



Original Research Article

Bullying and its risk factors among elementary school children in Riyadh, Saudi Arabia

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School bullying is a form of violence which is one of the common and serious school problems. Students in the school could be a bully, victim, bully-victim or not involved at all. Schools bullying presents in a physical, verbal, or social type. Bullying had an effect on the students, such as low academic performance, acquired risky actions or becoming more aggressive in the future. This study aims to calculate the prevalence of bullying and determine the pattern of bullying and risk factors among school children. This is an analytic cross-sectional study, conducted on students of a private elementary school in Riyadh, Saudi Arabia. 268 students 145 were girls and 123 were boys from first three grades were interviewed using the Peer Interaction in Primary School Questionnaire designed by Tarshis and Huffman and Adolescent Peer Relations Instrument by Parada, R. are used to build the study questionnaire. predesigned questionnaire. Most of the participants were bully-victims. Bullying was higher among higher graders with high proportion among males. There was a statistically significant relationship between exposure to school bullying and being bully ($p < 0.05$). Being bullied increases the occurrence of bullying among the studied school children. Victimization, seeking attention and being angry were the significant risk factors that control the occurrence of school bullying ($p < 0.05$). Raise the awareness among school children about bullying and its consequence, encourage school administration to improve students' supervision in all school premises and deal with students' complaints seriously, and more studies are needed in Saudi Arabia targeting bullying in this age group.

Key words: Elementary school, bullying, victimization, risk factors

INTRODUCION

School bullying is a type of violence which is a common school problem that might take place inside or outside the school and is considered as a global health issue (Hamburger et al., 2011; School violence and bullying, 2017; Anibal and Rivera, 2014).

Violence was defined by the World Health Organization as "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or have a high likelihood of resulting in injury, death, psychological

harm, maldevelopment or deprivation" (Secretary-General, 2001). The National Centre Against Bullying (Definition of Bullying, n.d.) defined the bully as "an individual or a group of people with more power, repeatedly and intentionally cause hurt or harm to another person or group of people who feel helpless to respond"

Bullying might occur in direct and indirect form. Direct bullying involves aggressive physical or verbal acts; while, indirect bullying involves social and cyber harassment (Gladden et al., 2014)

Risk factors that might lead to becoming a bully include trying to fit in and impress schoolmates or seeking attention, having anger issues, or lacking self-esteem, exposure to violent video games, television, and films (Verbal bullying, nd., Napolitano, 2011).

Children start a new psychological period and development of experience in elementary school, which affects the direction of their emotional and social attitude (AlBuhairan et al., 2016; Demirbağ et al., 2017). The bully, the victim, and the observers of bullying may have serious and long-term psychological, social, and physical consequences (Al Buhairan et al., 2016; Smokowski et al., 2005). The victims might suffer from isolation, having low self-esteem, feeling less engaged in the school, having eating disorders, or having mental health problems (Gladden et al., 2014). In addition, both the bully and the victim are more likely to have mental difficulties, have low academic performance, and obtain risky behaviors and in adulthood they become more aggressive and antisocial (Smokowski et al., 2005).

In Saudi schools, it was found that 54% of students have been bullied, compared to 78% in South Africa, 66% in Bahrain and 25% in Kazakhstan (Let's decide how to measure school violence, 2017).

Because it has serious consequences on children and is one of the common and underreported school problems; (Smokowski et al., 2005; Lai et al., 2017) and in order to provide a healthy and bullying-free school environment to achieve the sustainable development goals of agenda 2030 that related to good health and well-being, bullying should be investigated to describe the pattern of bullying distribution among school children and its possible risk factors.

Objectives:

This study aims at:

1. Calculating the prevalence of bullying among school children.
2. Determining the pattern of bullying and risk factors among school children.

MATERIALS AND METHODS

Study design

This is an analytic cross-sectional study, where bullying and its risk factors are studied at the same point of time. It is an analytic type because the study is investigating some risk factors of bullying and comparison groups will be formed.

Study subjects

Female and male students from the first to the third grade. According to the school authority, there were 350 first grade students, 264 second grade students, and 258 third grade students.

Study settings

An international school in Riyadh, Saudi Arabia.

Sampling technique

The sample was collected from a convenient school (agreed to conduct the study on their students) using all the registered students in the first to the third grade (comprehensive sample) after getting parental approval. The school was selected by non-probability sampling method, convenient sample, while the students were a comprehensive sample from first to third grade. The total number of students were 268 students they were boys 123 of them and 145 were girls.

Sample size

The Open Epi software, version 3.01 (Dean et al., 2013) Nationally, the prevalence of bullying was 54% which is the estimated proportion in the equation. Taking into consideration that the Confidence Interval is 95%, and the Design Effect is 1 since it is not a Clustered sampling technique (Schaeffer et al., 1990). Based on that, the sample size out of 872 students is 266. Assuming that the non-respondent rate is 20% then the sample size is 319 students.

