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THE RELATIONSHIP BETWEEN TYPICALLY DEVELOPING SIBLINGS OF AUTISTIC CHILDREN AND THEIR ACADEMIC ACHIEVEMENT, SELF-CONCEPT, AND PSYCHOLOGICAL ADJUSTMENT

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Abstract

Objectives: The current study examines the academic, emotional, and psychological outcomes of usually developing siblings of children with autism. It was assumed that the siblings of autistic children would likewise have negative outcomes. Autistic children have higher levels of academic success, self-esteem, and psychological adjustment when compared to their typically developing siblings.

Methods: The study employed a between-group design and utilized quantitative methods. The study had a grand total of 88 individuals. Out of the total participants, there were 22 children diagnosed with autism, 22 usually developing siblings, 22 moms, and 22 normal controls. All of them took part in the study together with their respective mothers. Path analysis, hierarchical regression, correlation coefficient, independent sample t test, and data were employed for data analysis.

Results: Autistic children showed much poorer psychological adjustment and self-concept compared to their regularly developing siblings. Mothers with children who have autism experience elevated levels of stress in comparison to mothers whose children do not have autism. Individuals who have siblings with autism are at a higher risk of encountering psychological and emotional challenges, as well as behavioral and social issues. The psychological adaptation of siblings of autistic children is influenced by parental stress, rejection, and family discord. Path analysis reveals a significant impact of maternal depression and stress on the psychological adjustment, pro-social conduct, academic performance, and self-concept of siblings.

Conclusion: The level of control exerted by one's family has a significant impact on how one perceives oneself, while conflicts within the family have a considerable influence on one's psychological well-being and tendency to engage in pro-social conduct. Taking into account the cultural context of Pakistan, researchers, mental health specialists, and doctors evaluate the importance of these findings.

Keywords: autistic, psychological adjustment, mothers stress, siblings.

Introduction

The personalities of children and the circumstances in which they are raised, which may include their parents, grandparents, peers, and extended relatives, all have a role in the development of their distinct cognitive and social abilities. However, siblings have the most significant and long-lasting impact on a child's development because they imitate and affect each other's conduct, attitude, and style. This is because siblings mimic and influence each other. The importance of this interaction cannot be overstated when it comes to the development of social, cognitive, and psychological skills. When siblings communicate their feelings, experiences, and even disagreements with one another, it is not only beneficial to the children but also to the entire family. On the other hand, the presence of a youngster who is either physically or psychologically unwell might cause this harmony to be disrupted.

The presence of a sibling who suffers from Autism Spectrum Disorder (ASD) is a very difficult situation. Autism is a complicated neurological disorder that has a profound impact on the dynamics of the family, leading to increased levels of stress and the obligations of caregiving. Extensive study has been conducted on the origin of autism, treatment options, and the impact that autism has on families as a result of the symptoms of autism and the recent increase in the number of people diagnosed with autism(Gregory et al., 2020). The researchers emphasize how important it is to have a comprehensive understanding of the characteristics, epidemiology, and history of autism. According toKovshoff et al. (2017)who described "autistic disturbances" in children, was the one who first discovered autism almost sixty years ago. Later on, autism was recognized as a unique developmental disease, despite the fact that it was first misunderstood and frequently associated with bad parenting. By the 1970s, diagnostic criteria had been established, and the term "Pervasive Developmental Disorders" (PDD) had been created to represent diseases that were characterized by severe developmental abnormalities(Inam, 2014).

Autism spectrum disorder (ASD) is characterized by difficulties in communication and social interaction, as well as activities that are restricted and repetitive. According to the most recent statistics, autism spectrum disorder (ASD) is diagnosed in one out of every 88 children in the United States(Tsai et al., 2016). This indicates that the prevalence of ASD has been on the rise. It is believed that improved diagnostic criteria and awareness are responsible for this increase.

There are a variety of features that are specific to each child who has autism. These traits include challenges in social interaction, communication issues, and repetitive activities. There is a range of severity, and these characteristics can change over time(Caner et al., 2024). Developmental delays and attention-deficit/hyperactivity disorder (ADHD) are two conditions that frequently coincide with autism, which further complicates the child's development. Although the precise causes of autism are still unknown, it is generally agreed that the condition is caused by a combination of genetic and environmental factors. Prenatal exposure to diseases, poisons, or specific drugs may be a factor in the development of autism, according to several hypotheses. Ongoing genetic research is focusing on identifying particular genes that are associated with the illness(Wolff et al., 2022).

