Prevalence of Aggression Dimensions in Children with Autism According to Some Variables

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Abstract
The current study aimed at exploring the level of aggression for children with autism according gender, age and intellectual state in the state of Kuwait. The study was conducted on a sample of parents for (108) children with autism, children ages were ranging from (5) to (16) years who have been attending of the autism centers in the State of Kuwait. The study used the aggression scale which includes (3) dimensions: aggression toward others, aggression toward self, aggression toward things. The results showed that aggression toward others was the most highest subscale, followed by aggression towards self, then aggression toward things. The most higher aspects of aggression was: appear obstinacy and refusal when asking him to do something, pinching others in a state of anger , kicking others with no apparent reason, throwing himself on the floor, and hitting himself with his hand or any part of his body. The results also showed that there is a statistically significant differences between males and females on aggression toward things favor females , While, no statistical significant differences between them on aggression toward others, or the total score for aggression scale; there is no a statistically significant differences between according age stages and intellectual state on all aggression subscale, either toward others, nor aggression toward self nor toward things ,or total score for aggression scale .

Keywords: Autism, aggression, state of Kuwait.

Introduction

Autism is commonly described as a disorder that accounts for wide variability among individuals in their ability to adapt and function in daily life. Within the autism spectrum, children may exhibit different combinations of specific behaviors ranging from mild to severe. Moreover, the presence of symptoms and degree of severity may change over the lifespan. In light of this variability, obtaining an accurate diagnosis of autism is exceedingly complex (Nasr, 2002).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR,2000) described Autism as a sub-category of a Pervasive Developmental Disorder (PPD), which include: Autistic disorder Asperger syndrome, Rett syndrome, disintegrative disorders, and pervasive developmental disorder not otherwise specified (PDD-NOS) (Alice, Carter, Kiln& Volkmar,2005). DSM-IV in its revised fourth edition agreed with The International Statistical Classification of Diseases and Related Health Problems (ICD) which produced by the World Health Organization (WHO),and both identified three main diagnostic criteria of autism; as the main symptoms that appear on people with autism ,these characteristics triad of symptoms ware: impairments in social interaction; impairments in communication; and restricted interests and repetitive behavior, and these symptoms appears in the first three years of the child's age (Bolet et al., 2011).

Children with Autism are suffering from many challenging behaviors, this behavior is most frequently defined as behavior of such intensity frequency or duration that the physical safety of the person or others is to be placed in serious jeopardy, or behavior which is likely seriously to limit use of, or result in the person being denied access to, ordinary community facilities (Emerson& Bromley, 1995). Severe challenging behavior often involves physical aggression or self-injurious behavior, verbal aggression, shouting or screaming, and refusing to move or refusing to carry out a request may also be present. However, the first implication of the definition of challenging behavior is that it is defined by its impact rather than by its topography.

Challenging behavior can take many forms, and may result from a variety of underlying social psychological or biological processes. But behavior qualifies as challenging not because of its frequency but because of its consequences. Individuals with challenging behavior are often inappropriately placed (Borthwick-Duffy et al., 1987; Emerson & Hatton,1994) have a poorer quality of life (Mansell, 1994) and have high levels of long- term medication (Sternfert, Dewhurst & Holmes, 2001). Behaviors such as physical aggression, self-injury or property destruction can threaten an individual" s residential placement (Bruininks, Hill & Morreau, 1988) interfere with opportunities for social interaction (Anderson, Lakin, Hill & Chen, 1992), and threaten vocational placement and community participation (Larson, 1991). The effects of challenging behaviors on care-giver stress and staff turnover are equally well documented (Russell& Harris, 1993). Challenging behavior can have a negative impact on the health and well-being of the person, those who care for the person and those who live or work with the person .

A second implication of the definition of challenging behavior is that the person who presents with the behavior is challenged. Like other forms of impairment, severe challenging behavior may present barriers to the person's participation in ordinary community living. In this sense, the person has a behavioral disability (Emerson, 1998).

