

Role of Bullying in Predicting Social Skills among Preschool Children

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Abstract

Background: Bullying is complex social phenomenon and inherently inflicts harm or distress on targeted preschool children includes physical, psychological, social, and educational harm. **Aim of the study:** The aim of the present study was to assess role of bullying in predicting social skills among preschool children. **Subjects and method: Research design:** A descriptive design was used to conduct the present study. **Setting:** The present study was conducted at four governmental nursery schools in Zagazig city. **Subjects:** 165 child were selected by using a multistage cluster sampling technique. **Tools of data collections:** Data were collected by using an interview questionnaire sheet composed of three parts: Socio-demographic data, a standardized bullying pictorial scale for kindergarten child, and a standardized social skills pictorial scale. **Results:** The study results revealed that the prevalence of bullying among preschool children was 33, 3% and more common among male children. Also, 70.9% of children had high social skills. Additionally, Female gender, good relations with siblings, father education, mother education, and social skills score were statistically significant negative predictors of the bullying score. Furthermore, female gender, good relations with siblings, mother age, and live with both parents were a statistically significant positive predictors of children's social skills score. **Conclusion:** The study concluded that bullying was a statistically significant negative predictor of children's social skills. **Recommendations:** it is recommended that behavioral skills training programs to preschool children to prevent and address the risk factors of bullying behavior.

Key words: Bullying, predicting social skills, and preschool children.

Introduction

Bullying in childhood is a major public health problem that increases the risk of poor health, social and educational outcomes in childhood and adolescence. Additionally, bullying is a behavioral phenomenon that has attracted the attention of educators and policy makers in many parts of the world in recent years. Bullying is a situation which is characterized by intentional direct or indirect abuse, made repetitively, by one or more individuals against one or more peers.⁽¹⁾

Bullying may take many forms, which are typically categorized as direct or indirect. Forms of direct bullying include physical such as pushing, kicking, and hitting or verbal actions such as repeated derogatory remarks and name-calling used to hurt or humiliate the victim. In contrast, indirect forms of bullying are not

always carried out in front of the victim, and often include social exclusion.⁽²⁾

Social skills are highly important for a sustainable social life. Children with advanced social skills become more successful in communicating with people, meeting the requirements of social life, participating in social environments, and complying with the environment. On the other hand, children who fail in acquiring social skills that would enable them to successfully sustain the friendships have a number of social and emotional risks like being rejected by their peers.⁽³⁾

Bullying children are characterized by inadequacy in social skills, have poor interpersonal relations; are unable to empathize with others or control their negative emotions.⁽⁴⁾ Childhood bullying can lead to social

isolation and exclusion in adulthood. The implications of such a claim are critical to note, because social isolation is often a gateway to many other more severe relational and psychological problems.⁽⁵⁾

Researchers, educators, psychologists, program developers, and other professionals who work with children are emphasizing the importance of initiating preventative efforts earlier, during the preschool years.⁽⁶⁾ Additionally, community health nurses play a critical role for the prevention, early detection, and management of bullying behavioral problems in children. Also may help children and their parents in various ways, such as identifying a particular issue by appropriate background and detecting responsible causal factors and encouraging parents and teachers to improve the environment at home, school and community.⁽⁷⁾

Significance of the study:

Bullying has been conceptualized as a major social interaction problem that has a negative effect on the well-being of children which including their physical, emotional and general health, and educational outcomes.⁽⁸⁾ The prevalence researches on school bullying worldwide showed that 32% of children were involved in bullying.⁽⁹⁾ Additionally, 77.8% in rural Egypt.⁽¹⁰⁾ So the early detecting of bullying among young children is necessary to prevent social and behavioral developmental problems.⁽¹¹⁾

Aim of the study:

Assess role of bullying in predicting social skills among preschool children.

Research Questions:

1. What is the prevalence of the bullying among preschool children?

2. What are the categories of social skills among preschool children?
3. What is the role of bullying in predicting social skills among preschool children?

Subjects and methods:

Research design:

A cross-sectional descriptive research design was used to accomplish the aim of this study.