The evaluation of persistent deficiencies in social communication and interaction, in addition to restricted and repetitive behaviors, is required in order to arrive at a diagnosis of autism. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) lists specific criteria for diagnosing autism and emphasizes the significance of early identification and intervention. There is a huge impact on the entire family when a child with autism is being raised. It is not uncommon

for parents to have significant levels of stress and psychological disorders, while siblings may struggle with emotional and social challenges(Kirchhofer et al., 2022). For the purpose of providing appropriate support to families impacted by autism, it is essential to have a solid understanding of these relationships.

Relevant Theories

In Rogoff's (1990) socio-constructivist approach, the impact of children's social bonds on their development is stressed. This is the framework for the socio-constructivist theory. Social constructivism is a theory that emerged in the late 1980s that lays an emphasis on the ability of connections, social environment, and interactions to influence an individual's way of thinking and to acquire new knowledge. According to Bontinck et al. (2018), learning and teaching are two-way streets in the context of relationships like those between siblings.

The Perspective of Developmental Psychopathology: According to the developmental psychopathology perspective, which is backed by research (Shivers, 2019), it is possible to gain a better understanding of the psychological outcomes of an individual by examining the ways in which various experiences have an effect on them. This approach, which is supported by Vermaes et al. (2011), places an emphasis on the role of the context and the developmental processes in the process of shaping behavior. According to the findings of Haukeland et al. (2020), the results of mental health are predicted by a complex interaction between genetic predispositions, familial relationships, and socio-cultural influences.

Developmental Ecological Systems is the name of the model that is referred to as the DES Model. Through its incorporation into the DES model, Haukeland et al. (2020) ecological systems theory places an emphasis on the significance of the child's immediate environment as well as the dynamic relationship that exists between the family and other individuals. Within the framework of this theory, it is proposed that a child's growth and development are influenced by both internal and external forces. For instance, (Hayden & Hastings, 2022) state that the diagnosis of autism in a kid may result in changes to the patterns of interaction within the family as well as the child's own personal development.

Structure of Minuchin's Model: According to Minuchin's structural notion, the family is similar to a network in that all of its components communicate with one another and influence one another. According to Minuchin (1985), this theory emphasizes that family relationships are governed by norms and patterns, and that perturbations, such as having a child with autism, have an effect on the entire family system.

Theorizing Family Systems (FST): In the 1960s, Murray Bowen published FST, which views families as complex systems in which members are dependent on one another and whose interactions impact both the experiences of the individuals and the experiences of the group as a whole. (Cebula et al., 2019)It places an emphasis on the impact that family stress has on the functioning of families in general, as well as the significance of interpersonal relationships between siblings in the development of autistic children. According to the idea, other members of the family may feel psychological discomfort and dysfunctional behaviors as a result of the dynamics of the family, such as having a child who is autistic (Doody et al., 2010). The present study analyzes the dynamics of these relationships within the context of Pakistani culture, with a particular emphasis on the psychological consequences that autistic children have on their siblings.

Literature Review

The importance of sibling connections in child development has led to studies on how siblings psychologically adjust to a developmentally delayed sibling. The impact on fathers, siblings, and other family members has been neglected in most study on mothers. Some studies blame poor sibling relationships on the disabled child, while others say they help. The increased frequency of autism underlines the need for more research since siblings of autistic children may endure poor psychological adjustment and parental stress, which can harm family dynamics. However, other

research show that siblings of autistic children are more affectionate and spend more time together(Mushtaque et al., 2021). This research discusses the psychological effects of developmental delays and autism spectrum disorder on siblings. It explores sibling adjustment, ASD's impact on parents, and research's theoretical and procedural constraints. Several studies have examined siblings' response to developmental and medical issues, with conflicting findings. Some siblings have greater social skills and less behavioral issues, while others have more stress and family routine disruptions. Sibling adjustment also depends on family finances and socioeconomic condition. Some siblings make good changes, while others have behavioral challenges.

Mushtaque et al. (2023) conducted a study to evaluate the levels of stress and anxiety among siblings of cancer survivors. The results showed that the siblings experienced modest post-traumatic stress, but there was no significant rise in anxiety when compared to a control group. Hassan et al. (2024)examined the behavior of 96 children diagnosed with spinal muscular atrophy (SMA), 45 of their healthy siblings, and 59 control children. The siblings of children with SMA displayed the most pronounced behavioral issues, followed by the children with SMA themselves and then those from unaffected families. In a study conducted by Packman et al. (2004), the researchers examined behavior problems in two groups: 21 donor siblings and 23 non-donor siblings of patients who underwent Pediatric Hematopoietic Stem Cell Transplantation (HSCT). The results showed that donor siblings had lower self-esteem, higher depression, and withdrawal symptoms, while non-donor siblings exhibited more externalizing problems. Both groups experienced moderate to severe stress. In their study, Lee et al. (2021) discovered a positive association between empathy among siblings of cancer patients and improved adaptation. They also observed that higher family size was related to increased behavioral issues, particularly in older siblings who were expected to assume greater responsibilities.