Data collection

Data was conducted from January to February 2019. It was done using structured interview, in which the students were interviewed using a predesigned questionnaire.

Data collection tool

The Peer Interaction in Primary School Questionnaire designed by Tarshis and Huffman and Adolescent Peer Relations Instrument by Parada, R. are used to build the study questionnaire. (Tarshis, 2007; Al Buhairan et al., 2016).

The data collection tool was validated by two methods: the first is that it was assessed for face and content validity by two consultants separately, second is that this study was conducted by interviewing 20 students to be insured the ease of questions. Also, the researchers were available on filling out the questionnaire to assure the clarity of questions.

The questionnaire is composed of 26 questions: 3 sociodemographic questions, 8 questions to investigate being a bully, while 8 questions to investigate being a victim. Point values of the questionnaire were assigned as following: Never=0, rare=1, sometimes=2, a lot=3. Items on each subscale are summed. The intended range for the Victim subscale is 0–24 (8 questions x 3 points), with higher scores indicating more victimization.

The questionnaire for both bully and victim covered: the physical bullying (6 questions), the verbal bullying (4

Table 1. Sociodemographic characteristics of the students

Characteristics	N (268)	(%)
Age		
Mean \pm SD		7.5 \pm 1.062
Grade		
First	75	28.0%
Second	96	35.8%
Third	97	36.2%
Gender		
Girl	145	54.1%
Boy	123	45.9%

questions), and the social bullying (6 questions). Also, 4 questions to determine bullying risk factors. Finally, a question of reporting about bullying and another one, to define the place where bullying happens. The intended range for the bully subscale is 0–24 (8 questions x 3 points), with higher scores indicating more bully perpetration. The intended range of the risk factors subscale is 0–8 (4 questions x 2 points) with higher scores indicating more probability of bullying.

The social workers were interviewed to identify their role in school bullying control.

Data analysis:

SPSS-Statistical Package for Social Sciences, version 23 was used for data entry, editing and analysis. Descriptive statistics was used including building frequency tables and proportions. Also, analytic statistics had been done: Chi square test was used to test the difference between qualitative variables and logistic regression test was used to study effects of different independent variables (risk factors) on the occurrence of bullying as an outcome (dependent). The independent variables of the model are: victim: yes=1/no=0, violent games: yes=1/no=0, violent media: yes=1/no=0, seeking attention: yes=1/no=0, and being angry: yes=1/no=0.

Ethical considerations

- o Approvals were taken from the university IRB and the school authority.
- o Confidentiality of data was secured.
- o Data was collected anonymously.
- o The school was reported with the results.
- o Participation in the study was voluntary. Informed consent was obtained from the parents by sending them acceptance letter with the children before data collection to get their permission.

RESULTS

This study was conducted on 268 primary school students of a private school in Riyadh city. The students were

recruited from the first to the third grade.

Table (1) presents the sociodemographic characteristics of the study students. Girls were a little more than boys in this study (54.1% and 45.9%, respectively). The study sample was distributed almost equally from grade one to grade three, with a little higher proportion in grade three (36.2%). The mean age of the students was 7.5 years.

Figure (1) demonstrates the bullying distribution among the study students. Most of the students were involved in both bullying and victimization (51.5%), while 41% of students were only victims, and only 1.5% of students were bullies. On the other hand, 6% of students were not involved in either bullying or victimization.

Figure (2) shows the distribution of bullying among students regarding their gender. It was found that boys (26.9%) were higher than girls (24.6%) as bully-victims, while girls (23.9%) were higher than boys (17.2%) as victims and also when they were not involved in bullying (4.5%).

Figure (3) shows the distribution of bullying among the three grades where the study was conducted. It was noticed that bully-victim increased among the third-grade students (20.1%). That was followed by the second grad students (18.3%). It was found that the least bullying was in the first-grade students (10.8% and 13.1% for victimization and bully-victim, respectively). Students who were not involved in bullying were mostly from first grade (3.4%).

Figure (4) shows the bullying types (physical, verbal and social) distribution among the students. The majority of the students were involved in a mix of all the types of bullying (86.1%). That was followed by the physical bullying (8.7%).

Figure (5) shows the distribution of bullying types among girls and boys. It was found physical bullying was higher among boys (6.3%), while verbal and social bullying were higher among girls (1.2% and 2.8%, respectively). Mixed bullying was a little higher among girls as compared to boys (46.4% and 39.7%, respectively).

