

Prevalence and Factors Associated with Aggression among Preschool Age Children at Baraem Bader Nursery School in Al-Asher 10th of Ramadan city, Egypt

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Abstract: Childhood aggression is a major public health problems leading to children at a significant risk for continued behavior problems and other social and emotional challenges throughout their lifetime. This study aimed to study the prevalence and factors associated with aggression in preschool age children. Baraem Bader nursery school of Al-Asher 10th of Ramadan city was chosen as the study setting. The study sample compromised 50 preschool age children from both sex. The validated observational checklist sheet which is designated to detect developing behavior problems of the preschool age children was used to collect required data. The study confirms that the prevalence of preschool age aggression were 68% who occasionally suffering from aggression and 32 % who always suffering from aggression. The associated factors of aggression are increased with age category, male, and first birth child, also they tend to be from mothers who are working and less than university education. The study recommended that professional nurse play a critical role in partnering with parents, educators, school psychologist for early identification, prevention and intervention of aggression in preschool age children, which are essential in the prevention of serious and costly problems in later childhood.

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Key words: prevalence, aggression, aggressive behavior, preschool and risk factors.

1. Introduction

Childhood Aggression is a major public health problem worldwide especially in recent years ^(1,2). Globally the prevalence of childhood aggression was 5-10% in both male and female ⁽³⁾. In the United States the prevalence of preschool age children aggression was 22% for both male and female ⁽⁴⁾. In a Canadian nationwide longitudinal study the estimated prevalence of childhood physical aggression was 16.6% ⁽⁵⁾. In A Vietnam veterans study the prevalence of reported childhood aggression was 19.4% among childhood ⁽⁶⁾.

In Egypt there is no national figure available regarding the prevalence of aggression in the preschool age children. Also study carried out at Pittsburgh showed that the prevalence of childhood aggression was ranged from 3% to 40% ⁽⁷⁾. Further evidence was provided by A 2006 Trenton and Philadelphia study in which it was estimated that 32% overlap in children identified as higher in aggression by both mothers and teachers ⁽⁸⁾.

The reason behind this major pediatric health problem could be attributed, on one hand to a complex set of biologic, psychosocial, cultural, and familial variables ^(7,8). On the other hand, gender, frustration, modeling and reinforcement are other factors that may play a role in increasing aggressive behavior in childhood ^(9,10).

Childhood aggression is a serious problem particularly among children who exhibit aggression

across time and contexts ⁽¹¹⁻¹²⁾. Preschool-aged children displaying high levels of aggression are known risk factors for increased social and emotional problems, as they are more likely to exhibit attention deficit disorder, conduct disorder, future juvenile delinquency, and later antisocial behaviors ⁽¹³⁻¹⁵⁾. Aggression is also associated with alcohol, drug abuse, accidents, violent crimes, depression, suicide attempts, spouse abuse, and neglectful and abusive parenting ⁽¹⁶⁻¹⁸⁾. Furthermore, violence commonly results in serious injuries to the perpetrators themselves ^(19,20). Indeed, young children who manifest severe and pervasive forms of aggression demonstrate significant levels of social impairment and are therefore significantly more likely to develop subsequent mental health problems ^(21,22). **Whitaker & Blake & Hamrin**, have shown that such problematic levels of aggression in adolescence or adulthood can be identified in the preschool years and can be traced to events occurring early in life ⁽²³⁻²⁶⁾.

Childhood aggressive behavior prevention has become one of the most pressing issues facing our society today ^(27,30). While preventing aggressive behavior are increasingly receiving international attention, the nursing profession play potential role to reduce this major problem in society ⁽³¹⁾. Ironically, the nursing profession had its origins in warfare ⁽⁷⁾. Together nurse, parents, educators and school psychologist play a major role for early identification, prevention and intervention of aggression in

preschoolers which leads to prevention of serious and costly problems in later childhood⁽³²⁻³⁶⁾.

2. Subject and Methods

Aim of the study:

To study the prevalence and factors associated with aggression in preschool age children.

Sample:

50 children from both sexes were chosen by systematic random sample their age ranged from 3 to less than 6 years.

Type of the study:

Cross sectional study.

Setting:

Baraem Bader nursery school at Al-Asher 10th of Ramadan City .

