

Bullying among school adolescents in Erbil city of Iraq

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Abstract

Background and objective: Bullying (being a bully or a victim of bullying) is a common problem for children all around the world. The prevalence of bullying varies depending on the age, gender, and race of the individuals involved. This study aimed to explore the prevalence of each form of bullying among school adolescents of both genders and to measure the association of different forms of bullying with the sociodemographic characteristics.

Methods: A school-based cross-sectional study done in public schools across Erbil city of Kurdistan region of Iraq for the educational year 2016-2017. The sample was collected by multistage cluster sampling technique with a total number of 35 schools distributed through the six municipalities of Erbil. Data collection was done through a self-reported close-ended questionnaire.

Results: A total of 1070 school adolescents participated in this study. The mean age was 15.56 ±1.41 years, and males were 51.8% of the sample making male to female ratio 1:0.9. Sixty percent of the students reported being involved in bullying at least once through the last semester of the school year, 3.0% were bullies, 26.2% were both bullies and being bullied, and 31.8% were victims of bullying.

Bullying, victimization, and bully-victims were significantly higher among boys compared to girls for all forms of bullying. Significantly higher bullying prevalence was noticed among Arabs compared to Kurds and Turkmen.

Conclusion: Bullying behavior seems to be a widespread problem in schools of Erbil city.

Keywords: School bullying; School violence; Adolescent bullying; Victimization.

Introduction

Research has revealed that bullying (being a bully or a victim of bullying), is not a problem unique to one culture, and is a common problem for children all around the world.¹ The prevalence rate of bullying can vary depending on the age, gender, and race of the individuals involved.² Two main styles of bullying are agreed upon, direct and indirect bullying.³⁻⁴ Direct bullying can include two different means of aggression: physical such as kicking and hitting, and the other is the verbal such as threatening, name-calling, and insulting.^{3,5} Indirect bullying is also known as relational aggression because the bully uses his relationship with other individuals as a way

of inflicting social harm onto another⁶ such as ignoring, excluding, and backbiting.³ A new method of bullying which emerged with the intrusion of technology and social media into daily life which is called cyberbullying that means it is the form of bullying which is perpetrated with digital technology.⁷ Other specific forms of bullying, which are comparatively much less studied, are racial bullying, that is, attacks toward peers from different ethnic backgrounds,⁸ and sexual bullying, that is, any bullying behavior, whether physical or non-physical based on a person's sexuality or gender.⁹ Therefore, adolescent bullying takes six forms: verbal, physical, relational, cyber, racial and sexual.¹⁰ All form of

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bullying can result in substantial negative effects on the individuals involved, so all forms of bullying should be taken seriously.⁵ As bullying means exposing the victims repeatedly and over time to negative actions, as intentionally inflicts injury or discomfort, so when examining bullying, it is important to classify the students into four categories: bullies, victims, bully-victims (i.e., had both bullied others and been bullied), and uninvolved students.¹¹ The current study examined the six forms of in-school bullying, after categorizing the students into four groups: bullies, victims, bully-victim, and those who are not involved in any form of bullying. Thus, the main objectives were to explore the prevalence of each form of bullying among school adolescents of both genders and to measure the association of different forms of bullying with the sociodemographic characteristics of school adolescents.

Methods

This is a school-based cross-sectional study, where students in grades 7 to 12 of the public schools across Erbil city of Kurdistan region of Iraq were taken as the primary sampling unit. Adolescent students between 13 and 18 years of age and of both genders were included in the study. The sample was collected by multistage cluster sampling technique. Data on schools and students in each school and grade for the educational year 2016-2017 were obtained from the General Directorate of Education of Erbil. Schools were divided into six groups according to the municipalities of Erbil city, to cover all quarters of the city. From each municipality, schools were selected randomly by choosing the random number from the table of numbers. There are four types of schools in Erbil city according to the teaching of language in that school, Kurdish, Arabic, Turkish, and English. The 1st three types are either male or female school, while English schools are mixed. The majority of the schools were those

