



Research Paper: Comparison of Parenting Stress and Locus of Control in Parents of Children with and without Specific Learning Disorder



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Abstract

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Objective: Families frequently experience a variety of wonderful occurrences and, at times, face difficult circumstances, such as the birth of a child with special needs. These conditions can profoundly affect the dynamics of a family. This research aimed to examine parental stress and locus of control between parents of children with certain learning disorder and those without.

Methods: This study utilized a descriptive-comparative methodology. The statistics population comprised all primary school students in the city of Talesh during March to June 2024. The research sample consisted of 116 people (56 parents of children with specific learning disorder and 60 parents with children without specific learning disorder) who were selected through purposive sampling. The data were analyzed using the Parenting Stress Index (PSI) and the Internal-External Locus of Control (IPC) scale. Multivariate analysis of variance and independent t-tests were employed to analyze the data.

Results: The findings revealed a notable disparity in parental stress and locus of control between parents of children with specific learning disorder and those without ($P < 0.05$).

Conclusion: The findings indicate that parents of children with learning disorder endure elevated stress levels and a heightened perception of loss of control, hence increasing their risk.

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1. Introduction

Specific learning disorder, often referred to as learning disabilities, are neurodevelopmental disorders that involve persistent difficulties in one or more of the basic skills of reading, writing, and arithmetic, which are essential for learning. These difficulties, such as dysgraphia, dyscalculia, dyspraxia, and aphasia, can occur alone or in combination, ranging from mild to severe (American Psychiatric Association, 2023). The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders estimates the prevalence of all learning disorder (including dysgraphia, dyslexia, and dyscalculia) to be around 5 to 15% worldwide (Scaria et al., 2022). In total, learning disorder affect 2-10% of the school-age population globally (Lino & Chieffo, 2022). Specific learning disorder have a detrimental impact on the adaptation and psychological well-being of families. Research findings indicate that parents of children with specific learning disorder experience more psychological problems compared to parents of typically developing children, including feelings of social deprivation, emotional deprivation, and higher levels of stress and depression (Moradi & Kiany, 2019). Family stress, especially when chronic and occurring early in a child's development, has harmful effects on the health of parents, children, and parent-child relationships. Raising children with specific learning disorder is a stressful experience, and one type of stress that mothers of these children experience is parental stress (Hsiao, 2018). As the prevalence of children with specific learning

disorder has increased significantly over the decades (Pourebrahim & Doniamaly, 2021), parents face the challenge of raising a child with a specific learning disorder, and their parenting is associated with unique challenges (Neff & Faso, 2015) and is correlated with lower maternal mental health and emotional disturbances (Ceballos et al., 2019). Parental stress results from a perceived mismatch between parental demands and individual resources, and such stress can be experienced in several domains related to child-rearing (Craig et al., 2016). Research suggests that parents of children with specific learning disorder experience higher parental stress, more emotional symptoms, and lower levels of quality of life related to health and psychological well-being compared to parents of typically developing children or children with other developmental disabilities (Johansson et al., 2020; Zeng et al., 2020).

According to Attribution Theory, individuals attribute their life successes and failures to either controllable factors (Internal Locus of Control) or uncontrollable factors (External Locus of Control) (Heywood et al., 2017). Those with an internal locus of control believe they have significant control over their lives and behave accordingly. As a result, these individuals experience less anxiety, have higher self-esteem, take responsibility for their actions and decisions, and enjoy better physical and mental health (Malik et al., 2015).

Conversely, individuals with an external locus of control believe they are powerless in the face of external stressors and perceive their efforts to improve their circumstances

as futile. These individuals have poorer mental health compared to those with an internal locus of control. Some research has shown that locus of control is a significant factor in reducing quality of life and increasing psychological disorders in parents of children with specific learning disabilities (Barros et al., 2017, Rajan et al., 2018).

Generally, parents of children with specific learning disabilities experience limitations such as impaired mental health, feelings of social deprivation, and high levels of stress, anxiety, and depression compared to parents of typical children. In these families, members experience various emotional and cognitive reactions, ranging from complete rejection to full acceptance, from intense anger to love, and from neglect to over-care (Hallahan et al., 2014).

