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## The aggressive behavior among primary school children at Egyptian rural community in Elsanta district, Gharbia governorate

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### Abstract

**Background:** Aggression is considered one of the most common types of abnormal behavior that aims to cause harm to oneself or another person or actually causes it. The aim of this work was to prevent aggressive behavior among primary school children and improvement of school and learning environment.

**Methods:** This cross-sectional study was carried out on 281 students, aged from 6 to 12 years old, both sexes, from primary school children in Eshnaway village, El Santa center, Gharbia governorate, Egypt. Screening of aggression using Modified Overt Aggression Scale was administered to the students.

**Results:** 74.4% of studied sample showed aggression, where among aggressive students, male, those watching action movies, and those didn't play sport neither has hobbies were statistically significant. The percentages of students having poor relationships to their parents, teachers and friends, perceived the school atmosphere as poor, with personal history of physical abuse, family history of psychiatric illness, physical and verbal aggression between family members, having a drug addict family member were more aggressive. There were statistically significant relationships percentage of moderate and sever degrees of aggression and all types of aggression. Total verbal aggression, total aggression against property, total auto aggression and total physical aggression for measuring aggression consider significant predictors for aggression.

**Conclusions:** The problem of aggressive behavior among primary school children in rural areas (Eshnaway village) is highly prevalent (74.4%). Total verbal aggression, aggression against property, auto aggression and physical aggression for measuring aggression were considered significant predictors for aggressive behaviors.

**Keywords:** Aggressive behavior, primary school children, Egyptian rural community, Gharbia governorate

### Introduction

Abnormal behavior is defined as behavior that is deviant from specific societal, cultural and ethical expectations. These expectations are broadly dependent on age, gender, traditional and societal categorizations. Behavior is considered abnormal when it is atypical or out of the ordinary, consists of undesirable behavior, and results in impairment in the individual's functioning<sup>[1]</sup>.

Aggression is considered one of the most common types of abnormal behavior that aims to cause harm to oneself or another person or causes it. Aggressive behaviors include verbal threats or physical violence toward others, and sometimes included explosive acts of impulsive property destruction and self-injurious behaviors<sup>[2]</sup>.

School violence and aggression have become an increasing concern to public health professionals, clinicians, policy makers, educators, and the public with widely varied prevalence worldwide. Aggression is prevalent among children and adolescents<sup>[3]</sup>.

Childhood aggression is a moderately stable behavioral characteristic associated with a variety of psychosocial problems that often persist in to adulthood, collectively exacting a heavy toll on the aggressive individual, their victims, and society. These problems include social skill deficits and peer rejection as well as delinquency and adult forms of antisocial behavior<sup>[4]</sup>.

Persistent aggressive behavior is a common reason for referral to a child and adolescent mental health clinic. Aggressive behavior is a multidimensional problem with biological,

psychological, social, behavioral and environmental roots. Biological factors of aggression include genetics and difficult temperament <sup>[5]</sup>

Social factors include poverty and a difficult classroom environment. Behavioral factors including physical abuse, unstable household, and domestic violence <sup>[6]</sup>.

Gathering information about the prevalence and risk factors of aggression among school children will help to embrace prevention programming, and to provide appropriate interventions to affected children and, so the present study was formulated to explore the prevalence of aggressive behavior among primary school children in rural area and their associated risk factors <sup>[7]</sup>.

The aim of this work was to prevent aggressive behavior among primary school children and improvement of school and learning environment.

### Subject and Methods

This cross-sectional study was carried out on 281 students, aged from 6 to 12 years old, both sexes, from primary school children in Eshnway village, El Santa center, Gharbia governorate, Egypt.

The study was done after approval from the Ethical Committee Tanta University Hospitals. An informed written consent was obtained from the relatives of the patients. From October 2021 to January 2022

Exclusion criteria were chronically ill children (diabetic, cardiac, asthmatic, and epileptic children).

### All students were subjected to

A predesigned questionnaire to collect data by observation of selected target group to determine the problem of aggressive behavior and its associated risk factors. Each month observation of 70 students, 18 students in each week and 6 students in a day for observation in classroom and school break time for three visits for each students including:

### Socio demographic and psychosocial characteristics

Like age of the child, sex, birth order, socioeconomic status of the family, family structure (extended or nuclear family), education and occupation of the parents, perceived school atmosphere and school achievement of the child, relation with parents, colleagues and teachers, sports, hobbies, watching movies and their type, smoking and drug abuse by the child and/or his parents or family members, exposure to domestic violence and family history of psychiatric illness.

Data were collected by interview with students.