teaching in Kurdish, 179 schools out of a total of 214 schools. The number of schools selected from each municipality was proportional to the number of students within that municipality. Not more than three Kurdish schools for males and three for females were selected from each municipality (at least one school for each gender was selected from each municipality). The total number of the selected Kurdish schools was 14 male schools and 15 female schools. Five male and four female schools were teaching in Arabic so one school for each gender was selected. Regarding the Turkish schools, there were three schools for males and two for females. Only one male school was selected as the number of female students was much lower than the males. There were a total of 21 mixed English schools from which proportionally three schools were selected randomly out of the list. Therefore, the total number of selected schools was 35 distributed in the six municipalities. From each school, a single class was selected randomly with a minimum sample of 25 students. Data collection was attended by the counseling specialist at each school. The researcher explained the nature of the research, and a definition of bullying was given to the students. Written informed consent was distributed to the students to be signed by their parents or other household guardians and returned the day after. In the next day, students were asked to fill out the questionnaire. To ensure confidentiality and highest possible honesty in student's answers, the questionnaires were filled in anonymously. Data collection extended from 21st January through 31st March 2017. The sample size was calculated using a population size of 84378 students in grades 7 to 12, a confidence interval of 95%, 5% allowed error, and a prevalence rate of bullying of 39.1%.¹² The calculated sample size was 366. Then, it was multiplied by the design effect (stratified cluster sampling) which is two making the sample size of 772. Adding 10% to account

for non-response or recording errors made the final sample 849 students. Anyhow, a sample of 1150 was collected to cover all schools and classes. A closed-ended questionnaire was designed and filled by self-reporting. The questionnaire comprised four parts. The 1st part covered the demographic characteristics of the participant's (age, sex, ethnicity, and religion). The 2nd part was about socio-economic status (age, educational level, and occupation of father, house ownership, and car ownership). The 3rd part was about the student being a victim of bullying, and the 4th part was about the student being a bully. The questionnaire was translated to the local Kurdish language and Arabic language to assure it is properly understood by all students. The socio-economic status (SES) of each student was determined to take into consideration age, education, and occupation of the father, car ownership, and house ownership. The calculated SES was compared to the range of the three categories of the socioeconomic index (low SES, middle SES, and high SES) designed by Omer and AL-Hadithi.¹³ The statistical package for the social sciences

(version 19) was used for data entry and analysis using appropriate statistical tests; Chi-square test of association was used to compare proportions, and Fisher's exact test was used when the expected count of more than 20% of cells of the table was <5. A *P* value of ≤ 0.05 was regarded as statistically significant.

Results

The total number of students filled in the questionnaire was 1150 collected from the 35 schools. Eighty (6.95%) of the questionnaire were discarded because of improper filling, making the sample 1070 students. The mean \pm SD age was 15.56 \pm 1.41 years; 554 (51.8%) were males making the male to female ratio 1:0.9. Male and female students in the age group 15-16 years constituted the highest proportion of students (47.3% and 49.6%, respectively). More than half of students (52.1%) were from high schools. All the students were Muslims, and most of them were Kurds (92.3%). Most of the students (both male and female) were from middle socioeconomic status (52.0% and 56.8% respectively). Details are shown in Table 1.

Table 1: Sociodemographic characteristics of the sample.

Variables	Males		Females		Total	
	No.	(%)	No.	(%)	No.	(%)
Age						
13-14	140	(25.3)	125	(24.2)	265	(24.8)
15-16	262	(47.3)	256	(49.6)	518	(48.4)
17-18	152	(27.4)	135	(26.2)	287	(26.8)
Ethnicity						
Kurds	508	(91.7)	480	(93.0)	988	(92.3)
Arabs	28	(5.1)	13	(2.5)	41	(3.8)
Turkmen	18	(3.2)	23	(4.5)	41	(3.8)
SES						
Low	182	(32.9)	144	(27.9)	326	(30.5)
Middle	288	(52.0)	293	(56.8)	581	(54.3)
High	84	(15.1)	79	(15.3)	163	(15.2)
Total	554	(100.0)	516	(100.0)	1070	(100.0)

The overall prevalence of bullying behavior was 60.0%; 30.8% were victims, 26.2% bully-victims, and 3.0% bullies. The prevalence of bullying behavior was 67.9% in males and 51.6% in females, with a clear difference in bully-victims ($P < 0.001$). A significant association was demonstrated ($P = 0.003$) between bullying behavior and the ethnicity of the students

as the highest prevalence was noticed among the Arabs (73.2%). Although bullying behavior as no significant association with age and SES, the highest prevalence of bullying was noticed in the age group 17-18 years (61.7%) and in the middle SES category (61.4%). Details are shown in Table 2.

Table 2: Prevalence (%) of bullying behavior and its association with the sociodemographic characteristics of the sample.

