



## Research article

## Intimidation and bullying: A school survey examining the effect of demographic data

Sawsan Abuhammad<sup>a,\*</sup>, Ahlam Alnatour<sup>a</sup>, Kimberly Howard<sup>b</sup><sup>a</sup> College of Nursing, Jordan University of Science and Technology, P.O. Box 3030, Irbid, 22110, Jordan<sup>b</sup> College of Letters and Science, University of Wisconsin Milwaukee, Milwaukee, WI, 53211, USA

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## ABSTRACT

The aim of this study is to identify the predictors of bullying in secondary school students. This study uses correlational and regression analysis to examine the relationship between demographic data of students and whether or not they partake in bullying or have been bullied. Out of the given surveys, 357 were answered. The survey was given to three public schools from Irbid city. The results of multiple logistic regression tests revealed that level of study ( $B = .184, p = 0.003$ ) is positively and independently associated with bullying. Factors such as gender, income, and education are not significantly predictive of bullying behavior among school students. This study has implications for healthcare providers, nurses, and policymakers to adapt anti-bullying strategies for all secondary schools.

## 1. Introduction

Bullying and victimization are done through intimidation and aggressive behavior toward a weaker individual (Olweus, 1994). Bullying can be differentiated from other forms of conflict and is considered not just a disagreement or mutual fight when there is a power differential involved (Al Zboon and Al Zgoul, 2016). An additional description of bullying is described by Olweus as when a person is repeatedly subjected to the negative behavior. This negative behavior includes physical contact, verbal contact, and through more subtle contact, such as psychological attack(s) that are contrary to the receiving party's wishes and goodwill (Kobayashi and Farrington, 2020).

Bullying is increasingly being studied and investigated by researchers (Georgiou and Stavrinides, 2013). It can be described as a common part of many environments and might even be considered a potential worldwide phenomenon, though there could be cultures and societies wherein bullying does not exist (Al Zboon and Al Zgoul, 2016). It is important to investigate bullying because the literature has shown it to cause very negative effects in all parties involved. The victims develop symptoms such as anxiety, depression, psychiatric illness, suicidal ideation, and adulthood mental illness, while the bullies develop negative symptoms such as depression, suicidal ideation, and adulthood delinquency/criminality (Pörhölä et al., 2020). Thus, the relationship between these parties can be considered highly harmful, and it can also be

determined that intervening or addressing bullying should be a significant concern (Kobayashi and Farrington, 2020). Bullying can even result in tragedies, including extreme retaliation, completed self-harm, or realized suicide (Salo, 2018).

Given the negativity surrounding this subject, it is valuable to study it and understand the context in which bullying occurs, what determinants or environments limit bullying, and whether there are correlations that can help us better understand this dynamic. The existing literature on bullying has shown that bullying and peer abuse are a prevalent problem in the educational environment, and that bullying has a statistically large impact on many children, with one study showing that one in ten school children are bullied weekly. This comes down to approximately 10% of all school-aged children.

Another study described bullying rates as disturbingly high, and its researchers asserted that the majority of students would experience bullying, and a fraction of those are chronically bullied (Pörhölä et al., 2020; Salo, 2018). Given the longstanding aftermath of bullying and its potential impact on adulthood, it is worthwhile considering the social factors related to bullying, including religion.

Literature has/studies have shown that some factors have a moralizing, psychological, and behavioral regulatory impact and has also been described as influencing behavior to what is considered a socially acceptable standard (Rounding et al., 2012).

\* Corresponding author.

E-mail address: [Shabuhhammad@just.edu.jo](mailto:Shabuhhammad@just.edu.jo) (S. Abuhammad).

This study examines the relationship between some demographic variables and bullying using self-report surveys on bullying, the Frisen Bullying Scale and Religiosity Questionnaire. Investigating the relationship between demographic variables and bullying could provide information on the motivations to either bully or not bully, and the impact of a particular religion on the existence and/or pervasiveness in bullying among practitioners, in this case, school-aged children. The major questions of this study were:

1. What is the perception of bullying among secondary school students?
2. What are the predictors of bullying among secondary school students?