The increasing number of children with specific learning disabilities has led to a critical need for healthcare and nursing services focused on families. This necessitates research in this area, and professionals such as psychiatric nurses can play a role in promoting the mental health of mothers, children, and families, ultimately contributing to societal well-being and modern locus of control. Given the importance of a healthy parent-child relationship in a child's psychosocial development and the crucial role of parents in maintaining the family's psychosocial balance, it is necessary to plan strategies to address the challenges faced by parents of children with specific learning disabilities. In fact, many children with learning disabilities go undiagnosed, and their academic

weaknesses are attributed by teachers and parents to laziness or lack of cooperation, which increases the stress experienced by parents. Moreover, due to the lack of research comparing these variables both domestically and internationally, the results of these differences can be used to plan and inform parents and to engage them in the treatment process. Based on the aforementioned points, this research aims to answer the question of whether there is a difference in parental stress and locus of control between parents of children with and without specific learning disabilities.

2. Methods

2.1. Research Design, Statistical Population, Sample, and Sampling Method

This study was descriptive-comparative in nature. The study population comprised all primary school children in the city of Talesh during March to June 2024. The sample comprised 116 individuals, including 56 parents of children with learning disorder and 60 parents of children without specific learning disorder. Participants were chosen based on their eligibility for the study, employing a convenience sample strategy for parents of children with learning disorder and a purposive sampling method for parents of children without specific learning disorder. Data were collected using the Parental Stress Index and the locus of control scale. Multivariate analysis of variance and independent t-test were utilized to evaluate the research hypotheses. All data analyses were conducted utilizing SPSS22.

2.2. Instruments

Parenting Stress Index (PSI): Developed by Abidin (1990), the PSI is a questionnaire designed to assess the significance of stress within the parent-child relationship. This questionnaire is based on the principle that parental stress can arise from various child characteristics, parental attributes, or diverse situations directly related to the parental role. In this study, the 36-item version of the Parenting Stress Index was used. The scoring method was based on a Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). The internal consistency reliability coefficient, calculated using Cronbach's alpha for a group of 248 Hong Kong mothers, was 0.93. The item-total correlation was 0.93, and the range of the concurrent validity coefficient with five other stress measures was 0.38 to 0.66 (Tam-Chan & Wong, 1994; as cited in Dadsetan et al, 2006). Abidin (1983) obtained an internal consistency reliability coefficient of 0.93 for the entire questionnaire in a group of American mothers.

Internal-External Control Scale (IPC):

This questionnaire was developed by Lewinsohn (1972) and consists of 24 questions. The questionnaire comprises three subscales: Internality (I), Powerful Others (P), and Chance (C). The questions are rated on a 6-point Likert scale, ranging from strongly disagree to strongly agree, with -3, -2, and -1 on one end and +1, +2, and +3 on the other. The questionnaire has three subscales: Internality, Powerful Others, and Chance. The total score is calculated by

summing the scores of the subscales. The score for each subscale is obtained by summing the test-taker's scores on the 8 items related to that subscale, which is then added to 24 to eliminate negative signs. Therefore, the score range for each scale is between zero and 48. Higher scores on each scale indicate that the individual expects a higher degree of control from the source represented by that scale (Soleymannezhad & Shahrarai, 2002).

Lewinsohn (1972) reported the validity of this questionnaire for each of the IPC scales as 51, 77, and 64, respectively. Furthermore, in the research of Soleymannezhad and Shahrarai (2002), the reliability using Cronbach's alpha for the IPC scales was 64, 71, and 68, respectively. Goodarzi (1999) reported the reliability of the questionnaire and its components using Cronbach's alpha as 0.64 for Internality (I), 0.60 for Powerful Others (P), and 0.69 for Chance (C).

3. Results

A total of 116 participants were studied (56 mothers of children with specific learning disorder and 60 mothers of typically developing children). The average age and standard deviation for moms of children with learning disorder was 39.91 ± 30.3 years, while for mothers of generally developing children, it was 40.55 ± 20.3 years. Subsequently, the frequency and percentage of children per family and the child's grade level were computed for both groups of moms with children with and without learning disorder. The findings indicated that 16 children (28.6%) with learning disorder and 9 children (15%) without disabilities were in the second grade; 24 children (42.9%) with learning disorder and 27

children (45%) without disabilities were in the third grade; 14 children (25%) with learning disorder and 19 children (31.7%) without disabilities were in the fourth grade; and 2 children (3.6%) with learning disorder and 5 children (8.3%) without disabilities were in the fifth grade. Furthermore, an