### Screening of aggression using Modified Overt Aggression Scale (MOAS) <sup>[8]</sup>

Data was collected by direct observation of the target group.

This scale rates aggressive behavior over the past week regarding four types of aggression (verbal, against objects, against self, against others) to give a total MOAS score. Each type of aggression had a rating of 0 when aggression was absent and 4 levels of severity. Weighted scores are then added together to yield the total score. Total scores on the MOAS range from 0 to 40, with higher scores indicating

more aggressive behavior as follows: no aggression = 0, minimal aggression = 1-10, mild aggression = 11-20, moderate aggression = 21-30, and severe aggression = 31-40.

### Preparatory phase

Literature review: During this phase the researcher reviewed local & international literature to get knowledge about the study.

Preliminary visits were done in August 2021 in the three schools to: determine the number of students in each school, communicate with responsible staff of different schools to orient them with objectives and procedures of the study and to get their cooperation and help.

Pretest was carried out before starting data collection inside the selected schools to test and evaluate the adequacy of the designed checklist and the questionnaire, as well as estimate the time needed for filling checklist and assessment of each study subject, and to determine the potential obstacles that might be met with during the execution of the study.

### Data collection phase

After getting the needed permissions, the researcher went to the school manager and explained the research and its objectives and asked for his assistance to carry out the study.

Oral and written consent was obtained, screening tool was read by a researcher after explaining its aim and instructions, data entry and data analysis: from March to May (2022), from January 2023 to April 2023, the thesis was written, and the researcher has reported it to the supervisors and authorized educational organizations of Tanta University, library and the community.

### Sample size

The sample size was calculated using the Minitab statistical program version 16. The minimal sample size for one proportion of aggressive behavior was 281. The sample size calculated by the following criteria: 5% alpha error, 100% power of the study. Putting into consideration that the hypothesized probability is 23.7% (Assaf *et al.*, 2018) and the alternative probability 33.3% from pre-test study (4 cases out of 12) at a power of 95%.

### Statistical analysis

Statistical analysis was done by SPSS v22 (Armonk, NY: IBM Corp). Quantitative variables were presented as mean and standard deviation (SD). Qualitative variables were presented as frequency and percentage (%). Chi square test ( $\chi^2$ ) was used to find the association between row and column variables. Stepwise regression analysis was used to determine the significant independent predictors for aggressive behavior. A two tailed P value < 0.05 was considered significant.

### Results

Table 1 shows socio-demographic data of the studied patients.

**Table 1:** Distribution of the studied students according to their socio-demographic data (n=281)

| Socio-demographic data | Classification of Socio-demographic data | No  | %       |
|------------------------|--|-----|---------|
| Age group              | 6-9 years                                | 166 | (59.1%) |
|                        | > 9-12 years                             | 115 | (40.9%) |

|                       | Age in years          | 9.09 ± 1.80 |         |
|-----------------------|-----------------------|-------------|---------|
| Sex                   | Female                | 113         | (40.2%) |
|                       | Male                  | 168         | (59.8%) |
| Residence             | Rural                 | 281         | (100%)  |
|                       | Urban                 | 0           | 0       |
| Family bonding        | Parents live together | 273         | (97.2%) |
|                       | Widow                 | 2           | (0.7%)  |
|                       | Divorced              | 6           | (2.1%)  |
| Relation to parents   | Good                  | 277         | (98.6%) |
|                       | Not good              | 4           | (1.4%)  |
| Family members        | Small family          | 178         | (63.3%) |
|                       | Big family            | 103         | (36.7%) |
| Order between brother | Older                 | 120         | (42.7%) |
|                       | Medium                | 81          | (28.8%) |
|                       | Young                 | 80          | (28.5%) |
| School type           | General               | 195         | (69.4%) |
|                       | Language              | 60          | (21.4%) |
|                       | Azhar                 | 26          | (9.3%)  |
| School atmosphere     | Good                  | 242         | (86.1%) |
|                       | Moderate              | 39          | (13.9%) |
| Relation with teacher | Good                  | 211         | (75.1%) |
|                       | Moderate              | 69          | (24.6%) |
|                       | Bad                   | 1           | (0.4%)  |
| Failed in school      | Yes                   | 0           |         |
|                       | No                    | 281         | (100%)  |

Data are presented as mean ± SD or frequency (%).

Table 2 shows special habits, family history and types of aggression of the studied patients.