	N	Uninvolved No. (%)	Victims No. (%)	Bully- Victims No. (%)	Bullies No. (%)	Total Involved No. (%)	P value*
Gender							
Male	554	178 (32.1)	176 (31.8)	179 (32.3)	21 (3.8)	376 (67.9)	<0.001
Female	516	250 (48.4)	154 (29.9)	101 (19.6)	11 (2.1)	266 (51.6)	
Age							
13 -14	265	110 (41.5)	69 (26.0)	73 (27.6)	13 (4.9)	155 (58.5)	0.123
15 -16	518	208 (40.2)	169 (32.6)	126 (24.3)	15 (2.9)	310 (59.8)	
17 -18	287	110 (38.3)	92 (32.1)	81 (28.2)	4 (1.4)	177 (61.7)	
SES							
Low	326	132 (40.5)	94 (28.8)	92 (28.2)	8 (2.5)	194 (59.5)	0.057
Middle	581	224 (38.6)	196 (33.7)	147 (25.3)	14 (2.4)	357 (61.4)	
High	163	72 (44.2)	40 (24.5)	41 (25.2)	10 (6.1)	91 (55.8)	
Ethnicity							
Kurds	988	398 (40.3)	304 (30.8)	259 (26.2)	27 (2.7)	590 (59.7)	0.003
Arabs	41	11 (26.8)	15 (36.6)	15 (36.6)	0 (0.0)	30 (73.2)	
Turkmen	41	19 (46.3)	11 (26.8)	6 (14.7)	5 (12.2)	22 (53.7)	
Total	1070	428 (40.0)	330 (30.8)	280 (26.2)	32 (3.00)	642 (60.0)	

* Calculated using Chi-square

When examining the forms of bullying, it was found that the prevalence of bullying behavior for the whole sample was the highest for verbal bullying (51.7%) and the least for sexual bullying (7.9%). The sequence of all forms of bullying is mostly similar in both males and females; the only difference is that males are more involved in physical bullying than females, i.e., physical bullying following the verbal in

males while in females it is followed by relational. A highly significant association with gender was found in all categories of different forms of bullying ($P < 0.001$). In all categories of different forms of bullying, males had a higher percentage of bullying than females, except in case of being a victim of relational bullying the percentage was higher among females than males. Details are shown in Table 3.

Table 3: Prevalence of bullying behavior in the six forms of bullying (physical, verbal, relational, cyber, racial and sexual) by gender

Forms/Categories of Bullying	Male		Female		Total		P value*
	No.	%	No.	%	No.	%	
Physical							
Bullies	36	(6.5)	23	(4.5)	59	(5.5)	<0.001
Bully-Victims	139	(25.1)	29	(5.6)	168	(15.7)	
Victims	153	(27.6)	72	(14.0)	225	(21.0)	
Total	328	(59.21)	124	(24.0)	452	(42.2)	
Verbal							
Bullies	29	(5.2)	22	(4.3)	51	(4.8)	<0.001
Bully-Victims	133	(24.0)	61	(11.8)	194	(18.1)	
Victims	173	(31.2)	135	(26.2)	308	(28.8)	
Total	335	(60.5)	218	(42.3)	553	(51.7)	
Relational							
Bullies	23	(4.2)	16	(3.1)	39	(3.6)	0.001
Bully-Victims	106	(19.1)	42	(8.1)	148	(13.8)	
Victims	132	(23.8)	132	(25.6)	264	(24.7)	
Total	261	(47.2)	190	(36.9)	451	(42.2)	
Cyberbullying							
Bullies	28	(5.1)	14	(2.7)	42	(3.9)	<0.001
Bully-Victims	71	(12.8)	30	(5.8)	101	(9.4)	
Victims	108	(19.5)	81	(15.7)	189	(17.7)	
Total	207	(37.4)	125	(24.4)	332	(31.0)	
Racial							
Bullies	14	(2.5)	2	(0.4)	16	(1.5)	<0.001
Bully-Victims	21	(3.79)	3	(0.6)	24	(2.2)	
Victims	59	(10.7)	33	(6.4)	92	(8.6)	
Total	94	(17.0)	38	(7.4)	132	(12.3)	
Sexual							
Bullies	23	(4.2)	5	(1.0)	28	(2.6)	<0.001
Bully-Victims	11	(2.0)	3	(0.6)	14	(1.3)	
Victims	30	(5.4)	11	(2.1)	41	(3.8)	
Total	64	(11.6)	19	(3.7)	83	(7.8)	
Total	554	(100.0)	516	(100.0)	1070	(100.0)	

*Calculated by using Chi-square test.