Study setting:

The present study was conducted at four governmental nursery schools in Zagazig city. These nursery schools were Al-Shahid Tayar Ibrahim Ali Al-Hadad, Al-Nakaria Al-Hadetha, Sfita 2 and Abd-Alla Abd-Alaziz nursery school, which were randomly selected from two educational zones available in Zagazig city.

Study subjects:

The existing study enrolled 165 preschool child, who were recruited from the above mentioned nursery schools according to the following inclusion criteria:

- Age from 5 to less than 6 years.
- Free from mental and physical disability or chronic diseases that might interfere with child behaviors.

Sample size calculation:

The sample size is estimated to determine the prevalence of any bullying behavior of 54.9% or more, with a 8% absolute precision and a 95% level of confidence Using the sample size calculation for a single proportion (Open-Epi), the estimated sample size is 149 child. After adjustment for a non-response rate of about 10%, it will be increased to 165 child.

Tools of data collection:

One tool was used to carry out the present study. **Tool I: a structured interview questionnaire** which consisted of three parts;

Part 1: Socio-demographic data: it involved two parts; child data such as; age, gender, birth order, the child relation with mother and father, the child relation with sisters, etc. Family data such as; parents age, educational level, occupation, family size, etc.

Part 2: A standardized Bullying pictorial scale for kindergarten child⁽¹²⁾:

It was used in order to measure bullying behavior among children aged 5-6 years. As it is measured bullying among preschool children helps a specialist to develop a positive behavior and reduce negative behavior. This scale was included 27 pictures that measured bullying behavior and it covered three domains and each domain involved number of pictures:

- Indirect domain consisted of 10 pictures.
- Verbal domain composed of 4 pictures.
- Physical domain involved of 13 pictures.

Scoring system:

Bullying: For each item, a correct response was scored 1 and the incorrect zero. For each area of bullying and for the total scale, the scores of the items were summed-up. The child was considered non-bully if the total score of each area and for the total scale was zero, otherwise he/she was considered bully.

Part 3: A standardized social skills pictorial scale⁽¹³⁾: Included 22 pictures that measured social skills and it covered four domains and each domain included number of pictures:

- Cooperation skill domain consisted of 6 pictures.
- Empathy skill domain composed of 5 pictures.
- Social interaction with adult skill domain involved of 6 pictures.
- Order skill domain included of 5 pictures.

Scoring system:

Social skills: For each item, a correct response was scored 1 and the incorrect zero. For each skill and for the total scale, the scores of the items were summed-up and the total divided by the number of the items, giving a mean score for the part. The child was considered to have high social skill if the score was higher than the corresponding mean, otherwise he/she was considered to have low cognitive skill.

Content validity& Reliability:

The tool was revised by two experts in the field of community health nursing and community medicine, where the panel reviewed the tools connects for relevance, clarity, comprehensiveness, and understandability.

The reliability of this tool was tested through measuring its internal consistency. Internal Consistency Coefficient Alpha (Cronbacks): The internal consistency of the tool was, 87.

Pilot study:

The pilot study was carried out on a sample of 16 children representing 10% of the calculated total sample size. The aim was to test clarity of the questions, the format of the questionnaire, comprehensiveness of the items and to estimate the exact time required for filling the questionnaire sheet. The children involved in the pilot study were excluded from the main study sample, since there was no modification in the tools of data collection.

Fieldwork

Once permission was granted to proceed with the study, the researcher met with each director of the selected nursery schools, explained the study aim and procedures, as well as the data collection forms. The researcher asked the directors to seek the permission of the parents of the selected children to participate in the

study. Then, the researcher set a schedule for data collection in collaboration with the director of each nursery school. The researcher spent some time with children before the actual data collection procedure to be familiar with the researcher.

