

## The effect of psychological stress on academic achievement among siblings of autistic children spectrum disorder

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### Abstract

The current study aims to identify the impact of psychological stress among siblings of autistic children on their academic achievement, as well as identifying differences in the level of their academic achievement according to the variables of the normal brother: gender, age, educational level, and the variables of the autistic siblings: gender and age of autistic children in Jeddah. The quantitative approach was followed, depending on the questionnaire. The results revealed that the level of psychological stress and academic achievement were moderate. The results also showed that there were no significant differences due to the variable gender of the respondent, the gender of the autistic child, the age of the autistic children, the educational level, and the age of the sibling in relation to academic achievement. The results also showed that no relationship between psychological stress and academic achievement.

Keywords: psychological stress, academic achievement, siblings, autism spectrum disorder

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## 1. Introduction

The family is considered a centre for exchanging experiences among its members so that they are influenced by each other and their positions converge and coalesce as an expression of the emotional participation of any member (al-Masa'deh, Younis, al-Zyoud & Homidi, 2020). Parents are the cornerstones and the main influencing factor on the individuals of the family, also the children are influencing with different ages, and any defect in building this family affects everyone within the family (Habelrih, Hicks & Vanstone, 2018). A root change in the psychological, social, and behavioural pathway of the family can occur when discovered a disability of child in the family (Begum & Mamin, 2019). The brothers and sisters of a child with disabilities will express their concern at the level of consciousness or unconsciousness due to the extra and special effort needed of their brother with disabilities, while the special needs of them are neglected (Habelrih et al., 2018). As a result, the existence of a disabled child in the family, as well as the unwanted features he possesses, is a source of stress for his disabled brother (Ilias et al., 2018).

Siblings of autistic children are unable to comprehend their brother's situation; they are unable to discern differences or similarities with him (Kovshoff, Cebula, Tsai & Hastings, 2017). The brothers and sisters of a child with disabilities feel that he is distinguished from them in earning the attention of their parents, as the basic desire of every child is to have the love of his parents (Hees, Roeyers & De Mol, 2018). Siblings of autistic children rarely give themselves the right to seek support and relief from their parents, where that this type of disability requires double efforts and care from parents which leads to high stress on them and extend to siblings of autistic children (Melli, Grossi, Zarbo & Compare, 2016).

Several studies related to siblings of autistic children showed that there is an increased risk of exposure to psychological stress, and siblings of autistic children have been found to do worse on a variety of outcome measures than siblings of children with other impairments. (Green, 2013; Vidojevic, Gligorovic & Dragojevic, 2014; Kovshoff et al., 2017; Habelrih et al., 2018). This severe stress due to the fact that autism in particular is one of the most difficult cases of disabilities to understand and deal with children (Rojas-Torres, Alonso-Esteban & Alcantud-Marín, 2020).

American Psychiatric Association (APA) (2013) mentioned that autism is a complex neurodevelopmental disorder that remains throughout the life of the individual, it manifests during a child's initial years of life, characterized by a lack of speech and social contact, non-verbal communicative behaviours, developing social relations and maintaining their continuity, the limited and repetition of behavioural patterns, ritual patterns or verbal and non-verbal behaviours, very limited and unusual interests in terms of intensity or focus, an over-or under-response to sensory input. Autism is one of the most difficult developmental disabilities for the child and all family (Ferraioli & Harris, 2009), where the autistic child is suffered from abnormal growth, and autism appears in the child's early years (2-3) years (Green, 2013). The fourth statistical guide for mental disorders has classified and diagnosed autism as a developmental disorder (Miranda et al., 2015). Jiar and Xi (2012) indicate that the developmental disorder of an autistic child leads to a lack of clarity of self-concept, lack of self-confidence, self-hatred, and a tendency to alienation, which makes entire family members vulnerable to psychological stress, especially siblings.