Figure (6) shows types of bullying according to the students' grade. It was found that mixed form of bullying (all types) was increasing from the first to the third grade, reaching the highest occurrence in the third grade (35.7%). First grade students had the highest occurrence of the physical, verbal and social bullying (4%, 0.8%, 1.6%,

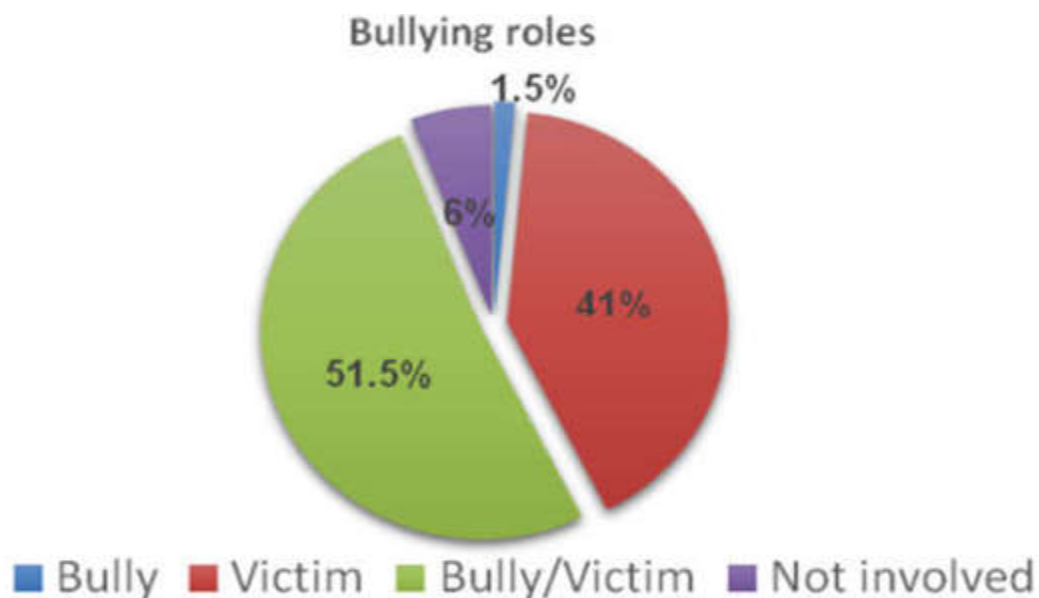


Figure 1: The bullying roles prevalence among the students. (N=268)

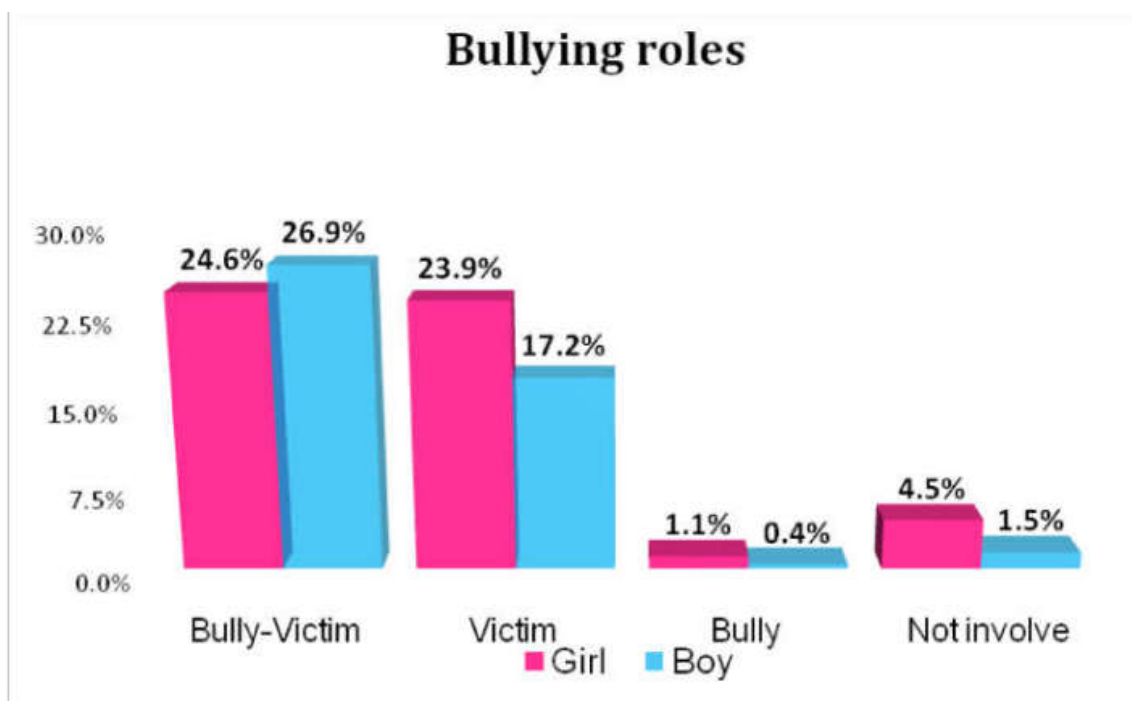


Figure 2: The bullying roles distribution according to gender. (N=268).

respectively).

