





DEPRESSION AND CHILD NEGLECT IN MOTHERS OF CHILDREN WITH GROWTH RETARDATION

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ABSTRACT

Aim: In this study, it was aimed to evaluate depression and child neglect in mothers of children with growth retardation (GR).

Methods: The research was carried out at Baglaralti Training Health Care Center affiliated to Bursa University of Health Sciences Yuksek Ihtisas Training and Research Hospital. The study is a case control study. A total of 200 children with GR between the ages of 0-6 and their mothers' were enrolled as the case group, and 200 children with similar age and gender, without GR, and their mother were included in the study as the control group (CG). The Beck Depression Inventory (BDI) and the Maternal Child Neglect Scale were administered to the mothers.

Results: Depression levels of mothers whose children were in the GR group were high. BDI values increased the risk of GR by 1.062 times. In addition, it was found that physical neglect values increased the risk of GR by 1.464 times, at a statistically significant level. The number of individuals living at home decreased the risk of GR and emotional neglect scores of the GR group.

Conclusions: In the study, the risk of depression and child neglect was higher in mothers of children with growth and development retardation. We believe that evaluating the mothers of children with developmental disabilities about depression and child neglect and taking the necessary measures can have a positive impact on the treatment processes of children.

Keywords: child neglect, emotional neglect, growth and development retardation, maternal depression, physical neglect

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INTRODUCTION

Currently, the survival of children with a healthy growth and development period depends on the interaction of many factors at different rates, such as genetic factors, as well as family relationships, the socioeconomic status of the family and society, nutritional conditions, and the mental health status of the mothers. These various factors include important elements that determine the basic level of health and quality of life in the first years of children's life. Growth and development retardation may occur in many children, often due to many factors such as economic difficulties, malnutrition, domestic violence and neglect [1].

Growth retardation, by definition, refers to the fact that the expected growth curves of children according to their age and gender remain below the standards of society. This condition occurs as a result of the interaction of genetic, psychosocial, and environmental factors to different degrees. Many factors, such as nutritional deficiencies, genetic predisposition, recurrent infections, and socioeconomic difficulties can prevent children from realizing their full biological potential [2].

Maternal depression, by definition, is the appearance of signs of depression during the gestational period of the mothers, puerperal pregnancy, or early in the child's life. This situation negatively affects the mother's communication with her child and her maternal skills. Depression occurring in the mother can disrupt the dynamics within the family and increase family tension, which negatively affects

the healthy growth and development environment of the child, and as a result, retardation in the child's growth and development can be monitored [3]. Depression can reduce the mother's physical and emotional connection with her child, and depending on this situation, the child may become vulnerable to child neglect. As a result of child neglect, it can have long-term consequences that can lead to biological, physical, and psychosocial problems in the later years of a child's life [4].

This study aims to examine the complex relationships in this regard in more depth, focusing on understanding the interaction between depression and child neglect, especially in the mothers of children with growth and development deceleration. This complexity represents an important area of research that can have long-term effects on child health and parent-child relationships [5].

METHODS

The research was carried out between December 2023 and June 2024 at the Baglaralti Training Health Care Center affiliated to Bursa University of Health Sciences Yuksek Ihtisas Training and Research Hospital. The study was a case control study. A total of 200 children with GR between the ages of 0-6 and their mothers' were enrolled as the case group, and 200 children with similar age and gender, without GR and their mother were included in the study as the control group (CG). SBU Bursa Yuksek Ihtisas Training and Research Hospital's Ethics Committee approved the study

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The study was a case-control study. The percentiles of age, gender, height and weight of the children included in the study were noted. In addition, the mothers' age, educational status, household income, smoking and alcohol consumption, whether they had chronic diseases (diabetes mellitus, hypertension, history of stroke, musculoskeletal system disease, history of cancer, COPD, asthma and other diseases), the parents' cohabitation status, the number of individuals living at home, and the mother's working status were recorded. Beck Depression Scale and Maternal Child Neglect Scale consisting of 21 questions were administered by interviewing each of the mothers face to face.

The Maternal Child Neglect Scale (MCNS) was developed by Taylor et al. [6] and adapted to Turkish by Neslihan and Sunay [7]. The scale consists of 20 items and each item is answered with a five-point Likert-type assessment. The items are arranged to measure the child's state of care and interest in different areas. By collecting the responses of the items determined for each dimension, it is possible to evaluate the negligence in the relevant dimension. Cronbach's Alpha value was high in the scale developed for the purpose of evaluating child neglect and abuse. Such scales are usually used in the fields of psychology, pediatrics, social services, and family therapy.