All categories of bullying were significantly associated with increasing age in the cyber bullying ($P = 0.001$) and sexual form of bullying only ($P < 0.001$). All forms of bullying were higher among the older age

groups compared to the youngest age group of our sample in all forms of bullying except in physical bullying in which the prevalence was higher in the youngest age group of the sample (Table 4).

Table 4: Prevalence of bullying behavior in the six forms of bullying (physical, verbal, relational, cyber, racial and sexual) by age of students.

Forms/Categories of Bullying	N	Age 13-14		Age 15-16		Age 17-18		P value*
		No.	(%)	No.	(%)	No.	(%)	
Physical								
Bullies	59	15	(5.7)	24	(4.6)	20	(7.0)	0.425
Bully-Victims	168	42	(15.8)	75	(14.5)	51	(17.8)	
Victims	225	61	(27.1)	114	(22.0)	50	(17.4)	
Total	452	118	(48.6)	213	(41.1)	121	(42.2)	
Verbal								
Bullies	51	15	(5.7)	24	(4.6)	12	(4.2)	0.571
Bully-Victims	194	44	(16.6)	95	(18.4)	55	(19.2)	
Victims	308	66	(24.9)	153	(29.5)	89	(31.0)	
Total	553	125	(47.2)	272	(52.5)	156	(54.4)	
Relational								
Bullies	39	8	(3.0)	18	(3.5)	13	(4.5)	0.059
Bully-Victims	148	25	(9.5)	79	(15.2)	44	(15.3)	
Victims	264	57	(21.5)	129	(24.9)	78	(27.2)	
Total	451	90	(34.0)	226	(43.6)	135	(47.0)	
Cyberbullying								
Bullies	42	9	(3.4)	20	(3.9)	13	(4.5)	0.001
Bully-Victims	101	14	(5.3)	53	(10.2)	34	(11.8)	
Victims	189	31	(11.7)	96	(18.5)	62	(21.7)	
Total	332	54	(20.4)	169	(32.6)	109	(37.9)	
Racial								
Bullies	16	3	(1.1)	6	(1.2)	7	(2.4)	0.333
Bully-Victims	24	4	(1.5)	12	(2.3)	8	(2.8)	
Victims	92	16	(6.1)	51	(9.8)	25	(8.7)	
Total	132	23	(8.7)	69	(13.3)	40	(13.9)	
Sexual								
Bullies	28	7	(2.6)	10	(1.9)	11	(3.8)	<0.001
Bully-Victims	14	1	(0.4)	3	(0.6)	10	(3.5)	
Victims	41	3	(1.1)	26	(5.0)	12	(4.2)	
Total	83	13	(4.9)	39	(7.5)	33	(11.5)	
Total	1070	265	(100.0)	518	(100.0)	287	(100.0)	

*Calculated by using Chi-square test

The association of different forms of bullying with the ethnicity of the student was statistically significant in racial ($P < 0.001$), physical ($P = 0.001$), sexual ($P = 0.002$) and relational ($P = 0.025$) forms of bullying. The highest

prevalence in all forms of bullying was noticed among the Arabs followed by the Kurds, and then the Turkmen, except in racial bullying where the prevalence was higher among Arabs and Turkmen who are both ethnic minorities (Table 5).

Table 5: Prevalence of bullying behavior in the six forms of bullying (physical, verbal, relational, cyber, racial and sexual) by ethnicity of students.

Forms/Categories of Bullying	N	Kurdish ethnicity		Arabic ethnicity		Turkish ethnicity		P value*
		No.	%	No.	%	No.	%	
Physical								
Bullies	59	49	(5.0)	2	(4.9)	8	(19.5)	0.001
Bully-Victims	168	158	(16.0)	9	(22.0)	1	(2.4)	
Victims	225	205	(20.7)	12	(29.3)	8	(19.5)	
Total	452	412	(41.7)	23	(56.1)	17	(41.5)	
Verbal								
Bullies	51	45	(4.6)	2	(4.9)	4	(9.8)	0.128
Bully-Victims	194	178	(18.0)	11	(26.8)	5	(12.2)	
Victims	308	282	(28.5)	16	(39.0)	10	(24.4)	
Total	553	505	(51.1)	29	(70.7)	19	(46.4)	
Relational								
Bullies	39	35	(3.5)	1	(2.4)	3	(7.3)	0.025
Bully-Victims	148	135	(13.7)	11	(26.8)	2	(4.9)	
Victims	264	241	(24.4)	14	(34.1)	9	(22.0)	
Total	451	411	(41.6)	26	(63.4)	14	(34.1)	
Cyberbullying								
Bullies	42	41	(4.1)	1	(2.4)	0	(0.0)	0.065**
Bully-Victims	101	92	(9.3)	6	(14.6)	3	(7.3)	
Victims	189	172	(17.4)	13	(31.7)	4	(9.8)	
Total	332	305	(30.9)	20	(48.8)	7	(17.1)	
Racial								
Bullies	16	16	(1.6)	0	(0.0)	0	(0.0)	<0.001**
Bully-Victims	24	20	(2.0)	3	(7.3)	1	(2.4)	
Victims	92	74	(7.5)	11	(26.8)	7	(17.1)	
Total	132	110	(11.1)	14	(34.1)	10	(19.5)	
Sexual								
Bullies	28	25	(2.5)	1	(2.4)	2	(4.9)	0.002**
Bully-Victims	14	13	(1.3)	0	(0.0)	1	(2.4)	
Victims	41	33	(3.3)	8	(19.5)	0	(0.0)	
Total	83	71	(7.2)	9	(21.9)	3	(7.3)	
Total	1070	988	(100.0)	41	(100.0)	41	(100.0)	