Children with autism have many forms from aggression behaviors, which rated between aggression toward others , self , and things. There s many studies indicated that children with autism have high level from aggression; such as head banging and scratching himself until it bled (Le& Lohr, 2012) , and the boys with ASD reacted with more serious forms of aggression when subjected to mild aggressive attacks and did not consider a child attacker's opposite sex an inhibitory factor. The girls with ASD, on the other hand, reacted less aggressively than the girls without ASD. According to the results boys with ASD may not follow the typical development in cognitive regulation of reactive aggression (Kaartinen, Puura, Helminen, Salmelin, Pelkonen , et al.2014).

Method

Subjects

The study sample consisted of (108) individuals with autism disorder, divided according to: a) gender {males: N (82), aged (6:16), female N (28), aged (6:16)}, b) age stage {children, N (78), aged (6:12), adolescents N (30), aged (13:16),and c) presence of intellectual disability ID (with ID: N (41) aged (6:15); without ID: N(67) aged(6:16) *see table 1*.

To diagnose study the sample persons, has been dependence on the diagnosis of developmental medicine department in the state of Kuwait in the diagnosis of children whether they have autism or intellectual disability or not. This department is depending on the Childhood Autism Rating Scale (CARS) in the diagnosis of autism cases and in identifying severity of autism, also depending on the Binet test fourth edition in identifying a child's IQ.

Table 1
Demographic Characteristics of participants

	N	Minimum age	Maximum age	Mean	Std. Deviation
Gender					
Male	82	6.00	16.00	9.77	2.70
Female	26	6.00	16.00	10.34	3.12
Age stage					
Children	78	6.00	11.00	8.46	1.54
Adolescents	30	12.00	16.00	13.66	1.583
Intellectual Disability					
With	41	6.00	15.00	8.68	2.43
Without	67	6.00	16.00	10.65	2.77
			total sample		
Total	108	6.00	16.00	9.91	2.81

Scales:

Aggression Scale

The researcher used a measure of aggressive behavior by (Syadi,2011) for the detection of aggressive behaviors that appear with children with autism disorder and to identify the forms of aggression they have. The scale consists of (30) item divided in three subscales: first is the aggression towards others (14 items), second is the aggression towards self (10 items), and the third is the aggression towards things(6 items).

The aggression scale can be applied through observation and interview with a parent or a teacher of the child, and the answer is on the scale items within five choices are: always: means that the behavior happens all the time (rated by 5 scores), often: means that the behavior most of the time happens (rated by 4 scores), Sometimes: means that the behavior occurs some time (rated by 3 scores), rarely: means that the behavior occurs a few degree (rated by 2 scores), and Never: means that the behavior does not exist (rated by 1 scores).The validity is accounted account by internal consistency, validity coefficients is ranged between 0.87 and 0.62. Cronbach's alpha coefficient was also accounted to identify the reliability coefficient which ranged between 0.93 and 0.80.

Childhood Autism Rating Scale

The CARS was used in this study from the developmental medicine department in the state of Kuwait to diagnosis of children whether they have autism or not. This scale evaluate children in several areas related to the salient characteristics of autism. The

scale includes (15) subscale, are: Relationship with People, Tradition and Simulation, Emotional Response, Use of Body, Use of Objects, Adapt to Change ,Visual Response, Responses to Listening, Response & the Use of Test, Smell & Touch, Fear & Anxiety or Nervousness, Verbal Communication, Non-Verbal Communication, Level of Activity, Level & Stability of the Response of Mental, and General Impression. The reliability and validity were reported in Schopler et al. (1980).

Statistical Analysis

In the present study was the use of averages and standard deviations, so as to detect the level of subscales and total score of aggression in children with autism. Was also used One-way analysis of variance to detect differences in the subscales total score of aggression among: males and females, children and adolescents, and children with autism with and without intellectual disability. All analyses were performed using the Statistical Program for Social Sciences (SPSS), Version 20.0 for Windows.