The Beck Depression Inventory was developed by Beck in 1974 [8]. It was translated into Turkish by

Hisli in 1988 [9]. This scale is a self-assessment tool used to measure the severity of depression. Beck created this scale in order to objectively evaluate the symptoms of depression and monitor the treatment process. The scale consists of 21 items and each item is rated at four different levels of severity (0-3). The total score determines the severity of depression and helps to identify depression at various levels, from mild to severe.

Statistical Analysis

The demographic and clinical characteristics of the cases evaluated in the study were analyzed with descriptive statistical analyses (number, percentage, average, standard deviation, etc.). The proportional data related to demographic and clinical characteristics between the GR and CG groups were compared with the Chi-Square Test. The BDI and MCNS scores were compared as Independent Groups using the t-test in normally distributed data. The relationship between BDI and MCNS scores was examined using Pearson Correlation Analysis in normally distributed data. The factors that are effective in increasing the risk of GR were examined by Multivariate Binary Logistic Regression Analysis. The significance level for all analyses was determined as $p < 0.05$. The conformity of the data to the normal distribution was checked with kurtosis and skewness values (± 1.5). The IBM SPSS 26.0 program was used in the analyses.

RESULTS

It was found that 97 of the GR cases (48.5%) were female, while 111 of the CG cases (55.5%) were female. The average age of the GR group cases evaluated in the study was 35.57 ± 22.25 , and the average age of the control group cases was 39.38 ± 20.73 . Age and gender were similar between the two groups.

The Independent Groups t test showed that the educational neglect averages of CG cases were statistically significantly higher than the GR cases ($p=0.004$). In addition, it was found that the mean BDI scores were higher at a statistically significant level in GR cases ($p<0.001$) (Table 1).

Table 1. Comparison of Beck Depression Inventory and Maternal Child Neglect Scale scores between the groups

	Growth Retardation Group		Control Group		p ^a - value
	Mean	Standart Deviation	Mean	Standart Deviation	
Beck Depression Inventory	12.24	8.88	8.23	5.89	<0.001
Emotional Neglect	18.73	1.71	18.99	1.41	0.085
Educational Neglect	22.44	2.29	23.09	2.13	0.004
Authority and Supervision	23.56	1.89	23.55	1.84	0.936
Physical Neglect	24.16	1.52	23.94	1.60	0.159
Maternal Child Neglect Scale (Total)	88.89	6.31	89.57	6.07	0.273

^a: Independent Groups t test

According to Pearson Correlation Analysis, there was a statistically significant level of negative correlation between BDI values of GR group and emotional neglect ($r=-0, 275$; $p<0, 001$), educational neglect ($r=-0, 351$; $p<0, 001$), authority and supervision ($r=-0, 208$; $p=0, 003$),

physical neglect ($r=-0, 329$; $p<0, 001$), MCNS total ($r=-0, 343$; $p<0, 001$). According to the Pearson Correlation Analysis, it was found that there was a statistically significant positive correlation between the BDI values of CG cases and the authority and audit scores ($r=0.147$; $p=0.038$) (Table 2).

Table 2. The relationship between Beck Depression Inventory and Maternal Child Neglect Scale scores

		Growth Retardation Group	Control Group
		Beck Depression Inventory	Beck Depression Inventory
Emotional Neglect	r	-0.275	0.072
	p	<0.001	0.308
Educational Neglect	r	-0.351	0.016
	p	<0.001	0.821
Authority and Supervision	r	-0.208	0.147
	p	0.003	0.038
Physical Neglect	r	-0.329	0.068
	p	<0.001	0.341
Maternal Child Neglect Scale (Total)	r	-0.343	0.085
	p	<0.001	0.233

r=Pearson Correlation Analysis

According to Multivariate Binary Logistic Regression Analysis, it was found that BDI values increased the risk of GR by 1.062 times ($p < 0.001$; CI, 1.028 – 1.097) at a statistically significant level. In addition, it was found that physical neglect values increased the risk of GR by 1.464 times at a statistically significant level ($p = 0.001$;

CI: 1.172 – 1.829).

According to the Multivariate Binary Logistic Regression Analysis, it was found that the number of individuals living at home reduced the risk of GR at a statistically significant level (OR=0.743; $p = 0.013$, CI: 0.587- 0.939). In addition, it was found that emotional neglect scores reduced the risk of GR at a statistically significant level (OR=0.760; $p = 0.040$, CI: 0.585- 0.987) (Table 3).

