

Personality Traits, Emotional and Behavioral Difficulties among Siblings of Children with Autism

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Abstract

Background: Autism spectrum disorder (ASD) remains a major public health and economic problem worldwide. Autistic children in the family affect siblings' personality, emotionally and behavior toward autistic child. **Aim of the study:** to assess personality traits, emotional and behavioral difficulties among siblings of children with ASD. **Design:** A descriptive correlational research design was used to conduct the study. **Sample:** Convenience sample from selected area, it consisted of 84 healthy siblings. **Tools for data collection:** Three tools used to collect the necessary data consisted of; structured Questionnaire, Hierarchical Personality Inventory for Children, Strengths and Difficulties Questionnaire (SDQ), and Sibling Inventory of Behavior (SIB) **Results:** The current study revealed that the majority of healthy siblings of autistic children were have extroversion personality (46.43%) and the majority of siblings have aggressive behavior **Conclusion:** There was a strong positive statistically correlation between peer problems and emotional symptoms **Recommendations:** Designing and applying educational psychological program to siblings for dealing with their autistic children.

Keywords: ASD, Behavioral difficulties, Emotional difficulties, Personality traits, Sibling.

1. Introduction

Autism spectrum disorder (ASD) could be a heterogeneous and complex gather of conditions with significant variety in center indications, dialect level, mental working and co-occurring psychiatric and restorative troubles. Subtype analyze such as childhood extreme and Asperger's disorder were already utilized to indicate morhomogeneous introductions but were unsteady overtime inside people and ut

ilized inconsistently by clinicians (Saunders & McGue, 2020).

ASD is characterized by impressive clinical heterogeneity, in spite of the fact that patients___share a few essential characteristics of the determination, such as, within the to begin with put, social withdrawal. This heterogeneousness reflects on particular extremely introverted characteri

stics, formative directions, age and onset, the course of the neurodiversity, and the inconstancy of the impedance in communication, or dialect (**Ruggeri et al., 2020**).

Additionally, autistic children appear a clear disability in communication aptitudes and social interaction. This can be related with the nature of autism, which is characterized by delays within the improvement of social, active, and mental abilities; particularly in obtaining communication abilities with family and companions, self-care, shaping social connections, and visual communication. immature social abilities when playing with other children, shaping fellowships, bunch integration, and expanded tedious behavioral designs(**Mohamed, Mohammed & Hassan 2020**).

Recent epidemiological information collected in 37 nations detailed a cruel predominance of ASD 0.97% in essential school children (**Rosselló et al., 2022**). Over the past decade, an increment within the predominance of autism spectrum disorder has been portrayed universally, with wide

topographical inconstancy. This increment reflects both a more prominent mindfulness of society approximately the disorder and propels within the conclusion and administration of cases (**Zaiden et al., 2022**). Besides, more noteworthy seriousness of behavior issues of children with ASD and parent mental psychopathology appear to contrarily affect on all family working particularly healthy siblings (**Efstratopoulou et al., 2022**).

The family is the key back arrange for children with extreme range clutter (ASD), ASD impacts the lives of those influenced, however the affect of ASD on the family may be especially critical. Family unit must collectively work to arrange around the numerous challenges related with supporting the influenced child, having a child with ASD is regularly conceptualized as a hazard variables understudy of family well-being, as there's extra stress put on family connections, as well as on family members roles and duties, (**Legg et al., 2022**).

Healthy siblings confront interesting challenges related with having a sibling with ASD as contradicted to other formative

inabilities such as, encounter shame in social circumstances and open places due to people's responses towards the behavior of their siblings with ASD (Chu et al., 2021). The challenges related with the social-communication disability and tricky behavior of children with ASD may affect family individuals and family flow. These challenges may affect these siblingsâ may impact these siblings' connection- ships, especially in how investing time together as moving together into adulthood (Travers et al., 2020).

Aggressive behaviors can continue into adulthood in 15 to 18% of children with ASD, aggression include self-injurious behavior, ritualistic behavior, and resistance to change as well as aggression towards others (Gaitanis et al., 2023). The impact of aggression on parents, siblings and the broader family is significant and can be associated with high levels of stress, trauma and poor wellbeing (Swaab et al., 2021).

