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Behavioral Consequences Among Children with Autism Spectrum Disorders at the Special Care Centers

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Abstract

Autistic children may have fewer positive social behaviors than typically developing children, Autistic children show a variety of unique behavior patterns in terms of element use, personal relationships, and verbal and non-verbal communication. These unique procedures, known as Autism behaviors distinguish Autistic children from ordinary children and are often associated with developmental and educational challenges. The study society and its sample included all public, private, special, voluntary, and international institutions and centers of special education in Jordan that provide educational programs and services for children with mental disabilities and Autism Spectrum Disorders (ASD) children in the Northern Region, which amounted to 30 of 160 institutions and centers. Results show that ASD children tend to be isolated and apprehensive whenever they meet new people or situations, students over the age of ten had more behavioral problems than their younger peers, male students had higher levels of behavioral consequences than female students, and length of time spent at school had an impact on the level of behavioral issues.

Keywords: Behavioral Consequences • Autism Spectrum Disorders (ASD) • Special Care Centers

Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental disease characterized by difficulty in communicating and socializing with others, as well as restricted and repetitive behaviors, interests, and hobbies, where symptoms appear at an early stage of development and have an impact on the daily performance [1]. ASD is a neurological disorder that makes it difficult for the individual to communicate and interact with others, where ASD symptoms range from total lack of communication to a problem of understanding others' feeling, knowing that one end of the Autism Spectrum is high-performance ASD. Signs and symptoms are milder in other types of disorders, where Autistic children suffer from emotional and behavioral problems, such as responsive symptoms and hyperactivity as well as peer problems that are distinctive in children with disabilities [2]. In reality, an individual with high-performance ASD is typically clever; if not above average while low-performance ASD categorized as an Autism state with intellectual interruption [3]. The common symptoms of ASD can be represented in poor social reciprocity, abnormal non-verbal communication, problems in creating and sustaining social relationships, repetitive movements, intense concerns, and abnormal physical understanding.

Futhermore, most Autistic people engage in a wide range of problematic behaviors that exceed the fundamental disorder symptoms [4], and given the social difficulties associated with ASD diagnoses, it makes sense to predict that Autistic children show less positive social behaviors than children who normally develop [5]. The majority of studies that support this hypothesis rely on parental reports with a current prevalence rate of 1 in 88 children, and according to (Centers for Disease Control & Prevention, 2012) ASD has become the fastest-growing disability in USA. ASD is a widespread and complex developmental disorder that affects people from different social races and classes around the world, and where increase in the number of Autistic children has comprehesive behaviors on public and private schools, and special education centers [3]. Autism characteristics and emotional and behavioral problems, have been widely discussed in regard to parenting pressures, and frequently Autistic children show a variety of unique behavior patterns; in terms of element use, personal relationships, and verbal and non-verbal communication.

These unique procedures, known as Autism behaviors distinguish Autistic children from usually develop children and are often associated with developmental and educational challenges [2,6]. Autistic children and their families are in danger of a variety of unfavorable behaviors and problems; as a result of simultaneous behavioral disorders that can hinder the behavior of children's daily performance, education, and intervention outcomes which prevent them from advancing in various developmental areas [7]. However, multiple alternative paths will be identified to develop behavior problems within the framework of evolutionary pathological psychology, which may contribute to these paths, and as a result, researchers have looked at the importance of many risks and protection factors to predict courses of behavior problems; in children and adolescents from the general population, where many factors have been discovered which can affect risks of adaptive and non-adaptive outcomes [8].

For instance, negative emotional moods and early deficiencies in self-regulation processes have been recognized to forcast the internal and

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external behavior matters; at the teenager level [8,9], as well as linking early language impairment with the increase in violence risk, especially when accompanied by problems in controlling emotions and regulating mood concerning children's age [10]. Researches showed that most aggressive tendencies among children decrease significantly during their development [11]. It's very important to understand variables that contribute to the creation and continuation of such problems because behavioral problems have a significant impact on performance and health of Autistic children and their families, where information may help health care providers to develop and implement the successful preventive programs and interventions [12]. Through the work of researchers and their direct supervision on trained students at the special education centers and the field training course of diploma students in measurement and diagnoses of autism disorders major, as one of the educational programs taught by Al-Balqa Applied University in Jordan. Researchers noticed some different behavioral effects of ASD children, which drew their attention to this matter.