In a study conducted by Ishizaki et al. (2005), the researchers examined the relationship between a child's disability and psychosocial problems in Japanese households. They discovered that siblings of children with developmental challenges experienced higher psychological concerns. However, mothers reported positive benefits such as improved empathy and collaboration. Their emphasis was on the major influence of cultural variables on these processes in Japan. In their study, Mash and Wolfe (2002) examined the behavioral problems exhibited by siblings of children with developmental challenges. They found that these problems could be categorized into two types: internal and exterior. Internal problems were characterized by emotional distress and somatic complaints, while external problems were characterized by verbal violence and disobedience. Sharpe and Rossiter (2002) corroborated similar results, indicating that siblings of children with chronic sickness and disabilities are susceptible to behavioral and adjustment problems, with the extent of these issues being determined by the specific kind of the impairment and the support structure that is in place.

Sibling rivalries and disputes are frequent occurrences, however they might result in notable psychological issues if parental focus is uneven due to a sibling's condition. The siblings of children with Autism Spectrum Disorder (ASD) have distinct obstacles, such as aggressive conduct, communication problems, changes in family dynamics, and limitations in activities. Autism, a widespread developmental disease, has a profound effect on social skills and relationships, presenting considerable obstacles for siblings in terms of coping (Tsao, Davenport, &Schmiege, 2012). Research conducted by Fitzgerald et al. (1997) and Ross &Cuskelly (2006) has demonstrated that siblings of children with Autism Spectrum Disorder (ASD) encounter stress, psychological difficulties, and social obstacles. Glasberg (2000) observed that siblings may view ASD as a source of stress, and the resulting effects can differ according on the coping mechanisms employed by each individual. According to Bebko et al. (1987), families that have a child with Autism Spectrum Disorder (ASD) have higher levels of stress compared to families dealing with other diseases.

Studies suggest that siblings of children with autism have an increased susceptibility to psychiatric disorders, including higher rates of depression and anxiety, when compared to siblings of children with other developmental delays or typical development (Piven et al., 1990; 1997; Orsmond et al., 2009). The inherent unpredictability of autism exacerbates the difficulties faced by families, resulting

in psychological obstacles such as feelings of isolation and depressive symptoms (Gold, 1993; McHale et al., 1984). Siblings are also adversely affected by parental stress and lack of attention (Giallo&Gavidia-Payne, 2006). Research conducted by Bagenholm and Gillberg (1991), Fisman et al. (1996), and Gold (1993) indicates that siblings of children with autism experience social isolation and behavioral difficulties as a result of the challenges posed by their sibling's condition.
Nevertheless, certain studies suggest that siblings of children with autism may have advantageous characteristics, such as maturity and resilience (Kaminsky& Dewey, 2002; Szatmari et al., 1993). According to Petalas et al. (2012) and Angell et al. (2012), individuals frequently acquire enhanced empathy and coping abilities. Although faced with difficulties, these siblings have exceptional ability to adjust and handle their surroundings and obligations (Tarafder et al., 2004; Benson &Karlof, 2008).

Hypotheses:

H1: Siblings of children with autism are expected to exhibit lower levels of psychological adjustment, self-concept, and academic performance compared to siblings of typically developing children.

H2: Mothers of children with autism are anticipated to experience higher levels of depression, anxiety, and stress than mothers of typically developing children.

H3: The levels of depression, anxiety, and stress experienced by mothers are expected to be predictors of the psychological adjustment, pro-social behavior, self-concept, and academic performance of their typically developing children.

Methodology

Research Design

This study utilized a between-groups design to collect data from siblings and mothers of children with autism, as well as a comparison group of siblings. The aim was to assess the psychological adjustment, academic performance, and self-concept of two sets of siblings. The initial cohort consisted of children diagnosed with autism, their neurotypical siblings, and their maternal caregivers. The second group consisted of mothers and siblings of generally developing children. Siblings in the second cohort were paired with those in the first cohort according to age, gender, educational status, and birth order.