Nurses can offer assistance the family for practice of arranged activities with anticipated behaviors some time recently arrangements or strategies, and visit updates

during post intercession care can diminish fear and upheavals whereas picking up quiet participation. Fitting care based on tactile affectability and the patient's capacity to communicate is the essential center. Intercessions, such as darkening the lights, employing a weighted cover or vest, and permitting monotonous development that doesn't prevent care, can relieve the child with ASD (Dunlap & Filipek 2020)

Psychiatric mental health nurse (PMHN) can be a competent care provider for a siblings of autistic child is an instructor for the family members in addition being a partner with the physician, psychologist, therapist, school teachers and researchers conducting studies on autism, as well as psychiatric nurse act as supporter for family by offering respite care and constructing parents support groups (Sapiets, Hastings& Totsika, 2023). The PMHN may fulfill several interrelated roles as member of multidisciplinary clinician and coordinator which included.

PMHN as health educator siblings of children with ASD are likely to learn about symptoms, problems and manage of ASD

through the adults in their lives who also interact with their brother or sister with ASD, and in particular from their parents (Macedo Costa & Pereira 2019)

Significance of the study

Epidemiological studies appear an expanding drift within the yearly prevalence of ASD. Besides the genuine increment within the prevalence of ASD, a Variety of other reasons, such as a broader definition of ASD, changes in demonstrative criteria and screening instruments, shifts in inquire about strategies, and expanded mindfulness of ASD, have been recommended to contribute to this wonder (Durkin& Wolfe 2020).

Small was known approximately the prevalence of autism spectrum disorder (ASD) among the population with incapacity in Egypt. Presently, Predominance of autism spectrum disorder among children with formative clutters in Egypt was reported to be extending from 54/1000, which means 33.6 % (Metwally et al., 2023).

The aim of the study

This study aimed to assess personality traits, emotional and behavioral difficulties among

siblings of children with autism spectrum disorder.

Research questions

1. What are personality traits among siblings of children with autism spectrum disorder?
2. What are emotional and behavioral difficulties among siblings of children with autism spectrum disorder?
- 3- Is there a relationship between personality traits and emotional and behavioral difficulties among siblings of children with Autism spectrum disorder?

2. Subjects and Methods

Study design

A descriptive correlational research design was utilized in this study.

Study setting

The present study was carried out at psychiatric outpatient clinic in Suez Canal university hospital, El-Aml center of children with autism and schools integration provide care to the autistic children who have healthy siblings in Ismailia city.

Study subjects

Purposive sample of 84 siblings of children with autism spectrum disorder. According to the following inclusion criteria: Siblings ages 6: 12 years and both genders at most extreme two sibling from one family. The exclusion criteria: siblings with psychiatric and mental health problem and siblings with physical inability or chronic disease.

Tool of data collection

Tool I: Demographic characteristics questionnaire sheet: It is developed by the researcher and divided into two sections: Section A: participants were complete questions about their demographic characteristics such as age, sex, academic year, rank of child among his siblings.

Section B: demographic characteristics for autistic child such as age, sex, educational level and go to schools integrating children with autism.

Tool II: Hierarchical Personality Inventory for Children: is developed by **Enescu and Iselin, (2007)** to assess the five types of personality to be used with children aged 6: 12 years. It consists of 30 items and

each six item divided into five dimensions represent type of personality.

Tool III: Strengths and Difficulties Questionnaire (SDQ): is developed by **(Goodman, 1997)** to assess emotional adjustment of children aged 3 to 16 years old. It consists of 25 items divided into 5 subscales namely; emotional symptoms, conduct problems, (hyperactivity/inattention, peer relationship problems while the 5th measures strengths and prosocial behavior. Arabic version of these tool conducted by **(Ababneh, E., & Alomari, H. 2016).**

Tool IV: Sibling Inventory of Behavior (SIB) is developed by **Schaefer and Edgerton (1981)** it consists of 32 items to assess sibling's behavior toward autistic child. It includes six subscales; (a) empathy/concern, (b) companionship/involvement, (c) rivalry, (d) conflict/aggression, (e) avoidance, and (f) directiveness scale. These six subscales divided into two general dimensions; positive (i.e., empathy/concern, companionship /involvement, and defectiveness) and negative (i.e., rivalry, conflict/aggression, and avoidance). The

Arabic version was used (El-Sabely et al., 2014).

Scoring System of Hierarchical Personality Inventory for Children

Each item was answered by yes or no. Scores are summed and averaged to obtain one of the five types of personality traits. When mean score between 1-3 reveal negative traits and when mean between 3 and above is revealed a positive traits or a positive aspect of personality with total score $\geq 60\%$ was considered positive while score $\leq 60\%$ was considered negative.