Study tool:

Data was collected through using: Modified Observation checklist sheet: It is a screening test designated to detect developing behavior problems of the preschool children from 3-6 years. It was developed by Behar,⁽³⁷⁾ preschool questionnaire, translated and modified by Abdelatif,⁽³⁸⁾. The checklist contain 30 items pertaining for the following categories; Hostile aggressive, anxious fearful, hyperactive distractible in addition to nervous mannerisms thumb sucking, nail biting, wet or soiled self, speech problems, unusual sexual behavior and over activity

Methods:

- Required letters were adopted from the administrator of the nursery school and Permission were obtained from the principles of the schools to facilitate the required data collection.
- The modified observational checklist sheet which is designated to detect developing aggressive behavior was used to study children aggressive behavior.
- Data were collected from 1 August to 30 September 2009. During the initial introductory period an attempt was made to establish an informal and friendly atmosphere to facilitate communication between the child and the researcher and to help

children to be more relaxed. Three children were observed daily for 3 consecutive days from 9 am to 1 p.m.

Statistical analysis:

The collected data were organized tabulated and statistically analyzed using SPSS software statistical package version 17. The variables were presented in number and percentage. The children's behavior was observed three times at different occasions. The frequency of behavior was rated at which the child was aggressive along a three-point scale ranging from rarely, occasionally and always. This rating was scored as 1 for rarely, 2 for occasionally and 3 for always. The score of the three observations was summated for each item of behavior and the average calculated. The total score was calculated by summation of the score of the nine questions. Total score of each behavior ranged as rarely (1-8), occasionally (9-17) and always (18-27). The mean and standard deviation of total score was calculated and T test was used to compare between subgroups. The chi square test was used for statistical significance of observed differences of behavior score in reaction to explanatory variables studied. Whenever the chi square was found not suitable, the Fisher exact test was used. The interpretation of significance was done using a p value of < 0.05.

3. Results

From Table (1) It was found that 34.0% of preschool children were always not considering to other's feelings, and biting or pinches others and 42.0 % of them were occasionally fight with other children ,and disobedient .The result also reveals that 26.0% ,24.0% , and 22,0% of children were always blames others, opposing with other children , and destroying their and other's things respectively. In addition it was illustrated that 68% of the preschool age children were occasionally suffering from aggression and 32% them were always suffering from aggression.

Table (1) Distribution of preschool age children in relation to their aggressive behavior.

Items of behavior	Rarely		Occasionally		Always	
	N	%	N	%	N	%
Destroying his and others' things	30	60.0	9	18.0	11	22.0
Fight with other children	20	40.0	21	42.0	9	18.0
Disobedient	22	44.0	21	42.0	7	14.0
Tells lies	32	64.0	11	22.0	7	14.0
Opposing with other children	30	60.0	8	16.0	12	24.0
Not sharing playing with others	47	94.0	1	2.0	2	4.0
Blames others	21	42.0	16	32.0	13	26.0
Not considering to others' feelings	14	28.0	19	38.0	17	34.0
Bites or pinches others	24	48.0	9	18.0	17	34.0
Total score	0	0.0	34	68.0	16	32.0

Table (2) shows that less than half (42.4%) of children whose age ≥ 5 years were always bites or pinches others compared to 17.6% of children whose age < 5 years. On the other hand the preschool age

children whose' age ≥ 5 years suffering from aggression than those aged < 5 years and the significant differences were not found.

Table (2): Children's aggressive behavior in relation to their age in years

Items of behavior	Boys (n=23)		Girls (n=27)		P
	N	%	N	%	
Destroying his and others' things					
Rarely	11	47.8	19	70.4	0.234
Occasionally	6	26.1	3	11.1	
Always	6	26.1	5	18.5	
Fight with other children					
Rarely	6	26.1	14	51.9	0.189
Occasionally	12	52.2	9	33.3	
Always	5	21.7	4	14.8	
Disobedient					
Rarely	7	30.4	15	55.6	0.134
Occasionally	11	47.8	10	37.0	
Always	5	21.7	2	7.4	
Tells lies					
Rarely	12	52.2	20	74.1	0.241
Occasionally	6	26.1	5	18.5	
Always	5	21.7	2	7.4	
Stupor with other children					
Rarely	11	47.8	19	70.4	0.214
Occasionally	4	17.4	4	14.8	
Always	8	34.8	4	14.8	
Not sharing playing with others					
Rarely	22	95.7	25	92.6	0.344
Occasionally	1	4.3	0	0.0	
Always	0	0.0	2	7.4	
Blames others					
Rarely	6	26.1	15	55.6	0.096
Occasionally	10	43.5	6	22.2	
Always	7	30.4	6	22.2	
Not considering to others' feelings					
Rarely	5	21.7	9	33.3	0.180
Occasionally	7	30.4	12	44.4	
Always	11	47.8	6	22.2	
Bites or pinches others					
Rarely	9	39.1	15	55.6	0.149
Occasionally	3	13.0	6	22.2	
Always	11	47.8	6	22.2	
Total score (mean \pm SD)	16.7	\pm 5.1	13.8	\pm 3.9	0.028*