Sample

The study particularly selected mothers and healthy siblings (aged 6 to 20) of autistic children. at addition, the study also involved mothers and corresponding individuals from healthy households who were enrolled at institutions in Lahore. Children with autism were eligible for inclusion provided they satisfied the following conditions: they had to be at least four years of age, belong to a stable, nuclear family, and have at least one sibling who is usually developing and falls within the age range of six to eighteen. For the autistic child, it was necessary to have siblings who were either younger or older, physically and intellectually healthy, and between the ages of 6 and 18. The control group's matched spouses were selected based on specific criteria. These criteria included having a similar age and gender as the sibling of the autistic child, being part of a whole family, attending the same school and class, and being relatively small in size. To eliminate any factors that could potentially influence psychological maladjustment, individuals were excluded if they had a sibling with a disability, parents with significant medical ailments, lived in single-parent households, or had experienced a divorce or separation in their family.

Tools for data collection

Demographic Information Sheet

The researcher developed a demographic information sheet taking into account the importance of various variables. Participants were mandated to complete a concise questionnaire designed to collect socio-demographic information about the sample. This information included the gender, age, and

birth order of the child with autism, the number of siblings excluding the child with autism, the size of the family, the ages and birth orders of the siblings, their health conditions, the marital status of the parents, and the ages, education levels, and occupations of both the mother and father.

Autism Rating Scale

This study assessed autistic functioning using the Childhood Autism Rating Scale (CARS; Schopler, Reichler, & Barbara, 2000). CARS is a 15-item behavior assessment scale for children over 2 years old to distinguish autism from non-autistic developmental impairments. It classifies autism severity into mild, moderate, and severe categories and is cross-culturally valid and frequently used. The scale scores behavior observations to determine autism, with a cutoff of 30. Good test-retest, inter-rater, and internal consistency have been shown for the scale. It has helped physicians, researchers, and educators diagnose and understand autism spectrum illnesses by quantifying autism severity.

Sibling Adjustment Scale

Sibling psychological adjustment was assessed using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The SDQ, based on the Rutter scale (Rutter, Tizard, & Whitman, 1970), has 20 items that assess problem behaviors in four domains: emotional, conduct, hyperactivity, and peer, as well as a five-item pro-social behavior scale. Each item is evaluated from 0 (not true of the child) to 2 (definitely true). Despite its length, the SDQ correlates well with other psychological adjustment measures in children (Goodman & Scott, 1999). The four problem domains' scores are added to get a Total Problems Score, which ranges from 0 to 40. Higher values indicate more problems. On the publisher's website, the questionnaire, instructions, and Urdu translation were freely available for research. Professor Goodman, the instrument's author, granted permission by email, describing the research goal.

Self-Concept Scale

The Piers-Harris 2 (2002) assesses self-perception using six subscales with sixty items. The Inconsistent Responding (INC) index and Response Bias (RES) index validity ratings assess inconsistent or haphazard response patterns. Yes or no answers indicate agreement or disagreement with descriptive statements. The sum of all subscales determines one's self-perception, whereas individual subscale scores reveal specific facets of self-concept. Some questions overlap across subscales, which have 10–16 questions. The subscales measure behavioral adjustment, intellectual and school standing, physical appearance and qualities, anxiety, and popularity, each offering a unique perspective on self-perception.

Procedure

The study used four parallel methods to collect data. Siblings and mothers of autistic children in special schools, clinics, and hospitals were recruited for the study. Also considered were children in the hospital's developmental pediatrics and psychiatry departments. Second, snowball sampling contacted 118 autism families. The researcher contacted families through the Autism Meetup group online and attended two training workshops for parents and professionals of autistic children during data collection. This encouraged additional parents to participate in the research. The researcher contacted more inclusive school parents throughout the sessions.
Data was collected three times. First, demographic data on all autistic children in Lahore facilities was collected. Siblings who met inclusion criteria were examined for psychological adjustment and self-concept in the second phase. The third phase entailed acquiring and testing counterpart information. The Depression, Anxiety, and Stress Scale assessed mothers' distress in both cohorts. The first step was to gather 30 special education institutes from the Directorate of Special Education and the internet. Those helping autistic kids were found and chosen. To conduct this research, we asked the administration about autistic children. The institutions were then individually visited. The supervisor's endorsement letter and a thorough request letter describing the research study's nature,

purpose, aims, and objectives were sent to special education institute heads. We asked the administrations to select families from their programs and conduct research in their schools. They were told the research was for academic purposes exclusively and had no financial gain. Official data collection consent was given after clearing up any issues. After receiving institutional approval, the study screened enrolled students with a specified autism diagnosis. A list of autistic children in these facilities was provided. Instead of using the institute's diagnosis, the researcher used the Childhood Autism Rating Scale (CARS) to diagnose autism in these children. Since the diagnosis method is qualitative and has varying results, the researcher used CARS to ensure uniformity. Second, some universities acknowledged admitting previously diagnosed students without a diagnosis record.Children with confirmed diagnosis provided demographic data. A demographic questionnaire was designed and filled out using the institution's children's records.School administrators requested parent questionnaires when information was unavailable. Some institutions finished the work, while others had to provide contact information so the researcher could contact parents for demographic data. Schools collected demographic data at parent-teacher meetings. Some institutions did not return the questionnaire or provide parent contact information, excluding them from the study. After receiving 88 parent contacts, the researcher contacted comparable parents.