Figure (7) shows where the students have been bullied. It was found that most of the students (48%) said they got

bullied in the playground, while 36.7% of them said the bullying occurred in the classroom. Also, 14.9% of students had been exposed to bullying on riding the school bus to

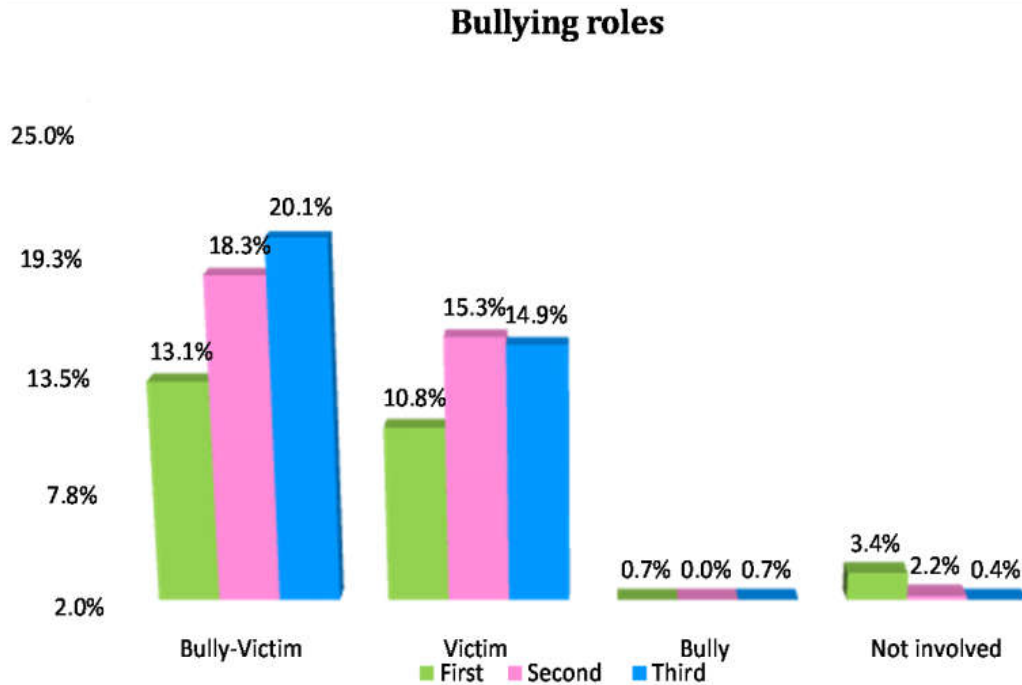


Figure 3: The bullying roles distribution according to students' grade (N=268)

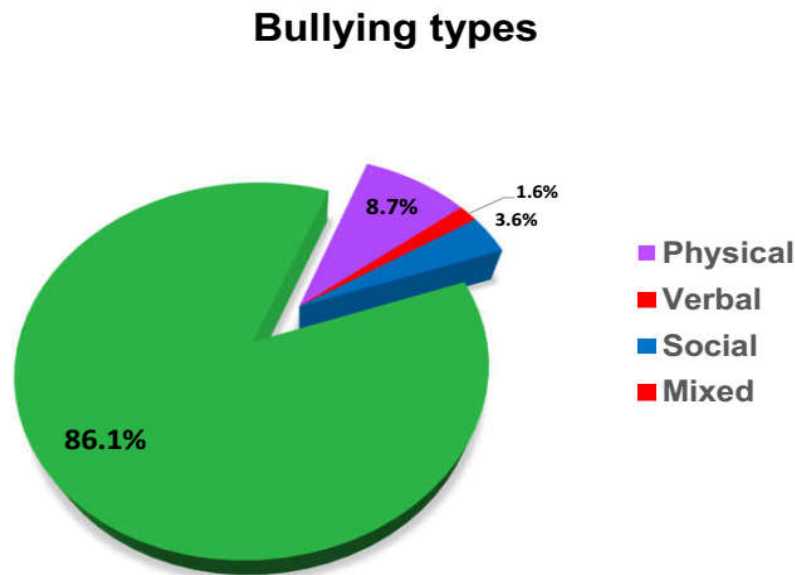


Figure 4: Bullying types distribution among the students. (N=268)

and from home.

Regarding this issue, the school administration admitted that the students are supervised by teachers inside the class and in the playground, while on the school bus and the toilets, there are assigned supervisors for the students.

Furthermore, the school has two social workers whom their job is to help students and try to solve their problems.

Figure (8) shows the proportion of students who reported being bullied (N=248). Most of the victim students (81%) admitted that they have reported being