Psychological stresses are those events that lead to noticeable changes in individuals' conditions and the course of their lives, leading to short or long-term psychological responses (Kassymova et al., 2019). Selye is considered the founder of the stress concept, as he was the first to use it in the biological field and described it as a "non-specific" physiological reaction by which the body responds to any stimuli (Fink, 2017). Sharett (2011) indicated that stress may be an image of the crisis or problem, a form of it, or an outcome out of its outcomes but not synonymous with them, in other words, that the problem occurs first, maybe it produces stress or it may develop after that to becomes a crisis and produces greater stress. The severity of psychological stress and frequent exposure to it cause many negative effects on personality, confusion, inability to make decisions, and a contradiction in the effectiveness of behaviour, and the

inability to interact with others (Sharet, 2011). From a broader perspective, stresses have the same reactions and multiple mediating processes, such as social phenomena as disturbance of the social system, as well as the cognitive factors that lead to the assessment of the threat and the concepts associated with it (Jiar & Xi, 2014; Melli et al., 2017).

The causes of psychological stress are many; the most important of these causes are the home and family environment, the work environment, the social environment, and the psychological and mental state of the person himself (Shahsavaran, Abadi & Kalkhoran, 2015; Köse, 2019). Despite psychological stress is one of the main features of the families with disabled in general and families with autistic children in particular, it is more severe for families with autistic children regarding the discrepancy between the expected image of the child before he comes and the realistic image of him (Quintero & McIntyre, 2010; Pisula & DoËrsmann, 2017).

The literature related to the effect of having an autistic child in a family on healthy brothers and sisters such as Ferraioli and Harris (2009); Quintero and McIntyre (2010); Green (2013); Melli et al. (2016); Estes et al. (2017); Kovshoff et al. (2017); Habelrih et al. (2018) mentioned that what lead psychological stress for the siblings of autistic children are the burdens that they afford due to the existence of the brother with autism in terms of asking them to take care of him, housework, or other tasks, because of the parent's preoccupation with the autistic child that needs care, whereas, individuals that do not have autistic siblings have more enjoying in their private lives and interacting with others. The existence of a brother with autism has an effect on the family system, which is consisted of three basic ties: marital, parental, and brotherly ties. Each individual influences the other in a continuous and uninterrupted interaction as it is not possible to isolate one of the elements of the system separately (Hesse, Danko, & Budd 2013; Habelrih et al., 2018).

Trevino has found that there are a number of factors that increase the level of psychological stress of siblings of autistic children, which are: the number of brothers in a household, as well as the age of the autistic brother, gender of brother with autism, parental response to a son's disability, type of disability, the severity of the disability and the burden and responsibility of the brothers to take care of their brother with disabilities (Maswadeh, 2013).

Ferraioli and Harris (2009) summarized researchs on the long-term impact of having a sister or brother with autism spectrum disorder (ASD) on their normally developing siblings. Siblings' cognitive and affective/emotional development influences how they perceive and explain the actions of the child with ASD. Also, intellectual capacity, behaviour, degree of communication of a child with autism has an effect on the relationship between the children, as well as parents' answers to all of the family's children's requirements. In addition, siblings of autistic children are usually children, teenagers, or adults.

Quintero and McIntyre (2010) investigated differences in sibling emotional, behavioural, and academic adjustment, as well as mother well-being, in families with and without a pre-schooler with ASD. According to the findings, autism-affected mothers are more likely to be depressed, life stress and have hassles than mothers who do not have a child with ASD. Also, the result showed that no disparities in parent and teacher-reported regarding academic adjustment, behavioural and social of older siblings in homes with and without an ASD child. Siblings can be more susceptible to the risks as they accumulate over time due to that parent stress and depression are more common with autistic children.

