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## Research Article

# Investigating Bullying Against Male Students in Western Makkah Middle Schools

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## Abstract

**Background and Objective:** Bullying is a serious public health concern that contributes to the global burden of disability and injuries. School bullying is a common phenomenon in childhood. This study examined the scale, type and impact of bullying among Middle School students in Western Makkah. **Materials and Methods:** A cross-sectional study design using a self-administered questionnaire in 400 students aged between 11-15 years old. Data analyzed with SPSS version 25. Descriptive analyses and Chi-square tests were performed to find if there is an association between bullying and other variables. **Results:** Among the sample studied, 43.5% experienced bullying by other students and teachers in form of verbal (43%), physical (33%), Indirect (16.7%) and cyber (8.2%). Bullying occurs highly in the classrooms (52%) followed by hallways (23%), playgrounds, (22%) and in the toilet 2.3%. There is a significant relationship between grades of performance and bullying. **Conclusion:** Bullying is a serious problem affecting Saudi students. Several factors in the schools that have the potential to contribute to bullying were found and appropriate recommendations made.

**Key words:** School bullying, preparatory, bullying form, academic performance, impact of bullying

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**Competing Interest:** The authors have declared that no competing interest exists.

**Data Availability:** All relevant data are within the paper and its supporting information files.

## INTRODUCTION

It is well documented that bullying among school-children has negative effects on the health of the victims that can persist to adult age<sup>1,2</sup>. Studies have shown that those kids that suffer bullying in schools are more prone to health issues including physical and serious mental illness<sup>3,4</sup>, such as depression<sup>5,6</sup>, psychosis<sup>7</sup> or even suicidal tendency<sup>8,9</sup>. Bullying among the school peers is a form of violence which the World Health Assembly adopted in their meeting in 1966 as the number one Global Public Health Problem<sup>10</sup>. School bullying is considered as a global concern that affects communities<sup>11</sup>, which can lead to serious academic, physical, social and mental consequences<sup>12-14</sup>. The World Health Organization (WHO) identifies bullying in schools as a serious public health issue<sup>15</sup>. Bullying can be defined as a harmful behavior that can occur in one of four ways physical, verbal, social and electronic (cyberbullying)<sup>16</sup>. Scientists identify a behavior that can be categorized as bullying must include four main features: aggression, repetition, intention to harm and power imbalance<sup>17</sup>. School bullying can involve a single student or group of students' aggression directed toward single student or group of students<sup>18,19</sup>. According to Kandersteg Declaration against Bullying in 2007, it shows that 200 million children and teenagers are being bullied by their companions<sup>20</sup>. Numerous studies conducted across the world to measure the prevalence of bullying suggested that 25% of adults have experienced bullying as a victim or as a perpetrator or both in their lifetime at school<sup>21</sup>. Scientists have examined the characteristic of adults who have a history of bullying behavior in their lifetime while at school. In 28 meta-analysis studies, it showed that there is an inverse relationship between socioeconomic status and being a victim of bullying behavior<sup>22,23</sup>. Prevalence rates for bullying vary greatly across studies not only across countries but also according to study conducted in US school system about the prevalence of bullying shows that 22.5% of students reporting as victims and 9% reporting as a perpetrator, such variations reflect differences in assessment approaches as well as differences across individuals' characteristics and culture<sup>24</sup>. School bullying can occur in different forms, the most common and frequent types of bullying are a verbal insult, direct aggression and social isolation<sup>25,26</sup>. Bullying can occur in two main forms direct and indirect. Physical, verbal and electronic bullying is recognized as a direct form of bullying whereas social bullying is recognized as an indirect form of bullying<sup>27-29</sup>. Verbal bullying involves bad comments, teasing, threatening and name-calling, Physical bullying entails spitting, kicking, breaking belongings, pushing and forcing the victim to do

things, Electronic bullying comprises writing posts on social media, sending images through cell phone and through e-mail, Social bullying involves exclusion from the group, spreading rumors, lies and make offensive joke<sup>30</sup>. Academic performance is affected by bullying in different ways<sup>31</sup>. An Australian study examined the effect of Bullying on the academic performance of the victims found a decrease in test score in both short term and long term with differences in the level of bullying and academic performance<sup>32</sup>. Bullying in Saudi Arabia has not well been properly addressed as public health concern since it may cause severe outcomes to students' health, grades and social relations. This study was designed to investigate bullying among male students in the Makkah community.

## MATERIALS AND METHODS

**Study area:** Data collection for this study took place in Western Makkah middle schools between 15 January and 27 February, 2019 while the entire project was from September, 2018 to June, 2019. The total number of middle schools in Western Makkah were 21 schools, the schools were classified into three strata according to the number of classes in each school (large: 15 and over, Medium :10-15, small: <10 classes).

