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## SELF-EFFICACY AND ALEXITHYMIA AS MODERATORS BETWEEN PERCEIVED SOCIAL SUPPORT AND STRESS AMONG PARENTS OF CHILDREN WITH LEARNING DISABILITIES

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The purpose of this cross-sectional study was to examine Self-Efficacy and Alexithymia as moderators between perceived social support and Stress among parents of children with Learning Disabilities. The convenience sample of the study consisted of 98 parents of children with Learning Disabilities from Ahwaz (Iran). This descriptive correlational study was conducted in 2014–15. Multidimensional Scale of Perceived Social Support (MSPSS), General Self-Efficacy Scale (GCE), Toronto Alexithymia Scale (TAS-20), and Perceived Stress Scale (PSS) were completed by parents. Hierarchical linear regression analyses were used to examine the moderating role of Self-Efficacy and Alexithymia. The results revealed that Self-Efficacy and Alexithymia were moderators in the relationship between Perceived social support and Stress. The findings supported the hypothesis that higher levels of self-efficacy (see: *Figure 1*) would be associated with lower levels of Stress, and that lower levels of Alexithymia (see: *Figure 2*) would be associated with lower levels of Stress.

**Keywords:** perceived social support, self-efficacy, Alexithymia, stres.

**Selbsteffizienz und Alexithymie als Moderatoren zwischen wahrgenommener sozialer Unterstützung und Stress unter Eltern von Kindern mit Lernbehinderungen:** Mit dieser Querschnittsstudie sollten Selbsteffizienz und Alexithymie als Moderatoren zwischen wahrgenommener sozialer Unterstützung und Stress unter Eltern von Kindern mit Lernbehinderungen untersucht werden. Die willkürlich ausgewählte Stichprobe bestand aus 98 Eltern von Kindern mit Lernbehinderungen aus Ahwaz (Iran). Die deskriptive Korrelationsstudie wurde 2014–2015 durchgeführt. Die Eltern haben die Fragebögen Multidimensional Scale of Perceived Social Support (MSPSS), General Self-Efficacy Scale (GCE), Toronto Alexithymia Scale (TAS-20) und Perceived Stress Scale (PSS) ausgefüllt. Um die Moderatorrolle von Selbsteffizienz und Alexithymie zu untersuchen, wurden hierarchische lineare Regressionsanalysen durchgeführt. Die Ergebnisse haben gezeigt, dass Selbsteffizienz und Alexithymie Moderatoren der Relation zwischen der

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wahrgenommenen sozialen Unterstützung und Stress sind. Die Erkenntnisse stützen die Hypothese, dass eine höhere Selbsteffizienz (s. *Abbildung 1*) mit einem geringeren Stressniveau einhergeht und eine geringere Alexithymie (s. *Abbildung 2*) mit einem geringeren Stressniveau einhergeht.

**Schlüsselbegriffe:** wahrgenommene soziale Unterstützung, Selbsteffizienz, Alexithymie, Stress

## 1. Introduction

Students with learning disabilities (LD) form the largest group of students with special educational needs in inclusive classrooms (CLARK & ARTILES 2000). According to the *International Statistical Classification of Diseases* (World Health Organization 2011), the basic learning disability is defined to emerge in reading, writing, and/or mathematics, even though the cognitive skills of these children are within normal range. Researchers have suggested that the responsibilities of caring for a child with a disability may negatively impact parents' mental health (GLENN et al. 2009). Although some parents cope well with the demands and challenges of a child with Learning Disabilities, others do not, and as a consequence are more likely to experience outcomes such as *stress*. Parental stress has direct negative effects on parental well-being. High parental stress levels have been associated with increased child behavioral problems and less-than-optimal outcomes from treatment interventions. In contrast, Perceived social support is linked to decreased stress among parents of children with learning disabilities (DUNN et al. 2001). *Social support* is known to buffer disease-related distress and improve quality of life (ELLIOT 2008). Individuals who perceive high levels of social support feel less stress (WITTIG et al. 2016; GIBBONS 2010; STOK et al. 2006). In a study, stress in parents has been shown to vary with social support (DUNN et al. 2001). Also, previous literature suggests that individuals who are dissatisfied with the amount of social support they receive may consequently be diagnosed with a psychological disorder such as depression (ICIASZCZYK 2016; KRAUSE et al. 1989).