Scoring System of Strengths and Difficulties Questionnaire (SDQ):

Each item is answered on a three-point Likert scale (0 = disagree; 1 = sometimes and 2=agree. For each of the 5 subscales the score can range from 0-10 if all 5 items were completed. A high cumulative score indicates a high adjustment of siblings with total score $< 50\%$ was considered mild symptoms, 50%-70% was considered moderate, and $\geq 70\%$ was considered severe symptoms

Scoring System of Sibling Inventory of Behavior (SIB):

Items are rated on a five-point Likert scale (1 = Never; 5 = Always) with total score $\geq 60\%$ was considered high adjustment while score $\leq 60\%$ was considered low adjustment.

Validity of the study tools

It was ascertained by a jury consisting of five expertise from psychiatric and mental health nursing. They were requested to express their opinions and comments on the translated tools (Tool II and Tool III). They reviewed the tools for clarity, relevance and comprehensiveness. The tools were modified according to jury opinions such as change translation of some words and sentences.

Reliability of the study tools

It was done using Cronbach's alpha coefficient test to assess the internal consistency of the tools and its value was 0.688 for Hierarchical Personality Inventory for Children, 0.627 for strength and difficulties questionnaire.

Pilot study

A pilot study was carried out after the development of the study tools before starting the data collection, including 10% of the sample size. It was carried out to check the validity, clarity and applicability of the study tools. The pilot study subjects were excluded from the study sample.

Fieldwork

The data was collected during Tuesday and Wednesday per week. From settings of Children & Adolescent psychiatric Outpatient clinic in Suez Canal University Hospitals (SCUH) Collection of data covered a period of eight months" from the first of January to the end of August 2022". The data collection process was conducted using face to face interview that was on an individual basis and a private area in the outpatient clinic, medical center and schools to ensure confidentiality and privacy of participants.

Administrative design:

Before starting any step in the study, an official letter was issued from the Dean of the faculty of nursing to the director of each previously mentioned study setting requesting his/her cooperation and

permission to conduct the study, after explaining the aim of the study.

Ethical considerations

The research approval, were obtained from the studied children and their mothers prior to participation in the study. Also, each child was familiar with the importance of his/her participation and they had the right to withdraw from the study at any time. Ensuring the confidentiality of the information collected and anonymity was guaranteed.

Data analysis

The collected data was coded, tabulated and analyzed using Statistical Package for the Social Sciences (SPSS version 20). The suitable statistical tests were used according to the type of data. Correlations were used to test relationships between different variables. *P* value was set at <0.05 for significant results.

3. Results

Table 1 shows that more than half of siblings (51. 2%) aged 6-8 years with mean age of

8.76 ±1.90 years, the majority of them were males (69 %). Regarding to educational level and the majority of them (79.8%) are in primary educational level, the majority 70.2 % of them living in rural areas and 60.7% of them were younger than their autistic children.

Table 2 reveals that the majority of the siblings of autistic children have negative personality traits (81%) and the minority of siblings have positive personality traits (19%). In the other hand total Mean &SD score of personality traits were 7.42(2.92).

Table 3 reveals that, the majority of siblings of autistic children were had moderate emotional and behavioral symptoms (70.2%) and the minority of siblings had severe emotional and behavioral symptoms. In the other hand Mean &SD was **28.09 ±5.09**.

Table 4 show that the majority of siblings of autistic children had high adjustment behavior (89.3%) while the minority had Low adjustment and total Mean ± SD was 68.84±7.14.

Table 5 show that there was a strong statistically significant negative correlation

between personality traits of siblings and their adjustment and there was a strong statistically significant positive correlation between personality traits of siblings and their emotional and behavioral difficulties.

Figure 1 shows that, the majority of siblings of autistic children have extroversion personality (46.43%), while the minority of them have conscientiousness personality (21.43%). In the other hand, 32.14% of them have neuroticism personality

4. Discussion

Autism and its side effects are not as it were a unpleasant encounter for autistic children, but too disturb their siblings' way of life which may be portrayed as the foremost unpleasant period of the siblings lives

(Quatrosi et al., 2023). destitute social interactions, matched with typical sibling relationship stressors., decreased communication, less shared interface, less interaction and side effects of ASD have been found to contrarily affect family intelligent as well as siblings of autistic children may encounter a combination of, psychological, mental and physical fatigue, which may disable capacity to bargain with

modern stressors that related with extremely introverted children and their issues

(McVey et al., 2022).

The result of the current study revealed that the mean age of studied siblings was 8.76 ± 1.90 (6-12) years. Two thirds of sample were males and more than two thirds living in rural area. Three fifth of the studied siblings have lower birth rank. More than three quarters of them were primary school grader and three fifth of siblings were younger than to their autistic children.