After that, the researcher spent some time with each child to fill bullying and social skills questionnaire sheet at the nursery school class or play garden. The needed time for tool of data collection for each child was about 15-20 minutes. At the end of the day, at leaving time, the researcher met with the children's parents at the nursery school director's office and asked them to fill out the socio-demographic data. The researcher stayed with the parents to answer any specific questions that arose during completing the data. It required 5 to 10 minutes. The researcher went to the nursery schools 3 days per week from 8 AM to 12 PM. The field work was carried out within the period of around one and half month, starting from the mid of October 2020 to the mid of December 2020.

Administrative and ethical considerations:

The official permission was obtained from the Education Directorate at Zagazig city based on letters issued from the postgraduates department at Faculty of Nursing, Zagazig University explaining the aim and procedures of the study. Then, the director of West and East administration referred the researcher to the directors of the selected nursery schools with approval letters. Then the researcher met with each of them and explained the aim of the study and the nature of tool used for data collection. The researcher gave the director of each nursery school a copy of the tool and formal letters.

Firstly, the research protocol was approved by the Research Ethics Committee (REC) in faculty of Nursing, Zagazig University. The agreement of participants was taken from parents

after full explanation of the aim of the study. Participants were given the opportunity to refuse participation and they were notified that they could withdraw at any time of the data collection interviews; also they were assured that the information would be confidential and used for the research purpose only. The researcher assure maintaining anonymity and confidentiality of the children's data.

Statistical analysis:

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. This latter serves to indicate the dispersion of the variable data points around the median. Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Qualitative categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. In larger than 2x2 cross-tables, no test could be applied whenever the expected value in 10% or more of the cells was less than 5. Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of bullying and social skills scores, multiple linear regression analysis was used and analysis of variance for the full regression models was done. Statistical significance was considered at p-value <0.05.

Results:

Table 1 clarifies that 61.8 % of the study sample was at age group 5.0-<5.5 years, with Mean±SD equal 5.4±0.3. As for gender, 53.9% of them were males, and 98.2% of children

were the second child, with Mean±SD equal 3.1±0.9.

Table 2 demonstrates that 64.2% of fathers of the study sample were at age group less than 40 years, with Mean±SD equal 37.7±5.9. About two thirds (65.5%) of fathers had basic and intermediate educational level, and 37.6% of them were workers. Whereas, 67.9% of mothers of the study sample were at age group less than 35 years, with Mean±SD equal 32.4±5.3. Also 70.3% of mothers had basic and intermediate educational level, and 83.0% of them were housewives.

Table 3 shows that 97.0% of the study sample were residing in rural area, and family size was equal 5 to 6 members among 66.7% of them, with Mean±SD equal 4.9±1.0. About two thirds of study sample (62.4%) had sufficient income. Majority of children (93.3%) were living with both parents.

Figure 1 illustrates that about one-third (33.3%) of the study sample were characterized by bullying.

Figure 2 illustrates the types of bullying behavior. The most frequent bullying were indirect (50.9%), then physical bullying (45.5%), and the least frequent one was verbal (39.4%).

Figure 3 portrays the total social skills among children in the study sample, 70.9% of children had high social skills.

Figure 4 shows the descending order of social skills as follow, order skill (75.2%), cooperation skill (69.1%), emotional participation skill (65.5%), and interaction skill with adults (52.1%).

Table 4 displays best fitting multiple linear regression model for the bullying score. It indicates that female gender, good relations with siblings, father education, mother education, and social skills score were a

statistically significant negative predictors of the bullying score. The model explains 0.57% of the variation in this score as the value of r- square indicates.

Table 5 represents best fitting multiple linear regression model for the social skills score (excluding bullying). It indicates that female gender, good relations with siblings, mother age, and live with both parents were a statistically significant positive predictors of children's social skills score. The model explains 0.29% of the variation in this score as the value of r- square indicates.

Discussion:

Concerning answering of the research question regarding the prevalence of bullying among preschool children, the current study results revealed that around one third of study sample characterized by bullying. This might be attributed to environmental condition, inappropriate disciplinary strategies, and mass media play an important role in acquiring abnormal behavior. In the same vein, a study conducted in Turkish by **Tanrikulu**.⁽¹⁴⁾ found that one third of the children were involved in bullying. Similarly, **Repo**.⁽¹⁵⁾ carried out a study in Finland clarified that the prevalence of bullying less than one quarter. Additionally, **Jansen et al.**⁽¹⁶⁾ in Netherlands indicated that one third of study sample had bullying.