Results.

Table 1: Demographic Information of Autistic Children (N=22)

Variable	F(%)	M(SD)
Boy	10 (45.4)	
Girl	12 (54.6)	
Age		7 (3.44)
Autism Level		
Mild	14 (63.6)	
Moderate	5 (22.7)	
Severe	3 (13.7)	

The demographic information of the 22 autistic children is detailed in Table 1. The sample consists of 10 boys (45.4%) and 12 girls (54.6%), with an average age of 7 years (SD = 3.44). In terms of autism severity, the majority of the children, 14 (63.6%), are classified as having mild autism, 5 (22.7%) have moderate autism, and 3 (13.7%) are categorized as having severe autism.

Table 2: Demographic Information of Autistic Children Siblings (N=22)

Variable	F(%)
Male	8 (36.3)
Female	14 (63.7)
Total Number of Siblings	
1-3	15 (65.8)
4-6	7 (34.2)
Do you like or Accept you Autistic Sibling	
Yes	11 (50.0)
No	12 (50.0)

The demographic information of the siblings of 22 autistic children is summarized in Table 2. Among these siblings, 8 are male (36.3%) and 14 are female (63.7%). The total number of siblings ranges from 1 to 6, with 15 (65.8%) having between 1 and 3 siblings and 7 (34.2%) having between 4 and 6 siblings. Regarding their acceptance of their autistic sibling, the responses are evenly split, with 11 (50.0%) indicating they like or accept their autistic sibling and 11 (50.0%) indicating they do not.

Figure 01 Level of Academic Achievement, self-concept and psychological adjustment among autistic children siblings

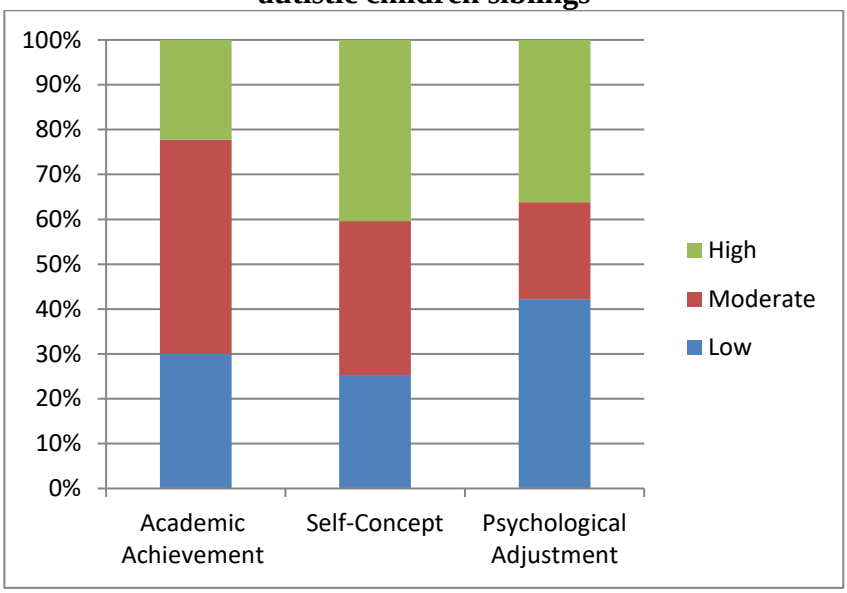

Figure 01 illustrates the levels of academic achievement, self-concept, and psychological adjustment among the siblings of autistic children. The distribution of academic achievement shows that 2.7 have low achievement, 4.3 have moderate achievement, and 2 have high achievement. In terms of self-concept, 2.5 siblings are categorized as having low self-concept, 3.4 have a moderate level, and 4 have a high level. For psychological adjustment, 3.5 siblings exhibit low adjustment, 1.8 have moderate adjustment, and 3 are highly adjusted.