Green (2013) reviewed the studies on the psychosocial effects of growing up with an autistic sibling as well as to find the gap in the relevant literature. Most research used a combination of children and adolescents as participants, as a result, there are mixed findings and it's difficult to draw a reliable conclusion about these different life stages. Autism tends to play an important role in environmental stressors related to developing healthy siblings. When these stressors are paired with other demographic risk factors, it may be difficult to adapt to the requirements of special-needs children. Despite considerable sensitivity to emotional and behavioural discomfort in children at risk, In the midst of handicap difficulty,

siblings have the potential to not just adapt but flourish..

Study of Melli et al. (2016) investigated assesses stress and well-being in siblings of ASD children using self-perceived assessments and to assess the existence of psychopathological trait (anxiety and depression) so that early intervention can be better planned. The result showed that regardless of the magnitude of the ASD or the size of the family, the average distress score was exceptionally high. Around a third of them is depressed or on the verge of being depressed. The key sources of distress tended to be challenged in forming a stable relationship with autistic children and handling child's behavioural issues.

The objective of Kovshoff et al. (2017) was to establish siblings solid framework, which may be utilized to better understand the interaction of sibling adjustment is influenced and factors, and to develop therapeutically useful interventions. Work focused on enhancing and promoting relationships, sibling adjustment, and families with autistic children's well-being, both educationally and experimentally. The results reported that siblings of autistic children have mixed results, ranging from negative effects to no difference to positive experiences. This is almost certainly related to the fact that the difficulty in comprehending the sibling experience..

Habelrih et al. (2018) examined if siblings of autistic children varied from siblings of normally developing in terms of children's effectiveness, effect and coping. The study looked at 82 siblings of autistic children and 74 siblings of children who were growing normally. Autistic siblings showed lower positive affect scores, social efficacy and emotional efficacy compared to siblings in the comparison group, as well as higher negative affect scores. Between the autistic siblings and the normally developing siblings, no major differences in coping strategies or academic effectiveness were observed. Being a sibling of someone with ASD is thought to have negative consequences or threats, implying that support strategies may help these people improve emotional and social effectiveness and increase positive affect.

With the possibility of exposure to psychological stress, especially in the presence of a child suffering from autism and its impact on human behaviour, the researchers were interested in studying this stress and its various effects. In this regard, Fawzy and Hamed (2017) and Oketch-Oboth and Okunya (2018) indicated that there is an effect of psychological stress on academic achievement, as psychological stress creates a number of extra information that often drives individuals to pay extraordinary attention, which leads to the depletion of energy and cognitive stress necessary for achievement performance. Mohammed and Ghaith (2018) emphasized that psychological stress leads to many emotions that make a person's view of life pessimistic, anxiety, tension, rejection of systems, and a low level of achievement. The effect of stress on the student depends on several variables, which are the intensity of the stressful event, the time, gender, age, and the cognitive differences between them in cognitive aspects, this appears in the cognitive assessment of the stressful event as well as the differences that exist among students in the coping styles that they choose to deal with situations (Maajida Aafreen, Vishnu Priya, & Gayathri, 2018; Michaela, Sarah & Parker, 2019).

The study of Shalaby and AlDilh(2015) was to determine the degree of stress and stressors encountered by critical care nursing students at King Saud Bin Abdulaziz University and linkage between stress and academic progress. 65.0% of those polled had modest stress levels, but 68.3% had numerous health issues. Stress levels and perceived stressors had a statistically significant difference; however, there was no linkage between perceived stressors and academic achievement. Critical care nursing students experienced low to moderate levels of stress, which had no influence on their academic performance.

Oduwaiye, Yahaya, Amadi, and Tiamiyu (2017) investigated association between stress levels and student academic performance. According to findings, there is important association between students' stress levels and their academic performance. Personal stress, interpersonal stress, environmental stress, accomplishment stress, and academic performance all have a significant relationship. There is association between personal stress, interpersonal stress, environmental stress, accomplishment stress and academic

performance.

Aafreen et al. (2018) investigated the stress levels of students at several professional institutions, as well as the association between stress and a variety of academic, social, and health-related aspects. Students in science classes were more stressed than students in other classes. It affects their mental, physical, and emotional well-being. Anxiety and sadness affect students, resulting in poor academic performance.