**Study design, participants and sampling:** This is a cross-sectional survey conducted among male students in Western Makkah Middle Schools aged between 12-15 years old.

**Sample size:** The total number of male students in Makkah Middles School in the Western Region is 7498 students. Based on this the calculation formulae and the arrived sample size in this study is 400 students. The study was conducted in three schools with 133 students from each school and approximately 33 students in each grade within each school (1st grade = 33 students, 2nd grade = 33 students and 3rd grade = 34 students).

**Sampling technique:** Two types of sampling techniques were used in this study. First is the stratified random sampling method to select the school and systematic random sampling method to select classes and students. For the stratified sampling method, one school from each stratum was chosen according to the number of classes in each school (Small-Abi-obaiydah Ibn Aljarah School, Medium-Alfateh School and Large-Abdullah Khaiat School). And for the systematic random sampling method we randomly picked three classes in each grade within each of the three schools that participated in the study and choose every second

student on the students' attendance list in each of 27 classes that selected to participate in the study.

**Exclusion and inclusion criteria:** The eligible schools are all public male Middle Schools in Western Makkah Region except private schools and schools that specialized for intellectually disabled students and talented students.

**Study tools:** Self-developed questionnaire was used as the main tool to measure the bullying behaviors in this study, the questionnaire was developed by using the available literature and questions were adapted to fit the cultural setting of Saudi Arabia. The final questionnaire was validated after a pilot study and the Arabic version of the questionnaire was developed after an adequate literature review and expert opinions.

**Pilot study:** The pilot study was carried out on 15 students aged between 11-15 years old in cyber coffee in Al-shawqiyah district which is located in the Southern region of Jeddah city, after the pilot study the questionnaire was reviewed and the unclear statements were modified. Each question in the questionnaire was separately analyzed in terms of language, style, content and arrangement of the questions to make it clearer and easier to answer.

**Data collection:** Data were collected from 27 classes in 3 schools of Western Region, Makkah (approximately 13 students from each class). The questionnaire was administered to the students by one researcher and one teacher in each school. The assisting teacher in each school read the questions loudly before the distribution of the questionnaires to students to ensure that all they understand the questions well. All the questionnaires were distributed completed by student participating and collected during the school lunch-time. The questionnaire was in four parts consisting of 18 questions, 16 multiple choice and two direct questions about their previous experience on bullying. The first part was about the students characteristics (age, grade and family status), followed by the part on bullying behavior (common form of bullying, frequency and where it occurs most). The third part was about the factors that may influence bullying behavior (physical appears, nationality, existence of punishments) while the final part covered the impact of bullying on students' academic performance and social relationships.

**Ethical issues:** The privacy of students was protected and the questionnaire was completed anonymously and students did not provide any information about personal identification. All students were informed about the purpose of the study and

they were invited voluntarily. Both the Ministry of Education and the Ethical Committee of the Faculty of Public Health and Health Informatics of Umm Al Qura University approved this study (see permission NO.40180910807 appendices 1 and 2, respectively).

**Data analysis:** Data were analyzed using SPSS (IBM SPSS 25). Several descriptive analysis tools were used to describe a demographic characteristic, school factors. Then chi-square was performed to establish significance at  $p < 0.05$ .

**Scale of Bullying:** The primary outcome measure in this study is to examine the extent of bullying in Makkah Western Middle Schools. The Scale of bullying was accessed through appropriate questions in the questionnaire such as the one student was asked if they have been exposed to bullying or not since being at the Middle school.

**Forms of bullying:** Bullying forms were measured using questions such as if they have been exposed to any form of bullying since being at the Middle school. They were given the forms of bullying to identify the form they have been exposed to such as:

- Physical Bullying
- Verbal Bullying
- Indirect Bullying
- Cyberbullying

**Frequencies of bullying and the location of the event:** To get the frequency and location of the event, relevant questions on these were analyzed such as questions "Where are the most places in the school you get exposed to bullying?" and "How often were you exposed to bullying".

**Students' academic performance:** Students' performance was measured by asking the students question about their final grades in the immediate past semester.

### **Factors that contribute to bullying**

**School factors:** The school environment play a key role in increasing or decreasing of bullying behavior in the school, hence it essential factors that contribute to the frequency of bullying. To assess that students were asked two questions. [1] Does your school offer some form of education programs or workshops that address the issue of bullying?

Responses in dichotomous fashion, Yes or No options.

[2] Is there a list of punishments provided by the school to those who engage in bullying, Responses in dichotomous fashion, Yes or No options?