Table (3) shows that less than half (47.8 %) of boys were always bites or pinches others, and not considering to others' feelings compared to, 22.2% of girls respectively. On the other hand, 21.7% of boys were always fight with other children,

disobedient, and tells lies compared to 14.8%, and 7.4% of girls respectively. In addition the aggressive score was more in boys (± 5.1) than in girls (± 3.9) and there was a significant difference between the aggressive score in boys and girls.

Table (3): Children's' aggressive behavior in relation to their gender.

Items of behavior	First birth (n=21)		Second and more (n=29)		P
	N	%	N	%	
Destroying his and others' things					
Rarely	12	57.1	18	62.1	1.000
Occasionally	4	19.0	5	17.2	
Always	5	23.8	6	20.7	
Fight with other children					
Rarely	9	42.9	11	37.9	0.521
Occasionally	7	33.3	14	48.3	
Always	5	23.8	4	13.8	
Disobedient					
Rarely	10	47.6	12	41.4	0.494
Occasionally	7	33.3	14	48.3	
Always	4	19.0	3	10.3	
Tells lies					
Rarely	13	61.9	19	65.5	0.768
Occasionally	4	19.0	7	24.1	
Always	4	19.0	3	10.3	
Stupor with other children					
Rarely	13	61.9	17	58.6	1.000
Occasionally	3	14.3	5	17.2	
Always	5	23.8	7	24.1	
Not sharing playing with others					
Rarely	20	95.2	27	93.1	1.000
Occasionally	0	0.0	1	3.4	
Always	1	4.8	1	3.4	
Blames others					
Rarely	10	47.6	11	37.9	0.245
Occasionally	4	19.0	12	41.4	
Always	7	33.3	6	20.7	
Not considering to others' feelings					
Rarely	5	23.8	9	31.0	0.934
Occasionally	8	38.1	11	37.9	
Always	8	38.1	9	31.0	
Bites or pinches others					
Rarely	8	38.1	16	55.2	0.517
Occasionally	4	19.0	5	17.2	
Always	9	42.9	8	27.8	
Total score (mean±SD)	15.5	±5.1	14.8	±4.4	0.588

From table (4) It was observed that 23.8 of the first birth were always destroying their and others' things and fight with other children compared to 20.7% and 13.8 % of the second birth respectively and the significant difference were not found. Although the

significant difference were not found regarding Children's' aggressive behaviour in relation to birth order, the preschool age children whose first birth suffering from aggression than those whose second and more rank.

Table (4) Children's' aggressive behavior in relation to their birth order.

Items of behavior	First birth (n=21)		Second and more(n=29)		P
	N	%	N	%	
Destroying his and others' things					
Rarely	12	57.1	18	62.1	1.000
Occasionally	4	19.0	5	17.2	
Always	5	23.8	6	20.7	
Fight with other children					
Rarely	9	42.9	11	37.9	0.521
Occasionally	7	33.3	14	48.3	
Always	5	23.8	4	13.8	
Disobedient					
Rarely	10	47.6	12	41.4	0.494
Occasionally	7	33.3	14	48.3	
Always	4	19.0	3	10.3	
Tells lies					
Rarely	13	61.9	19	65.5	0.768
Occasionally	4	19.0	7	24.1	
Always	4	19.0	3	10.3	
Stupor with other children					
Rarely	13	61.9	17	58.6	1.000
Occasionally	3	14.3	5	17.2	
Always	5	23.8	7	24.1	
Not sharing playing with others					
Rarely	20	95.2	27	93.1	1.000
Occasionally	0	0.0	1	3.4	
Always	1	4.8	1	3.4	
Blames others					
Rarely	10	47.6	11	37.9	0.245
Occasionally	4	19.0	12	41.4	
Always	7	33.3	6	20.7	
Not considering to others' feelings					
Rarely	5	23.8	9	31.0	0.934
Occasionally	8	38.1	11	37.9	
Always	8	38.1	9	31.0	
Bites or pinches others					
Rarely	8	38.1	16	55.2	0.517
Occasionally	4	19.0	5	17.2	
Always	9	42.9	8	27.8	
Total score (mean±SD)	15.5	±5.1	14.8	±4.4	0.588