Concerning **types** of bullying behavior exhibited among children, the results of the present study revealed that about half of studied children characterized by indirect bullying. Indirect or social bullying is one of the most damaging types of bullying among children, may consist of actions designed to inflict psychological harm on the targeted victim. **Jeffrey and Stuart**.⁽²⁾ clarified that the example of indirect bullying include spreading rumors about the victim and telling peers ignore or not to be friends with victims.

This result was consistent with those of a study conducted by **Repo.**⁽¹⁵⁾ in Finland showed that the most common form of bullying was exclusion from peer relationships. Similarly, a study conducted in Greece by **Vlachou et al.**⁽¹⁷⁾ found that slightly than half of children reported being indirect bullying.

The present study results showed that slightly less than half of studied children demonstrated physical bullying, followed by about one-third of them demonstrated verbal bullying. The explanation of these phenomena might be due to children from abusive homes are more likely to bully than other children because aggression and violence modeled for them. On the other hand, permissive parents do not established rules for their children. Lack of relationships between the child and parents can create all types of issues including bullying behavior.

On the other hand, **Douvlos.**⁽¹⁸⁾ in Bulgaria found that the most typical forms of bullying in preschool education settings are physical aggressiveness. Additionally, a study conducted by **Rose et al.**⁽¹⁹⁾ stated that research findings in Midwestern community revealed that the majority of bullying for preschool children was physical bullying. This might be attributed to cultural discrepancies.

Concerning **factor positively affecting** bullying, regarding gender, the present study findings revealed that bullying among males were more than females, with a statistically significant difference. This might be due to the societal norms and cultural support encourage this concept and attitude. In the same context, a study conducted by **Tanrikulu.**⁽¹⁴⁾ conducted a study in Turkey and **Girard et al.**⁽²⁰⁾ in Quebec revealed that boys are more bullying behavior than girls. Similarly, **Vries et al.**⁽²¹⁾ in Rotterdam found that boys are at higher risk for

being involved in bullying than girls. As well, **Verlinden-Bondaruk.**⁽²²⁾ in Netherlands found that preschool boys had higher bullying behavior than preschool girls.

Concerning **factors negatively affecting** bullying, good relations with siblings was a statistically significant independent negative predictor of children's bullying score. This might be attributed to siblings relations provide an important context for the development of children's understanding of their social, emotional, moral and cognitive world. In particular siblings play an important role in the development of children's understanding of other minds and emotions, namely their understanding of emotions, thoughts and beliefs.

This result was corresponded with **Heinrich.**⁽²³⁾ in London stated that positive sibling relationships have been shown to be protective for a variety of adverse events, which including behavioral problems. Additionally, a study conducted by **Wolke et al.**⁽²⁴⁾ in Coventry, United Kingdom found that positive siblings interactions can help with the acquisition of skills that are important in cognitive development, provide emotional support and prevent bullying behavior.

The current study results indicated that father and mother education were a statistically significant independent negative predictor of children's bullying score. This result might be due to that parents educational level play an important role through its impact on behavior and lifestyle of children. Additionally, parents educational level reflected general and specific knowledge, and all aspects that could be related to child raising behavior and consequently lead to reduced bullying behavior.

This result is in agreement with **Sandstorm and Huerta.**⁽²⁵⁾ conducted

a study in California and found that a parents with less than a high school significantly predicted bullying in preschool age children. Similarly, **Jansen et al.**⁽¹⁶⁾ in Netherlands reported that low educational level of parents were independently associated with the risk of children being bullies or bully-victims.

Regarding answering of the research question about the categories of social skills among preschool children, the current study results showed that slightly more than two thirds of preschool children had high social skills. From the researcher point of view, this might be due to, the tool used to measure the social skills is suitable for that age, contains pictures, stories, and life situation that help children ease to answer. Similarly, **Maleki et al.**⁽²⁶⁾ in Rasht city, Iran found that around two thirds had high social skills.