Furthermore, *Self-efficacy* is a personal factor identified in the literature as a predictor of stress. SCHWARZER (1992) conceptualised self-efficacy, which is concerned with a more global and stable personal capability to address many stressful situations effectively. Self-efficacy is considered a personal resource that can influence a person's feelings, thoughts, and behaviors. Self-efficacy also tends to help an individual facilitate goal setting, effort investment, persistence in face of barriers, recovery from setbacks, and emotional adaptiveness (SCHWARZER & JERUSALEM 1995). Parental self-efficacy is a cognitive factor that has been associated with parental competence. Parental self-efficacy refers to parents' perceptions that they are capable of competently and effectively parenting their children (TETI & GELFAND 1991).

In general, a high self-efficacy level indicates an affirmative sense of self and an ability to remain committed to goal achievement. Meanwhile, low self-efficacy

indicates low levels of self-confidence, negative self-evaluation, and the inability to produce a planned outcome when tasks are given (APPELBAUM & HARE 1996). High SE has been related to a wide range of physiological measures including lower catecholamine responsivity during stress (BANDURA et al. 1985), pre-competitive anxiety and subjective performance among athletes (NICHOLLS 2010), and better psychological adjustment to highly stressful life changes and events, such as aging (KRAAI 2002, BENKA et al. 2014).

On the other hand, it is suggested that Alexithymia may be a key concept of increasing psychological distress for Parents of Children with Learning Disabilities. Alexithymia is a multifaceted construct that includes the following main components: (i) difficulty describing emotions; (ii) difficulty identifying emotions; and (iii) externally oriented thinking (TAYLOR 1994; 2006; TAYLOR et al. 1991). It is derived from the Greek roots 'a = without', 'lexus = words', and 'thymos = emotions', and literally means 'a lack of words for emotions' (SIFNEOS 1973). It is viewed as a relatively stable trait that is normally distributed in the general population and is often measured with self-report or observer-report measures (HAVILAND et al. 2000). Research has also associated alexithymia with a number of mental or behavioral disorders (TAYLOR & BAGBY 2013). Alexithymia has been empirically linked to poor coping with stress (MARTIN & PIHL 1985), poor bonding with others (SIFNEOS 1987; 1996), and higher levels of anxiety, depression, self-consciousness, and vulnerability (BAGBY et al. 1994). In either case, TAYLOR (1984) cites associations between alexithymia and somatoform disorders, substance abuse, and post-traumatic stress disorders.

### **1.1. Objectives**

The aim of this study was to investigate whether Self-Efficacy and Alexithymia moderate the relationship between perceived social support and Stress among Parents of Children with Learning Disabilities. In order to address the aim, the following research questions were posed:

- Is there a significant relationship between Perceived social support and Stress among Parents of Children with Learning Disabilities?
- Does Self-Efficacy and Alexithymia moderate the relationship between Perceived social support and Stress among Parents of Children with Learning Disabilities?

## **2. Method**

### **2.1. Participants**

We sampled 98 parents of children with Learning Disabilities from Ahwaz, Iran, (66 women and 32 men) between 28 and 53 years of age ( $M = 41.7$ ).