Results

Prevalence of Aggression

For identify the level of aggression for the sample, means and standard deviations are accounted for subscales and total score of aggression scale, *see table 2*

Table 2
Mean and standard deviation for aggression subscales and total score

	N	Mean	Std. Deviation
Toward others	108	29.95	12.84
Toward self	108	16.93	7.83
Toward things	108	11.38	6.15

The results showed that the aggression toward others was the highest subscale {(mean (29.95), SD (12.84)}, then aggression toward self {(mean (16.93), SD (7.83)}, and aggression toward things {(mean (11.38), SD (6.15)}.

Differences between Gender:

Mean and standard deviation for aggression subscale are accounted for males (N= 82) and females (N=26) see Table 3 .

Table 3
Mean and standard deviation for aggression subscale according gender

gender	aggression	N	Mean	Std. Deviation
male	Toward others	82	29.83	13.12
	Toward self	82	17.14	8.53
	Toward things	82	12.14	6.42
	Total aggression	82	59.12	25.93
female	Toward others	26	30.34	12.13
	Toward self	26	16.26	5.11
	Toward things	26	9.00	4.56
	Total aggression	26	55.61	18.36

According to Table (3), the results showed that there is equal to the dimensions of the order of both genders, It was the aggression towards others in the first place (male: mean 29.83, SD 13.12, female: Mean 30.34, SD 12.13), then aggression toward self (male: mean 17.14, SD. 8.53, female: Mean 16.26, SD 5.11), and finally aggression toward things(male: mean 12.14, SD. 6.42, female: Mean 9.00, SD 4.56), While the total score on a scale aggression was (male: mean 59.12, SD25.93, female: Mean 55.61, SD 18.36)

One-way analysis of variance ANOVA is used to account the differences between male and female, *See Table (4)*

Table 4
Results of ANOVA for differences between males and females at aggression subscale

		Sum of Squares	Df	Mean Square	F	Sig.
Toward others	Between Groups	5.274	1	5.274	.032	.859
	Within Groups	17637.494	106	166.391		
	Total	17642.769	107			
Toward self	Between Groups	15.187	1	15.187	.246	.621
	Within Groups	6555.359	106	61.843		
	Total	6570.546	107			
Toward things	Between Groups	195.423	1	195.423	5.361	.023
	Within Groups	3864.244	106	36.455		
	Total	4059.667	107			
Total aggression	Between Groups	242.732	1	242.732	.409	.524
	Within Groups	62902.934	106	593.424		
	Total	63145.667	107			

As table (4), the results showed that there is a statistically significant differences between males and females on aggression toward things favor females (F = 5.36, Sig 0.023 < 0.05). While, no statistical significant differences between them on aggression toward others (F = 0.032, Sig 0.859 >0.05) and toward self (F = 0.246, Sig 0.621 > 0.05), or the total score for aggression scale (F = 0.409, Sig 0.524 > 0.05).

Differences between Age groups:

Mean and standard deviation for aggression dimensions are accounted for children and adolescents See Table (5) .

Table 5

Mean and standard deviation of aggression dimensions for children and adolescents

Age Stages	aggression	N	Mean	Std. Deviation
Children	Toward others	78	30.34	12.62
	Toward self	78	16.93	7.87
	Toward things	78	11.96	6.33
	Total aggression	78	59.24	24.24
Adolescents	Toward others	30	28.93	13.54
	Toward self	30	16.93	7.87
	Toward things	30	9.90	5.49
	Total aggression	30	55.76	24.65