Concerning **domains of social skills** among children, the current study results revealed that about three quarters of study sample characterized by order skill. This might be due to order is an important aspect in play, social interaction, and academic task performance **Romero-López et al.**⁽³⁾. Order skill is the children ability to coordinate his/her tasks in any public place. This result is in agreement with **Suleiman.**⁽²⁷⁾ in Damascus demonstrated that about three quarters of study sample had order skill.

The present study results clarified that around two thirds of study sample had cooperation skills and about two thirds of children had emotional participation skills. These results might be attributed to these skills are crucial for children's successful participation in school and for their overall growth. Additionally, children's emotional wellbeing during their early years have a powerful effect on their social relationships. On the same way, a

study conducted by **Maleki et al.**⁽²⁸⁾ in Iran showed that around two thirds of children had cooperation skill. Similarly, a study conducted by **Suleiman.**⁽²⁷⁾ in Damascus found that more than one half of study sample had cooperation skill and more than two thirds emotional participation skill.

The current study results demonstrated that slightly more than one half of the study sample had interaction skill with adults. This result might be due to when children interact with adults become secure, confident, and feel safe.

Concerning **factors positively affecting** social skills, regarding gender, the present study results clarified that girls were a statistically significant positive predictor in social skills score of children. This finding might be contributed to the fact that gender differences likely reflect societal expectations. In Arabian societies, female children are expected to identify themselves more with the motherhood role and be more cooperative in household tasks than boys. They are also expected to be more submissive, kind, gentle, responsive, empathic, and prosocial than boys from the very earliest age.

In the same vein, a study conducted by **González et al.**⁽²⁹⁾ in Chile revealed that boys displayed significantly more difficulties in their social skills when compared to girls. Similarly, a study conducted by **Tersia and Matsouka.**⁽³⁰⁾ In Greece found that female kindergarteners rated as having higher total social skills. As well, **zaki et al.**⁽³¹⁾ in Egypt illustrated that girls had higher levels of social skills than boys with a statistically significant difference. Similarly, **Ozyurek.**⁽³²⁾ in Karabuk found that there was a significant difference between the gender and social skills in favor of girls and the scores of girls were significantly higher than all the scores of boys. Additionally, **Takahashi et al.**⁽³³⁾ in Japan who

reported that girls have higher social skills than boys.

The current study results clarified that good relations with siblings was a statistically significant independent positive predictor of social skills score. The rationale of this result might be due to that positive sibling relationships influence children's emotional functioning by providing conjoint emotion regulation, offering experiences to develop prosocial skills, and providing a buffer for stress and negative emotions.

This finding was on the same way with **Sang and Nelson**.⁽³⁴⁾ in the Southwestern United States suggested that siblings' influence on children's social skills. Furthermore, **Morgan et al.**⁽³⁵⁾ carried out a study in Pittsburgh and declared that children of good relations with siblings had been found positive social skills and negative bullying scores.

The existing study demonstrated that mother age was a statistically significant independent positive predictor of the social skills score. Possible explanation of such result is believed that older maternal age is associated with positive parental behaviors, including the mother-child bond, which can influence a child's social development. Younger mothers may have less parental skills.

In the same line, **Maleki et al.**⁽²⁸⁾ in Rasht City, Iran showed that a statistically significant association between social skills score and mother's age. Furthermore, this finding was on the same way with **Aryani et al.**⁽³⁶⁾ in Indonesia showed that children of young mothers have risks in emotional and social problems.

On the contrary, a study conducted by **Zaki et al.**⁽³¹⁾ in Egypt revealed that mother age was a negative predictor factor of social skills of children. This result might be due to that younger mother better

understands her children, play and interacts with them, and is more close to them.