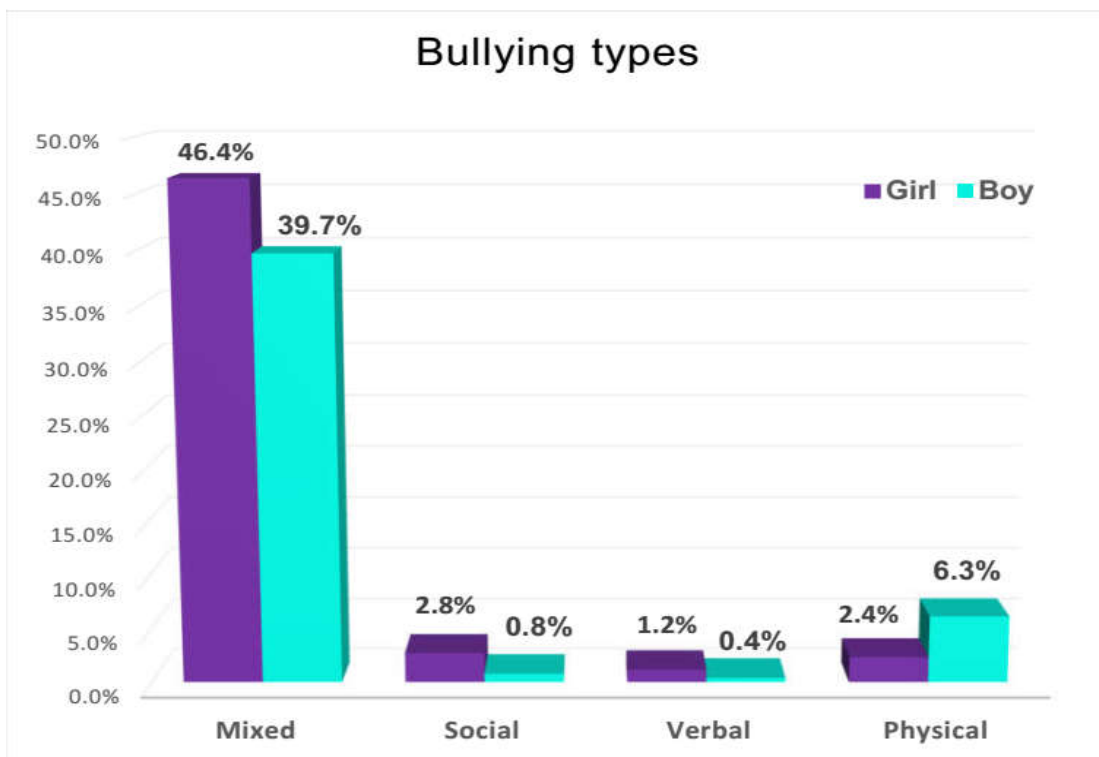


Figure 5: Distribution of bullying types according to the gender (N=268).

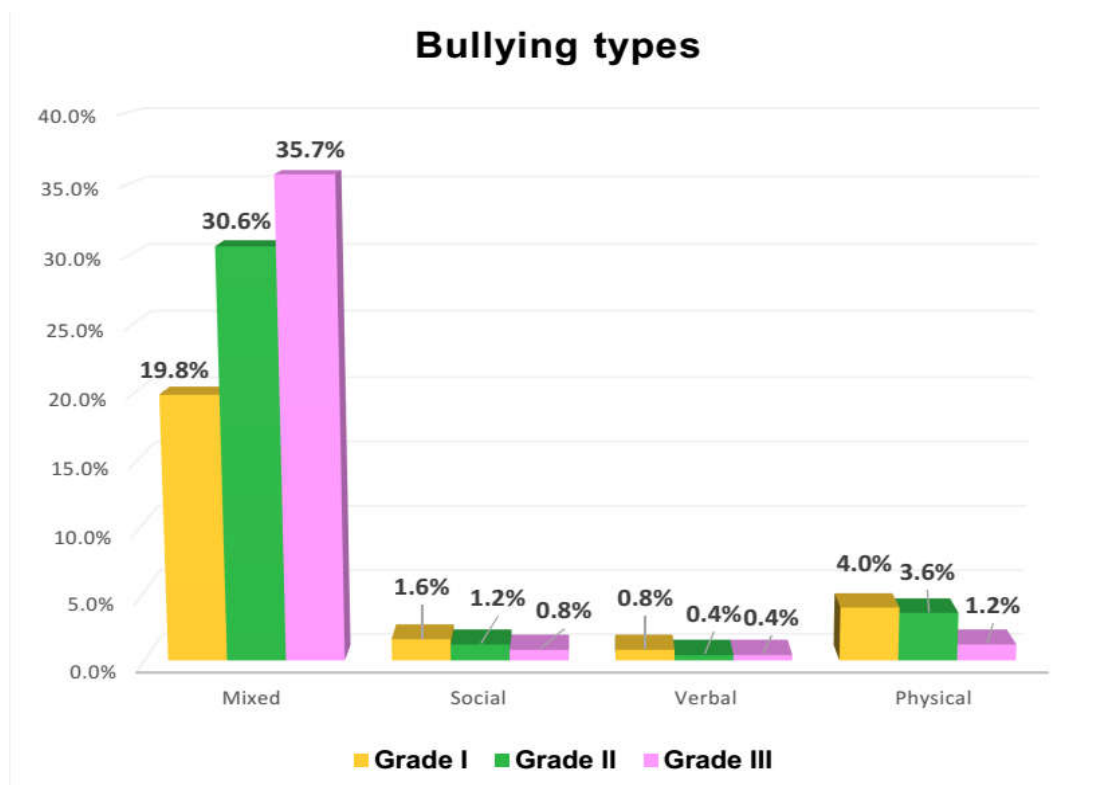


Figure 6: Distribution of bullying types according to students' grades (N=268).