Oketch-Oboto and Okunya (2018) investigated the linkage between stress and academic performance in university students. The majority of students 64.4% reported being stressed at high to moderate levels, while just over 35.6% reported being stressed at low levels. Stress and academic performance had a statistically important relationship. Within 19 to 22 years, 23 to 26 years, College of Agriculture and Veterinary Sciences, College of Humanities and Social Sciences, males and levels one and four of research. The level of stress and academic achievement has a substantial association.

As mentioned previously, psychological stress and autism have received the attention of educational researchers for their negative impact on the nature of the family as a whole, especially the siblings, as well as greatly affecting the educational process and academic achievement. Accordingly, the purpose of this study is to look into the impact of psychological stress on academic performance of siblings autistic children in Jeddah by achieving the following sub-objectives:

- Identify the level of psychological stress among siblings of autistic children.
- Identify the level of academic achievement of siblings of autistic children.
- Identify the differences in the level of academic achievement of siblings of autistic children, according to variables of the normal brother's gender, age, educational level, and the variables of the autistic brother's gender and age.

## 2. Method

A quantitative method and descriptive design were used in the current research, which aimed to create a methodical, authentic and accurate description of truths and features of a population or a particular area. The purpose of quantitative descriptive research is to characterize or clarify characteristics of the object of study, after which offer findings in an analysis format (Saunders, Lewis & Thornhill, 2016).

### 2.1 Sample Size and Population

According to Barreiro and Albandoz (2001) and Zikmund (2003), a population of less than 500 people is considered small; in this case, it is common to perform the survey using the entire population as a sample, which is referred to as a census sample. Questionnaires are mailed to everyone in the population. A total of 35 questionnaires were deemed to be valid for analysis, out of a total of 40.

### 2.2 Research Instrument

The current study, siblings of autistic children were given questionnaires to complete in order to assess their perspectives on each question using a five point Scale varying between "1" (very low) to "5" (very high). The questionnaire was broken down into three sections. Part 1 of the survey gathers background information from sample individuals, such as their "gender, age, educational level" of siblings of autistic children and gender and age of autistic children. Part 2 consisted of 25 questions designed to assess psychological stress level. Based on Maswadeh's research (2013), the questions for this section were chosen. Part 3 included 13 questions designed to assess academic achievement. The questions for this section were chosen based on Abu Habeeb's research (2010).

### 2.3 Instrument Validity

To ensure linguistic scientific precision, formulation, and clarity, the researcher offered the

questionnaire to (6) specialized in special education working in Saudi universities. In light of those specialized' comments, the amount of questions about psychological stress has become (20 questions); in relation to academic achievement, the amount of questions became (11 questions).

#### 2.4 Instrument Reliability

The reliability of the instrument means is that it is possible to rely on the same instrument to obtain the same results from the same sample that matches the conditions. Cronbach's alpha test was used to reach the internal accuracy of the respondents' responses. A value of 60% or more is the value that can be accepted to ensure internal accuracy (Saunders et al., 2016)

Table 1. Test of Cronbach's Alpha

Variable	Value of Cronbach Alpha
Psychological stress	0.748
Academic achievement	0.877
All items	0.799

The internal consistency coefficient values for the study's measurements were strong, as shown in Table 1, ranging between (0.748-0.877). This means that Cronbach Alpha coefficient is greater than one for all sections of the questionnaire (0.60). This indicates that the components in the study instrument are internally consistent.

#### 2.5 Data Analysis

The researcher utilized the SPSS program to do a means, independent sample 't' test, One Way ANOVA, and multiple linear regression coefficient analysis in order to meet the study's objectives. The independent sample't' test is utilized when comparing two means, and Anova One Way is favored when comparing three or more means (Cuevas, Febrero & Fraiman, 2004).The findings, which were based on Table below, were explained using means.