*Calculated by using Chi-square test. ** Calculated by using Fisher-exact test.

No statistically significant association between the SES of the students with bullying behavior was demonstrated in

all six forms of bullying. The highest prevalence rates were noticed in verbal bullying in all SES categories (Table 6).

Table 6: Prevalence of bullying behavior in the six forms of bullying (physical, verbal, relational, cyber, racial and sexual) by the socioeconomic status of the students.

Forms/Categories of Bullying	N	Low SES		Medium SES		High SES		P value*
		No.	%	No.	%	No.	%	
Physical								
Bullies	59	18	(5.5)	29	(5.0)	12	(7.4)	0.888
Bully-Victims	168	51	(15.6)	95	(16.4)	22	(13.5)	
Victims	225	72	(22.1)	120	(20.7)	33	(20.2)	
Total	452	141	(43.3)	244	(42.0)	67	(41.1)	
Verbal								
Bullies	51	14	(4.3)	22	(3.8)	15	(9.2)	0.088
Bully-Victims	194	57	(17.5)	109	(18.8)	28	(17.2)	
Victims	308	102	(31.3)	168	(28.9)	38	(23.3)	
Total	553	173	(53.1)	299	(51.5)	81	(49.7)	
Relational								
Bullies	39	17	(5.2)	13	(2.2)	9	(5.5)	0.140
Bully-Victims	148	39	(12.0)	86	(14.8)	23	(14.1)	
Victims	264	76	(23.3)	152	(26.2)	36	(22.1)	
Total	451	132	(40.5)	251	(43.2)	68	(41.7)	
Cyberbullying								
Bullies	42	17	(5.2)	19	(3.3)	6	(3.7)	0.523
Bully-Victims	101	33	(10.1)	51	(8.8)	17	(10.4)	
Victims	189	52	(16.0)	113	(19.4)	24	(14.7)	
Total	332	102	(31.3)	183	(31.5)	47	(28.8)	
Racial								
Bullies	16	8	(2.5)	3	(0.5)	5	(3.1)	0.083**
Bully-Victims	24	5	(1.5)	16	(2.8)	3	(1.8)	
Victims	92	25	(7.7)	53	(9.1)	14	(8.6)	
Total	132	38	(11.7)	72	(12.4)	22	(13.5)	
Sexual								
Bullies	28	10	(3.1)	11	(1.9)	7	(4.3)	0.396**
Bully-Victims	14	7	(2.1)	6	(1.0)	1	(0.6)	
Victims	41	11	(3.4)	23	(4.0)	7	(4.3)	
Total	83	28	(8.6)	40	(6.9)	15	(9.2)	
Total	1070	326	(100.0)	581	(100.0)	163	(100.0)	

*Calculated by using Chi-square test. ** calculated by using Fisher-exact test.