Place where bullying occurs

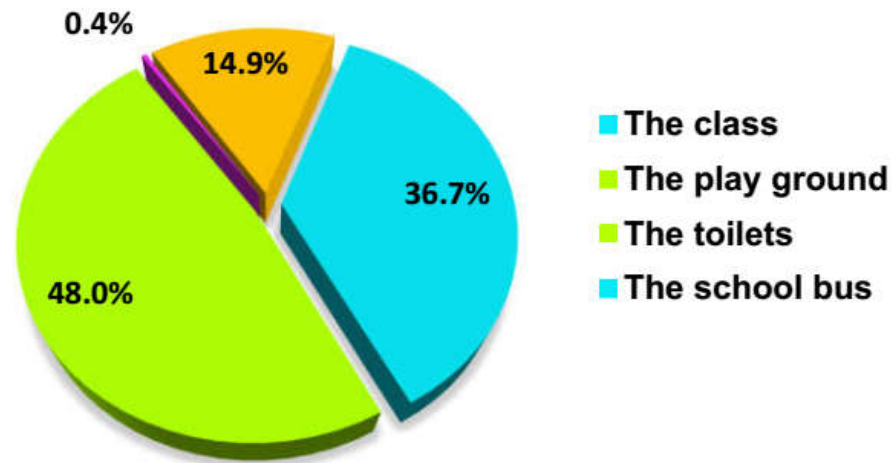


Figure 7: Places where bullying occurs (N=244)

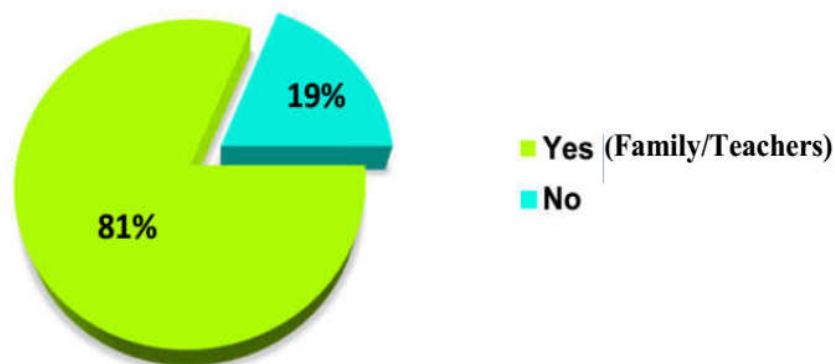


Figure 8: Students' reporting of being bullied (N =248).

bullied either to their teachers or parents.

Table (2) shows the exposure of victim students to peer bullying. It was found that there is a statistically significant relationship between exposure of the victims to peer bullying ($p < 0.05$). This indicates that student's exposure to violence (bullying) will turn out eventually to be violent (bully).

Table (3) displays the relationship between risk factors

and bullying. It was found that violent media was the highest risk among the students by 60.6%. also, it was found a strongly significant relation between seeking attention, being angry and bullying.

Table (4) presents a logistic regression model to study the effects of different risk factors on occurrence of bullying as an outcome. It is noticed that being a victim, seeking attention, and being in angry mood were statistically

Table 2. Relationship between victimization and bullying

Exposure	Bully	Not Involved	Total	p-value
Victim	138	110	248	.002*
Not Involved	4	16	20	
Total	142	126	268	

*Statistically significant at p-value < 0.05

Table 3. Relationship between different risk factors and bullying

Risk factors	Bully	Not Bully	p-value
Violent games	59.2%	46.03%	0.032*
Violent media	60.6%	40.5%	.001*
Seeking attention	14.1%	1.6%	.000*
Being angry	29.1%	7.2%	.000*

*Statistically significant at p-value < 0.05

Table 4. Logistic regression model to study the effect of different risk factors on the occurrence of bullying

Variables	B	S.E.	Wald	df	Sig.	Exp(B)(OR)	95% C.I.for EXP(B)	
							Lower	Upper
Victimization	1.526	.607	6.325	1	.012*	4.599	1.400	15.101
Violent games	.026	.291	.008	1	.928	1.027	.580	1.817
Violent Media	.547	.291	3.547	1	.060	1.728	.978	3.055
Seeking Attention	1.744	.780	5.003	1	.025*	5.721	1.241	26.376
Being Angry	1.420	.417	11.586	1	.001*	4.139	1.827	9.377
Constant	-1.912	.610	9.832	1	.002	.148		

*Statistically significant at p < 0.05

significant risk factors for bullying, as explained in the following formula:

$$\begin{aligned} &\text{Probability of becoming a bully:} \\ &= \text{constant} + \text{Var 1} \times B + \text{Var2} \times B + \text{Var3} \times B + \dots \\ &= -1.912 + \text{victim} \times 1.526 + \text{violent games} \times 0.026 + \\ &\text{violent media} \times 0.547 + \text{seeking attention} \times 1.744 + \text{being} \\ &\text{angry} \times 1.42 \end{aligned}$$

DISCUSSION

In this study, the prevalence of being bullied was more than triple the one reported in a health survey conducted on Saudi adolescents, 2014 (Al Buhairan et al., 2016). Our study was conducted on younger children who usually are naive and sincere in their reporting of events, while older students might get ashamed if they are bullied so they under-report their events (Napolitano, 2011).