## **2.2. Research Instruments**

### **2.2.1. Perceived stress**

The Perceived Stress Scale (PSS) was used to measure levels of perceived stress over the past month (COHEN et al.1983). This 14-item form measures levels of perceived stress and the degree to which respondents find their lives unpredictable, uncontrollable, and over-loading. On a 5-point scale, ranging from never to very often, respondents were asked to report how often they perceived feeling stressed. Research has shown that it is a reliable and valid measure of self-reported stress (COHEN et al. 1993). In this study, the Perceived Stress Scale was carefully translated and adjusted to the main scale by the author. Then, to examine its validity, a confirmatory factor analysis was carried out on its items and its reliability was calculated. Results indicate that the scale has appropriate psychometric qualities to be used in Iran. A high internal consistency reliability was shown in the present study for the total scale  $\alpha.79$ .

### **2.2.2. Social support**

Social support was assessed with the Multidimensional Scale of Perceived Social Support (ZIMET et al. 1988). MSPSS is a brief research tool designed to measure perceptions of support from 3 sources: Family, Friends, and a Significant Other. The scale is comprised of a total of 12 items, with 4 items for each subscale. Across many studies, the MSPSS has been shown to have good internal and test-retest reliability, good validity, and a fairly stable factorial structure (CANTY-MITCHELL & ZIMET 2000; ZIMET 1990). It has been translated into many languages, including Farsi (Persian). In this study, the Perceived Stress Scale was carefully translated and adjusted to the main scale by the author. The MSPSS internal consistency reliability using Cronbach's alpha was 0.87.

### **2.2.3. Self-efficacy**

The General Self-Efficacy Scale (SCHWARZER & JERUSALEM 1995) was administered to assess the international students' self-beliefs to cope with a variety of difficult demands in life. The scale explicitly refers to personal agency, which is the belief that one's actions are responsible for successful outcomes. Adjustment to life in a new culture requires dealing with various situations and facing many challenges and, therefore, general self-efficacy is the most appropriate way to assess factors related to international students' adjustment. The scale consists of 10 items. For each item, students will be rated on a five-point Likert-type scale (1 = Not at all true to 4 = Exactly true). In this study, the General Self-Efficacy Scale was carefully translated and adjusted to the main scale by the author. Then, to examine its validity, confirmatory factor analysis was carried out on its items and its reliability was calculated. Results indicate that the scale has appropriate psychometric qualities to be used in Iran. The reliability of the test was 0.81.

#### 2.2.4. Alexithymia

The 20-item Toronto Alexithymia Scale (TAS-20). The Toronto Alexithymia Scale (TAS-20) is a self-report measure of alexithymia which was developed by BAGBY and colleagues (1994). It is a 20-item scale with a five point Likert-type scale (1 = never true for me to 5 = always true for me) that participants rate according to what is typically true for them. The scale measures three factors of alexithymia: 1) difficulty identifying feelings (e.g., ‘When I am upset, I don’t know If I am sad, frightened or angry’); 2) difficulty describing feelings (e.g., ‘It is difficult for me to find the right words for my feelings’); and 3) externally-oriented thinking (e.g., ‘I prefer to just let things happen rather than to understand why they turned out that way’). In this study, TAS-20 was carefully translated and adjusted to the main scale by the author. Then, to examine its validity, a confirmatory factor analysis was carried out on its items and its reliability was calculated. Results indicate that the scale has appropriate psychometric qualities to be used in Iran. The TAS-20 internal consistency reliability using Cronbach’s alpha was 0.71.

#### 2.2.5. Data Analysis

An analysis of the data from this study was performed using SPSS 24.0 statistical software. Missing values in the data were computed along with the sample means.

The moderator effects of Self-Efficacy and Alexithymia were tested using a hierarchical multiple regression analysis based on the steps of BARON AND KENNY’S (1986) moderating model. In order to decrease the multicollinearity problems in the analyses, standard z-scores were used. Details about data analyses are given in the section on findings.