Table 3 Gender Differences Normal children Siblings and Autistic Children Siblings

	Normal C-S		Autistic C-S			
Variables	**M**	**SD**	**M**	**SD**	**t**	**p**
AA	3.42	1.47	1.32	0.93	2.67*	0.021
SC	5.21	3.53	3.67	1.52	4.21**	0.01
PA	5.53	2.41	2.33	1.04	4.32**	0.01

Note: AA= academic achievement, SC= self-concept, PA= psychological adjustment, C-S= children siblings.

Table 3 compares gender differences between normal children siblings and autistic children siblings across three variables: academic achievement (AA), self-concept (SC), and psychological adjustment (PA). For academic achievement, normal children siblings (M = 3.42, SD = 1.47) scored significantly higher than autistic children siblings (M = 1.32, SD = 0.93), with a t-value of 2.67 (p = 0.021). In terms of self-concept, normal children siblings (M = 5.21, SD = 3.53) again outscored autistic children siblings (M = 3.67, SD = 1.52), with a t-value of 4.21 (p = 0.01). Similarly, for psychological adjustment, normal children siblings (M = 5.53, SD = 2.41) had higher scores compared to autistic children siblings (M = 2.33, SD = 1.04), with a t-value of 4.32 (p = 0.01). These results indicate significant differences in all three areas between the two groups.

Figure 02 Psychological Problems among Autistic Siblings Children

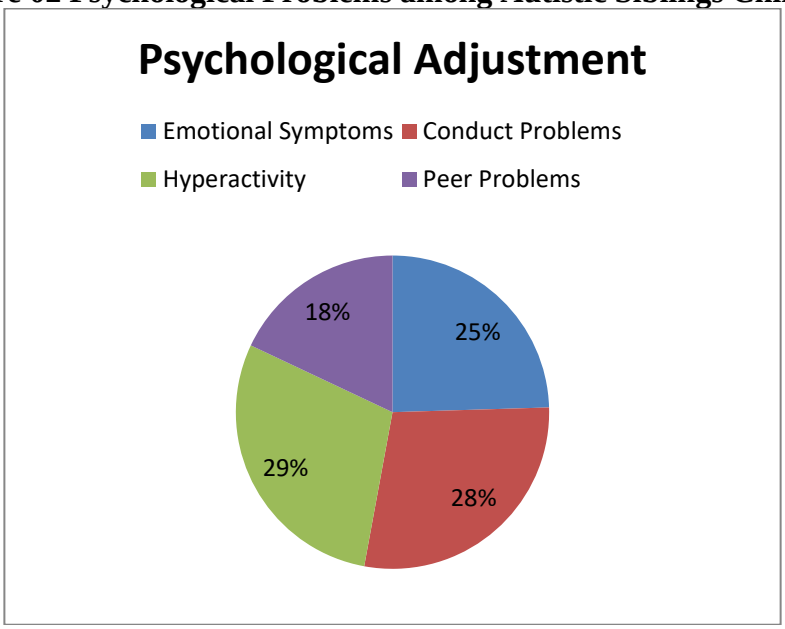

Figure 02 highlights the psychological problems among the siblings of autistic children, focusing on psychological adjustment issues. The data reveals that emotional symptoms are present with a mean score of 4.32. Conduct problems are slightly higher, with a mean score of 5. Hyperactivity issues are the most prevalent, with a mean score of 5.13. Peer problems are also significant but comparatively lower, with a mean score of 3.17. These figures suggest that hyperactivity and conduct problems are the most prominent psychological challenges faced by the siblings of autistic children.

