

# The role of parental stress in predicting academic and social adjustment of students with learning disabilities

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## Abstract

**Background:** Parental stress have a long-term effect on the behavior, performance and personality of the child. The aim of this study was to investigate the role of parental stress of mothers in predicting academic and social adjustment of students with learning disabilities.

**Methods:** This applied research was a descriptive-correlational study. Statistical population included all mothers of children with learning disabilities, received services from government learning disability centers in Mashhad in the winter of 2019 (330 people). Based on the Morgan's table, 181 people were selected using a convenience sampling method. The Aydin (1983) Parental Stress Scale and the Sinha and Singh Student Adjustment Scale (1993) were used to collect data. Cronbach's alpha coefficients for all variables and components of the study were greater than 0.7. Data were analyzed by regression coefficient test using SPSS-22 software.

**Results:** The value of the correlation coefficient was - 0.305. There was a negative and moderate relationship between the variable of mothers' parental stress and the level of academic adjustment. The coefficient of determination between these two variables was 0.093, indicating that 0.09 of the changes in the level of academic adaptation of students with learning disabilities were influenced by the variable of mothers' stress.

**Conclusion:** To improve and enhance the academic and social adjustments of students with learning disabilities, it is necessary to pay attention to mental health, stress status and the styles used by parents, especially mothers, in coping with stressful situations.

**Keywords:** Academic Adjustment; Learning Disabilities; Social Adjustment; Stress Psychological; Students.

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## Introduction

Learning disorder is a disability in which genetic and environmental factors and disorders before and during birth play a role in its occurrence and prevalence. (1). The term learning disability (LD) derives from the need to identify and serve children who consistently fail in their studies and are not

included in the traditional structure of exceptional children (2). The prevalence of learning disabilities in functional areas including reading, writing and mathematical calculations has been reported between 5 and 15% of school-age children in different languages and cultures. The prevalence of learning disabilities in adults is unknown and about 4% and is

more common among men than women. In Iran, the prevalence rate of this disability with 8.81% indicates its high prevalence among Iranian students (3). People with learning disabilities have a normal intelligence distribution but have problems with spelling, arithmetic and reading (4). Children with learning disabilities are unable to express their emotions due to low abstract thinking, which threatens the psychological health of these children, increases the level of anxiety in these children, and reduces the level of positive emotions and adjustment of these children (5). Based on the studies, the presence of a disabled child in the family has a significant effect on many psychological components of the parents of these children, especially their mothers, and reduces their psychological well-being and life satisfaction (6).

The parents of these children suffer more stress than the parents of normal children (7). Pereira et al., argue that parental stress causes behavioral problems in children by disrupting and inefficient parenting style and parent-child interactions (8). Weyand argues that parental stress is one of the strongest predictors of children's behavioral problems, including anxiety-depression (9). Parents of children with disabilities are anxious to seek help and find appropriate resources and community-based programs for their children (10). Also, children with disabilities show a range of maladaptive behaviors such as social anxiety, social avoidance, irritability, etc., and put additional stress on their parents (11). Given what was stated, the research question was whether maternal parental stress can predict the academic and social adjustment of students with learning disabilities or not.

## **Methods**

This study was fundamental and applied. The method of this study was descriptive-analytical, correlational type. The statistical population included all 330 mothers of children with learning disabilities and their

children who receive services from government learning disability centers in Mashhad in the winter of 2019. Based on the Morgan's table, 181 mothers of children with learning disabilities in Mashhad and their children were selected using a convenience sampling method. Inclusion criteria included age range of 20 to 60 years, having a child with learning disabilities, receiving services in the winter of 2019 from one of the government centers for learning disabilities in Mashhad, not taking any special physical or mental medication and complete consent. The following two measurement scales were used to collect data:

**Parental Stress Scale:** This scale was developed by clinical experts to provide a valid scale of stress in parent-child communication that can be implemented in a limited time. It was derived directly from the long form of this scale prepared by Aydin in 1983. The short form of this questionnaire with 36 questions was conducted by Kaveh & Keramati in 2017 in Iran, and the reliability of this questionnaire was reported through the test-retest method and the internal consistency coefficient for overall stress was 0.84 (7). The scoring method of this questionnaire is based on the Likert scale from completely agree to strongly disagree, so that the answers that are strongly agree receive a score of 1 and the answers that are strongly disagree receive the score of 5. The test-retest reliability of this questionnaire with 6-month interval was implemented on 530 mothers and the internal consistency coefficient for overall stress was reported at 0.84 (7). **Student Adjustment Scale:** This scale has 60 items prepared by Sinha and Singh (1993). In Iran, 55-item version of this questionnaire was evaluated by Ahghar in Iran (12). on a sample of 3000 students of different educational levels. The scoring of this questionnaire is in the form of zero and one and the high score indicates higher non-adjustment and the low score indicates higher adaptation to the environment. Sinha and Singh (1993) reported the reliability

coefficient of this scale by split-half, test-retest and Kuder-Richardson method at 0.95, 0.93 and 0.94, respectively. The reliability of social, emotional and educational adjustment components were reported at 0.92, 0.92, 0.96 and 0.94, respectively. The content validity of this questionnaire was confirmed by 20 experts in educational sciences. Students are classified based on the scores obtained on the scale into five groups: very good adjustment, good adjustment, moderate adjustment, poor adjustment and very poor adjustment. The degree of adjustment of students is determined based on these criteria (13).

The results of Cronbach's alpha coefficient to assess the reliability of research questionnaires of Component / Variable consisted about: Academic adjustment (number: 20, Cronbach's alpha: 0.709), Social adjustment (number: 20, Cronbach's alpha: 0.712) and Parental stress (number: 35, Cronbach's alpha: 0.736 indicated) that in the values of Cronbach's alpha coefficient for all variables and components of the research is more than 0.7, the reliability of the research questionnaires is acceptable.

The obtained data are analyzed by regression coefficient test using SPSS2-22 software.

## Results

Respondents' demographic information is presented in Table 2.

Based on Table 2, out of 181 participants completed the questionnaire 0.53% of them

are female and 0.47 are male. Sixteen have bachelor's degree and 27 have mother's degree. Also, 0.82 of the mothers are not employed and are housewives. According to Table 1, most mothers in the study sample are between 30 and 40 years old. There was a relationship between maternal parental stress and the level of academic adjustment in students with learning disabilities.

Table 1. Frequency of demographic information of research participants

Variable type	group	Frequency	percent
Gender	Female	96	0.53
	Male	85	0.47
Level of Education	bachelor	154	0.85
	Master	27	0.15
Employment status	Employed	33	0.18
	housewife	148	0.82
age category (years)	Less than 30	34	0.09
	30 - 40	65	0.32
	41 - 50	52	0.44
	More than 50	30	0.12

According to Table 2, the correlation coefficient value is -0.305, which indicates the existence of a negative and moderate relationship between the variables of parental stress and the level of academic adjustment. The coefficient of determination between the two variables is 0.093, indicating that 0.09 of the changes in the level of academic adjustment of students with learning disabilities is affected by the variable of parental stress of mothers.

Table 2. Correlation coefficient between parental stress of mothers and level of academic adjustment

Independent variable	Dependent variable	Correlation coefficient	coefficient of determination	Adjusted coefficient of determination	Estimate standard error
Parental stress of mothers	Level of academic adjustment	-0.305	0.093	0.088	0.464

Table 3. Analysis of variance between parental stress of mothers and the level of academic adjustment

Row	Sum of squares	df	Mean of squares	Fisher's statistic	sig
Regression	3.960	1	3.960		
Residual	38.702	179		18.317	0.000
Total	42.663	180	0.216		

Based on Table 3, for parental stress of mothers and the level of academic adjustment (Sig = 0.000; F = 18.317), at the level of confidence of 0.95 and the level of error of 0.05, the predictability of academic adjustment by parental stress of mothers among students with learning disabilities is confirmed.