Table 2. Interpretation of the means

Mean	Information
1.00-2.33	Disagree (DA)
2.34-3.67	Moderate Agree (MA)
3.68-5.00	Agree (A)

Source: (Bryman & Bell, 2011)

### 3. Result and Discussion

#### 3.1. Profile of Respondents

To describe the respondents' profile in terms of demographics 'gender, age, and education level', descriptive analysis was used and describes profile of siblings with autism in terms of 'gender and age'. As shown in Table3, the majority of respondents (54.3%) were male, while (45.7%) were female. In relation to age, table 3 shows that the overwhelming majority have age between 13 to 18 years with a rate of 80.0%, while 20.0% of respondents have age more than 26. In relation to the education level of respondents, 40.0% of respondents have a preparatory degree, as well as 40% of respondents have a secondary degree, while 14.3% of respondents have a bachelor's degree, finally, the respondents have a diploma, and respondents have postgraduate representing the same rate that is 16.0%. With respect to the gender of siblings with autism, the results showed that the majority of the siblings were male representing 60.0%, while 40.0% were female.

Finally, the siblings who have less than 12 years representing 45.7%, while 54.3% of siblings have 13-18 years.

Table 3. The Profile of the Respondent and Siblings (N=35)

Variables	Category	N	%
Gender	Male	19	54.3
	Female	16	45.7
Age	13-18	28	80.0
	19-25	0	0.0
	More than 26	7	20.0
Educational Level	Preparatory	14	40.0
	secondary	14	40.0
	diploma	1	2.9
Gender of Siblings with Autism	Bachelor	5	14.3
	Postgraduate	1	2.9
	Male	21	60.0
Age of Siblings with Autism	Female	14	40.0
	Less than 12	16	45.7
	13-18	19	54.3

### 3.2. Result of the First Objective

The researcher employed means and standard deviation for each item of psychological stress to achieve the study's first objective.

Table 5. Each Psychological Stress Item's Means and Standard Deviation

N	Item	Mean	St.dev	Inf.
1	I feel dissatisfied because there is money being spent on my brother/sister with an autism spectrum disorder.	3.74	1.17	A
2	I feel angry that my brother/sister with an autism spectrum disorder is unable to do life's works	3.23	1.00	MA
3	The medical services provided to children with an autism spectrum disorder are insufficient.	4.09	0.98	A
4	I make a double effort to help my brother/sister with an autism spectrum disorder.	3.94	1.16	A
5	I feel upset that it is difficult for my brother/sister with an autism spectrum disorder to move around.	3.69	0.93	A
6	Problems occur in the family because of my brother/sister with an autism spectrum disorder.	3.63	0.97	A
7	I feel embarrassed when others talk about my brother's/ sister's autism spectrum disorder.	3.74	1.17	A
8	I feel scared because my brother/sister with an autism spectrum disorder will not find help in the future.	3.46	1.15	MA
9	I am angry at the discrimination and concern for my brother/sister with an autism spectrum disorder from others	3.57	0.98	MA

10	I feel a lack of focus at work or study as a result of my being busy with my brother's/sister's autism spectrum disorder.	3.77	0.88	A
11	I am annoyed by the looks of sympathy and kindness directed at my brother/sister with an autism spectrum disorder.	3.69	0.99	A
12	I am worried because the social services for children with an autism spectrum disorder are insufficient.	3.83	0.99	A
13	I feel scared if my brother/sister with an autism spectrum disorder is out of the house.	3.34	1.06	MA
14	I feel insufficient information about my brother's autism spectrum disorder.	3.43	1.12	MA
15	I feel deprived of taking the trips or visits that compel me to leave my brother/sister with an autism spectrum disorder at home.	3.26	1.01	MA
16	I am worried that my brother's/sister's autism spectrum disorder is not treated.	3.26	1.22	MA
17	I feel frustrated that I am unable to help my brother/sister with an autism spectrum disorder.	2.89	1.05	MA
18	I feel sad for my brother/sister with an autism spectrum disorder being unable to introduce himself.	3.11	1.13	MA
19	I feel unaware of others about my suffering related to my brother's/sister's autism spectrum disorder.	3.06	1.24	MA
20	Problems occur with the neighbors because of my brother/sister with an autism spectrum disorder.	3.23	1.24	MA
<b>Total</b>		<b>3.5</b>	<b>0 0.45</b>	<b>MA</b>

