



# An Investigation of the Bullying Through Social Networks Among Junior High School Students: An Experience in Kashan, Iran

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## 1. Background

An individual's state of health is primarily determined by a range of social factors. These factors mostly have their roots outside the health sector (1). One of these social factors is the presence of mass communication means in people's personal and social lives. Using modern communication technologies and accessing social networks is a phenomenon recently developed in large extents (2). In today's generation, a large portion of the adolescent and the young people's interaction is accomplished through information communication technology (3).

Nowadays, mobile-centered and web-based social networks are commonly used among the youth (4). Motives to utilize such technologies and networks in the order of importance are as follows: self-disclosure, improving one's status, immersing in the media, searching for information, whiling away, maintaining relationships, and keeping oneself amused (5). These media can bring about adverse consequences too. One of the disadvantages is misusing these media and amenities especially by the youth to vex others and give rise to a new method of bullying that harms the social and psychological health of individuals and societies especially the young students (6).

Bullying is defined as a repeated aggressive act on the part of an adolescent or a stronger child against a weaker victim (6). In regards to the health impact, the victims most often report such feeling as depression and social anxiety. Moreover, from an educational perspective, these students, compared with their peers, experience weaker school performance (7). Bullying is practiced in such different forms as physical, verbal, communicative, and/or web-related types (8). Similar to the traditional bullying, cyber-bullying is also an aggressive act re-

peated to harm someone unable to defend him/herself (8). Mobile-centered and web-based social networks threaten users while accessing their user accounts (9). Most probably both types of bullying occur among young students (10). Cyber-bullying, however, may happen at any time and spread speedily and most often occurs outside school milieu where monitoring and controlling by the adults become difficult (11). Some of the cyber-bullying forms are vexing, bothering, and threatening by means of telephone calls, texting, emailing, insulting at web-sites, and circulating released pictures and video clips on mobile phones that inflict more harm than traditional bullying (12). Researchers found that bullies, probably on account of their involvement in improper behavior, show less empathy and school commitment compared with their fellow students (13).

Bullying prevalence is widely studied in many countries and is ranging from 8.6% to 45.2% in males, and from 4.8% to 35.8% in females (14) and cyber bullying ranged from 6.5% to 35.4% (15). Two studies in Iran indicated that the prevalence of bullying were 64.2% and 26.3% (16, 17).

Considering the importance of bullying issue and the widespread use of modern mass communication means, the current study aimed at investigating the issue in the schools of Kashan, Iran -a traditional city- to determine the bullying occurring in mobile-centered and web-based social networks and assess whether traditional barriers to traditional bullying can prevent bullying through social networking.

## 2. Methods

The research statistical population comprised all junior-high school students of Kashan, Iran during the academic year 2015 - 2016.

The tool used to collect data for the current cross sectional study was the Olweus Bullying questionnaire (OBQ), which measures students' perspective on bullying and victimization in different types of traditional, cybernetic, and through social networks. The questionnaire contains 20 items; the first 10 of which measure victimization and the next 10 measure committing the act of bullying. In this questionnaire, items 1 to 8 are designed to measure traditional victimization, items 11 to 18 to measure perpetrating traditional bullying, items 9 and 10 measure cyber-victims, and items 19 and 20 measure cyber-bullying while the two items 10 and 20 are intended to measure victims and bullies through social networks. Using a 5-point Likert scale for this 20-item questionnaire, the score range fluctuates from 20 to 100. Content validity was approved through the content validity ratio ( $CVR > 0.7$ ). Construct validity of victimization and bullying perpetration scale was respectively explained by exploratory factor analysis with 64% and 72% of variance. Test-retest showed a good level of reliability for two scales. Cronbach's alpha coefficient of the questionnaire for the subscale of bullying perpetration and the subscale of victimization were 0.87 and 0.86, respectively (18).

Based on the mean victimization rate of 15% for cyber-bullying reported in a systematic review (14) and considering the Cochran formula with confidence interval (CI) of 95% and error margin of 5%, and also a coefficient of three for cluster sampling, the number of needed subjects amounted to 587. Using the random sampling method and in proportion to the total body of the research population, four female schools and four male schools were selected and in each school from each grade, one class was picked out. After doing the necessary coordination with the school headmasters and the classroom teachers, and after orienting the students toward the research objective, the questionnaires were distributed among the students in the presence of the tester.

To analyze the data, the statistical tests of Chi-square and the Fisher exact test and the Pearson correlation were employed. Further, in the analysis, the cutoff point recommended by Sulberg and Olweus was used to group bullies and victims. Following their method, a minimum of perpetrating the act of bullying or being a victim of a bullying act, two or three times in a month, is considered a good indicator to include an individual as bully or victim (19).