## 2. Study method

### 2.1. Design

This research study used a quantitative correlation and regression analysis. The correlational design is used to examine the relationships or links between different variables. It measures the level at which variables are related in either a positive correlation, negative correlation, or non-existent zero correlation. Although the correlational design cannot be used to determine causality, it is useful for determining whether there is any relationship between variables that are examined but not manipulated.

### 2.2. Study setting

A convenient sample is used for this study. Based on G power version 3, it is estimated that female and male school students are needed based on a power of 0.8, an alpha of 0.05, and a moderate effect size. The estimated size of this study was 340. The target population of this study includes all female and male Jordanian school students. The accessible population consists of female and male school students who were studying at three public schools of the Irbid governorate. About 400 school students from the three study settings were asked to participate in this study. The returned surveys were 357. The setting was three public schools from Irbid city. The authors chose these schools because the head of schools and teachers were very cooperative in the recruiting process and collection of data.

### 2.3. Instrument

The research questions for this study were taken from the Frisen Bullying Questionnaire. The Frisen Bullying Questionnaire contained 41 structured items related to bullying, which were reduced to 37 structured items. The questionnaire also includes a definition of bullying with five characteristics: 1.) Repeated aggressive behavior. 2.) Which behavior is negative? 3.) If behavior involves physical or verbal contact. 4.) If the bully intentionally causes harm to the victim, and 5.) If the victim is unable to defend him/herself. This scale consists of three subscales that include the characteristics of bullies, the characteristics of the victim, and how to stop bullying. A three-point Likert scale is used for respondents: agree, unsure, and disagree. Cronbach's Alpha for the bullying subscales was respectively 0.67, 0.63 and 0.56 (Al-Ali et al., 2017).

### 2.4. Data collection procedures

The researchers received permission to conduct the research and use the student and school data. The researchers provided this information to the Institutional Review Board (IRB) committee at Jordan University of Science and Technology in Jordan (#20/120/2018) and Ministry of Education (2018234) for authorization. The researchers contacted the school to inform them about the purpose and nature of the research study. The researchers wanted to do this study to understand whether there was a significant correlation between the Islamic religion and bullying.

The school provided permission for the researchers to distribute the questionnaire to students and use the data collected from the study. The

school was advised of the strict confidentiality standard intended to protect both the students' and school's data. The teachers were asked to read a pre-prepared script related to participation in the study to each class and advise students that they were allowed to opt out if they did not want to participate. The researchers provided the research study dissemination instructions and questionnaire packets to teachers and then started collecting data. They collected two types of consent form, one from secondary school students who accepted to participate in the study and the other from their parents. The students who decided to participate in the study completed the Arabic-translated versions of the questionnaires without indicating their names or any identifiable information. The questionnaires were placed in a sealed packet and taken to a pre-identified drop-off location. The information from these completed questionnaires was then aggregated and analyzed by the study researchers. Data collection took 15 min. The study maintained strict confidentiality of the students' identity and also retracted the name of the school. The authors kept the surveys in a locked cabinet, and only authors who participated in the study had access to the data.

### 2.5. Translation

These questionnaires were translated into Arabic using the back-translation method described by the World Health Organization (WHO) because the instruments had to be adapted for use in Jordan, a largely Arabic-speaking country. The goal of the translation was to produce Arabic translations of the original English instruments that were cross-culturally and conceptually equivalent, though not literally equivalent (2010). The researchers followed the following steps: 1.) Forward translation, 2.) Back translation, 3.) Pre-testing and cognitive interviewing, and 4.) Final version. The forward translation process involved a primary translation of the English language questionnaires into Arabic by a bilingual native speaker of Arabic.

This first translation was reviewed by the panel of researchers, also known as the expert panel, who recommended changes and produced a second translation. The back translation process involved translating the Arabic version produced by the first translator and expert panel back into English to find and resolve any inconsistencies, which resulted in a third translation that was completed by a bilingual native speaker of English.