Study questions

The current study came to identify the behavioral effects of ASD children in special education centers, by answering the following questions:

Q.1: What is the behavioral consequences on ASD children at the special education centers?

Q.2: Are there statistically significant differences of (a=0.05) in the level of the behavioral consequence level of ASD children at the special education centers; due to children age, gender, and staying period?

Study purpose and importance

The current study aims to identify the behavioral consequences of children; from standpoint of teachers at the special education centers in Jordan. The study's importance comes from its real contribution to future researches, by adding educational literature, knowledge, previous studies, results, and tools to the Arab Library. Its importance also comes from benefits to Autistic children; at the special education centers and the guidance of workers in this category to avoid inappropriate behavioral consequences by providing educational, therapeutic, and behavioral interventions for ASD children [13].

Methods

Study design

Researchers designed a descriptive study using the survey to conduct this investigation and to answer study questions they used the descriptive statistics and Chi-square test. Researchers obtained ethical approval from Institutional Review Board (IRB) at Al-Balqa Applied University, as well as acquiring enlightened approval from participants and the permission of facilities. Participants were free to leave the study at any time and data collected would remain confidential.

Study participant

The study society and its sample included 30 out of 160 public, private, special, voluntary, and international institutions and centers of special education in Jordan; which provide educational programs and services for children with mental disabilities and the ASD children in the Northern Region, according to institutions guide for persons with disabilities issued by the Supreme Council of Disabled Persons Affairs in H.K. of Jordan 2010, as shown in (Table 1):

Table 1. Study sample members.

		Frequency	Percent
Age	< 5 years old	32	31.4
	5 to 10 years	41	40.2
	> 10 years	29	28.4
Gender	Male	54	52.9
	Female	48	47.1
Staying period at the center	Less than 2 years	55	53.9
	2 to 5 years	29	28.4
	More than 5 years	18	17.6
	Total	102	100

Procedure

The preparation process of this study has gone through several stages:

- Inventory of institutions, centers, and schools that provide its educational programs and services to children with mental disabilities and ASD children; in terms of numbers and distribution places by returning to special education directorates at the Ministry of Social Development and the General Federation of Charities, and using Special Education Institutions and Centers issued by the Supreme Council for Disabled Persons Affairs/ 2010.
- Collect information about schools for people with special needs which educate Autism students and students with physical, psychological, and mental disabilities. Whenever children become unable to continue in their public schools, these special schools will provide children with comprehensive services that include academic, medical, and psychological care.
- Hire several specialists to help with the implementation, after training them on the way to use the tool.
- Provide trained specialists with the study tool to implement instrument and collect the necessary data to achieve study objectives.
- Translate the questionnaire into the Arabic language because some teachers in the listed centers aren't English speakers.
- Visit special education institutions and centers, and supervisors and officials of special education to measure the applicability of dimensions or indicators with the reality of existing programs, which took two months of 2021. Researchers were able to reach 28 institutions and centers that offer their programs to children with mental disabilities, and ASD children in the North region, which make up 93% of study population.
- Analyze tool results to answer the study questions related to behavioral consequences among ASD children at the special education centers.

Measures

Researchers collected data using the questionnaire by distributing it on teachers face-to-face while doing their duty and through the self-completion method, where it took about 20 minutes to complete the questionnaire which allowed researchers to collect quantitative data; in a unified way in order for it to be internally reliable and comprehensible for analysis [14]. For the purposes of current study, the questionnaire built by researchers based on literatures [15-17], where the tool in its final form consists of 27 questions related to the behavioral consequences of ASD children and responses on it were within 4 options (never, sometimes, often, and always) as shown in the appendix 1.

Data Analysis

Researchers used version 20 of the Statistical Package Program for Social Sciences (SPSS) by analyzing descriptive statistical variables, such as frequencies and ratios of class variables, as well as Scheffe Test to identify variations. Researchers conducted an experimental study on 20 participants from the selected facilities; after obtaining a letter of facilitation from the Institutional Review Board at Al-Balqa Applied University, where researchers revised the questionnaire for clarity after study completion.

Results

Q.1: What is the level of behavioral consequences on ASD children at special education centers?