Discussion

A considerable variability in the prevalence of bullying reported worldwide, having estimated its presence in a wide range, from 5 to 65%.¹⁴ Even within the same country there may be such a wide differences in bullying prevalence as it was noticed in Mexico, where prevalence rates ranging from 17%¹⁵ to 66.7% were reported.¹⁶ These wide variations in prevalence rates of bullying across studies may be partially due to differences in measurement and/or operationalization of the bullying concept it may be due to cultural variations in the conceptualization and understanding of bullying.¹⁷ Such inconsistencies have strongly influenced rate estimation, and scholars have called for greater agreement in definition and measurement.¹⁸ The prevalence of bullying in this study 60% is as high as that reported in Egypt (60.3%) while it is much higher than that reported in other Arab countries in North Africa as about one-third of the students reported being involved in bullying in Libya, Morocco, and Tunisia.¹⁹ In other Arab countries in the middle-east, the prevalence of bullying among middle school students was 44.2% in Jordan, 38.9% in Oman, 33.6% in Lebanon, and 20.9% in the United Arab Emirates.²⁰ In developed countries, a survey done in 40 countries revealed that 26% of adolescents had been involved in bullying as victim or perpetrator or both.²¹ In this study, the prevalence of bullying varied between 11.6% and 60.5% among boys and between 3.7% and 42.3% among girls depending on the form of bullying. In Kuwait, the prevalence range was between 41.6% and 71.1% among boys and between 10% and 81.4% among girls according to the form of bullying.²² The prevalence of victimization revealed by this study (30.8%) is lower than that noticed in Baghdad, the capital of Iraq (39.1%).¹² High variations in the prevalence of victimization were also noticed worldwide; in two comparative studies in 66 countries the prevalence of students frequently

victimized varied between 7.1% and 70.2%.²³ Regarding the gender differences, there was significantly greater involvement of boys in bullying behaviors in this study, a finding which is expected on the basis of previous literature.^{10,21,24} However, there are measurement concerns with the form of assessment using self-report questionnaires because girls may be less likely to acknowledge perpetrating this form of aggression than boys. In a survey research, for example, girls were less likely to report bullying others compared to boys although all bullying research studies use self-reported questionnaires.²⁵ However, sex differences did not emerge in all studies.²⁶⁻²⁷ The prevalence of each category of victimization, bully-victims, and bullies was higher in males for each category compared to females, similar results reported in many other studies.^{1,20,23} However, some other studies reported that the prevalence of both bullies and bully-victims were higher in boys than in girls, whereas girls were more likely to be victimized.^{21,28} In all forms of bullying, our results showed that the prevalence of bullying is higher among males; this result was similar to cross-national study across 40 countries that boys reported higher rates than girls of each of direct physical, direct verbal, and indirect types of bullying.²¹ The highest bullying prevalence was in verbal bullying for both males and females, followed by physical bullying in male while in females followed by relational. Similarly, other studies reported that females were more involved in indirect (relational) bullying while males were more involved in direct physical bullying.²⁹⁻³⁰ A significant association between bullying and the ethnicity of the students was demonstrated by the highest prevalence among Arabs in all forms of bullying. In the racial form of bullying the prevalence of bullying was higher among Arabs and Turkmen as both are ethnic minorities. Similar findings were reported in the USA,^{31,32} Finland³³ and Austria³⁴ as

adolescents from ethnic minority backgrounds were more likely than those from the ethnic majority to report bullying. However other studies within Europe have concluded that there were no significant differences in the prevalence of victimization as a function of the cultural background of the participants.³⁵⁻³⁷ The finding of no significant association between bullying behavior and the age of the students is similar to that reported in Libya, Morocco, and Tunisia, while it was significantly increased with age in Egypt.¹⁹ This study has revealed a significant association of increasing age with cyberbullying, a finding which is similarly reported by other studies,³⁹⁻⁴⁰ although others reported decreasing with age.⁴¹⁻⁴² The significantly increased prevalence of sexual bullying with age was similarly reported in some studies,⁴³⁻⁴⁴ while others did not show any age difference in sexual bullying.⁴⁵ The lack of association between the SES of the students and any form of bullying has been described in other studies,⁴⁶⁻⁴⁷ however, others reported the opposite as bullying seems to be patterned by parental socioeconomic status.⁴⁸⁻⁴⁹ This study is limited by the inability of estimating the direction of the relationship or drawing conclusions about causality due to its cross-sectional design. Future longitudinal research is needed to truly test the causality between the sociodemographic factors and bullying behavior. This study also relies exclusively on self-report measures, which can be subjected to reporting bias as respondent's interpretation of the questions and faulty recall bias. Even though it is hard and expensive, direct observations in schools may help to clarify the actual prevalence of Bullying and victimization.

Conclusion

Bullying behavior seems to be a widespread problem in schools of Erbil city. The most common form of bullying was verbal bullying in both genders. There was a significant involvement of males in all

forms, and all categories of bullying more than females. The ethnic origin of the student was significantly associated with bullying behavior in the four forms of bullying while the prevalence only significantly increased with the age of students in sexual and cyberbullying.

Competing interests

The authors declare that they have no competing interests.

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