According to the present study results, live with both parents was a statistically significant independent positive predictor of social skills score. This result might be attributed to that parents are considered influential forces in the development of children's life skills and the best position for the provision of a reliable evaluation of children's social skills. In the same vein, **Maleki et al.**⁽²⁶⁾ in Rasht city found that live with both parents was a statistically significant independent positive predictor of social skills score. Additionally, **Gerholm et al.**⁽³⁷⁾ in Swedish found that children live with both parents had high social skills.

Concerning answering of the research question regarding the role of bullying in predicting social skills among preschool children, the present study results revealed that bullying was a statistically significant independent negative predictor of children's social skills. This might be due to bullying can have significant negative effects on children, including decrements to individual resources, social relation and wellbeing. Additionally, bullying can influence the self-esteem of children which increasing social isolation, raise withdraw behavior and also make children vulnerable to stress and insecurity feeling.

In the same context, a study conducted in Greece by **Tersia and Matsouka**.⁽³⁰⁾ reported that children with higher bullying showed lower social skills **Lee**.⁽¹¹⁾ in South Korean emphasized that bullies in kindergarten appear low on cooperativeness and prosocial behavior and bullying is associated with low social preferences among young children. Additionally, similar results found by **Tülay and Güler**.⁽⁴⁾ in Zonguldak, Turkey found that children with higher bullying showed lower

social skills. Similarly, **Jenkins et al.**⁽³⁸⁾ in Virginia indicated that aggressive children had lower levels of social skills. Furthermore, this finding was on the same way with **Skalická et al.**⁽³⁹⁾ in Trondheim City, Norway who found negative statistically significant correlation between children's bullying and their social skills.

Conclusion:

According to the findings of the present study, the following concluded:

The study showed that about one third of the study sample characterized by bullying behavior and indirect bullying was the most commonly used by children. Regarding best fitting multiple linear regression model for the bullying, indicated that female gender, good relations with siblings, father education, mother education, and social skills score were a statistically significant negative predictor of the bullying score. On the other hand, more than two thirds of study sample had high social skills and social order more common among children. Concerning best fitting multiple linear regression model for the social skills, indicated that female gender, good

relations with siblings, mother age, and live with both parents were a statistically significant positive predictor of children's social skills score. Finally, the bullying was a statistically significant negative predictor of children's social skills.

Recommendations:

On the basis of the current study findings, the following recommendations are suggested:

- Behavioral skills training programs to preschool children to prevent bullying behavior.
- Further researches should be developed to address the risk factors of bullying behavior.
- Further researches to investigate the other factors that might affect the social skills of preschool children.
- Replicate the study on larger number of children in other settings to permit for generalization of results.

Table 1: Demographic characteristics of children in the study sample (n=165)

Items	Frequency	Percent
Age:		
5.0-<5.5	102	61.8
5.5-6.0	63	38.2
Range	5.0-6.0	
Mean±SD	5.4±0.3	
Median	5.40	
Gender:		
Male	89	53.9
Female	76	46.1
Birth order:		
1	3	1.8
2+	162	98.2
Range	1-4	
Mean±SD	3.1±0.9	
Median	3.0	

Table 2: Parents' characteristics of children in the study sample (n=165)

Items	Frequency	Percent
Father age:		
<40	106	64.2
40+	59	35.8
Range	25.0-60.0	
Mean±SD	37.7±5.9	
Median	37.0	
Father education:		
None	23	13.9
Basic/intermediate	108	65.5
University	34	20.6
Father job:		
Worker	62	37.6
Employee	41	24.8
Self-employed	62	37.6
Mother age:		
<35	112	67.9
35+	53	32.1
Range	22.0-50.0	
Mean±SD	32.4±5.3	
Median	31.0	
Mother education:		
None	11	6.7
Basic/intermediate	116	70.3
University	38	23.0
Mother job:		
Housewife	137	83.0
Working	28	17.0

Table 3: Family characteristics of children in the study sample (n=165)