**Table 2:** Distribution of the studied students according to their special habits, family history and types of aggression

|  | No            | %    |
|--|---------------|------|
| <b>Special habits &amp; family history</b>         |               |      |
| Doing sporting                                     | 115           | 40.9 |
| Hobbies  | 101           | 35.9 |
| Watching films                                     | 195           | 69.4 |
| Types of films                                     | 134           | 47.7 |
|  | 62            | 22.1 |
| Smoking  | 0             | 0    |
| Addict drugs                                       | 0             | 0    |
| Parents addict drugs                               | 5             | 1.8  |
| Psychological diseases in family members           | 6             | 2.1  |
| Physically abused                                  | 94            | 33.5 |
| Physical, verbal aggression between family members | 120           | 42.7 |
| <b>Type of aggression</b>                          |               |      |
| Verbal aggression                                  | 202           | 71.9 |
| Shout  | 198           | 70.5 |
| Curses   | 35            | 12.5 |
| Impulsive  | 52            | 18.5 |
| Threatens  | 0             |      |
| Aggression against property                        | 151           | 53.7 |
| Slams door   | 92            | 32.7 |
| Throws objects down                                | 80            | 28.5 |
| Breaks object                                      | 41            | 14.6 |
| Sets fires   | 0             |      |
| Auto aggression                                    | 79            | 28.1 |
| Picks or scratches skin                            | 77            | 27.4 |
| Bangs head   | 13            | 4.6  |
| Inflicts minor cuts                                | 1             | 0.4  |
| Inflicts major injury                              | 0             |      |
| Physical aggression                                | 160           | 56.7 |
| Makes menacing gestures                            | 144           | 51.2 |
| Strikes pushes                                     | 65            | 23.1 |
| Attacks mild injury                                | 24            | 8.5  |
| Attacks serious injury                             | 1             | 0.4  |
| Total score  | 10.27 ± 11.22 |      |

Data are presented as mean ± SD or frequency (%)

Regarding the relationships between socio-demographic data and grades of aggression, there was no statistically significant association between school types, age, and grades of aggression. There was statistically significant difference between male and female, relationships with

parents, family bonding, family members, order between brother, school atmosphere, association between relationships to teachers & friends regarding aggression. Table 3.

**Table 3:** The relationships between socio-demographic characters of the studied students and their grades of aggression