Figure 03 Self-concept among Autistic Children Siblings

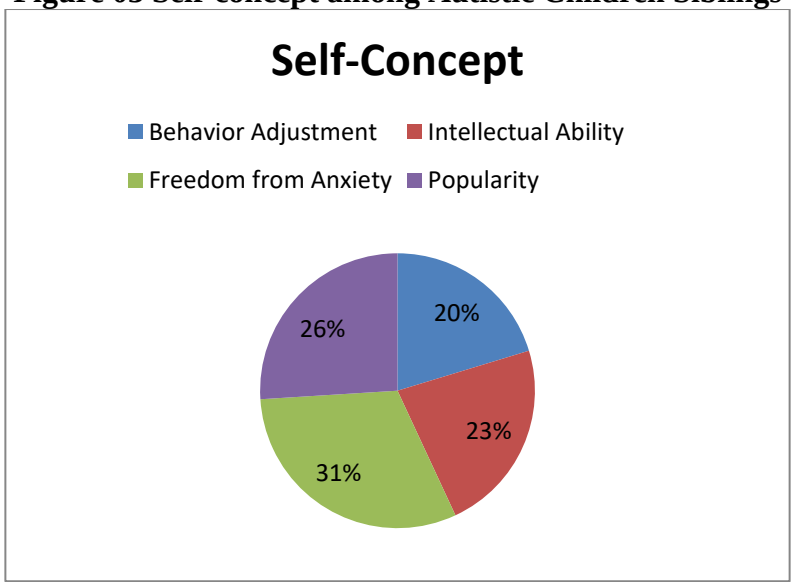

Figure 03 presents the self-concept dimensions among the siblings of autistic children. The data indicates that these siblings have varied levels of self-concept across different areas. Behavioral adjustment scores an average of 8.2, while intellectual ability is slightly higher at 9.2. Freedom from anxiety is notably the highest, with a score of 12.5, suggesting that these siblings generally feel less anxious. Popularity also scores relatively high at 10.5. These findings highlight that, despite the challenges, the siblings of autistic children exhibit strong intellectual abilities and social popularity, with a significant degree of freedom from anxiety.

Table 4 Hierarchical Regression Predicts

Predictors	Model 1		Model 2		Model 3	
	SE	B	SE	β	SE	β
Self-concept	.23	-0.21*	.19	-0.15	.11	-.24
Psychological Adjustment	.51	-0.11*	.31	-0.08	.13	-.12
Academic Adjustment	.42	-0.08**	.36	-.03	.20	-.13

Table 4 displays the results of a hierarchical regression analysis predicting outcomes among the siblings of autistic children across three models. In Model 1, self-concept (SE = .23, β = -0.21*), psychological adjustment (SE = .51, β = -0.11*), and academic adjustment (SE = .42, β = -0.08**) all show significant negative associations. Model 2 demonstrates that self-concept (SE = .19, β = -0.15) and psychological adjustment (SE = .31, β = -0.08) continue to show negative associations, although they are no longer statistically significant. Academic adjustment (SE = .36, β = -0.03) also shows a reduced and non-significant association. In Model 3, the associations remain negative for self-concept (SE = .11, β = -0.24), psychological adjustment (SE = .13, β = -0.12), and academic adjustment (SE = .20, β = -0.13), but none reach statistical significance. These results suggest that while initial associations are significant, the predictive power of these factors diminishes across subsequent models.

Figure 04 Autistic Children Mothers' Stress, Anxiety and Depression

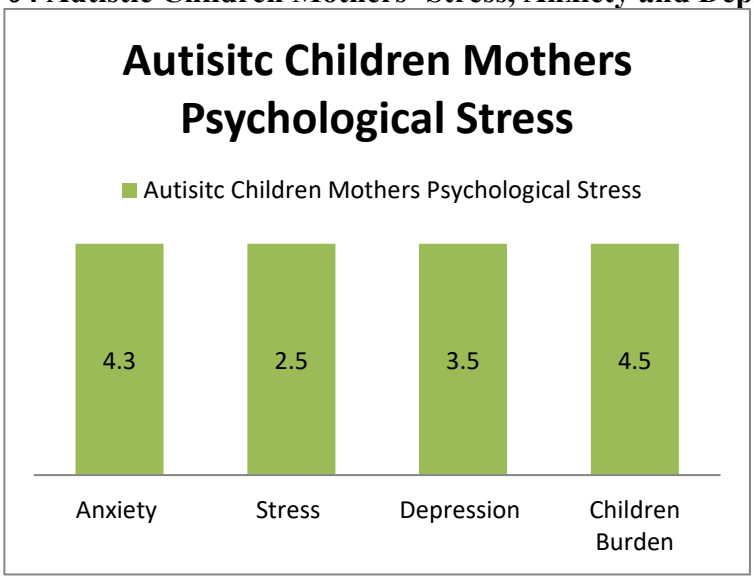

Figure 04 illustrates the psychological stress levels of mothers with autistic children, focusing on anxiety, stress, depression, and the perceived burden of caregiving. The data reveals that anxiety is notably high, with a mean score of 4.3. Depression is also significant, scoring 3.5. General stress is somewhat lower, with a score of 2.5. The highest score is observed in the perceived burden of caregiving, with a mean of 4.5. These figures suggest that while mothers experience various levels of psychological distress, the burden of caring for their autistic children is the most pronounced stressor.

Discussion

According to the findings of the research, the psychological adjustment of typical siblings of children with autism is significantly lower than that of typical children. This finding is consistent with previous research that has discovered that siblings of children who have been diagnosed with autism are more likely to experience internalizing behavior difficulties as well as emotional and behavioral concerns. The fact that having a child with a disability in Pakistan is associated with feelings of guilt contributes to the increased level of suspicion over the matter. It is possible for siblings who are in the same room

as a child with autism to be subjected to unwanted glances and attention, which can lead to them becoming excessively self-conscious and frightened. The moms' relationships with their children who were developing ordinarily were significantly impacted as a result of the stress that was involved with care for the kid with autism. This, in turn, made it more difficult for the children to adjust to their new environment.