### 3. Results

Descriptive statistics and bivariate correlation for the perceived social support, Self-Efficacy and Alexithymia and stress are presented in *Table 1*. As expected, perceived social support negatively correlated with perceived stress ( $r = -0.70, p < 0.01$ ), Alexithymia ( $r = -0.66, p < 0.01$ ), and positively correlated with Self-Efficacy ( $r = 0.67, p < 0.01$ ). Also consistent with expectation, stress negatively correlated with Self-Efficacy ( $r = -0.77, p < 0.01$ ) and positively correlated with Alexithymia ( $r = 0.75, p < 0.01$ ). In addition, skewness and kurtosis values were found to be within acceptable range for a normal distribution.

*Table 1*  
Means, standard deviations, skewness, kurtosis and correlations of the variables

<i>Variable</i>	<i>M</i>	<i>SD</i>	<i>Skew-ness</i>	<i>Kurtosis</i>	<i>1</i>	<i>2</i>	<i>3</i>
<i>1. Perceived social support</i>	36.04	19.93	0.58	-0.76			
<i>2. Self-Efficacy</i>	19.23	10.63	0.51	-1.16	0.67**		
<i>3. Alexithymia</i>	56.12	18.76	-0.05	-1.00	-0.66**	0.73**	
<i>4. Stress</i>	43.03	15.04	-0.38	-1.32	-0.70**	0.77**	0.75**

\*\* :  $p < 0.01$

### 3.1. Moderating effects of Self-Efficacy and Alexithymia

In order to test the moderating effects of Self-Efficacy and Alexithymia on the relationship between perceived social support and Stress, hierarchical multiple regression procedures were conducted, as recommended by BARON AND KENNY (1986). For each potential moderator variable, regression models were performed *separately*. In the first step, we entered gender as a covariate. In the second step, the predictor variable (perceived social support) was entered into the regression equation. At step 3, potential moderator variables (Self-Efficacy and Alexithymia) were entered into the regression equations. In the final step, interaction variables (perceived social support x Self-Efficacy; perceived social support x Alexithymia) were entered into the models. Significant change in  $R^2$  for the interaction term indicates a significant moderator effect.

*Table 2*  
Hierarchical Regression Model for Moderator Role of Self-Efficacy in the Relationship between social support and stress among Parents of Children with Learning Disabilities

<i>Predictor Variables</i>	<i>b</i>	$\beta$	<i>t statistic</i>	<i>p value &lt;</i>
<i>Control Variables (entered in 1<sup>st</sup> step): (Constant)</i>	0.15		0.41	0.67
<i>Gender</i>	-0.09	-0.04	-0.43	0.66
<i>Overall <math>F(1,96) = 0.18, p &lt; .66; Total R^2 = 0.002</math></i>				
<i>Main Effects (entered in 2<sup>nd</sup> step):</i>				
<i>Perceived social support</i>	-0.29	-0.29	-3.38	0.001
<i>Self-Efficacy</i>	-0.57	-0.57	-6.67	0.001

Overall  $F(3,94) = 59.66, p < 0.001$ ;  
 Total  $R^2 = 0.65$

Total  $R^2$  Change (from previous step) = 0.65,

$F$  Change = 89.23 ( $p < .001$ )

Interaction Term (entered in 3<sup>rd</sup> step):

(Perceived social support x Self-Efficacy)	-0.24	-0.20	-2.88	0.005
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Overall  $F(4,93) = 50.30, p < 0.001$ ;  
 Total  $R^2 = 0.67$