## 3. Results

In the current study, among 590 students- according to class name lists- 581 answered the questionnaires. The responding rate was 98.47, deemed to be desirable. Out of the students participating in the study, 306 were male and 275 were female. The students were in the age range of 13 to 17 years (Table 1).

**Table 1.** Demographic Characteristics of Junior High School Students in Kashan

Variables	Group of Variables	No. (%)
Gender	Female	275 (47.3)
	Male	306 (52.7)
Grade of education	7	211 (36.3)
	8	201 (34.6)
	9	169 (29.1)
Mother's education	No H.S diploma	327 (56.3)
	H.S diploma and higher	254 (43.7)
Father's education	No H.S diploma	302 (52.0)
	H.S diploma and higher	279 (48.0)
Type of school	State/public	459 (79.0)
	Private	122 (21.0)
Mother's occupation	Unemployed	498 (85.7)
	Employed	83 (14.3)
Father's occupation	Unemployed	52 (9.0)
	Employed	529 (91.0)

Abbreviation: H.S, high school.

In general, higher frequency of bullying was observed among males, 119 students (38.9%), and lower frequency in bullying among females, 23 students (8.4%). From a statistical point of view, there was a significant relationship between gender and generally bullying and also victimization ( $P < 0.001$ ) (Table 2). There also were a significant relationship between gender and different types of victimization; i.e., traditional, cybernetic, and social networks ( $P < 0.001$ ), and different types of bullying except bullying through social networks ( $P = 0.16$ ) (Tables 3 - 5).

It should be added that the results of the current study showed no significant statistical relationship between general bullying and victimization and also different types of them on one hand and the school grade, parents' education, parents' occupation, and the school type on the other hand (Tables 2 - 5).

The highest frequency in committing bullying act was related to parents level of education (those not holding a high school diploma), which were statistically significant ( $P$  values = 0.006 and 0.007, respectively) (Table 4).

**Table 2.** General Bullying and Victimization Among Junior High School Students in Kashan

Variable	Type	General Bullying			General Victimization		
		Yes	No	P Value	Yes	No	P Value
Gender	Female	23 (8.4)	252 (91.6)	< 0.001	60 (21.8)	215 (78.2)	< 0.001
	Male	119 (38.9)	187 (61.1)		158 (51.6)	148 (48.4)	
Grade of education	7	53 (25.1)	158 (74.9)	0.780	77 (36.5)	134 (63.5)	0.924
	8	51 (25.4)	150 (74.6)		77 (38.3)	124 (61.7)	
	9	38 (22.5)	131 (77.5)		64 (37.9)	105 (62.1)	
Father's education	No H.S diploma	83 (27.5)	219 (72.5)	0.076	122 (40.4)	180 (59.6)	0.136
	H.S diploma and higher	59 (21.1)	220 (78.9)		96 (34.4)	183 (65.6)	
Mother's education	No H.S diploma	84 (25.7)	243 (74.3)	0.427	128 (38.5)	201 (61.5)	0.568
	H.S diploma and higher	58 (22.8)	196 (77.2)		92 (36.2)	162 (63.8)	
Father's occupation	Unemployed	14 (26.9)	38 (73.1)	0.662	21 (40.4)	31 (59.6)	0.655
	Employed	128 (24.2)	401 (75.8)		197 (37.2)	332 (62.8)	
Mother's occupation	Unemployed	123 (24.7)	375 (75.3)	0.723	183 (36.7)	315 (63.3)	0.345
	Employed	19 (22.9)	64 (77.1)		35 (42.2)	48 (57.8)	
Type of School	State/public	115 (25.1)	344 (74.9)	0.504	167 (36.4)	292 (63.6)	0.272
	Private	27 (22.1)	95 (77.9)		51 (41.8)	71 (58.2)	

Abbreviation: H.S, high school.

**Table 3.** Traditional Bullying and Victimization Among Junior High School Students in Kashan

Variable	Type	Traditional Bullying			Traditional Victimization		
		Yes	No	P Value	Yes	No	P Value
Gender	Female	23 (8.4)	252 (91.6)	< 0.001	58 (21.1)	217 (78.9)	< 0.001
	Male	116 (37.9)	190 (62.1)		148 (48.4)	158 (51.6)	
Grade of education	7	51 (24.2)	160 (75.8)	0.861	12 (5.7)	199 (94.3)	0.757
	8	50 (24.9)	151 (75.1)		71 (33.6)	140 (64.2)	
	9	38 (22.5)	131 (77.5)		63 (37.3)	106 (62.7)	
Father's education	No H.S diploma	81 (26.8)	221 (73.2)	0.089	114 (37.7)	188 (62.3)	0.230
	H.S diploma and higher	58 (20.8)	221 (79.2)		92 (33.0)	187 (67.0)	
Mother's education	No H.S diploma	81 (24.8)	246 (75.2)	0.587	118 (36.1)	209 (63.9)	0.719
	H.S diploma and higher	58 (22.8)	196 (77.2)		88 (34.6)	166 (65.4)	
Father's occupation	Unemployed	14 (26.9)	38 (73.1)	0.595	19 (36.5)	33 (62.5)	0.864
	Employed	125 (23.2)	404 (76.4)		187 (35.3)	342 (64.7)	
Mother's occupation	Unemployed	120 (24.1)	378 (75.9)	0.812	171 (34.3)	327 (65.7)	0.167
	Employed	19 (22.9)	64 (77.1)		35 (42.2)	48 (57.8)	
Type of School	State/public	112 (24.4)	347 (75.6)	0.601	157 (34.2)	302 (65.8)	0.221
	Private	27 (22.1)	95 (77.9)		49 (40.2)	73 (59.8)	