The pre-testing and cognitive interviewing process involved using the minimum number of ten students per questionnaire. The students were provided with information on the study, asked to explain what they thought of the questions that were asked of them, asked to answer the questions according to their understanding, and to identify any words or phrases that they had a hard time understanding. After the pre-test, the subjects' answers were considered, and a final translation was produced for use in the study.

### 2.6. Data analysis

This study used the correlational design and regression model to analyze the results for each question. Later examinations after a correlation are found to be useful to prove causality (Myers et al., 2013).

Regression analysis is a related procedure that was used to examine the relationship between dependent and independent variables. This type of statistical analysis was implemented because the study deals with schoolchildren and self-reported information without variable manipulation, and what could be considered a minimally-invasive test for the limited purpose of this study.

## 3. Results

### 3.1. Demographic variables

The number of study participants was 357. The participants were females ( $n = 169$ , 47.4%), and 52.7% were males ( $n = 188$ ). The age of the population was 16 years. The yearly family income of the study

participants ranged from \$1200 JOD (\$1700) to more than \$5000 JOD (\$7000 USD). The mean income was \$1600 JOD (\$2300 USD). Almost 110 (30.8%) of the participants' mothers had bachelor's level of education, primary or secondary education (93; 26.0%), associate (59; 16.5%), and graduate level (95; 26.6%). On the other hand, the participants' fathers had primary or secondary education (89; 24.9%), bachelor's degree (85; 23.8%), associate (55; 15.4%), and lastly, Master or Ph.D. (128; 35.9%). See [Table 1](#).

### 3.2. Bullying

After examining the perception of the participants on the 37 items on the bullying scale, the results showed that there was a common perception regarding bullying. The mean perception of bullying had a score of  $M=65.3$ . The standard deviation was 12.78, the maximum was 108, and the range was 37–111. Item #1 showed that bullies are cowards and scored the highest score of agreement from the students 257 (71.2). Item #37, bullying stops if victims of bullies can make new friends, scored the lowest score of student agreement 6 (1.7%) outlines the answers provided by every student. [Table 2](#) revealed the response of the students for each question regarding bullying.

### 3.3. Multiple regressions

Multiple regressions were used to predict bullying behaviors using potential predictive factors such as age, gender, level of education, the mother's education, the father's education, and income. The results are summarized in [Table 1](#). The results of multiple logistic regression tests revealed a level of study ( $B = .184, p = 0.003$ ) is positively and independently associated with bullying. Factors such as gender, income, and education are not significantly predictive of bullying behavior in school students. [Table 3](#) reveals the predictors of bullying behavior.

**Table 1.** Demographical variables for the students.

Variable	Frequency (%) Mean (SD)
<b>Gender</b>	
Male	188 (52.6)
Female	169 (47.4)
<b>Age</b>	16 (12.4)
<b>Seventh</b>	7 (2%)
<b>Eighth</b>	8 (2.2%)
<b>Ninth</b>	67 (18.8%)
<b>Tenth</b>	101 (28.3%)
<b>Diploma</b>	174 (48.7)
<b>Levels of Education Mother</b>	
Primary education or secondary	92 ( 25.8%)
Diploma	59 (16.5%)
Bachelor	110 (30.8%)
Higher education	95 (26.6%)
<b>Levels of Education Father</b>	
Primary education or secondary	89 (24.9%)
Diploma	55 (15.4%)
Bachelor	85 (23.8%)
Higher education	128 (35.9%)
<b>Monthly Income (JD)</b>	
1100 to 2200	137 (38.4%)
2300 to 3600	82 (23.0%)
3600 to 5000	54 (15.1%)
more than 5000	83 (23.2%)
<b>Area of living/work</b>	
Urban	188 (52.6%)
Rural	169 (47.3%)

## 4. Discussion

It is challenging to draw a conclusion from this study based on the novelty of research on social constructs concerning bullying. The study did not confirm the hypothesis that an individual's environment and demographic variables have some influence on how they treat others and allow them to be treated.