Table 6 revealed that the mean academic achievement score among autistic children's siblings was (3.22) and standard deviation of (0.83). This indicates a moderate amount of academic achievement among autistic children's siblings. Item 9, which states, "I feel unwanted among my colleagues" among the items of academic achievement was the highest mean score (3.83), while item 8, which states, "I go to school/college by force" was the second-highest mean score among academic achievement items with (3.94) from perspective of autistic children siblings, and item 6, which states, "I feel distracted inside the classroom" was the third-highest mean score among academic achievement items with (3.40). While item 5, which states, "My ability to memorize study subjects is low"; item 11, which states "My colleagues are dealing with me aggressively" and item 1, which states "I have difficulty focusing when the lecturer explains the subjects" with (2.71),(2.97), and (30.3) were the lowest value mean score among academic achievement respectively.

This finding is consistent with those of the studies of Green (2013), Kovshoff et al. (2017), Oketch-Oboto and Okunya (2018) and Habelrih et al. (2018). Also, inconsistent with the results of studies Suzannah and Sandra (2009), Quintero and McIntyre (2010), Shalaby and AlDilh (2015), and Melli et al. (2016). This is due to a set of reasons, perhaps the most important of which is that the siblings of the disabled were able to overcome the trauma upon discovering the autism spectrum disorder, lived with the first stages of this trauma, which was studied by many researchers, divided it into different stages: beginning with trauma, then denial and denial, followed by psychological pain, then adaptation and acceptance, and then contain



the crisis, in the end the siblings recognize the existence of the child with disabilities, accepts the status quo, and begins a period of adaptation to the autism spectrum disorder.

### 3.3. Result of the Second Objective

The researcher employed means and standard deviation for each item of psychological stress to achieve the study's second objective.

Table 6. Each Academic Achievement Item's Means and Standard Deviation

N	Item	Mean	Information	
			St.dev	tion
1	I have difficulty focusing when the lecturer explains the subjects.	3.03	1.12	MA
2	I suffer from some difficulties in some academic subjects.	3.06	1.14	MA
3	I suffer from difficulty in completing the required homework.	3.14	1.31	MA
4	My relationship with my colleagues is not good.	3.14	1.29	MA
5	My ability to memorize study subjects is low.	2.71	1.23	MA
6	I feel distracted inside the classroom.	3.40	1.19	MA
7	I find it difficult to finish my homework quickly and accurately.	3.37	1.33	MA
8	I go to school/college by force.	3.54	1.29	MA
9	I feel unwanted among my colleagues.	3.83	0.99	A
10	I am not getting enough interest from the lecturers.	3.23	1.40	MA
11	My colleagues are dealing with me aggressively.	2.97	1.22	MA
	<b>Total</b>	<b>3.22</b>	<b>0.83</b>	<b>MA</b>

Table 6 showed that the mean score of academic achievement among siblings of autistic children was (3.22) with a standard deviation of (0.83). This means that the level of academic achievement among siblings of autistic children is moderate. Item 9, which states, "I feel unwanted among my colleagues" have the highest means score among the items of academic achievement among siblings of autistic children with (3.83), while item 8, which states, "I go to school/college by force" have the second-highest means score among the items of academic achievement among siblings of autistic children with (3.54), and item 6, which states, "I feel distracted inside the classroom" have the third-highest means value among the items of academic achievement among siblings of autistic children with (3.40). While item 5, which states, "My ability to memorize study subjects is low"; item 11, which states "My colleagues are dealing with me aggressively" and item 1, which states "I have difficulty focusing when the lecturer explains the subjects" have the lowest value of the means among the items with (2.71), (2.97) and (3.03) respectively.