| Socio-demographic characters |                       | Aggression grades |      |         |      |      |      |          |      |        |       |       |     | $\chi^2$<br>P value |
|------------------------------|-----------------------|-------------------|------|---------|------|------|------|----------|------|--------|-------|-------|-----|---------------------|
|                              |                       | No                |      | Minimal |      | Mild |      | Moderate |      | Severe |       | Total |     |                     |
|                              |                       | N                 | %    | N       | %    | N    | %    | N        | %    | N      | %     | N     | %   |                     |
| School type                  | General               | 48                | 24.6 | 73      | 37.4 | 33   | 16.9 | 24       | 12.3 | 17     | 8.7   | 195   | 100 | 15.210<br>0.055     |
|                              | Language              | 16                | 26.7 | 30      | 50.0 | 11   | 18.3 | 3        | 5.0  | 0      | .0    | 60    | 100 |                     |
|                              | Azhar                 | 8                 | 30.8 | 8       | 30.8 | 6    | 23.1 | 2        | 7.7  | 2      | 7.7   | 26    | 100 |                     |
| Age group                    | 6 - 9 years           | 51                | 30.7 | 67      | 40.4 | 24   | 14.5 | 13       | 7.8  | 11     | 6.6   | 166   | 100 | 9.176<br>0.057      |
|                              | 10-12 years           | 21                | 18.3 | 44      | 38.3 | 26   | 22.6 | 16       | 13.6 | 8      | 7     | 115   | 100 |                     |
| Sex                          | Female                | 46                | 40.7 | 48      | 42.5 | 13   | 11.5 | 3        | 2.7  | 3      | 2.7   | 113   | 100 | 36.887<br>0.000     |
|                              | Male                  | 26                | 15.5 | 63      | 37.5 | 37   | 22.0 | 26       | 15.5 | 16     | 9.5   | 168   | 100 |                     |
| Residence                    | Rural                 | 72                | 25.6 | 111     | 39.5 | 50   | 17.8 | 29       | 10.3 | 19     | 6.8   | 281   | 100 | -                   |
|                              | Urban                 | 0                 | 0    | 0       | 0    | 0    | 0    | 0        | 0    | 0      | 0     | 0     | 0   |                     |
| Family bonding               | Parents live together | 71                | 26.0 | 108     | 39.6 | 48   | 17.6 | 28       | 10.3 | 18     | 6.6   | 273   | 100 | 4.767<br>0.782      |
|                              | Widow                 | 1                 | 50.0 | 1       | 50.0 | 0    | .0   | 0        | .0   | 0      | .0    | 2     | 100 |                     |
|                              | Divorced              | 0                 | .0   | 2       | 33.3 | 2    | 33.3 | 1        | 16.7 | 1      | 16.7  | 6     | 100 |                     |
| Relation to parents          | Good                  | 72                | 26.0 | 111     | 40.1 | 49   | 17.7 | 29       | 10.5 | 16     | 5.8   | 277   | 100 | 31.124<br>0.000     |
|                              | Not good              | 0                 | .0   | 0       | .0   | 1    | 25.0 | 0        | .0   | 3      | 75.0  | 4     | 100 |                     |
| Family members               | Small family          | 46                | 25.8 | 73      | 41.0 | 32   | 18.0 | 17       | 9.6  | 10     | 5.6   | 178   | 100 | 1.517<br>0.824      |
|                              | Big family            | 26                | 25.2 | 38      | 36.9 | 18   | 17.5 | 12       | 11.7 | 9      | 8.7   | 103   | 100 |                     |
| Order between brother        | Older                 | 30                | 25.0 | 50      | 41.7 | 20   | 16.7 | 16       | 13.3 | 4      | 3.3   | 120   | 100 | 8.199<br>0.414      |
|                              | Medium                | 18                | 22.2 | 30      | 37.0 | 18   | 22.2 | 7        | 8.6  | 8      | 9.9   | 81    | 100 |                     |
|                              | Young                 | 24                | 30.0 | 31      | 38.8 | 12   | 15.0 | 6        | 7.5  | 7      | 8.8   | 80    | 100 |                     |
| School atmosphere            | Good                  | 68                | 28.1 | 98      | 40.5 | 42   | 17.4 | 21       | 8.7  | 13     | 5.4   | 242   | 100 | 14.336<br>0.006     |
|                              | Moderate              | 4                 | 10.3 | 13      | 33.3 | 8    | 20.5 | 8        | 20.5 | 6      | 15.4  | 39    | 100 |                     |
| Relation with teacher        | Good                  | 65                | 30.8 | 92      | 43.6 | 35   | 16.6 | 13       | 6.2  | 6      | 2.8   | 211   | 100 | 57.556<br>0.000     |
|                              | Moderate              | 7                 | 10.1 | 19      | 27.5 | 15   | 21.7 | 16       | 23.2 | 12     | 17.4  | 69    | 100 |                     |
|                              | Bad                   | 0                 | .0   | 0       | .0   | 0    | .0   | 0        | .0   | 1      | 100.0 | 1     | 100 |                     |
| Relation with friends        | Good                  | 67                | 33.3 | 86      | 42.8 | 32   | 15.9 | 11       | 5.5  | 5      | 2.5   | 201   | 100 | 66.096<br>0.000     |
|                              | Moderate              | 5                 | 6.3  | 25      | 31.6 | 18   | 22.8 | 18       | 22.8 | 13     | 16.5  | 79    | 100 |                     |
|                              | Bad                   | 0                 | 0    | 0       | 0    | 0    | 0    | 0        | 0    | 1      | 100.0 | 1     | 100 |                     |
| Failed in school             | Yes                   | 0                 | 0    | 0       | 0    | 0    | 0    | 0        | 0    | 0      | 0     | 0     | 0   | -                   |
|                              | No                    | 72                | 25.6 | 111     | 39.5 | 50   | 17.8 | 29       | 10.3 | 19     | 6.8   | 281   | 100 |                     |

Data are presented as frequency (%)

There was statistically significance association between special habits, hobbies, watching films, family history and grades of aggression. Table 4

**Table 4:** The relationships between special habits & family history of studied students from one side and the grade of aggression from the other side