This result is in the same line with **El-Sabely et al., (2014)** who reported that the mean age of studied siblings were 10.0 ± 3.7 years. More than half of the studied siblings were males. About three fifth are living in urban area (58.3%). More than two thirds of the studied siblings (78.7%) have lower birth rank, while (43.5%) of them were primary school grader.

The results of the present study revealed that about half of siblings of autistic children were had extroversion personality: This percentage of extroversion personality might be associated with demographic characteristics of siblings as their young age

between six and eight years and the majority of siblings were males. While fifth of them were had conscientiousness personality and more than a quarter of them were had neuroticism personality which associated with tendency toward anxiety and depression. Siblings with certain personality characteristics are more likely to expose themselves to more frequent and severe stressful experiences. In addition, siblings' differences in personality traits may influence appraisals of potentially stressful circumstances. Hence, personality is associated with the effectiveness of the coping responses whereby cognitive and behavioral efforts can prevent, manage, or alleviate distress.

The prior result is in agreement with study conducted by **Leger et al., (2016)** who indicated that higher levels of extraversion, conscientiousness, and openness to experience, and lower levels of neuroticism

Furthermore, the results of the present study revealed that the majority of the studied siblings of autistic children have negative personality traits this result might be associated with little attention and psychological support given to siblings of

autistic children expansion to disgrace and humiliation from having ASD child make the majority of them have negative personality traits, the study result is congruent with study concluded by **Woods (2017)** who found that children hold more negative characteristics towards their autistic peers than neurotypical peers. A later consider conducted by **Dickter et al., (2020)** who appeared that whereas neurotypical siblings shown positive express states of mind towards autistic grown-ups, certain attitudes were negative.

The study results is in contradictory with study conducted by **Macedo Costa & Pereira, (2019)** who found that the higher degree of autism information that the neurotypical sibling had, made them had positive personality traits such as less humiliated they were with respect to their autistic siblings behavior and the superior they were able to acknowledge the challenges of autism .

Furthermore, the results of the present study revealed that the majority of siblings were had emotional problem, more than two thirds of them were had hyperactivity, while three fifths were had peer problems and two fifth

of them were had conduct problems. The high level of emotional problem might be associated with autistic child's disability as they aggressive, had behavioral and communication problem as well as their parents give excessive attention to autistic child than other siblings in the same family, siblings encountered by stressful life situation inside and outside their family, some parents especially mothers are depressed and nervous which negatively impact on their sibling's emotional state. Siblings might be hyperactive due to autistic child hyperactivity, which make them also hyperactive. In the other hand siblings had peer problem might be associated with encountered stressful situation make them nervous, easily disrupted and unable to bear, their autistic children aggressiveness makes siblings hyperactive to defense themselves so they had peer problem.

This result of the current study is congruent with **Griffith et al., (2014)** who found that there are social, behavioral, and emotional adjustment difficulties in siblings of children with ASD as compared to normative samples, also found that siblings of children with ASD have significantly more emotional

problems and higher rates of adjustment problems. This result is in contradiction with **Walton & Ingersoll (2015)** who found that siblings of children with ASD do not have significant behavioral, social and/or emotional adjustment problems. . Regarding to siblings of autistic children adjustment behavior; the current study result shows that the majority of siblings of autistic children had high adjustment behavior while the minority had low adjustment. This might be associated with high level of empathetic behavior among the siblings made them had high level of adjustment. This result of the current study is congruent with study conducted by **Rixon et al., (2021)** who found that levels of externalizing issues, internalizing and social issues of autism siblings did not contrast altogether from the siblings within the control group.

The result of the present study revealed that, the majority of siblings had empathetic behavior and four fifth of siblings had companionship behavior toward their autistic children. this might be associated with siblings within younger age and mothers taught their siblings the case of their autistic

child and encourage them to accept autistic child who need special care

The prior result is congruent with, **Leedham et al., (2020)** who found that empathy with healthy siblings having created expanded understanding, empathy and kindness towards others, due to their involvement of having a sibling with ASD.

5. Conclusion

It can be concluded that: the majority of sibling of autistic children have negative personality traits while the minority of them have positive personality More than half of the studied siblings' have high level of emotional problem. Also, most of the studied siblings had behavioral difficulties, Also there was a highly statistically significant relation between primary educational level of siblings and their emotional difficulties. There was a statistically significant relation between female's gender of autistic children and emotional difficulties among siblings. There was a strong positive statistically correlation between peer problems and emotional symptoms. There was a strong negative statistically correlation between personality traits of siblings and their

adjustment and there was a strong positive statistically correlation between personality traits of siblings and their emotional and behavioral difficulties.