Girls were found to be higher in being victims, while boys were higher in being bully-victims. A similar finding had been found in a study conducted in 40 western countries (Craig et al., 2009). Physical bullying was higher among boys while verbal and social bullying was more frequent

among girls. Most of the students have mixed types of bullying, but girls were higher than boys. This is consistent with a study that was conducted in Oman (Al-Saadoon et al., 2014) and found also that boys were more physically bully than girls, while girls were higher in verbal and social bullying. This might be explained by the boys' and girls' physical and psychological nature. This finding fits the boys' nature and their tendency to be fighters, so boys participate in physical bullying, while girls have fine physical nature, so, social and verbal bullying fit more to their nature.

It was found that third-grade students were higher in all bullying roles and types which are consistent with other studies which reported that bullying is increasing with age (Von Marées et al., 2010; Wang et al., 2012). Bullying is a learning behavior, so students gain and practice different bullying roles and types while getting older, so the more students to be engaged in bullying in younger ages the more they learn and develop their ways of bullying by start using more than one type of bullying. Also, both verbal and social bullying are easier to hide from the adult as compared to the physical type.

A study conducted in Canada (Craig et al., 2000) showed that bullying occurs in the playground more than the class.

The current study found that students were bullied in all school premises and even in the school bus, but it was more frequent in the playground and in the class despite the presence of supervision and despite their reporting of bullying. This may imply that bullying is a significant and serious problem in the school.

Reporting of being a victim was high among the students which is consistent with Cortes and Kochenderfer-Ladd who stated that younger students are more likely to inform adult about being bullied (Blomqvist et al., n.d.). This is the typical nature of young ages who feel fragile and helpless, so they seek help and support from adults.

It was found that seeking attention, watching violent media, being in angry mood, playing violent games were increased bullying significantly ($p < 0.05$); this consistent with other studies (Rajput et al., 2018; Abu Baker et al., 2018 ; Melander et al., 2015). In order to become popular and join the larger group in the school, the students bully others so as to make friends easily. Also, children imitate the actions seen in violent media and games.

CONCLUSION

Being bullied increases the occurrence of bullying among the studied school children. Victimization, seeking attention and being angry were the significant risk factors that control the occurrence of school bullying ($p < 0.05$).

Recommendations

1. Implement an interventional school program and use educational tools to raise the awareness among school children about bullying and its consequences.
2. Encourage school administration to improve students' supervision in all school premises and deal with students' complaints seriously.
3. More studies are needed in Saudi Arabia targeting bullying in this age group to get detailed information about risk factors at home and in the schools.

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REFERENCES

Abu Baker N, Ayyd S (2018). The Relationship Between Exposure to Media Violence and School Bullying in Jordan. *Global. J. Health Sci.* 10(5):154-166.

Al Buhairan FS, AlEissa M, Alkufeidy N, Almuneef M (2016). Bullying in early adolescence: An exploratory study in Saudi Arabia. *Int. J. Pediatrics and Adolescent Med.* 3(2):64-70.

Al Buhairan, F, Al Dubayee M, Tamim H, Al Shehri S, Tami , Ahmed N, Magzoub M, Al Alwan I(201 National Assessment of the Health Needs of Adolescents in Saudi Arabia: Screening for health risk behaviors an chronic illness-Jeeluna Study Report.

Al-Saadoon M, Al-Farsi , Rizvi S, Al-Sharbati M, Al-Jabri A, Almamari S, AL-Adawi S (2014, October). The Magnitude and Impact of Bullying among School Pupils in Muscat, Oman: A Cross-Sectional Study. *The Scientific World Journal.*

Anfbal F, Rivera P (2014). The Utility of the Olweus Bully/Victim Questionnaire in Identifying Stably Peer-Victimized Children. Fayetteville, AR: University of Arkansas. Retrieved July 19, 2019, from <https://scholarworks.uark.edu/cgi/viewcontent.cgi?referer=https://www.google.com.sa/&httpsredir=1&article=3650&context=etd>

Blomqvist K, Saarento-Zaprudin S, Salmivalli C. (n.d.). Telling adults about one's plight as a victim of bullying: Student- and context-related factors predicting disclosure. *Scandinavian J. Psychol.*