Table 3. Factors effective in increasing the risk of growth retardation

	B	SE	Wald	df	p	OR	95% CI	
							LL	UL
Age	-0.004	0.006	0.487	1	0.485	0.996	0.984	1.008
Gender (Male)	0.353	0.228	2.407	1	0.121	1.423	0.911	2.224
The age at which supplemental food started	-0.128	0.078	2.689	1	0.101	0.880	0.756	1.025
Breast feeding duration	-0.019	0.015	1.537	1	0.215	0.981	0.952	1.011
Growth retardation in siblings	-0.530	0.676	0.616	1	0.432	0.588	0.157	2.212
Additional illness of the child (None)	-0.627	0.384	2.667	1	0.102	0.534	0.252	1.134
Maternal Age	0.044	0.023	3.616	1	0.057	1.045	0.999	1.094
Maternal education level (below high school)	0.007	0.274	0.001	1	0.981	1.007	0.589	1.721
Mother chronic illness (No)	-0.224	0.324	0.475	1	0.491	0.800	0.423	1.510
The number of individuals living in the house	-0.298	0.120	6.176	1	0.013	0.743	0.587	0.939
Is the mother working? (No)	0.453	0.300	2.283	1	0.131	1.573	0.874	2.831
Montly Income (Low)	-0.034	0.349	0.010	1	0.922	0.967	0.488	1.914
Beck Depression Inventroy	0.060	0.017	12.956	1	0.000	1.062	1.028	1.097
Emotional neglect	-0.275	0.134	4.223	1	0.040	0.760	0.585	0.987
Educational neglect	-0.124	0.084	2.201	1	0.138	0.883	0.749	1.041
Authority and supervision	0.015	0.090	0.027	1	0.868	1.015	0.851	1.211
Physical Neglect	0.381	0.114	11.260	1	0.001	1.464	1.172	1.829

SE=Standard Error, CI=Confidence Interval, LL=Lower Limit, UL=Upper Limit. NR2=0.25, X2=81.33, p<0.001.

DISCUSSION

The depression levels of mothers whose children were in the GR group were high in the current study. It was found that BDI values increased the risk of GR by 1.062 times. Physical neglect values increased the risk of GR by 1.464 times at a statistically significant level. In addition, the number of individuals living at home and emotional neglect scores were found to reduce the risk of GR.

There are studies in the literature that show children with growth retardation experiencing problems in their domestic relationships [10-12]. For example, a study conducted by Roberts et al. [10], they emphasized that low socioeconomic status and domestic stress negatively affect the physical and emotional development of children. In the present study, the authority and supervision scores of the GR group were low.

In the literature, the effects of authority and supervision on children's development have been studied [13-17]. For example, a study conducted by Thompson et al. indicated that domestic discipline and supervision have positive effects on children's social and academic achievements [13]. The study was conducted with a large sample group and the levels of discipline and supervision of children in the family were analyzed in detail. It shows that low authority and supervision increase children's risk of behavioral problems and academic failure.

In the GR group, a negative relationship was found between mothers' BDI scores and emotional neglect. In the literature, high levels of

depression increase the risk of emotional neglect of children [10, 18, 19]. For example, a study conducted by Roberts et al. found that maternal depression leads to difficulties in meeting the emotional needs of children, and therefore emotional neglect increases [10]. A negative relationship was found between BDI and educational neglect in the GR group. It has been stated in the literature that there are difficulties in meeting the educational needs of children in families with high levels of depression. A study conducted by Martinez et al. found that depression leads to educational neglect of children and this negatively affects children's academic achievement [20].

A negative relationship was found between physical neglect and BDI in the GR group. It has been stated in the literature that depression leads to inadequacies in meeting the physical needs of children. As a result of the research conducted by Smith et al., it has been found that parental depression negatively affects the physical care of children and this increases the risk of physical neglect [21].

It has been found that the number of individuals living at home reduces the risk of GR. In the literature, it is stated that the extended family structure positively affects the growth and development processes of children. In a study conducted by Johnson et al., it was found that increasing the number of individuals living at home reduces the risk of growth retardation in children [22]. It has been found that emotional neglect scores reduce the risk of GR. In the

literature, it is stated that the reduction of emotional neglect positively affects the growth and development processes of children. A study conducted by Garcia et al. found that reducing emotional neglect reduces the risk of growth retardation in children [23].

Since the study has a cross-sectional design, it is difficult to determine causality relationships. It is necessary to examine these relationships in more detail with prospective studies. In this case, it has limited our evaluation. Evaluating depression and child neglect in mothers in groups with more participants will lead to more reliable results.

As a result, it has been observed that mothers of children with GR have a higher risk of depression and child neglect. We believe that the evaluation of mothers of children with GR detected depression and child neglect and taking action against these conditions may have positive repercussions on the treatment processes of children.

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