6. Recommendation:

In the light of the finding of the current study, Designing and applying psycho

educational program about methods to siblings for dealing with their autistic children .and how parents deal with siblings and Further studies are recommended to investigate the effect of psychological support on sibling's emotions and behaviors

Table 1: Percentage distribution of the studied siblings of autistic children according to their demographic characteristics (n = 84).

Demographic characteristics	No.	%
Age in years		
6: ≤ 8	43	51.2
8: ≤ 10	8	9.5
10: 12	33	39.3
Gender		
Male	58	69
Female	26	31
Educational level of sibling		
Primary	67	79.8
Preparatory	17	20.2
Residence		
Rural	59	70.2
Urban	25	29.8
Rank of sibling to autistic child		
Older	25	29.8
Younger	51	60.7
Twin	8	9.5

Table 2: Percentage distribution of autistic children according to their demographic characteristics (n = 84).

Demographic characteristics	No.	%
Age in years		
6: ≤ 8	33	39.3
8: ≤ 10	27	32
10: 12	24	28.6
Gender		
Male	57	67.9
Female	27	32
Educational level		
Primary	68	81
Preparatory	16	19.1
Rank of autistic child		
The oldest child	50	59.5
The youngest	34	40.5

Table 3: Percentage distribution of total personality traits score of studied siblings (n=84):

Total personality traits score of studied siblings	No.	%	Mean ±SD
Positive personality traits	16	19	11.50±.52
Negative personality traits	68	81	4.45±2.36
Mean &SD (range)	7.42(2.92) (3-12)		

Table 4: Frequency distribution percentage of strength and difficulties symptoms among studied siblings of autistic children (n=84).

Levels of strength and difficulties symptoms	No.	%
Mild symptoms	17	20.2
Moderate symptoms	69	70.2
Sever symptoms	8	9.5
Mean &SD, Median(range)	.28.09 ±18 و5.09-35	

Figure 1: Percentage distribution of Personality traits among siblings of autistic children (n=84).

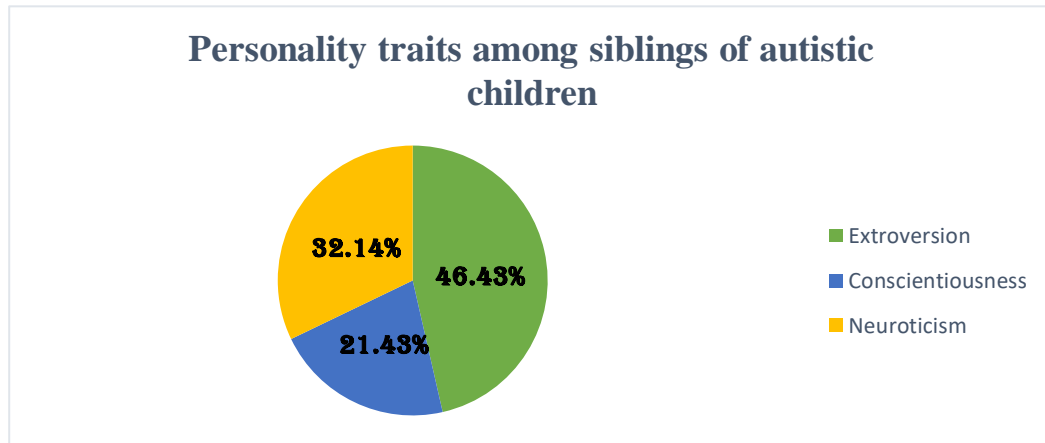


Table-5: Frequency distribution percentage of total siblings adjustment behavior of studied siblings (n=84).

Sibling inventory behavior (SIB)	No.	%
High adjustment of siblings	75	89.3
Low adjustment of siblings	9	10.7
Mean &SD, Median(range)	68.84±7.14, 20-77	

Table 6: Correlations matrix between personality traits, total emotional strength and difficulties, and total siblings inventory behavior among siblings of autistic children (n=84)

Scores of	Personality traits		Siblings inventory behavior		Strength and difficulties symptoms	
	Rho	p-value	Rho	p-value	Rho	p-value
Personality traits			-.041	.709	.042	.702
Siblings inventory behavior	-.041	.709			.026	.813
Strength and difficulties symptoms	.042	.702	.026	.813		

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