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

Received 30 May, 2019 Revised 14 July, 2019 Accepted 20 July, 2019 Published 24 September, 2019

Alhnouf H. Alrokban*1, Ruba M. Alzaidi1, Shahad A. Alqahtani1, Fatmah Almoayad2, and Lamiaa E. Fiala2,3

1Graduates, Health Education program, Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdullahman University, Riyadh, Saudi Arabia
2Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdullahman University, Riyadh, Saudi Arabia
3Department of Public Health, Community, Environment and Occupational Medicine, Faculty of Medicine, Suez Canal University, Egypt.

*Corresponding Author Email: alhnouf.alrokban@gmail.com

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 aglobal health issue (Hamburger et al., 2011; School violence and bullying, 2017; Anbala 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 affect 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:
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

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N (268)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean ±SD</td>
<td>7.5 ±1.062</td>
<td></td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>75</td>
<td>28.0%</td>
</tr>
<tr>
<td>Second</td>
<td>96</td>
<td>35.8%</td>
</tr>
<tr>
<td>Third</td>
<td>97</td>
<td>36.2%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl</td>
<td>145</td>
<td>54.1%</td>
</tr>
<tr>
<td>Boy</td>
<td>123</td>
<td>45.9%</td>
</tr>
</tbody>
</table>

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

- Approvals were taken from the university IRB and the school authority.
- Confidentiality of data was secured.
- Data was collected anonymously.
- The school was reported with the results.
- 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 (34.3%).

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%, respectively).
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
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 3:** The bullying roles distribution according to students’ grade (N=268)

**Figure 4:** Bullying types distribution among the students. (N=268)
**Figure 5**: Distribution of bullying types according to the gender (N=268).

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

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Bully</th>
<th>Not Involved</th>
<th>Total</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victim</td>
<td>138</td>
<td>110</td>
<td>248</td>
<td>.002*</td>
</tr>
<tr>
<td>Not Involved</td>
<td>4</td>
<td>16</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>142</td>
<td>126</td>
<td>268</td>
<td></td>
</tr>
</tbody>
</table>

*Statistically significant at p-value < 0.05

Table 3. Relationship between different risk factors and bullying

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Bully</th>
<th>Not Bully</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent games</td>
<td>59.2%</td>
<td>46.03%</td>
<td>.032*</td>
</tr>
<tr>
<td>Violent media</td>
<td>60.6%</td>
<td>40.5%</td>
<td>.001*</td>
</tr>
<tr>
<td>Seeking attention</td>
<td>14.1%</td>
<td>1.6%</td>
<td>.000*</td>
</tr>
<tr>
<td>Being angry</td>
<td>29.1%</td>
<td>7.2%</td>
<td>.000*</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)(OR)</th>
<th>95% CI for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent games</td>
<td>.026</td>
<td>.291</td>
<td>.008</td>
<td>1</td>
<td>.928</td>
<td>1.027</td>
<td>.580 – 1.817</td>
</tr>
<tr>
<td>Violent Media</td>
<td>.547</td>
<td>.291</td>
<td>3.547</td>
<td>1</td>
<td>.060</td>
<td>1.728</td>
<td>.978 – 3.055</td>
</tr>
<tr>
<td>Seeking Attention</td>
<td>1.744</td>
<td>.780</td>
<td>5.003</td>
<td>1</td>
<td>.025*</td>
<td>5.721</td>
<td>1.241 – 26.376</td>
</tr>
<tr>
<td>Being Angry</td>
<td>1.420</td>
<td>.417</td>
<td>11.586</td>
<td>1</td>
<td>.001*</td>
<td>4.139</td>
<td>1.827 – 9.377</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.912</td>
<td>.610</td>
<td>9.832</td>
<td>1</td>
<td>.002</td>
<td>.148</td>
<td></td>
</tr>
</tbody>
</table>

*Statistically significant at p < 0.05

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

Probability of becoming a bully:

= constant + Var 1 x B + Var2 x B + Var3 x B + ....

= -1.912 + victim x 1.526 + violent games x 0.026 + violent media x 0.547 + seeking attention x 1.744 + being angry x 1.42

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 Buhaireen et al., 2016). Our study was conducted on younger children who usually are naïve 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 bullying 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.

Acknowledgments

The authors are thankful to the princess Nora bint Abdulrahman University administration for permitting access to Saudi digital library. Also, deep appreciation to the school administration for facilitating and permitting conduction of the study.

REFERENCES


https://www.cdc.gov/violenceprevention/pdf/bullying-
definitions-final-a.pdf
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/bullycom
pendium-a.pdf
Lai T, Kao G (2017). Hit, Robbed, and Put Down (but not
Bullied): Underreporting of Bullying by Minority and
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
Correlates of bullying behaviors among a sample of North
American Indigenous adolescents. J. Adolesc. 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
[cited 2018 Nov 19].
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/violenc
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,
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
1.1.1015.6524&rep=rep1&type=pdf
bullying behaviors: Physical, verbal, exclusion, rumor,