| Special habits & family history          |         | Aggression grades |      |         |      |      |      |          |      |        |      |       |     | $\chi^2$<br>P value |
|--|---------|-------------------|------|---------|------|------|------|----------|------|--------|------|-------|-----|---------------------|
|  |         | No                |      | Minimal |      | Mild |      | Moderate |      | Severe |      | Total |     |                     |
|  |         | N                 | %    | N       | %    | N    | %    | N        | %    | N      | %    | N     | %   |                     |
| Doing sporting                           | Yes     | 26                | 22.6 | 58      | 50.4 | 12   | 10.4 | 15       | 13.0 | 4      | 3.5  | 115   | 100 | 17.008<br>0.002     |
|  | No      | 46                | 27.7 | 53      | 31.9 | 38   | 22.9 | 14       | 8.4  | 15     | 9.0  | 166   | 100 |                     |
| Hobbies                                  | Yes     | 40                | 39.6 | 49      | 48.5 | 7    | 6.9  | 4        | 4.0  | 1      | 1.0  | 101   | 100 | 39.675<br>0.000     |
|  | No      | 32                | 17.8 | 62      | 34.4 | 43   | 23.9 | 25       | 13.9 | 18     | 10.0 | 180   | 100 |                     |
| Watching films                           | No      | 29                | 33.7 | 35      | 40.7 | 10   | 11.6 | 8        | 9.3  | 4      | 4.7  | 86    | 100 | 6.805<br>0.147      |
|  | Yes     | 43                | 22.1 | 76      | 39.0 | 40   | 20.5 | 21       | 10.8 | 15     | 7.7  | 195   | 100 |                     |
| Types of films                           | Cartoon | 43                | 32.1 | 62      | 46.3 | 21   | 15.7 | 7        | 5.2  | 1      | .7   | 134   | 100 | 74.970<br>0.000     |
|  | Action  | 1                 | 1.6  | 14      | 22.6 | 19   | 30.6 | 14       | 22.6 | 14     | 22.6 | 62    | 100 |                     |
| Smoking                                  | No      | 72                | 25.6 | 111     | 39.5 | 50   | 17.8 | 29       | 10.3 | 19     | 6.8  | 281   | 100 | -                   |
|  | Yes     | 0                 | .0   | 0       | .0   | 0    | 0    | .0       | 0    | .0     | 0    | 0     | .0  |                     |
| Addict drugs                             | No      | 72                | 25.6 | 111     | 39.5 | 50   | 17.8 | 29       | 10.3 | 19     | 6.8  | 281   | 100 | -                   |
|  | Yes     | 0                 | .0   | 0       | .0   | 0    | 0    | .0       | 0    | .0     | 0    | 0     | .0  |                     |
| Parents addict drugs                     | No      | 72                | 26.1 | 111     | 40.2 | 49   | 17.8 | 28       | 10.1 | 16     | 5.8  | 276   | 100 | 25.130<br>0.000     |
|  | Yes     | 0                 | .0   | 0       | .0   | 1    | 20.0 | 1        | 20.0 | 3      | 60.0 | 5     | 100 |                     |
| Psychological diseases in family members | No      | 71                | 25.8 | 110     | 40.0 | 50   | 18.2 | 27       | 9.8  | 17     | 6.2  | 275   | 100 | 11.640<br>0.020*    |
|  | Yes     | 1                 | 16.7 | 1       | 16.7 | 0    | .0   | 2        | 33.3 | 2      | 33.3 | 6     | 100 |                     |
| Physically abused                        | No      | 70                | 37.4 | 90      | 48.1 | 19   | 10.2 | 6        | 3.2  | 2      | 1.1  | 187   | 100 | 113.449             |

|  |     |    |      |    |      |    |      |    |      |    |      |     |     |         |
|--|-----|----|------|----|------|----|------|----|------|----|------|-----|-----|---------|
|  | Yes | 2  | 2.1  | 21 | 22.3 | 31 | 33.0 | 23 | 24.5 | 17 | 18.1 | 94  | 100 | 0.000   |
| Physical, verbal aggression between family members | No  | 65 | 40.4 | 79 | 49.1 | 12 | 7.5  | 4  | 2.5  | 1  | .6   | 161 | 100 | 106.853 |
|  | Yes | 7  | 5.8  | 32 | 26.7 | 38 | 31.7 | 25 | 20.8 | 18 | 15.0 | 120 | 100 | 0.000   |

Data are presented as frequency (%)

There was statistically significance association between elements of aggression, sub types and elements of aggression and the grades of aggression. Table 5