Abbreviation: H.S, high school.

The linear correlation coefficient between traditional bullying and cybernetic bullying and also between traditional bullying and bullying through social networks were 0.472 and 0.419, respectively; it should be noted that these relationships were also significant ( $P < 0.001$ ) (Table 6).

#### 4. Discussion

Over the past few years, bullying in schools is turned into a matter of considerable importance and in many

countries it is investigated extensively as an international issue. Researches conducted to date indicate that bullying may occur in any school environment at different degrees and intensities, which shows that bullying is a common problem among nations and countries (20). Many researches were conducted on the prevalence of bullying among middle school students. Although some of their findings were in agreement with those of the current study, there were some differences, which were dealt with below in some details.

**Table 4.** Cybernetic Bullying and Victimization Among Junior High School Students in Kashan

Variable	Type	Cybernetic Bullying			Cybernetic Victimization		
		Yes	No	P Value	Yes	No	P Value
Gender	Female	6 (2.2)	269 (97.8)	0.007	3 (1.1)	272 (98.9)	< 0.001
	Male	21 (6.9)	285 (93.1)		35 (11.4)	271 (88.6)	
Grade of education	7	6 (2.8)	205 (97.2)	0.290	12 (5.7)	199 (94.3)	0.215
	8	11 (5.5)	190 (94.5)		18 (9.0)	183 (91.0)	
	9	10 (5.9)	159 (94.1)		8 (4.7)	161 (95.3)	
Father's education	No H.S diploma	21 (7.0)	281 (93.0)	0.006	23 (7.6)	279 (92.4)	0.275
	H.S diploma and higher	6 (2.2)	273 (97.8)		15 (5.4)	264 (94.6)	
Mother's education	No H.S diploma	22 (6.7)	305 (93.3)	0.007	24 (7.3)	303 (92.7)	0.377
	H.S diploma and higher	5 (2.0)	249 (98.0)		14 (5.5)	240 (94.5)	
Father's occupation	Unemployed	4 (7.7)	48 (92.3)	0.274	3 (5.8)	49 (94.2)	0.814
	Employed	23 (4.3)	506 (95.7)		35 (6.6)	494 (93.4)	
Mother's occupation	Unemployed	24 (4.8)	474 (95.2)	0.629	33 (6.6)	465 (63.4)	0.837
	Employed	3 (3.6)	80 (96.4)		5 (6.0)	78 (94.0)	
Type of School	State/public	23 (5.0)	436 (95.0)	0.419	33 (7.2)	426 (92.8)	0.220
	Private	4 (3.3)	118 (96.7)		5 (4.1)	117 (95.9)	

Abbreviation: H.S, high school.

**Table 5.** Social Networks Bullying and Victimization Among Junior High School Students in Kashan

Variable	Type	Social Networks Bullying			Social Networks Victimization		
		Yes	No	P Value	Yes	No	P Value
Gender	Female	6 (2.2)	269 (97.8)	0.162	3 (1.1)	272 (98.9)	< 0.001
	Male	13 (4.2)	293 (95.8)		23 (7.5)	283 (92.5)	
Grade of education	7	2 (0.9)	209 (99.1)	0.059	9 (4.3)	202 (95.7)	0.371
	8	9 (4.5)	192 (95.5)		12 (6.0)	189 (94.0)	
	9	8 (4.7)	161 (95.3)		5 (3.0)	164 (97.0)	
Father's education	No H.S diploma	14 (4.6)	288 (95.4)	0.054	15 (5.0)	287 (95.0)	0.551
	H.S diploma and higher	5 (1.8)	274 (98.2)		11 (3.9)	268 (96.1)	
Mother's education	No H.S diploma	14 (4.3)	313 (95.7)	0.120	16 (4.9)	311 (95.1)	0.580
	H.S diploma and higher	5 (2.0)	249 (98.0)		10 (2.9)	244 (96.1)	
Father's occupation	Unemployed	2 (3.8)	50 (96.2)	0.807	1 (1.9)	51 (98.1)	0.351
	Employed	17 (3.2)	512 (96.8)		25 (4.7)	504 (95.3)	
Mother's occupation	Unemployed	16 (3.2)	482 (96.8)	0.849	24 (4.8)	474 (95.2)	0.326
	Employed	3 (3.6)	80 (96.4)		2 (2.4)	81 (97.6)	
Type of School	State/public	15 (3.3)	444 (96.7)	0.995	22 (4.8)	437 (95.2)	0.472
	Private	4 (3.3)	118 (96.7)		4 (3.3)	118 (96.7)	

Abbreviation: H.S, high school.