## RESULTS

Table 1 shows the socio-demographic factors that influence the occurrence of bullying. For those 202 students who were living with their parents, 135 (40.1%) had experienced bullying. On the other hand, out of the 63 students who were not living with their parents, 38 (60.3%) were bullied. This is significant statistically ( $X^2 = 8.875$ ,  $p = 0.003$ ). The distribution of bullying among students according to their age shows that 45 students (41.7%) are 15 years old, 72 students (43.1%) are 14 years old, 45 students (41.3%) are 13 years old while 11 students (68.8%) are 12 years old. The frequency of bullying according to student's nationality showed that 151 (43.8%) of Saudi students were exposed to bullying while 22 (40.0%) of non-Saudi students were exposed to bullying. Bullying behavior was distributed almost equally in all grades 63 (49.6%) of student exposed to bullying in First grade, 72 (43.4%) in Second grade and 38 (35.5%) in Third grade. The nationality and grade of the students did not show an association as regards bullying.

Table 2 presents the School Policy against bullying in terms of the presence or absence of programs and punishment against bullying. The table shows that out of 173 students that were bullied, 52 (30.1%) students were in schools where there is anti-bullying programs whereas 121 (69.9%) were in schools where there was no anti-bullying program. The result was statistically significant ( $X^2 = 4.300$ ,  $p = 0.04$ ). Also, among the total 173 students that were bullied, only 73 (42.2%) students came from schools where there is punishment for perpetrators of bullying whereas 100 (57.8%) were from schools where there is no form of punishment for the bullying perpetrators. There is a significant difference between the results ( $X^2 = 8.408$ ,  $p < 0.001$ ). Table 3 displays the results of the grades of students and whether or not they experienced bullying. Out of 145 students with A+ to A grades, only 36 (24.8%) were bullied while 109 (75.2%) did not experience bullying. Among 113 students with B+ to B, 46 (40.7%) were bullied while 67 (59.3%) were not. The number bullied seems to increase as the grades go down. For example, according to the table, for 85 students who received C+ to C

Table 1: Socio-demographic factors

Variables	Number of bullied student (%)	Number of non-bullied (%)	Total (%)	X <sup>2</sup>	p-value
<b>Age</b>					
15 years old	45 (41.7)	63 (58.3)	108 (100)	4.522 <sup>a</sup>	0.021
14 years old	72 (43.1)	95 (56.9)	176 (100)		
13 years old	45 (41.3)	64 (58.7)	109 (100)		
12 years old	11 (68.8)	5 (31.3)	16 (100)		
<b>Nationality</b>					
Saudi	151 (43.8)	194 (56.2)	345 (100)	0.274 <sup>a</sup>	0.060
Non-Saudi	22 (40.0)	33 (60.0)	55 (100)		
<b>Living status</b>					
Living with both parents	135 (40.1)	202 (59.9)	337 (100)	8.875 <sup>a</sup>	0.003
Not living with both parents	38 (60.3)	25 (39.7)	63 (100)		
<b>Students' grades</b>					
First grade	63 (49.6)	64 (50.4)	127 (100)	4.701 <sup>a</sup>	0.095
Second grade	72 (43.4)	94 (56.6)	166 (100)		
Third grade	38 (35.5)	69 (64.5)	107 (100)		

Table 2: School policy against bullying

Variables	Number of bullied student (%)	Number of non-bullied (%)	Total (%)	X <sup>2</sup>	p-value
Anti-bullying programs-present	52 (30.1)	91 (40.1)	143 (35.8)	4.300 <sup>a</sup>	0.038
Absent	121 (69.9)	136 (59.9)	257 (64.2)		
Total	173 (100.0)	227 (100.0)	400 (100.0)		
Perpetrator punishment-present	73 (42.2)	129 (56.8)	202 (100.0)	8.408 <sup>a</sup>	0.004
Absent	100 (57.8)	98 (43.2)	198 (100.0)		

Table 3: Impact of bullying on academic performance

Variables	Number of bullied student (%)	Number of non-bullied (%)	Total (%)	X <sup>2</sup>	p-value
<b>Grades</b>					
A+ to A	36 (24.8)	109 (75.2)	145 (100)	52.228 <sup>a</sup>	<0.001
B+ to B	46 (40.7)	67 (59.3)	113 (100)		
C+ to C	62 (72.9)	23 (27.1)	85 (100)		
D+ to F	29 (50.9)	28 (49.1)	57 (100)		

grades, 62 (72.9%) were bullied while only 23 (27.1%) were not and among students who had D to F grades, about half (50.9%) were bullied. The results were statistically significant ( $X^2 = 52.228, p < 0.001$ ).

## **DISCUSSION**

The current study showed that students that are not living with their both parents were more prone to be bullied (60.3% as against 40.1% of those who were living with both parents) which is found to be statistically significant. This may suggest that the availability of both parents makes a child to be more stable emotionally than when they are brought up in a single parent home. The fact that obtained results did not find any association of age and nationality with bullying may mean that bullying is so common as to cut across those two important factors. In this study, a significant association was found between bullying and whether schools have punishment for those who engage in bullying or not. This may be reassuring that at least students fear being held accountable for their acts of bullying. So, instituting punitive measures across all schools may reduce bullying. As expected, bullying showed a significant association with the academic performance of students. A significant association was shown in this study in grades of those that were bullied. Consistently higher grades meant a non-exposure to bully while more people that were bullied had lower grades.