**Table 5:** The relationships between the elements of aggression of the studied students and their grades of aggression

| Elements of aggression      |     | Aggression grades |      |         |      |      |      |          |      |        |       |       |     | χ <sup>2</sup><br>P value |
|-----------------------------|-----|-------------------|------|---------|------|------|------|----------|------|--------|-------|-------|-----|---------------------------|
|                             |     | No                |      | Minimal |      | Mild |      | Moderate |      | Severe |       | Total |     |                           |
|                             |     | N                 | %    | N       | %    | N    | %    | N        | %    | N      | %     | N     | %   |                           |
| Verbal aggression           | No  | 72                | 91.1 | 7       | 8.9  | 0    | .0   | 0        | .0   | 0      | .0    | 79    | 100 | 248.548                   |
|                             | Yes | 0                 | .0   | 104     | 51.5 | 50   | 24.8 | 29       | 14.4 | 19     | 9.4   | 202   | 100 | 0.000                     |
| Shout                       | No  | 72                | 86.7 | 6       | 7.2  | 3    | 3.6  | 1        | 1.2  | 1      | 1.2   | 83    | 100 | 230.990                   |
|                             | Yes | 0                 | .0   | 105     | 53.0 | 47   | 23.7 | 28       | 14.1 | 18     | 9.1   | 198   | 100 | 0.000                     |
| Curses                      | No  | 72                | 29.4 | 106     | 43.3 | 42   | 17.1 | 18       | 7.3  | 7      | 2.9   | 245   | 100 | 77.390                    |
|                             | Yes | 0                 | .0   | 5       | 13.9 | 8    | 22.2 | 11       | 30.6 | 12     | 33.3  | 36    | 100 | 0.000                     |
| Impulsive                   | No  | 72                | 31.4 | 108     | 47.2 | 36   | 15.7 | 11       | 4.8  | 2      | .9    | 229   | 100 | 137.666                   |
|                             | Yes | 0                 | .0   | 3       | 5.8  | 14   | 26.9 | 18       | 34.6 | 17     | 32.7  | 52    | 100 | 0.000                     |
| Threatens                   | No  | 72                | 25.6 | 111     | 39.5 | 50   | 17.8 | 29       | 10.3 | 19     | 6.8   | 281   | 100 | -                         |
|                             | Yes | 0                 | .0   | 0       | .0   | 0    | 0    | .0       | 0    | .0     | 0     | 0     | .0  | -                         |
| Aggression against property | No  | 72                | 55.4 | 48      | 36.9 | 6    | 4.6  | 3        | 2.3  | 1      | .8    | 130   | 100 | 135.547                   |
|                             | Yes | 0                 | .0   | 63      | 41.7 | 44   | 29.1 | 26       | 17.2 | 18     | 11.9  | 151   | 100 | 0.000                     |
| Slams door                  | No  | 72                | 38.3 | 62      | 33.0 | 36   | 19.1 | 13       | 6.9  | 5      | 2.7   | 188   | 100 | 62.841                    |
|                             | Yes | 0                 | .0   | 49      | 52.7 | 14   | 15.1 | 16       | 17.2 | 14     | 15.1  | 93    | 100 | 0.000                     |
| Throws objects down         | No  | 72                | 35.8 | 98      | 48.8 | 18   | 9.0  | 10       | 5.0  | 3      | 1.5   | 201   | 100 | 123.493                   |
|                             | Yes | 0                 | .0   | 13      | 16.3 | 32   | 40.0 | 19       | 23.8 | 16     | 20.0  | 80    | 100 | 0.000                     |
| Breaks object               | No  | 72                | 30.0 | 106     | 44.2 | 43   | 17.9 | 17       | 7.1  | 2      | .8    | 240   | 100 | 123.570                   |
|                             | Yes | 0                 | .0   | 5       | 12.2 | 7    | 17.1 | 12       | 29.3 | 17     | 41.5  | 41    | 100 | 0.000                     |
| Sets fires                  | No  | 72                | 25.6 | 111     | 39.5 | 50   | 17.8 | 29       | 10.3 | 19     | 6.8   | 281   | 100 | -                         |
|                             | Yes | 0                 | .0   | 0       | .0   | 0    | 0    | .0       | 0    | .0     | 0     | 0     | .0  | -                         |
| Auto aggression             | No  | 72                | 35.8 | 81      | 40.3 | 27   | 13.4 | 13       | 6.5  | 8      | 4.0   | 201   | 100 | 54.547                    |
|                             | Yes | 0                 | .0   | 30      | 37.5 | 23   | 28.8 | 16       | 20.0 | 11     | 13.8  | 80    | 100 | 0.000                     |
| Picks or scratches skin     | No  | 72                | 35.5 | 82      | 40.4 | 28   | 13.8 | 13       | 6.4  | 8      | 3.9   | 203   | 100 | 53.864                    |
|                             | Yes | 0                 | .0   | 29      | 37.2 | 22   | 28.2 | 16       | 20.5 | 11     | 14.1  | 78    | 100 | 0.000                     |
| Bangs head                  | No  | 72                | 26.9 | 110     | 41.0 | 47   | 17.5 | 25       | 9.3  | 14     | 5.2   | 268   | 100 | 32.978                    |
|                             | Yes | 0                 | .0   | 1       | 7.7  | 3    | 23.1 | 4        | 30.8 | 5      | 38.5  | 13    | 100 | 0.000                     |
| Inflicts minor cuts         | No  | 72                | 25.7 | 111     | 39.6 | 50   | 17.9 | 29       | 10.4 | 18     | 6.4   | 280   | 100 | 13.839                    |
|                             | Yes | 0                 | .0   | 0       | .0   | 0    | .0   | 0        | .0   | 1      | 100.0 | 1     | 100 | 0.008*                    |
| Inflicts major injury       | No  | 72                | 25.6 | 111     | 39.5 | 50   | 17.8 | 29       | 10.3 | 19     | 6.8   | 281   | 100 | -                         |
|                             | Yes | 0                 | .0   | 0       | .0   | 0    | .0   | 0        | .0   | 0      | .0    | 0     | .0  | -                         |
| Physical aggression         | No  | 72                | 59.5 | 49      | 40.5 | 0    | .0   | 0        | .0   | 0      | .0    | 121   | 100 | 169.372                   |
|                             | Yes | 0                 | .0   | 62      | 38.8 | 50   | 31.3 | 29       | 18.1 | 19     | 11.9  | 160   | 100 | 0.000                     |
| Makes menacing gestures     | No  | 72                | 52.6 | 51      | 37.2 | 7    | 5.1  | 5        | 3.6  | 2      | 1.5   | 137   | 100 | 122.842                   |
|                             | Yes | 0                 | .0   | 60      | 41.7 | 43   | 29.9 | 24       | 16.7 | 17     | 11.8  | 144   | 100 | 0.000                     |
| Strikes pushes              | No  | 72                | 33.3 | 110     | 50.9 | 24   | 11.1 | 7        | 3.2  | 3      | 1.4   | 216   | 100 | 161.166                   |
|                             | Yes | 0                 | .0   | 1       | 1.5  | 26   | 40.0 | 22       | 33.8 | 16     | 24.6  | 65    | 100 | 0.000                     |
| Attacks mild injury         | No  | 72                | 28.0 | 111     | 43.2 | 48   | 18.7 | 19       | 7.4  | 7      | 2.7   | 257   | 100 | 115.950                   |
|                             | Yes | 0                 | .0   | 0       | .0   | 2    | 8.3  | 10       | 41.7 | 12     | 50.0  | 24    | 100 | 0.000                     |
| Attacks serious injury      | No  | 72                | 25.7 | 111     | 39.6 | 50   | 17.9 | 29       | 10.4 | 18     | 6.4   | 280   | 100 | 13.839                    |
|                             | Yes | 0                 | .0   | 0       | .0   | 0    | .0   | 0        | .0   | 1      | 100.0 | 1     | 100 | 0.008*                    |