Items	Frequency	Percent
Residence:		
Rural	160	97.0
Urban	5	3.0
Family size:		
<5	55	33.3
5+	110	66.7
Range	3-10	
Mean±SD	4.9±1.0	
Median	5.0	
Family income:		
Insufficient	56	33.9
Sufficient	103	62.4
Saving	6	3.6
Live with:		
Both parents	154	93.3
One parent	10	6.1
Relatives	1	0.6
Live with both parents:		
No	11	6.7

Yes	154	93.3
Parents separated	1	100.0

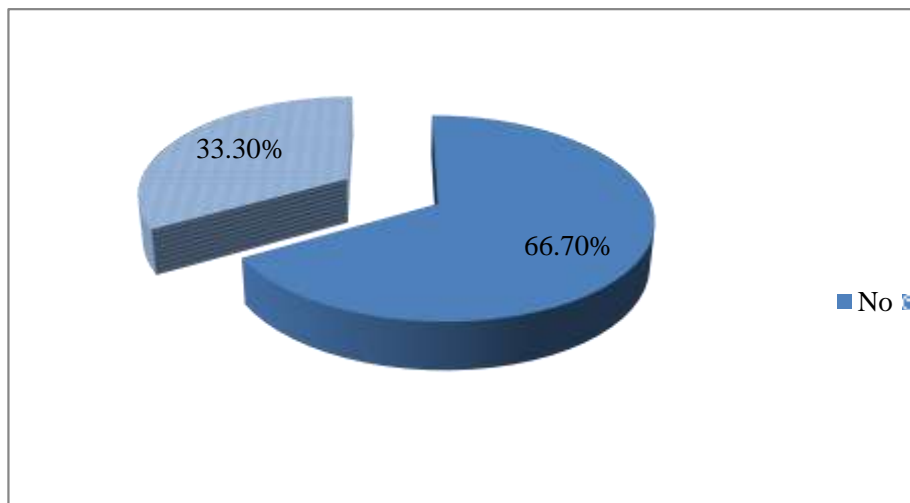


Figure 1: Prevalence of bullying among children in the study sample (n=165)

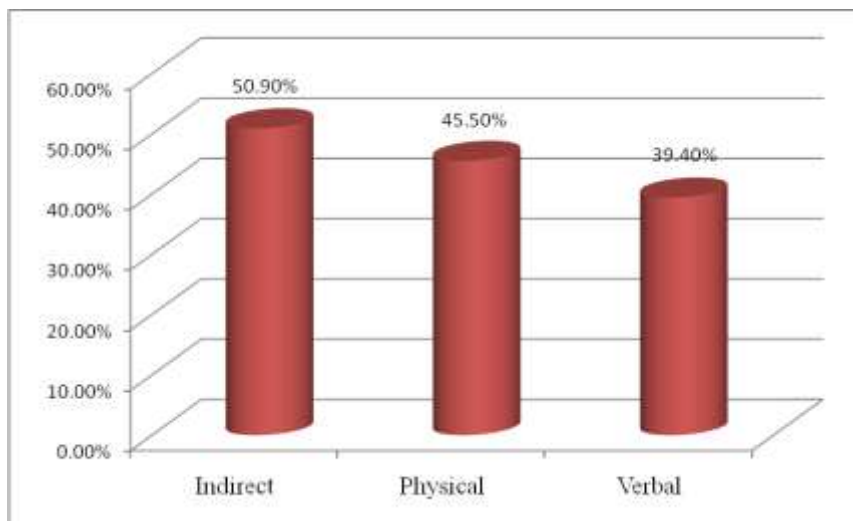


Figure 2: Types of bullying among children in the study sample (n=165)

