships among the parents' stress levels and their reported coping strategies. They reported significant differences between African American and Hispanic parents in terms of stress and use of coping strategies, but emphasized that both groups of parents expressed lower levels of stress than the levels documented by previous literature. Depending on this finding, Mapp and Hudson concluded that racial and ethnic group membership was significantly related to the degree of use of several coping strategies which is strictly associated with stress process. In the second study (*N*=131) which reported inconsistent findings with the current study, Henggeler et al. (1990) found that the parents of youths with hearing loss expressed less psychiatric symptomatology than did the parents of hearing youths on Symptom Checklist-90-Revised (SCL-90-R; a checklist for screening psychiatric symptoms). Inconsistency between these two studies and present study could be partially explained by cultural differences of the samples and the methodology including different measures and sample size.

In summary, with respect to the limited sample of this study, it can be concluded that the findings of the study tend to indicate two generalizations: (1) A child with hearing loss is a chronic source of stress and stress-related problems. (2) Parents of children with hearing loss, especially the mothers, seem to be at risk for developing psychiatric symptomatology.

Finally, depending on the limitations of this study, further research is needed to focus on psychological variables including perceived social support (with an emphasis on professional support), coping processes, anger, self-esteem, and locus of control. In addition, studies on effectiveness of different psychological interventions can lead to a complete understanding of the parents of individuals with hearing loss.

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