Data are presented as frequency (%)

Table 6 Shows the predictors of aggressive behavior among studied students using Stepwise regression analysis. It revealed that total verbal aggression, aggression against

property, auto aggression and total physical aggression considered significant predictors for aggressive behavior with effect of 98.3%.

**Table 6:** The predictors of aggressive behavior among studied students using Stepwise regression among studied students

| Predictors of aggressive behavior | Coefficients <sup>a</sup>   |            |                           |  | T      | Sig.  |
|-----------------------------------|-----------------------------|------------|---------------------------|--|--------|-------|
|                                   | Unstandardized Coefficients |            | Standardized Coefficients |  |        |       |
|                                   | B                           | Std. Error | Beta                      |  |        |       |
| Total verbal aggression           | 1.347                       | 0.087      | 0.197                     |  | 15.532 | 0.000 |
| Total aggression against property | 1.865                       | 0.080      | 0.280                     |  | 23.348 | 0.000 |
| Total auto aggression             | 2.710                       | 0.132      | 0.179                     |  | 20.574 | 0.000 |
| Total physical aggression         | 3.716                       | 0.094      | 0.519                     |  | 39.437 | 0.000 |



## Discussion

Aggressive behavior displayed by individuals is a major obstacle to social integration whether it be in terms of having access to certain residential settings, educational and occupational programs or general social acceptability.

The current study revealed that 74.4% of studied students showed aggression, also high degree of all types of aggression and their sub types with statistically significance association between elements of aggression and grades of aggression, that was similar to Potirniche *et al.*,<sup>[9]</sup> in Constanta, Romania which reported that 78% of studied students believed that aggression is present in their school.

While the percentage was lower than that reported by Elmasry *et al.*,<sup>[10]</sup> in Sharkia, Egypt, the results revealed that nearly 98.7% of the students were aggressive regarding both physical and verbal aggression.

On the other hand, in the current study the level of aggression among studied students was lower than that found by Nansel *et al.*<sup>[11]</sup>, where aggression was varied from 5 to 54% across countries with an average of 29.9%.

In the current study the most prevalent type of aggressive behavior was verbal (71.9%) this agrees with those of Crocker *et al.*,<sup>[12]</sup> who found that the most prevalent type of aggressive behavior was verbal (37.5%).