According to Table (5), the results showed that there is equal to the subscale of the order of both age groups, It was the aggression towards others in the first place (children: mean 30.34, SD 12.62, adolescents: Mean 28.93, SD 13.54), then aggression toward self (children: mean 19.93, SD. 7.87, adolescents: Mean 16.93, SD 7.87), and finally aggression toward things(children: mean 11.96, SD. 6.33, adolescents: Mean 9.90, SD 5.49). While the total score on a scale aggression was (children: mean 59.24, SD 24.24, Adolescents: Mean 55.76, SD 24.65)

One-way analysis of variance ANOVA is used to account the differences between children and adolescents as shown *See Table (6)*

Table 6
Results of ANOVA for differences between children and adolescents at aggression subscale

		Sum of Squares	Df	Mean Square	F	Sig.
Toward others	Between Groups	43.248	1	43.248	.260	.611
	Within Groups	17599.521	106	166.033		
	Total	17642.769	107			
Toward self	Between Groups	.000	1	.000	.000	.999
	Within Groups	6570.546	106	61.98		
	Total	6570.546	107			
Toward things	Between Groups	92.082	1	92.082	2.46	.12
	Within Groups	3967.585	106	37.430		
	Total	4059.667	107			
Total aggression	Between Groups	261.928	1	261.928	.442	.508
	Within Groups	62883.738	106	593.243		
	Total	63145.667	107			

As table (6), the results showed that there is no a statistically significant differences between children and adolescents on all aggression subscale, either toward others (F = 0.260, Sig 0.611 > 0.05), nor aggression toward self (F = 0.000, Sig 0.999 >0.05) nor toward things (F = 0.46, Sig 0.12 > 0.05), or total score for aggression scale (F = 0.442, Sig 0.508 > 0.05).

Differences between children with and without intellectual disability:

Mean and standard deviation for aggression subscale are accounted for children with and without intellectual disability *See Table (7)* .

Table 7
Mean and standard deviation of aggression subscale for with and without intellectual disability

Intellectual Disability	aggression	N	Mean	Std. Deviation
With	Toward others	67	30.02	12.85
	Toward self	67	16.86	7.56
	Toward things	67	10.97	5.89
	Total aggression	67	57.86	24.37
Without	Toward others	41	29.82	12.97
	Toward self	41	17.04	8.35
	Toward things	41	12.07	6.58
	Total aggression	41	58.95	24.44

According to Table (7), the results showed that there is equal to the subscale of the order of both age groups, It was the aggression towards others in the first place (with ID: mean 30.02, SD 12.85, without ID: Mean, 29.82 ,SD 12.97), then aggression toward self (with ID: mean 16.86, SD. 7.56, without ID: Mean 17.04, SD 8.35), and finally aggression toward things (with ID: mean10.97, SD 5.89, without ID: Mean12.07, SD 6.58). While the total score on a scale aggression was (with ID: mean 57.86, SD 24.37, without ID: Mean 58.95, SD 24.44)

One-way analysis of variance ANOVA is used to account the differences between children and adolescents as shown in *table (8)*.

Table 8
Results of ANOVA for differences between children with and without intellectual disability at aggression subscale

Aggression		Sum of Squares	Df	Mean Square	F	Sig.
Toward others	Between Groups	1.023	1	1.023	.006	.938
	Within Groups	17641.745	106	166.432		
	Total	17642.769	107			
Toward self	Between Groups	.853	1	.853	.014	.907
	Within Groups	6569.693	106	61.978		
	Total	6570.546	107			
Toward things	Between Groups	30.946	1	30.946	.814	.369
	Within Groups	4028.721	106	38.007		
	Total	4059.667	107			
Total aggression	Between Groups	29.973	1	29.973	.050	.823
	Within Groups	63115.693	106	595.431		
	Total	63145.667	107			

As table (8), the results showed that there is no a statistically significant differences between children with and without intellectual disability on all aggression subscale, either toward others (F = 0.006, Sig 0.938> 0.05), nor aggression toward self (F = 0.014, Sig 0.907>0.05) nor toward things (F = 0.814, Sig 0.369> 0.05), or total score for aggression scale (F = 0.050, Sig 0.823> 0.05).