According to Table 4, the fixed value is (Sig = 0.000; t = 16.585), so the assumption that the fixed value is zero is rejected. Also, since the parental stress of mothers is (Sig = 0.000; t = 4-880), the assumption of zero Beta between parental stress and the level of academic adjustment is rejected. In other words, there is a relationship between parental stress of mothers and the level of academic adjustment of students with learning disabilities.

There is a relationship between parental stress of mothers and the level of social adjustment in students with learning disabilities

According to Table 5, the correlation coefficient is -0.238, which indicates the existence of a negative and moderate relationship between the variables of parental stress of mothers and the level of social adjustment. The coefficient of determination between the two variables is 0.056, indicating that 0.06 of the changes in

the level of social adjustment of students with learning disabilities are affected by the variable of parental stress of mothers.

Based on the analysis of testing regression (sum of squares:2.552, df:1, mean of squares:2.552), residual (sum of squares:42.664, df:1.79, mean of squares:0.238) with the Fisher's statistic(10.707) with sig (0.000 ), the variance between parental stress of mothers and social adjustment level, for parental stress of mothers and the level of social adjustment (Sig = 0.000; F=10.707), at the level of confidence of 0.95 and the level of error of 0.05 the level of predictability of social adjustment is confirmed by parental stress of mothers among students with learning disabilities.

Analysis of testing the variance between parental stress of mothers and social Based on Table 6, the fixed value is (Sig = 0.000; t = 17.150), so the assumption that the fixed value is zero is rejected. Also, the parental stress of mothers (Sig = 0.001; t = -3.2272), the assumption of zero of Beta between parental stress of mothers and the level of social adjustment is rejected. In other words, there is a relationship between parental stress of mothers and the level of social adjustment of students with learning disabilities.

Table 4. Non-standard and standard coefficient between parental stress of mothers and level of academic adjustment

Model	Non-standard coefficient		standard coefficient	t	sig
	B	Standard error	Beta		
Fixed value	1.214	0.702		16.855	0.000
parental stress of mothers	-0.113	0.026	-0.305	-4.280	0.000

Table 5. Correlation coefficient between parental stress of mothers and level of social adjustment

Independent variable	The dependent variable	Correlation coefficient	coefficient of determination	Adjusted coefficient of determination	Estimate standard error
Parental stress of mothers	Level of social adjustment	-0.238	0.056	0.051	0.488

Table 6. Non-standard and standard coefficient between parental stress of mothers and level of social adjustment

Model	Non-standard coefficient		standard coefficient	t	sig
	B	Standard error	Beta		
Fixed value	1.297	0.076		17.150	0.000
parental stress of mothers	-0.090	-0.028	-0.238	-3.272	0.001

## Discussion

Based on the results, the correlation coefficient value of -0.305 showed a negative and moderate relationship between parental stress of mothers and the level of academic adjustment. The value of the coefficient of determination between these two variables is 0.093, indicating that 0.09 of the changes in the level of academic adjustment of students with learning disabilities was affected by the variable of parental stress of mothers. This result is consistent with the results of studies conducted by Weyand (9), Sangani et al. (14), Shadmani Moghaddam (15), Abedi (16), Moshkani et al. (17), and Dyson (18). In explaining this hypothesis, it can be stated that most of the studies that have been conducted in the area of parent-child relationship emphasize that there is a relationship between moods and psychological characteristics of parents and children (19).

In family life, children sometimes cause unhappiness, boredom, incompatibility and dissatisfaction for parents, and sometimes they become a source of parental satisfaction and hope. Regarding a child with a learning disability, the special educational issues of these children put a lot of pressure on parents and family functioning, which makes parents assess the situation more negatively and problematically, and this can be very stressful for parents, especially mothers, thus endangering the mental health of mothers. Negative assessments of the situation by parents lead to increased stress and consequently increase the student's academic problems, and since parent-child interactions are a two-way relationship, any change in the psychological states of

mothers will affect the mental states of the child.