From Table 5 we found that 23.7% of preschool age children whose mother less than university were always destroying their and others' things and fight with other children compared to 16.7% and none of them whose mother have university education

respectively. In addition the aggressive score level in children whose mother less than university were higher (± 4.8) than those of children whose mothers have university education (± 3.8) and significant differences were not found.

Table (5): Children's' behavior in relation to mothers' education

Items of behavior	Less than university (n=38)		University (n=12)		P
	N	%	N	%	
Destroying his and others' things					
Rarely	24	63.2	6	50.0	0.380
Occasionally	5	13.2	4	33.3	
Always	9	23.7	2	16.7	
Fight with other children					
Rarely	12	31.6	8	66.7	0.060
Occasionally	17	44.7	4	33.3	
Always	9	23.7	0	0.0	
Disobedient					
Rarely	16	42.1	6	50.0	0.360
Occasionally	15	39.5	6	50.0	
Always	7	18.4	0	0.0	
Tells lies					
Rarely	23	60.5	9	75.0	0.720
Occasionally	9	23.7	2	16.7	
Always	6	15.8	1	8.3	
Stupor with other children					
Rarely	24	63.2	6	50.0	0.740
Occasionally	5	13.2	3	25.0	
Always	9	23.7	3	25.0	
Not sharing playing with others					
Rarely	36	94.7	11	91.7	0.520
Occasionally	1	2.6	0	0.0	
Always	1	2.6	1	8.4	
Blames others					
Rarely	13	34.2	8	66.7	0.220
Occasionally	13	34.2	3	25.0	
Always	12	31.6	1	8.3	
Not considering to others' feelings					
Rarely	11	28.9	3	25.0	0.280
Occasionally	12	31.6	7	58.3	
Always	15	39.5	2	16.7	
Bites or pinches others					
Rarely	19	50.0	5	41.7	0.320
Occasionally	5	13.2	4	33.3	
Always	14	36.8	3	25.0	
Total score (mean±SD)	15.5	+4.8	13.9	+3.8	0.316

Table 6 illustrates that there is a significant difference in relation to preschool age children of working mothers and aggressive score. It was found that 20% of children whose mothers were working

always disobedient and 48% of them were always bites or pinches others compared to 8% and 20% of children whose mothers were housewife respectively, there was statistically significant differences.

Table (6):Children's' aggressive behavior in relation to their mothers' occupation

Items of behavior	Housewife (n=25)		Working (n=25)		P
	N	%	N	%	
Destroying his and others' things:					
Rarely	18	72.0	12	48.0	0.062
Occasionally	5	20.0	4	16.0	
Always	2	8.0	9	36.0	
Fight with other children:					
Rarely	10	40.0	10	40.0	1.000
Occasionally	10	40.0	11	44.0	
Always	5	20.0	4	16.0	
Disobedient:					
Rarely	16	64.0	6	24.0	0.021*
Occasionally	7	28.0	14	56.0	
Always	2	8.0	5	20.0	
Tells lies:					
Rarely	17	68.0	15	60.0	0.598
Occasionally	6	24.0	5	20.0	
Always	2	8.0	5	20.0	
Stupor with other children:					
Rarely	18	72.0	12	48.0	0.180
Occasionally	2	8.0	6	24.0	
Always	5	20.0	7	28.0	
Not sharing playing with others:					
Rarely	24	96.0	23	92.0	1.000
Occasionally	0	0.0	1	4.0	
Always	1	4.0	1	4.0	
Blames others:					
Rarely	12	48.0	9	36.0	0.767
Occasionally	7	28.0	9	36.0	
Always	6	24.0	7	28.0	
Not considering to others' feelings:					
Rarely	10	40.0	4	16.0	0.204
Occasionally	8	32.0	11	44.0	
Always	7	28.0	10	40.0	
Bites or pinches others:					
Rarely	17	68.0	7	28.0	0.021*
Occasionally	3	12.0	6	24.0	
Always	5	20.0	12	48.0	
Total score (mean±SD)	13.7	±4.3	16.5	±4.7	0.034*