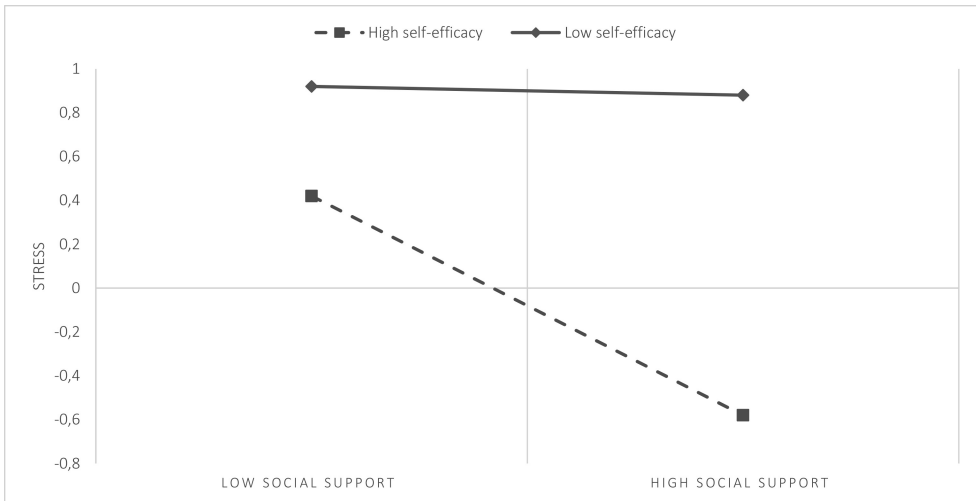
Total  $R^2$  Change (from previous step) = 0.02,

$F$  Change = 8.30 ( $p < 0.005$ )

*Table 3*  
 Hierarchical Regression Model for Moderator Role of Alexithymia in the Relationship  
 between perceived social support and stress among Parents of Children with Learning Disabilities

Predictor Variables	<i>b</i>	$\beta$	<i>t</i> statistic	<i>p</i> value <
Control Variables (entered in 1 <sup>st</sup> step): (Constant)	0.15		0.41	0.67
Gender	-0.09	-0.04	-0.43	0.66
Overall $F(1,96) = 0.18, p < 0.66$ ; Total $R^2 = 0.002$				
Main Effects (entered in 2 <sup>nd</sup> step):				
Perceived social support	-0.35	-0.35	-4.25	0.001
Alexithymia	0.52	0.52	6.29	0.001
Overall $F(3,94) = 56.40, p < 0.001$ ; Total $R^2 = 0.64$				
Total $R^2$ Change (from previous step) = 0.64,				
$F$ Change = 84.36 ( $p < 0.001$ )				
Interaction Term (entered in 3 <sup>rd</sup> step):				
(Perceived social support x Alexithymia)	0.19	0.15	2.13	0.03
Overall $F(4,93) = 45.05, p < 0.001$ ; Total $R^2 = 0.66$				
Total $R^2$ Change (from previous step) = 0.01,				
$F$ Change = 4.56 ( $p < 0.03$ )				

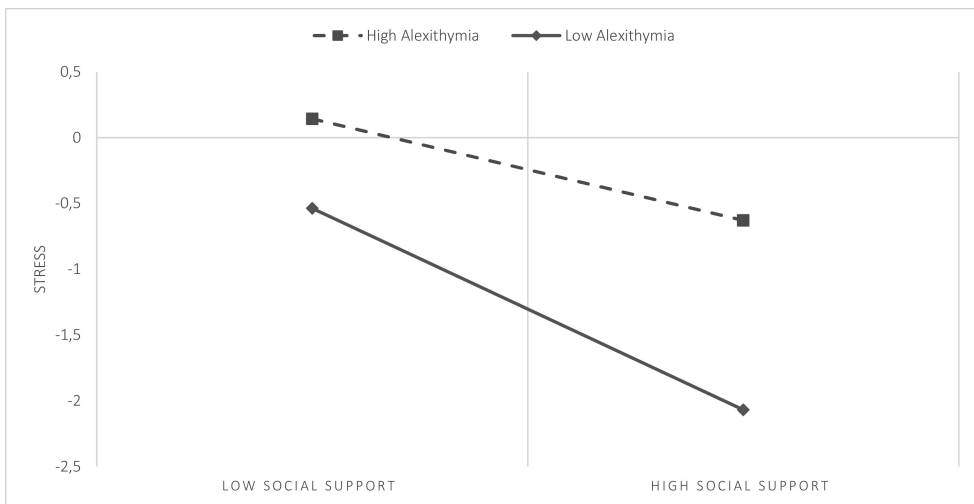
Of greatest importance was the significant interaction between perceived social support and Self-Efficacy ( $p < 0.005$ ) and Alexithymia ( $p < 0.03$ ). To illustrate the nature of the interaction effect, we examined the relationship between perceived social support and stress at a high level of Self-Efficacy and Alexithymia (one standard deviation above the mean) and at a low level of Self-Efficacy and Alexithymia (one standard deviation below the mean; AIKEN & WEST 1991). As can be seen in *Figure 1*, when Self-Efficacy was high (but not when Self-Efficacy was low), higher levels of perceived social support led to lower stress. In contrast, as can be seen in *Figure 2*, when Alexithymia was low (but not when Alexithymia was high), higher levels of perceived social support led to lower stress.