The present study, males were significantly more aggressive than female. This finding coincides with that of Cherghi and Piskin,<sup>[13]</sup> also, agreed with that of Tang *et al.*,<sup>[14]</sup>

The current study medium order students were more aggressive than other birth orders which coincides with Leman,<sup>[15]</sup> in United States of America who found that the older sibling is usually stronger and smarter than the middle child.

In the current study, age and types of school regarding severity of aggression between students were not a significant risk factor for aggression in children. This finding differs from that of Karriker-Jaffe *et al.*,<sup>[16]</sup> which determined that aggression peaked between ages 13-14 years. Also coincides with that of Elmasry *et al.*,<sup>[10]</sup> in Sharkia, Egypt found that school type isn't a significant risk factor for aggression.

In the present study students who perceived the school atmosphere as poor and whose parents were divorced and those who were having poor relationships with their parents were more aggressive. This agreed with the study of Henery *et al.*,<sup>[17]</sup> in Durham and Richmond about the influence of school level variables on aggression. On the other hand, the study of Elmasry *et al.*,<sup>[10]</sup> in Sharkia, Egypt found that there is a strong association between aggression and academic failure. Also consistent with those of Lopez *et al.*,<sup>[18]</sup> in Valencia (Spain) who suggested that a positive family environment seems to be a stronger protective factor for children in the development of problems of behavior at school. As well as Farrington,<sup>[19]</sup> in Penn State who found single parent households are at greater risk factor for aggressive behavior.

The current study found that the percentages of aggressive students with poor relationships to their teachers and their friends were more. This finding is consistent with that of Dodge *et al.*,<sup>[20]</sup>. This finding differs from that of Baron and Hartnagel<sup>[21]</sup>; Larsen *et al.*,<sup>[22]</sup> in Canada stated that the aggressive students is less likely to be susceptible to teachers and friends influence, because the children has already established a habit of aggression.

Also, the current study found that percentages of students living in big family had higher aggression rate. Children who either witness or experience domestic aggression is more likely to behave aggressively towards others in

schools which agreed with Radford *et al.*,<sup>[23]</sup> in United Kingdom.

The current study showed that children who's their parents addict drugs showed higher percentages of aggression, also there was a statistically significant difference between aggression and personal history of physical abuse among students.

The current study coincides with Duke *et al.*,<sup>[24]</sup> in Minnesota Student Survey revealed that childhood physical abuse was significantly related to delinquent behaviors and violence and suicidal attempts. Also, coincides with that of Afifi *et al.*,<sup>[25]</sup> in Beni Suef, Egypt which revealed that both assault and more serious physical abuse are related to major depression, substance use disorder, contact disorder and antisocial disorders.

According to the current study, students who watch action movies are significantly more aggressive than who watch cartoon films also that aggressive students who did not play sport nor had hobbies were significantly high. This agree with Huesmann *et al.*,<sup>[26]</sup> in the Chicago area who found children exposure to media violence predicted aggressive behavior in later life for both males and females.

The current study found that the presence of physical abuse in the family was a strong risk factor of aggressive behavior. This agreed with Sternberg *et al.*,<sup>[27]</sup> and Tippett & Wolke,<sup>[28]</sup> who found that Poor relationships with parents and harsh parenting behavior predicted greater aggression.

Stepwise regression analysis of the risk factors of aggression in the present study revealed that; total verbal aggression, total aggression against property, total auto aggression and total physical aggression for measuring aggression considered significant predictors for aggressive behavior among school students with effect of 98.3%.

However, Smithmyer *et al.*,<sup>[29]</sup> through Stepwise multiple regression analysis revealed that the levels of aggression were mainly associated (73.2% of the explained variance) with the following protective factors: the ability to manage emotions as a component of emotional intelligence (EI), and perspective-taking and personal distress as components of empathy, and with the following risk factors: negative and positive urgency as a component of impulsivity, fantasy as a component of empathy, negative affect, and expressive suppression of emotions.

It was recommended that in depth root analysis study will be needed to study all aspects of causes and risk factors of aggressive behavior among school students, establishment of committee with the function structure group related to all aspect of aggressive behavior as public health policy makers, teachers, economists, sociologists, physiologists, psychiatrists, public health and public leaders to make a plane related to prevention and management of aggressive behavior among school children based upon root analysis study.

## Conclusions

The problem of aggressive behavior among primary school children in rural areas (Eshnaway village) is highly prevalent (74.4%). Total verbal aggression, aggression against property, auto aggression and total physical aggression for measuring aggression were considered significant predictors for aggressive behaviors among study group.

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**Conflict of Interest**

Nil

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