Alternative investigations, on the other hand, were unable to discover any statistically significant differences in the behavioral adaption of siblings of children with disabilities throughout the various cohorts. It has been demonstrated that siblings of children who have developmental difficulties exhibit comparable levels of adjustment in terms of the challenges they face in terms of behavior, internalizing difficulties, social competence, self-concept, and the nature of their interactions with their siblings. In addition, research has been conducted on the positive ramifications that come with having a child in the family who has special needs. However, the findings of this investigation contradictthefindingsofthepreviousinvestigation.

A number of factors, including wealthy nations, where children with special needs receive optimal assistance and families possess full knowledge regarding developmental disorders, could be responsible for the variance in the outcomes. It is possible for families in Pakistan to have sentiments of humiliation and avoidance as a result of disparities in assessment procedures and stigmatization. The findings of the research indicate that siblings of children with autism exhibit a higher prevalence of emotional symptoms, behavioral concerns, impulsivity, peer-related obstacles, and less prosocial behavior in comparison to their counterparts who are typically developing. According to the findings of prior studies, which discovered that siblings of children with autism displayed a higher prevalence of behavioral, emotional, and peer difficulties, this finding is consistent with those findings. On the other hand, there were no statistically significant differences in psychological adjustment that were detected between the control group and the siblings of children who had disabilities. The siblings of children who have developmental difficulties usually experience a wide range of unpleasant emotions, such as humiliation, dread, neglect, resentment, guilt, and conflict with their peers. Additionally, their socializing is hindered, and they are unable to communicate with their peers as much as they would like. Within the context of Pakistani culture, there is a restriction about developmental problems, which leads to agitation and hyperactivity. It's possible that siblings will exhibit these symptoms as a consequence of societal expectations and conventions, which may be more rigorous than they normally would be. It is possible for siblings who are in the same room as a child with autism to be subjected to unwanted glances and attention, which can lead to them becoming excessively self-conscious and frightened. On the other hand, in contrast to individuals of other cultures, siblings of children with autism do not display difficulty in socialization and may even display stronger prosocial tendencies.

According to the findings of the study, siblings of children with autism had a poorer self-concept than siblings of children who were developing ordinarily. This reduction was observed across all aspects of self-concept. In addition, they exhibited a reduced ability to change their conduct, increased anxiety, and unfavorable attitudes toward their physical appearance and qualities, in addition to a self-concept that was associated with popularity. In previous research (Mellor (2015) and others), researchers have revealed findings that are comparable to these. In spite of this, a large number of researchers have demonstrated that siblings of children who have disabilities or chronic disorders have a tendency to have a good self-concept.

Self-concept is not a solitary notion; rather, it is strongly influenced by familial circumstances, the surrounding environment, and cultural norms. However, there may be variations between the results and earlier investigations due to the fact that self-concept is not a solitary concept. The entire household continues to be preoccupied with the commitments and difficulties involved with the child's upkeep because there are no suitable amenities available for children who have autism. Individuals may raise embarrassing questions or make nasty remarks about the child, which may result in the siblings having a lower sense of self-esteem. The presence of the child with autism can also have an impact on the social interactions that take place inside the family.

According to the findings of the current study, there is no discernible difference in terms of academic accomplishment between siblings of children with autism and children who are developing ordinarily. There is a significant amount of anxiety among parents in Pakistan on the academic achievement of their children, and they will not allow their children who are in good health to neglect their academics. On the other side, Lobato et al. (2021) found that Latino siblings of children with developmental disabilities had a lower probability than the other children in their study to receive above-average or outstanding grades in language arts. This phenomenon was observed in comparison to the other children in the study.

Conclusion

Siblings of children with autism have poor psychological adjustment and are at a greater risk for developing psychiatric disorders, according to this study. The presence of a child with autism can be attributed to the existence of a sibling from the autism group. Siblings of children with autism have a reduced self-concept than siblings of typically developing children, according to this study. A child with a low self-concept may experience adverse effects on their personality, confidence, and overall academic performance. Mental health issues among mothers are more prevalent as a result of stress signals. Concerning structure, control, and cohesion, autism has the potential to undermine family functioning, which impacts the entire family unit. Families of children with autism are at a greater risk for emotional and behavioral problems, according to the study, and therefore require professional assistance to ensure quality care and psychological health.

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