*Figure 1*

The Interactive Effect of perceived social support and Self-Efficacy on stress among Parents of Children with Learning Disabilities





*Figure 2*

The Interactive Effect of perceived social support and Alexithymia on stress among Parents of Children with Learning Disabilities

#### 4. Discussion

Parents can play a central role in children's psychological, social, and academic development. Parents who received the direct professional support showed greater reductions in self-reported stress levels than parents who did not. Informal supports have also shown promise regarding increased effectiveness in stress reduction (GREEFF & VAN DER WALT 2010). The present study had two objectives. The first objective was an examination of the predictive value of perceived social support on Stress among parents of children with Learning Disabilities. The second, was to determine the ability of Self-Efficacy and Alexithymia to act as moderator on that relationship. Results at the individual level of analysis indicate that perceived social support has a positive effect on stress. The results of the study support other studies that found a positive relationship between social support and stress (WITTIG et al. 2016; GIBBONS 2010; STOK et al. 2006). Likewise, in a study by STREET and colleagues (1999), individuals with large social networks are more likely to cope effectively with stressors. However, other studies have found no correlation between stress and social support (DWYER & CUMMINGS 2001). According to another important finding of the study Self-Efficacy and Alexithymia has a moderator role in the relationship between perceived social support and stress.

According to the results of the current study, when Alexithymia increases, the positive effect of social support on perceived stress decreases. The results are consistent with the other studies presenting the relationship of Alexithymia with stress

(MARTIN & PIHL 1985; BAGBY et al. 1994). In the case of the moderating model as being effective, it is indicated that the intervening variable plays a buffer role (FRAIZER et al. 2004). Accordingly, it could be said that Alexithymia has a buffer role against the stress decreasing function of social support. Consequently, it could be expected that with a decrease in Alexithymia and a weakening of the preventative role of Alexithymia, the positive effect of social support on perceived stress would increase.

Also consistent with expectations, the findings supported the hypothesis that higher levels of Self-Efficacy would be associated with lower levels of stress, and that higher levels of social support would be associated with lower levels of stress. The results are consistent with the other studies presenting the relationship of Self-Efficacy with stress (BANDURA et al. 1985). The results of this study support the proposition that self-efficacy has psychological benefits. DONOVAN and colleagues (1990) posited that parents with high self-efficacy will likely interpret difficulties related to their child as challenges and exert increased effort to meet their child's needs.

In summary, several limitations must be acknowledged in the present study. First, it is important to note that the present study was cross-sectional, meaning that results can only be interpreted as correlational and the direction of causality cannot be determined. Future studies should be encouraged to overcome these limitations by longitudinal design, which would enable quantification regarding the effectiveness of intervention self-efficacy. Another issue related to measurement is that data in this study were obtained using self-report measures, and the results may be contaminated by the variance of the common method. It would be appropriate to complement these measurements with others obtained with different methods. Despite these limitations, the findings of the present study have numerous implications for theory and practice.

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