* Significant

4. Discussion

Aggression is widely prevalent among preschool age children in Al-asher 10th of Ramadan City Bader nursery school. Results of present study revealed that the overall prevalence of preschool age children who always suffering from aggression was 32% the same

results was reported by **Bendersky et al.** ⁽⁸⁾ who indicated that 32% overlap in children identified as higher in aggression by both mothers and teachers. Our study finding was higher than that reported by **Crick et al.** (22%) ⁽⁴⁾ and **Cote et al.** ⁽⁵⁾ (16.6%), this may be attributed to adverse family background and

family environment as compared to all other children.

Regarding child aggressive behavior in relation to their age in years, results of the present study showed that the preschool age children ≥ 5 years suffering from aggression than those aged less < 5 years. These findings are in line with the **NICHD** ⁽³⁶⁾ and **Tremblay, et al.** ⁽²²⁾ who indicated that children who exhibit high levels of aggression during the preschool remain on a relatively high throughout childhood. Also **Cote et al.** confirmed that some children become aggressive in kindergarten as a result of the stress generated by the transition from preschool to formal schooling ⁽⁵⁾.

Results of present study revealed that the gender of the child was an important factor associated with aggression in the preschool age children as the boys had aggressive behavior than girls. This may be due to the biology in particular to male sex hormones, at the same time the development of gender typing that males and female are expected to behave differently. In addition parents tendency to discipline boys more harshly magnifies this effect. This results also go in line with recent large US study and Canadian sample of children **NICHD, 2004 & Cote, et al.** who found that children in a high level of aggression were likely to be boys from families whose using a hostile ineffective parenting strategies ^(36,5). Moreover the differences in gender possibly are explained as children learn aggressive behavior tactics from their families cultural or media influence also our finding agree with **Keller et al.** ⁽³⁹⁾ **Ostrov et al.** ⁽⁴⁰⁾ and **Adams,** ⁽⁴¹⁾ they emphasized that gender is blamed by the general public as a reason for aggressive behavior, which indicated that males were more physically aggressive than female where males were likely to engage in physically and avoidance aggression.

Concerning children aggressive behavior in relation birth order, results showed that first birth children suffering from aggression than those whose second and more rank this may be due to children learn to be aggressive from all around them including parents, teachers and peers. The same was reported by **Gershoff, in 2002** ⁽⁴²⁾ and **Breitenstein et al.** ⁽⁴³⁾ who stated that children who see their parents as physically abusive are observing that they come to know as acceptable and therefore may exhibit this behavior with others, also early harsh discipline may lead to aggressive behavior. This is parallel with **Adams,** ⁽⁴¹⁾ who revealed that first born children were most likely to exhibit more aggression than third or later born children.

Regarding mother education, findings of this study revealed that the aggressive score level in children whose mother less than university were higher than those of children whose mothers have university education. The same was reported by **Cote et al.** ⁽⁵⁾ and **Adam,** ⁽⁴¹⁾ who reported that a child's

mothers with less than a high school diploma significantly predicted aggression in preschool age children. **Tremblay, et al.** emphasized that children who remain aggressive throughout childhood are tend to be from mothers who have low educational level ⁽²²⁾.

As regards children's aggression in relation to their mothers' occupation, results showed that children whose mothers were working always aggressive than whose mother housewife, this may be due to mothers exposed to life stress, low social support may provide a mother experience characterized by inconsistency of rule setting, harsh discipline and low supervision and lack of warmth, all found relate to aggressive behavior in children. Results are consistent with **Campbell et al.,** ⁽¹³⁾ **Dodge and Pettit,** ⁽⁴⁴⁾ and **Bendresky et al.,** ⁽⁸⁾ who found that children whose mothers are working remain aggressive throughout childhood.

Conclusion

The study concluded that prevalence of preschool age aggression were 68% who occasionally suffering from aggression and 32 % who always suffering from aggression. The associated factors of aggression are increased with age category, male, and first birth child. They tend to be from mothers who are working and less than university.

Recommendations

Based on the findings of the present study, the following can be recommended

1. Provide early identification and appropriate referral of children who are suffering from aggression in the nursery school.
2. Incorporate mental health assessment in the daily pediatric practice.
3. Conduct early aggression prevention program to make school safer for today's young children.
4. Provide a consistent school nurse in the nursery school.

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