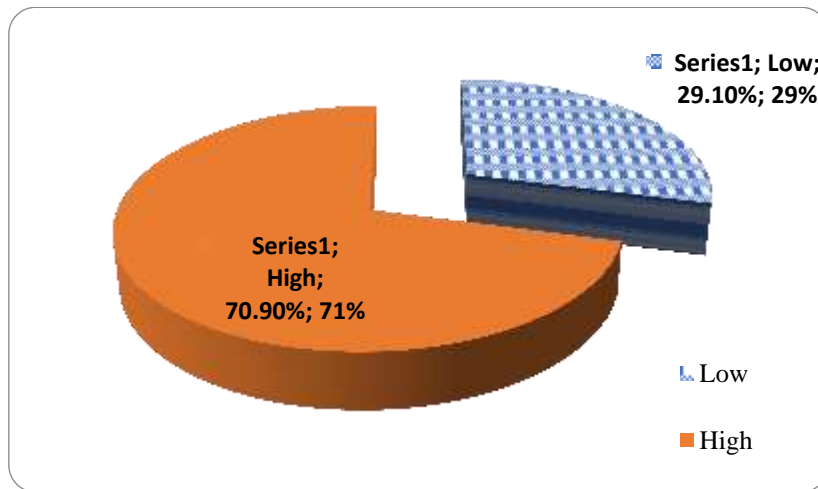


Figure 3: Total social skills among children in the study sample (n=165)

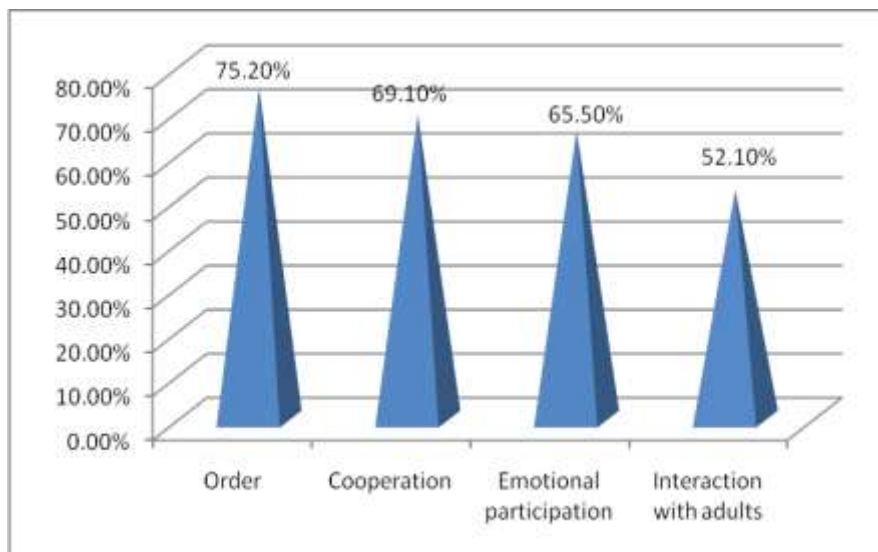


Figure 4 : Categories of social skills among children in the study sample (n=165)

Table 4: Best fitting multiple linear regression model for the bullying score

Items	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	33.30	3.02		11.039	<0.001	27.34	39.26
Female gender	-1.61	0.61	-0.14	2.622	0.010	-2.82	-0.40
Good relations with siblings	-4.32	0.83	-0.32	5.187	<0.001	-5.97	-2.68
Father education	-1.46	0.41	-0.22	3.547	0.001	-2.28	-0.65
Mother education	-1.16	0.53	0.14	2.194	0.030	0.12	2.19
Social skills score	-0.79	0.09	-0.51	8.477	<0.001	-0.97	-0.60

r-square=0.57

Model ANOVA: F=43.40, p<0.001

Variables entered and excluded: age, close friends, living with both parents, play preferences, parents' age and job, residence, family size, residence, and income

Table 5: Best fitting multiple linear regression model for the social skills score.

Items	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	-1.66	2.46		0.672	0.502	-6.52	3.21
Female gender	0.92	0.50	0.12	1.838	0.068	-0.07	1.91
Good relations with siblings	4.09	0.61	0.46	6.733	<0.001	2.89	5.30
Mother age	0.11	0.05	0.15	2.236	0.027	0.01	0.20
Live with both parents	2.46	1.11	0.15	2.209	0.029	0.26	4.66

r-square=0.29

Model ANOVA: F=17.21, p<0.001

Variables entered and excluded: age, close friends, play preferences, father age, parents' education and job, residence, family size, residence, and income

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