To answer this question, researchers calculated arithmetic means and standard deviations for the impact level of behavioral consequences on ASD children, at the special education centers; as shown in (Table 2) below:

Q.2: Are there statistically significant differences of (a=0.05) on the behavioral consequence level of ASD children at special education centers, due to age, gender, and staying period?

To answer this question, researchers calculated means and standard deviations for the impact level of behavioral consequences among ASD children in special education centers, according to age, gender, and staying period as shown in (Table 3) below:

(Table 3) shows an apparent variation in arithmetic means and standard deviations of the level of the behavioral consequence among Autistic children at special education centers, due to the difference in categories of age, gender, staying period variables, and to indicate the statistical differences between means researchers used Three- Way ANOVA, as shown in (Table 4) below:

- There are statistically significant differences (a=0.05); due to age, where F-value amounted to 18,683 with a statistical significance of (p=0.000), where researchers used Post Hoc Comparisons of Scheffe' Test to show statistical significant Pairwise Comparisons between means, as shown in (Table 5) below:
- There are statistically significant differences (a=0.05); due to gender, where F-value amounted to 5,045 with a statistically significant of (p=0.027) and in favor of males.
- There are statistically significant differences (a=0.05); due to staying period, where F-value amounted to 11.937 with a statistically significant of (p=0.000), where researchers used Post Hoc Comparisons of Scheffe' Test to show statistical significant Pairwise Comparisons between means, as shown in (Table 5) below:

(Table 5) shows statistically significant differences (a=0.05) between more than 10 yrs. and each of less than 5 yrs. and 5-10 yrs.; in favor of more than 10 yrs.

It shows from (Table 6) shows statistically significant differences (a=0.05) between less than 2 yrs. and each of greater than 5 yrs. and 2-5 yrs.; in favor of more than 2 yrs.

Discussion

This study tested behaviors of ASD children during school and their contacts with classmates and educators, where the study analyzed previous results and added to it information of potential behavioral difficulties associated with ASD. It also aimed to examine the distinctive impact of children's age, gender, and other social-demographic features on external and internal behavior problems of ASD children school.

Study included children from different age groups, such as less than 5 yrs. old, 5-10 yrs., and more than 10 yrs., where the highest percentage of children participating in this study belong to students' category of 5-10 yrs. old, with more than 40% of the study sample. Males and female representation in the sample was almost identical, with a minor increase of males with 52.9% compared with 47.1% for females. In regards to staying period of surveyed students at the school, most of them joined recently with a period of fewer than 2yrs. Based on results analysis, researchers found that most ASD children would "Spend more time alone" with a mean of 2.59 +.569, which comes in line with the study findings of [18]. The study also found that the most common behavioral disorders of ASD children related to their

Table 2. Shows that arithmetic means were between 2.18-2.59, where the item 1 that stated "Spends more time alone" came first with a mean of 2.59, while items 6 and 12 which stated "Often unhappy, depressed or tearful" and "Steals from home, school or elsewhere" came in last place with means of 2.18, where the mean for the field as a whole amounted to 2.36.

Item	Mean	STDEV
Spends more time alone	2.59	0.569
Nervous in new situations, easily loses confidence	2.54	0.539
Refuses to share (for example pencils, books, food)	2.51	0.641
Worrying too much about different things	2.48	0.558
Experience rapid mood swings	2.47	0.609
Need less sleep than usual; yet does not feel tired the next day	2.47	0.609
Do things that are unusual for him or her that is foolish or risky (e.g., jumping off heights, giving things away)	2.46	0.64
Easily distracted, concentration wanders	2.45	0.654
Eat large or low amounts of food	2.43	0.682
Has difficulty sustaining attention to tasks or activities	2.41	0.722
Has trouble sleeping	2.4	0.649
Feeling afraid as if something awful might happen	2.39	0.662
Often lies or cheats	2.37	0.628
Acting or feeling as if the event was happening again (Hearing something or seeing a picture about it and feeling as if he \she there again)	2.37	0.744
Many fears, easily scared	2.36	0.672
Trying to avoid contact with the foreign people	2.33	0.635
Often loses temper	2.32	0.706
Takes things that do not belong to him or her	2.32	0.662
Is afraid to try new things for fear of making mistakes	2.28	0.709
Feels lonely, unwanted, or unloved; complains that "no one loves him or her"	2.26	0.73
Restless, overactive, cannot stay still for long	2.25	0.667
Feeling nervous, anxious, or on edge	2.25	0.763
Constantly fidgeting or squirming	2.23	0.595
Often fights with other children or bullies them	2.23	0.782
Behave in a sexually inappropriate way (e.g., talks dirty, exposing, touches others sexually)	2.23	0.688
Often unhappy, depressed, or tearful	2.18	0.723
Steals from home, school, or elsewhere	2.18	0.666