Mothers of students with learning disabilities generally experience high levels of stress and anxiety as a result of responsibilities in child care, home management, working with school officials and healthcare providers compared to fathers (17). In general, the studies suggest that these mothers experience higher stress compared to mothers of normal children. Students with learning disabilities have several problems, the most important of which are poor performance and behavioral problems, and it increases the stress of parenting in mothers (20). Parental stress can affect parenting styles and prevent the mother-child intimacy relationship (21).

Based on the results, the value of correlation coefficient is - 0.238, indicating a negative and moderate relationship between parental stress of mothers and social adjustment. The value of the coefficient of determination between these two variables is 0.056, indicating that 0.06 of the changes in the level of social adjustment of students with learning disabilities was affected by the variable of parental stress of mothers. This result is consistent with the results of studies conducted by Pereira et al., (8), and Weyand (9). Shadmani Moghaddam (15), Moshkani et al. (17) and Hashemi & Kohansal (22). In explaining this result, it can be said that parental stress affects mothers' parenting styles and prevents the formation of an intimate relationship between mother and child. Studies also confirm that maternal stress increases the level of maternal misbehavior with her child (23). Under the influence of the child's behavioral and educational problems,

mother experiences a lot of stress, and she feels helpless and hopelessness in coping with a child with a learning disability. Also, as mentioned above, the intimacy between mothers and normal children is less observed in the relationship of the parents and the children with learning disabilities, so mother uses more either strict or easy-going educational methods to manage the behavior of her child's actions, and this educational method, which is caused by the mother's high stress, leads to increased internalization or externalized problems in the student and leads to an increase in social non-adjustment (24).

### **Recommendations**

The applied recommendations of this research are presented as follows.

Based on the results, to improve and increase the academic and social adjustment of students with learning disabilities, it is recommended to pay attention to mental health, stress and the styled used by parents, especially mothers in coping with stressful situations and necessary training should be provided in the form of a support workshop and a change of attitude to cope with the conditions of students with learning disabilities.

Holding training sessions on stress management training and coping strategies for mothers of children with learning disabilities.

### **Conclusion**

Based on the present study, it can be stated that there is a relationship between moods and psychological characteristics of parents and children, and parental stress can affect parenting styles and prevent the establishment of a relationship based on intimacy between mother and child. Using problem-based strategies will affect various aspects of their family life, and as a result, students will enjoy the necessary security at home and their mental and physical needs will be met in the best possible way. A parent of a child with a learning disability

uses cognitive skills to solve problems, by applying problem-based coping strategies and uses direct coping methods to find problems, and finding appropriate solutions to everyday challenges. As a result, he or she achieves psychological satisfaction, and this situation leads to the parent's mental order and cohesion, and reduced emotional turmoil of caring for a child with this disability. In light of the acquired mental cohesion and emotional calmness, the source of stress is better identified and it can be more easily controlled and evaluated. Selecting and applying problem-based coping strategies in line with change and stress creates a healthy and positive psychological atmosphere, which leads to the correct knowledge and evaluation of the stressful situation, so the appropriate coping strategy is selected, otherwise, a vicious circle is created, in which both parties experience more problems every day. Therefore, it seems that by providing training and conditions for stress management and learning problem-based skills, better interaction is established with a child with a learning disability, and better mental and physical conditions are provided for the child with a learning disability, parents and others.

### **Author's contribution**

Zeinab Jafary developed the study concept and design. Zeinab Jafary acquired the data. Zeinab Jafary analyzed and interpreted the data, and wrote the first draft of the manuscript. All authors contributed to the intellectual content, manuscript editing and read and approved the final manuscript.

### **Informed consent**

Questionnaires were filled with the participants' satisfaction and written consent was obtained from the participants in this study.

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### Conflict of interest

The authors declare that they have no conflict of interests.

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