The literature consulted during the study showed that over 77% of students report bullying at some point during their school years. However, several studies show a significantly lower number ([Fu et al., 2013](#)). Although correlational research does not reveal cause and effect, it is reasonable to assume that the curriculum in the school has an impact on bullying. Therefore, the assumption becomes the predicament of the research study. Besides, while it is difficult to ascertain the causality, we have assumed that the setting has unique features that set it apart from similar environments.

Our results show that gender has no effect on perception of bullying. To the contrary, a study conducted by [Kartal and Bilgin \(2011\)](#) in Turkey used a convenient sample of 688 male and female students as participants. Among the 688 participants, 222 were in 7th and 8th grade. The researchers found that three out of four students engaged in behaviors perceived to be bullying. The most dominant type of bullying was verbal bullying. Boys had high levels of engaging in bullying compared to girls. Victims of bullying as well as bullies agreed that factors like poverty and obesity were significant reasons for bullying. There is a separate perception for male students who are physically weaker and girls who are short, which are some of the reasons for bullying ([Kartal and Bilgin, 2011](#)).

Similarly, a Greek study conducted by [Kalati et al. \(2010\)](#), which involved 214 primary and secondary school students, found that bullying was closely related to academic achievement. According to the authors, 67.7% of girls and 37% of boys who participated in the study believed that gender plays a vital role in bullying. [Kalati et al. \(2010\)](#) define a bully as an individual with bad manners who often makes trouble in classrooms. When questioned about such behavior, most participants stated that they ignore the incidents, talk less to their teachers and parents, and react aggressively to the bully. Additionally, female students engage in a psychological form of aggressiveness, while males participate in physical aggressiveness. The study also found that the educational levels of parents influenced the students' perception of the characteristics of a victim of bullying. Students whose parents have a university and diploma education level agreed with the argument regarding the statement on victim characteristics more than students with parents who attained a secondary level of education. Besides, parental support had a negative association with bullying. However, according to [Georgiou and Stavrinides \(2013\)](#), families who are overprotective of their children may result in the child becoming a victim of bullying. Parents with a higher level of education had more family involvement with their children and provided adequate parental support. As a result, the students gain a sense of belonging to specific groups more than average ([Walters and Kim-Spoon, 2014](#)). These students become socially isolated but to a lesser degree of a pure bully, and they are perceived to be a characteristic of a bullying victim.

Our results revealed that the level of study is the only factor that influences perception toward bullying. This finding corresponds to the results of a study in the U.S. conducted by [Carlyle and Steinman in 2007](#). They examined the effect of socio-demographic factors on bullying. The study examined the role of gender, ethnicity, and age group concerning bullying. The study used a cross-sectional research design with a large sample size of 79,492 student participants who were between the 6th and 12th grade. The study results showed that the most affected group were students in 8th grade. It also found that male students are more likely to face the impact of bullying than their female counterparts.

Typically, today's culture is more permissive and accepted than in previous cultures. Activities like alcohol and drug use, premarital sex, and risk-taking behavior among youths are becoming more acceptable

**Table 2.** Response of the students for each question regarding bullying.

	agree	not sure	not agree
1. Bullies are really cowards underneath	257	73	26
2. Bullying is normal, everyone gets bullied	99	130	126
3. Nobody likes a wimpy kid	125	117	113
4. It's funny to see kids get upset when they are teased	54	50	251
5. Victims of bullying are usually thin	72	207	76
6. Victims of bullying are usually fat	94	174	86
7. Victims of bullying are often considered ugly	93	148	112
8. Victims of bullying often talk or sound different	144	158	53
9. Victims of bullying are shy	164	121	66
10. Victims have low self-esteem	137	137	79
11. Victims come from poor families	46	143	163
12. Victims have no friends	79	144	129
13. Bullies think they are cool	119	129	103
14. Bullies want to feel superior	234	81	36
15. Bullies want to show that they have power	244	72	33
16. Bullies have psychological problems	186	127	40
17. Bullies have family problems	151	165	38
18. Bullies have low self-esteem	174	128	51
19. Bullies bully others to feel better	195	124	32
20. Bullies want to impress others	164	150	36
21. Bullies are jealous of the victim	176	130	45
22. Bullies lack respect for other people	223	94	31
23. Bullies are annoyed by the victim's appearance	167	140	39
24. Bullies are annoyed by the victim's behavior	163	137	49
25. Bullies are also victims	146	123	81
26. Victims should changes classes to escape bullies	100	111	141
27. Victims should changes schools to escape bullying	91	100	158
28. Victim should stand up for himself/herself	239	74	39
29. Victim should become psychologically stronger to stop bullying	232	74	46
30. Victim should stop being different (loses weight or gets the right clothes) if they want bullying to stop	94	144	114
31. Bullies stop when they matures (get older)	94	183	66
32. Bullies become tired of bullying	133	171	47
33. Bullies can find other victims	191	111	48
34. Bullies feel a sense of guilt (realizes it's wrong to bully others and feels badly)	87	177	81
35. Bullying stops when adults intervene (school, teachers, or others intervene)	132	161	57
36. Bullying stops if victims don't care if they are bullied	123	171	55
37. Bullying stops if victims of bullies can make new friends	6	234	115