Table 1

Mean and Standard Deviation of Parental Stress and Locus of Control by Group

Variable	Group	Mean	Standard Deviation	Minimum	Maximum	Skewness	kurtosis
Parental Stress	With Learning disorder	67.62	5.34	60	75	-0.020	-1.177
	Normal	47.28	7.30	38	65	0.771	-0.030
Internality	With Learning disorder	13.82	2.08	10	20	0.010	0.345
	Normal	15.95	1.68	13	19	0.302	-0.820
Powerful Others	With Learning disorder	16.41	1.70	14	20	0.330	-0.955
	Normal	17.06	3.38	10	25	-0.070	0.450
Chance	With Learning disorder	16.94	1.65	14	20	0.138	-1.005
	Normal	17.50	1.99	12	20	-0.344	-0.630
Total Locus of Control	With Learning disorder	47.17	3.27	39	54	0.019	-0.004
	Normal	50.51	4.69	40	64	0.036	0.302

Table 1 illustrates that the mean parental stress ratings indicate elevated stress levels in moms of children with learning difficulties relative to mothers of generally functioning children. A comparison of the mean scores on the dimensions of internal locus of control, powerful others, and chance, together with

analysis of family size indicated that 33 persons (58.9%) of children with learning disorder and 39 individuals (65%) of children without learning disorder were only children, while the remainder had two siblings in both cohorts.

the overall locus of control score, revealed that these scores were elevated in moms of generally developing children in contrast to mothers of children with learning difficulties. Additionally, an analysis of the skewness and kurtosis for all three variables in both groups revealed that the data were normally

distributed, thus permitting the application of parametric statistical methods without restrictions.

An independent t-test was employed to compare the total parental stress scores and total locus of control scores between mothers of children with learning difficulties and

those without. Levene's test results indicated that the assumption of homogeneity of variances was satisfied ($P < 0.05$), therefore validating the use of the independent t-test. Table 2 displays the outcomes of the independent t-test conducted to compare total parental stress levels and locus of control scores.

Table 2

Outcomes of the Independent Samples t-test for Analyzing Mean Parental Stress and Total Locus of Control Scores in Mothers of the Two Groups

Variable		Mean Difference	df	t	Significance Level
Parental Stress	Assumed Equality of Variances	20.33	113	16.972	0.0001
	Assumed Inequality of Variances	20.33	106.229	17.108	0.0001
Locus of Control	Assumed Equality of Variances	-3.338	114	-4.411	0.001
	Assumed Inequality of Variances	-3.338	105.732	-4.464	0.001

The independent samples t-test results, displayed in Table 2, indicated a significant difference in total parental stress and locus of control between the two groups of mothers. The comparison of means revealed that moms of children with learning difficulties had elevated parental stress and diminished locus of control relative to mothers of generally developing children. To compare the dimensions of locus of control (internal, powerful others, and chance), a multivariate analysis of variance (MANOVA) was employed due to the multivariate character of the dependent variables. Consequently, its assumptions were initially scrutinized. The outcomes of Box's M test for the homogeneity of covariance matrices

indicated that this assumption was violated ($Mbox=30.952$, $F_{92931.282}=5.011$, $P=0.001$). The assumption of homogeneity of variances was subsequently assessed using Levene's test. Levene's test results indicated that the assumption of homogeneity of variances was satisfied for the internal and chance dimensions ($P < 0.05$), but not for the powerful others dimension ($P > 0.05$). Subsequently, multivariate tests were employed to analyze the differences in the three variables between the two groups. The Wilk's lambda multivariate test results (Wilk's Lambda=0.749, $F_{3,112}=12.537$, $P=0.001$) indicated a significant difference in the locus of control dimensions between the two groups of mothers of children with and

without learning difficulties. Table 3 presents more specifics on the multivariate analysis of variance for each dimension.

Table 3

Outcomes of Multivariate Analysis of Variance (MANOVA) for Comparing Locus of Control Dimensions Across Two Groups

Variable	Sum of Squares	Df	Mean Square	F	Significance Level	Eta-Square
Intercept	131.237	1	131.237	36.754	0.001	0.244
Powerful Others	12.463	1	12.463	1.701	0.195	0.015
Chance	8.876	1	8.876	2.623	0.108	0.022

The multivariate analysis of variance results (Table 3) indicated a significant difference between the two groups just in the internal locus of control dimension, while differences in other dimensions were not significant.