The main findings of the study showed that 43% of middle school students aged between 11-15 years old experience bullying in their lifetime at middle school. This is similar to several studies conducted in Arab<sup>33</sup> and Western countries<sup>34</sup>, for example the 277 prevalence of bullying in some Arab countries like Jordan and Morocco were 44 and 39% respectively while in a Western country, it was 45%. Bullying behavior can occur in different 279 forms and at different locations. Results of the current study showed that verbal bullying was 280 the most prevalent form to occur in Makkah Middle schools. This is similar to several studies 281 conducted in US<sup>35</sup>, UK<sup>36</sup> and Brazil<sup>37,38</sup> which conclude that verbal bullying is the 282 most common types to occur in the Middle schools. There were five main factors found that influence bullying according to our results, some of these factors are similar to the factors found in other studies while some are opposite. In current study, students living with only one parent were likely to be bullied which was also found to influence the occurrence of bullying in a study conducted in elementary schools<sup>39</sup>. This may be because the presence of both parents in a student's life will increase student self-

confidence and Strengthen student personality therefore students are more capable to deal with bullying behaviour. It was found in a study conducted in Italy<sup>40</sup> that the student with younger age is more likely to experience bullying, however, in this study there was no strong association between age and possibility to be exposed to bullying. This may be because in Italy perhaps smart students can go to a higher grade at younger age, unlike Saudi students who have to follow the grade sequence. For example, Saudi students can't attend middle school if they were 11 or 10 years old even if they were smart students. The third factor was about student's physical appearance. Several studies conducted in US and other Western countries<sup>41-43</sup>, conclude that obese and overweight students are more likely to be exposed to bullying. Surprisingly in this study, the association between body size and the possibility to be exposed to bullying has not been found. This is perhaps because many Saudi students in middle school age are obese so, it is difficult to find an association between body size and the possibility of exposure to bullying. The fourth factor was the presence or absence of punishment against bullying behaviour in the schools. In this study, the presence of punishment against bullying behaviour can reduce the frequency of bullying and that was also what have been found by a meta-analysis study a decade ago<sup>44</sup> which conclude that the presence of anti-bullying punishment in school is effective intervention against bullying, This may be because students have fear against certain types of punishments, however, this type of intervention can have an inverse outcome as in a study conducted in the US which conclude that punishments against bullying is the ineffective intervention for reducing the prevalence of bullying in the school<sup>45</sup>. The final factor was the presence or absence of anti-bullying programs in the schools. In current study, it was found that the presence of anti-bullying program reduces the occurrence of bullying behaviour inside the school. This may be because the presence of such programs helps the student to deal with bullying by educating them about the impacts of bullying and it helps them also by increasing the awareness of students, teachers and other school staff. In support of our finding, there were three meta-analysis studies that found the same results. First two meta-analysis studies concluded that anti-bullying programs are effective intervention in reducing the prevalence of bullying by 22% and the third meta-analysis study also recommended that in order to bring the occurrence of bullying down, schools need to put in place some activities that drive away bullying behavior in schools<sup>46,47</sup>. The final important finding that found is about the impact of bullying behavior on students' academic performance. In the current study it was found that bullying can affect student academic

performance and the result showed that most of student who exposed to bullying have lower grade than those who have not exposed to any form of bullying in the schools. It may partly be that those students that have experienced bullying are reluctant to attend classes to avoid been bullied again. In addition, bullying victims are more likely to have depression and low self-confidence which might be a long term impact. This is also what has been found in similar study<sup>48</sup> which concludes that poor academic performance is strongly associated with bullying. This study findings are similar to other researchers. According to several studies<sup>49,50</sup> that were conducted to examine the impact of bullying on student well-being, it found that bullying behaviour can have significant impact on student academic performance, physical health and psychiatric health.

### **CONCLUSION**

Bullying is a serious problem that is found distributed among Saudi students bullying behavior affecting all ages in middle schools that can have impacts on student academic performance and physical health. Several factors in the schools have the potentials to contribute to bullying such as the absence of punishment and absence of anti-bullying programs.

### **SIGNIFICANCE STATEMENT**

The study found interesting areas at which bullying take place and potential students that can be exposed to bullying act of various forms. The researches on bullying behavior among Saudi youth is rare in Saudi Arabia therefore, more researches needed to examine the burden and causes of bullying among Saudi youths. In addition, further researches are needed for effective intervention strategies to reduce the prevalence of bullying as anti-bullying programs. Authorities need to be able to offer supports to students that have experienced bullying in order to help them improve their academic performances.

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