**Table 3.** Predicators of bullying behaviors for school students.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.180	7.942		4.555	.000
	age	.059	.083	.038	.704	.482
	gender	1.989	1.665	.082	1.195	.233
	Level of study	2.325	.731	.184	3.183	.002
	Income	.900	.549	.087	1.638	.102
	Meducat	.598	.814	.053	.735	.463
	Feducate	.299	.809	.028	.370	.712

(Abuhammad et al., 2018). These initially punished activities are now tolerated. Although it is an indication that society is evolving, it is becoming difficult to face fundamental human characteristics. Bullying had the role of policing specific behaviors in the past. However, it is currently used as a way to demean and abuse other people. Although the argument is not based on the right or good of bullying, it was an essential component of the society that is now missing. The current form of

bullying is unconscionable as society loses its ability to safeguard itself and to create boundaries for acceptable behaviors.

#### 4.1. Limitations

The Frisen Bullying Questionnaire measured the various facets of bullying. Most importantly, the limitation of this study is that it relied on self-reporting. Study participants were requested to report socially

unacceptable behavior such as bullying. Besides, the participants reported information on bullying in an environment where the activity violates the morals of the established social construct. The study could encounter limitations as most of the students already knew the “right” answers to select from the ethical and standard of their community which may alter their response.

Although the researcher upheld the autonomy of the participants, there were possibilities for deceit in reporting. Also, the instruments used during the study were limited to the number of questions. Hence, test fatigue should not have been a concern.

#### 4.2. Implications (Abuhammad et al., 2018)

The results showed no relationship between the demographic and bullying, and that the social construct has no impact on bullying. The study achieved its aim in determining whether there was a relationship between the variables. Most literature took a psychological perspective, preventative perspective, or long-term effects perspective. The study aimed to link groups of people within a sociological setting rather than an individualized setting. Educators can identify groups of students at higher risks of bullying by having in-depth research in which they can find a more pronounced relationship. This study, therefore, acts as groundwork for future studies.

Health care providers, especially nurses, are required to improve the knowledge and attitude toward bullying in secondary schools. Moreover, they need to increase the awareness of the decision maker, especially the Ministry of Education, regarding the extent of the problem and the way to deal with bullying so that they can create national policies and increase the awareness through media and education.

#### 5. Conclusion

It cannot be determined conclusively that there is a relationship between the demographic data and bullying. In general, our study did not confirm the hypothesis that an individual's environment and demographic variables have influence on how they treat others or how they allow them to be treated. However, the matter cannot be concluded due to the limitation of the study data collection, considering it only took place at three schools. There is a need to increase the awareness of the decision maker, especially the Ministry of Education, regarding the extent of the problem and the way to deal with bullying so that they can create national policies and increase the awareness through media and education.

#### Declarations

##### Author contribution statement

S. Abuhammad, A. Alnatour, K. Howard: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the

data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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##### Competing interest statement

The authors declare no conflict of interest.

##### Additional information

No additional information is available for this paper.

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