Craig W, Harel-Fisch Y, Fogel-Grinvald H, Dostaler S, Hetland J, Simons-Morton B, Pickett W(2009). A cross-national profile of bullying and victimization among adolescents in 40 countries. *International journal of public health.* Retrieved July 20, 2019, from <https://link.springer.com/article/10.1007/s00038-009-5413-9>

Craig W, Pepler D, Atlas R (2000). Observations of Bullying in the Playground and in the Classroom. *School Psychology International.*

Dean AG, Sullivan KM, Soe MM, (2013) Open Source Epidemiologic Statistics for Public Health, Version. OpenEpi. Retrieved July 19, 2019, from http://www.openepi.com/Menu/OE_Menu.htm

Definition Of Bullying. (n.d.). Australia: The National Centre Against Bullying. Retrieved July 19, 2019, from <https://www.ncab.org.au/bullying-advice/bullying-for-parents/definition-of-bullying/>

Demirbağ B Çiçek Z Yiğitbaş Ç Özkan Ç Dinçer A (2017). The Relationship between Types of Bullying Experienced by Primary School Students and their Anxiety, State-Trait, Self-Esteem and Certain Socio-Demographic Characteristics. *Procedia - Social and Behavioral Sciences.* Retrieved July 19, 2019, from <https://www.sciencedirect.com/science/article/pii/S1877042817300770>

Gladden RM, Vivolo-Kantor AM, Hamburger MF, Lumpkin CD (2014). *Bullying Surveillance Among Youths.* Atlanta, GA: Centers for Disease Control and Prevention. Retrieved July 19, 2019, from

- <https://www.cdc.gov/violenceprevention/pdf/bullying-definitions-final-a.pdf>
- Hamburger MF, Basile KC, Vivolo AM (2011). *Measuring Bullying Victimization, Perpetration, and Bystander Experiences*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Retrieved July 19, 2019, from <https://www.cdc.gov/violenceprevention/pdf/bullycompendium-a.pdf>
- Lai T, Kao G (2017). Hit, Robbed, and Put Down (but not Bullied): Underreporting of Bullying by Minority and Male Students. *Journal of Youth and Adolescence*. Springer US. Retrieved July 19, 2019, from <https://link.springer.com/article/10.1007/s10964-017-0748-7>
- Let's decide how to measure school violence. (2017). United Nations Educational Scientific Cultural Organization. Retrieved July 19, 2019, from <https://unesdoc.unesco.org/ark:/48223/pf0000246984>
- Melander LA, Sittner Hartshorn KJ, Whitbeck LB (2015). Correlates of bullying behaviors among a sample of North American Indigenous adolescents. *J. Adolesce.* 36(4):675-684
- Napolitano SM (2011). *Risk Factors for and Outcomes of Bullying and Victimization*. Lincoln, NE: University Of Nebraska-Lincoln. Retrieved July 19, 2019, from <http://digitalcommons.unl.edu/edpsychpapers/132/>
- Schaeffer RL, Mendenhall W, Ott L (1990). *Elementary Survey Sampling, Fourth Edition*. Belmont, CA: Duxbury Press. Available at: <http://www.openepi.com/PDFDocs/SSProporDoc.pdf> [cited 2018 Nov 19].
- School violence and bullying: Global status report. (2017). Paris, France: the United Nations Educational, Scientific and Cultural Organization. Retrieved July 19, 2019, from <https://unesdoc.unesco.org/ark:/48223/pf0000246970>
- Secretary-General, United Nations, Nobel Peace Laureate [Internet]. 2001; Available from: http://www.who.int/violence_injury_prevention/violence/world_report/en/summary_en.pdf [cited 2018 Nov 11].
- Shiba, Rajput M, Goutam A, Rajawat G (2018). Bullying and being bullied: Prevalence and psychosocial outcomes among school going adolescents of Rohtak. *Int. J. Community Medicine And Public Health.* 5(3):991-995
- Smokowski PR, Kopasz KH, (2005). *Bullying in School: An Overview of Types, Effects, Family Characteristics, and Intervention Strategies*. National Association of Social Workers.
- Tarshis TP, Huffman LC (2007). Psychometric properties of the peer interactions in primary school (PIPS) Questionnaire. *J. Development & Behavioral Pediatrics,* 28(2):125-132.
- Verbal bullying. (n.d.). United Kingdom: Family Lives. Retrieved July 19, 2019, from <https://www.bullying.co.uk/general-advice/verbal-bullying/>
- Von Marées N, Petermann F (2010). *Bullying in German Primary Schools Gender Differences, Age Trends and Influence of Parents' Migration and Educational Backgrounds*. Bremen, Germany: Centre for Clinical Psychology and Rehabilitation. Department of Psychology, University of Bremen. Retrieved July 20, 2019, from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1015.6524&rep=rep1&type=pdf>
- Wang J, Iannotti RJ, Luk JW (2012). Patterns of adolescent bullying behaviors: Physical, verbal, exclusion, rumor, and cyber. *J Sch. Psychol.* 50(4): 521-534.