4. Discussion

The objective of this study was to examine parenting stress and locus of control among parents of children with specific learning difficulties and those without. The findings indicated a considerable disparity in overall parental stress between the two maternal groups, with mothers of children with learning difficulties exhibiting elevated stress levels in contrast to mothers of generally developing children. The results of the current study align with those of Johansson et al. (2020) and Zeng et al. (2020).

Raising a kid is among the most significant, delicate, and demanding responsibilities that parents encounter. This process entails confronting intricate and distinctive circumstances that not only perplex parents but also frequently subject

them to various psychological detriments and issues, including communication breakdowns and parental stress. Parental stress is characterized as the gap between the expectations parents perceive and the resources they possess to fulfill those demands (Fucà et al., 2022). When a child encounters an issue that disrupts their functioning or diverges from the standard educational procedure, the stress levels of each parent will escalate. Any disorder in a child's functioning, particularly for perfectionist parents, adversely affects the family's mental health, disrupts family interaction and communication, induces psychological pressure, elicits emotional responses, fosters incompatibility and social isolation, and contributes to depression, anxiety, and other emotional disturbances, as well as straining relationships with the child. Consequently, it is understandable that parents of children with learning disabilities, particularly when education and academic achievement are significant to them, endure greater stress levels than mothers of children who do not have learning disabilities and

navigate the educational process with greater ease. Mothers, owing to their caring responsibilities, assume greater obligations for a kid with difficulties, leading to increased stress and psychological issues. A literature analysis indicates that parents of children with certain learning difficulties encounter challenges such as stress, sadness, and significant anxiety in comparison to other parents (Zyga et al., 2020).

The results indicated a substantial disparity in the overall locus of control score and the internal dimension between the two maternal groups, but differences in other dimensions were not significant. The comparison of means revealed a diminished locus of control in moms of children with learning difficulties relative to mothers of generally developing children. The findings of the current study align with the research conducted by Barros et al. (2017) and Rajan et al. (2018).

The results indicate that locus of control significantly influences the conduct of mothers with children who have certain learning difficulties. Mothers possessing an external locus of control perceive themselves as lacking influence over their current and future circumstances, believing that their activities do not affect the results of their endeavors. Consequently, they undervalue their efforts, and this conviction impacts their performance. These mothers ascribe life events to external influences and do not assume responsibility for the circumstances in their lives. They perceive themselves as powerless against life's occurrences, believing their fate is governed by external influences such as chance or destiny. Mothers

possessing an internal locus of control have more adaptive coping skills for societal interactions. Internalizers perceive life events and incidents as under their control, assume responsibility for them, and possess confidence in their capacity to influence life occurrences. They exhibit increased independence in their ideas and less susceptibility to environmental influences, leading to enhanced life expectancy. Consequently, individuals possessing an internal locus of control, owing to their comprehension of their influence on life perceptions and their acknowledgment of accountability for their actions' outcomes, tend to experience enhanced happiness and exhibit greater efficiency, persistence, cognitive engagement, and adaptability than mothers with an external locus of control. Mothers possessing an internal locus of control experience superior mental wellness. They exhibit reduced anxiety, a lower susceptibility to mental disease, and superior psychological adjustment in social and personal contexts, as well as in all facets of their lives. The study indicated that mothers of children with learning difficulties exhibited a weaker internal locus of control compared to mothers of generally developing children. As a result, mothers of children with learning disabilities, after grappling with their children's challenges, perceive a lack of control over these issues, which can adversely impact their mental health, stress levels, and quality of interaction with their children (Li et al., 2015). A weakness of this research was the absence of control over demographic variables, including socioeconomic position, parental education

level, and family size. A further weakness of this research was the non-random selection of participants, which constrains the generalizability of the findings. It is recommended that, in conjunction with the therapeutic and educational services offered to these children, strategies be developed to alleviate parental stress and enhance their understanding of their children's diseases, with these strategies being delivered by service-providing institutions.

5. Conclusion

This research indicates that the study has broad implications for healthcare practitioners who are crucial in assisting parents to manage stress and enhance their locus of control for children with unique learning difficulties. Parents should be adequately prepared for alterations in the dynamics of their connections with children who have unique learning difficulties.

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Conflict of Interest

The authors assert that no conflict of interest exists.

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