Based on the findings of the current research, the prevalence of general bullying among junior high school students (grades 7 to 9) was 24.4%. The prevalence of cybernetic bullying was calculated at 4.6%, the majority of which was practiced by means of social networks (72%). The cybernetic victimization also occurred more through social networks (69%). The higher prevalence of victimization relative to bullying can be attributed to the lower tendency toward reporting bullying than victimization.

Moreover, the obtained results showed that bullying

was observed more among males than females. This finding was in concordance with the research that pointed to an alarming rate of increase in traditional bullying among males, the reason of which may lie in the fact that people mostly consider bullying (aggressiveness) as an innate and natural trait for males and that these types of behavior by the males is deemed to be a sign of power and audacity (17). Generally speaking, males practice bullying more than females, just as males are more violent than females, a fact related to such numerous biological factors as testosterone

**Table 6.** Pearson Linear Correlation Coefficient Between Bullying and Relevant Subscales

Variable	General Bullying	Traditional Bullying	Cyber-Bullying	Social Net Bullying
General bullying	-			
Traditional bullying	0.991	-		
	< 0.001			
Cyber-bullying	0.583	0.472	-	
	< 0.001	< 0.001		
Social net bullying	0.516	0.419	0.871	-
	< 0.001	< 0.001	< 0.001	

and serotonin levels in the body (21).

The higher extent of bullying among males is also observed in analyzing gender difference in cybernetic bullying, but in bullying in social networks, the difference is not distinct, a fact that is accounted for by comparing the frequency of bullying females through cybernetic means and through social networks; the information provided in tables 4 and 5 bears out this fact. This finding is harmonious with the results obtained by Smith et al. They found that females practiced considerably more web bullying than males (22).

This finding sounds a danger alarm for the cultural authorities of the society, that is, social networks are successful in removing some traditional barriers in the way of developing social abnormal types of behavior on the part of females.

The findings of the current study considered that the highest frequency of cyber-bullying and cyber-victims occurred among males. These findings were in agreement with the study conducted by Li, which mentioned that in Canada cybernetic vexation occurs twice as much among males than females (23). Though researches by Slonje et al. and Patchin et al. pointed to the fact that females more than males were the object of cyber bullying especially through e-mailing (12, 24).

The present study manifested that cybernetic bullying was observed among the students whose parents had lower levels of education. It is claimed that cyber-bullying and cyber-victimization usually occur when the supervision of the adults is quite enough and the parents are capable of supervising their children mobile usage (25). Therefore, it is expected that the parents with higher levels of education communicate more effectively with their children and on the account of having more information can exert better and more conscious supervision.

In this study, the grouping of parents' occupation into employed and unemployed was done considering the amount of time they spent at home with their children and

the income aspect was not in view. Therefore, not being convinced of a significant relationship between parents' occupation on one hand and bullying and victim types on the other, one can endorse the supreme role of a conscious supervision on the part of parents in exerting strict personal controls and checks; therefore, an effective way to reduce bullying is setting up talks with the students' parents (25).

The linear correlation coefficient between traditional and cybernetic bullying on one hand and traditional bullying and bullying through social networks can point to the fact that having a familial upbringing background of traditional coerciveness can pave the way for cyber-bullying and bullying through social networks. This latter point was borne out by Kwan et al. that came to the conclusion that students' offline bullying experiences are the strong predictors of their involvement in bullying in such social networks as Facebook and that parents can, by enhancing their knowledge and exerting proper supervision, take measure towards reducing the possibility of their off-line bullies turning into social network ones (20).

While the current study elucidated the fact that, compared with other researches in this field, there was less prevalence of bullying behavior among junior high school students in Kashan rather than other setting, this phenomenon still needs proper attention.

Although the study implied that some social harm were emerged from social networking, but it could be supposed that the social behaviors hidden by traditional barriers are found out through social networks; hence, there is an ambiguity about the causal direction of the association between bullying and social networking (15).

Among the limitations of the current study, it can be referred to the design of the research in a cross sectional manner in a small setting, which fact delimits the possibility of establishing a causal relationship and generalizing the results to other groups. Finally, underestimating bullying behavior due to the nature of self-report characteristics

of the study is still regarded as one weakness of the present research program.

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