This result can be explained by the importance of the cognitive and training need for the siblings of autistic children, as they need counselling and training programs to help them in dealing with their colleagues, whether in communication or social interaction or to train them to rely on themselves in daily life skills -the source of high stress for them- or reduce behaviours Stereotypes and repetitions.

### 3.4. Result of the Third Objective

To identify differences in level of academic achievement of siblings of autistic children, according to variables of the normal brother's gender, age, educational level, and the variables of the autistic brother's gender and age; One Way Anova and Independent Sample 'T' Tests were utilized.

Table 7. T-Test for Independent Samples

Variable	N	M	St. dev	DF	T	SIG
Male	16	3.39	0.72	33	1.32	0.298
Female	19	3.02	0.92			
Male_a	19	3.42	0.90	33	1.56	0.385
Female_a	16	2.99	0.69			
Less than 12_a	16	3.32	0.65	33	0.67	0.072
13-18 years_a	19	3.13	0.96			

Table 7 shows that the mean of male responses for academic achievement of autistic children's siblings was (3.39) while the mean of female responses was (3.02). In addition, the Sig of two gender groups is (0.298). In addition, The mean of the responses was presented in the table about autistic children's gender were (3.42) for males and (2.99) for females. Furthermore, the Sig of two gender groupings is (0.385). Regarding age autistic children the mean score of responses less than 12 was (3.32) and the mean score of those aged 13 to 18 was (3.13). Furthermore, the Sig of two age groups is (0.072), which demonstrates that gender, gender of autistic children, and age of autistic children have no statistically significant effect on academic achievement (0.05). The result of Habelrih et al. (2018) contradicts this result.

Table 8. ANOVA Test

Variable	Groups	Sum of Squares	df	Mean Square	F	Sig
Educational level	Between groups	0.998	1	0.998	1.485	0.232
	Within groups	22.164	33	0.672		
	Total	52.88	34			
Age of Siblings	Between groups	1.677	4	0.419	0.585	0.676
	Within groups	21.485	30	0.716		
	Total	23.162	34			

Table 8 shows that there are no differences between groups in terms of educational level and siblings' ages. Where, the Sig are (0.232), (0.676) respectively, This means there isn't a statistically significant effect (0.05) of Educational level and age of Siblings for academic achievement. The results of Habelrih et al. (2018) contradict this result.

### 3.5. Result of the Main Objective

In order to fulfill the study's main objective, simple linear regression coefficient analysis was used by the researcher. The following is a summary of the regression and simple correlation analysis results for this impact in Table 9:

Table 9: simple linear regression coefficient

Variable	B	T- Value	P- Value
Psychological stress	0.149	0.465	0.645
R			0.081
R <sup>2</sup>			0.007
F			0.216
df			34

Based on the data in the table above, psychological stress and academic achievement have no statistical association. As value of the correlation coefficient is weak and represents about 0.081% based on simple the model's correlation coefficients (R). This finding supports Shalaby and AIDilh's research (2015), However, this finding differs from that of Oduwaiye et al.(2017), Aafreen et al.(2018), and Oketch-Oboth and Okunya

(2018).

#### 4. Conclusion

The main objective of this study was to investigate the effect of psychological stress on the academic achievement of siblings of autistic children in Jeddah. The results showed an insignificant effect of psychological stress on the academic achievement of siblings of autistic children. On the other hand, the result showed that psychological stress levels and academic achievement levels among siblings of autistic children were moderate. The study concludes that the siblings of autistic children adapt to the autism spectrum disorder of their brother and sister then contain the crisis, in the end; the siblings recognize the existence of the child with disabilities. Consequently, the study recommends that siblings should adopt need counselling and training programs to help them in dealing with the educational environment.

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