Discussion

The results of this study showed that the children with ASDs often engage in aggressive behavior because they need or want something that they cannot get without another person's help or because they want to avoid doing something that someone else wants them to do. Thus, a large part of the behavior that adults find so difficult is, at its base, an effort to communicate. It is rare for children, even children with Severe autism, to behave badly just to test the patience of others, because Such

behavior is intrinsically rewarding, or because children simply want to make life difficult for the adults around them. Instead, children with ASDs often use strategies that they have found, through experience, to be effective in solving immediate problems (Durand& Merges, 2001).

Identifying the Situations in which Challenging Behavior Occurs Parents who are asked about situations that are difficult for their children usually list the following:

• Disruptions in daily routines
• Interruption of enjoyable activities
• Crowds of people, especially in Small spaces
• The presence or approach of Strangers
• Too many instructions at once
• Insistent demands from an adult
• Times when there is nothing to do (e.g., while riding in the car, while sitting in a waiting room)
• Particular sounds, bright lights, or other unpleasant sensory Stimulation
(O Brien& Daggett, 2006)

Many parents reported their distress at having to watch their child deliberately injure him- or herself. Even when they suspected that this was a manipulative form of attention seeking they still found themselves unable to quell their anxiety. Hand-biting, eye-poking, head-banging and ears lapping are among the most common of the self-injurious behaviors reported, and they are normally shown by children with the most severe form of the disorder. Many explanations exist for this type of behavior, the most common one being that the self-injuring children are simply attention seeking.

They have learned that this behavior, painful as it may be, brings large rewards in terms of adult attention. Another explanation is that the children have learned that causing themselves pain leads to a sense of well-being. This situation may arise because the behavior produces a response at the biochemical level whereby naturally occurring opiates rather like morphine are released into the bloodstream, and this leads to an increased sense of well-being. A third hypothesis is that self-injuring children are showing that they are bored and need stimulation. It is certainly the clinical experience of the first author that distracting a self-injuring child with an interesting activity can reduce the frequency and severity of self-injury. It is also noticeable that the most severe and frequent self-injurious behavior is found in those children who have little or no means of communication. This implies that it is a form of communication, and that parents and psychologists must be careful to try to interpret the message that the child is attempting to communicate. Once this has been done, it is often possible to alter the antecedents that give rise to the self-injurious behavior, such that the child no longer needs to communicate in this way. Typically the antecedents concern some break in or disruption of a ritual that the child with autism enjoys or depends upon for his or her security.

Children with autism have self-biting also. This is the form of self-injurious behavior that parents report causes them greatest distress. Analysis of most of the situations in which they report this behavior indicates that the child or young person feels under some pressure because he or she is no longer in a routine, or because there has been a change in the child's handling characteristics.

Sometimes the only solution to self-biting is to use a protective device that stops the young person from injuring him- or herself. This also has the added benefit of preventing parents from being anxious that there will be serious injury.

Temper Tantrums Aggression

Most of the parents felt that the aggression directed towards others by their children with autism during temper tantrums was a product of their frustrated attempts at communication. However, prolonged bouts of screaming, punctuated by kicking, hitting, biting, spitting and pushing other people, create severe family pressures. These behaviors are common among children with autism, and frequently follow a pattern from some kind of frustration, perhaps in communication or denial of a want, progressing through a series of escalating difficult behaviors to full-blown aggression. There is many studies agree with results of this study, e.g.: (Mallory, 2014) which indicated that that children with autism spectrum disorders (ASD) and with other disabilities (OD) experienced significantly greater rates of peer aggression than peers in the without disabilities group (WD). Additionally, the ASD and OD groups of children were more likely to experience peer victimization than the WD group. Peer aggression was correlated with autistic traits, anxious/depressed, withdrawn/depressed, thought problems, and attention problems (Mallory, 2014).

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