Table 3. Means and STDEV for the impact level of behavioral consequences among ASD children in special education centers, according to age, gender, and staying period.

		Mean	N	STDEV
Age	< 5 years old	2.28	32	0.238
	5 to 10 yrs.	2.34	41	0.271
	> 10 yrs.	2.49	29	0.214
Gender	Male	2.49	54	0.213
	Female	2.21	48	0.222
Staying period at the Center	Less than 2 yrs.	2.48	55	0.218
	2 to 5 yrs.	2.23	29	0.249
	More than 5 yrs.	2.2	18	0.195

Table 4. Three-Way ANOVA for the impact of age, gender, and staying period on the level of the behavioral consequence of Autistic children at special education centers.

Source	Type III Sum of Squares	DF	Mean Square	F-value	Sig.
AGE	1.244	2	0.622	18.683	0
GENDER	0.168	1	0.168	5.045	0.027
DURATION	0.795	2	0.397	11.937	0
Error	3.195	96	0.033		
Corrected Total	6.700	101			

Table 5. Post Hoc Comparisons of Scheffe' Test for the age on behavioral consequences level among Autistic children at special education centers.

		Mean	< 5 yrs. old	5-10 yrs.	> 10 yrs.
Age	< 5 yrs. old	2.28			
	5-10 yrs.	2.34	-0.06		
	> 10 yrs.	2.49	-0.21*	-0.15*	

* Significant at level (a=0.05)

Table 6. Post Hoc Comparisons of Scheffe' Test for the impact of staying period on the level of the behavioral consequence of Autistic children at special education centers.

		Mean	< 2 yrs.	2-5 yrs.	> 5 yrs.
Staying Period at the center	< 2 yrs.	2.48			
	2-5 yrs.	2.23	0.25*		
	> 5 yrs.	2.2	0.28*	0.04	

* Significant at level (a=0.05)

tendencies to be isolated and feel nervous whenever they meet new people or situations. In addition, ASD children avoid sharing their belonging with other children which comes in agreement with previous studies' results, such as [7,19].

There are statistically significant differences due to the impact of age, gender, and staying period with P<0.0, where study results indicated that students of more than 10 yrs. old had larger behavioral disorders than their peers of younger ages, which come in line with results of formatting citation study's. In addition, results showed that behavioral consequence level of male students was higher than females, and that the staying period of students at the school had an impact on shaping behavioral consequences level, which was higher for students who spent two years or more at the school.

Regarding study limitations, the assessment of behaviors using quantitative methods may consider a limitation to this study because it was not accompanied by any qualitative data to support the research; even further. Furthermore, other methodologies like participant observation could be better to evaluate students' real behaviors. Future researchers need to pay attention to these variables whenever examining children's characteristics on the development of behavior consequences among ASD children.

Conclusion

Study society and its sample included all public, private, special, voluntary, and international institutions and centers of special education in Jordan that provide educational programs and services for children with mental disabilities and the ASD children in the Northern Region, which amounted to 30 of 160 institutions and centers. Our results show that ADS children tend to be isolated and apprehensive when meeting new people or situations. Students over the age of ten had more behavioral problems than their younger peers. Male students had higher levels of behavioral consequences than female students, and length of time spent at school had an impact on the level of behavioral issues.

Study limitations

Objective Limits: behavioral consequences of ASD children at the special education centers

Human Limits: teachers of special education centers

Temporal Limits: the first semester/ 2021

Spatial Limits: the northern governorates of H.K. of Jordan (Irbid, Mafraq, Jerash, and Ajloun)

Tool: sequometeric characteristics represented in validity and reliability

Conflict of interest

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