

Relationship Between Bullying and Health Problems in Primary School Children

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Purpose The aim of this study is to analyze the relationship between bullying and exposure to bullying and the health problems in the primary school children.

Methods This study was conducted on 92 parents and 92 students who were sixth grade students in two primary schools in Izmir. The data were collected using the Peer Bullying Scale Adolescent Form and the Identification of Health Problems Form. The data were analyzed through χ^2 analysis and odds ratios with a 95% confidence interval.

Results About forty-nine percent of the students (48.9%) was male, 51.1% of them was female and the average age was 11.6 ± 0.53 years. It was found that students who had high scores for being exposed to bullying were significantly more likely to experience headache, feeling bad, crying restlessness, nervousness, sleeping problems, dizziness; whereas students who had high bullying scores were significantly more likely to experience only poor appetite.

Conclusions Students exposed to bullying have more health problems than the bullying students. It is recommended that programs designed to prevent the negative effects of bullying be developed. [*Asian Nursing Research* 2011;5(2):81–87]

Key Words bullying, children, school health, primary school

INTRODUCTION

Interpersonal relations between children in schools vary considerably in many countries throughout the world. Bullying is one of the negative relations experienced by the children at school and it constitutes an important part of the aggressive behaviors (Rigby, 2007; Smith & Sharp, 2003). Bullying is defined as applying physical or psychological pressure in a repetitive manner by a stronger person or group over a weaker one (Olweus, 1993). Bullying is characterized by the presence of a real or perceived power

imbalance, the intention to harm, and its repetitive feature (Olweus; Rigby; Smith & Sharp).

Bullying as a form of aggression, is considered to be one of the subcategories of the proactive aggression (Olweus, 1993; Rigby, 2007). Dominant emotions in proactive aggression are pleasure and agitation rather than anger and restraint. Aggressive behavior makes people feel strong and pleased (Griffin & Gross, 2004).

Many studies conducted in different parts of the world with regard to bullying show that this is a problem prevalent almost all over the world (Alikasifoglu, Erginöz, Ercan, Uysal, & Albayrak-Kaymak, 2007;



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Andreau, 2000; Baldry & Farrington 1999; Due et al., 2005; Fitzpatrick, Dulin, & Piko 2007; Gini & Pozzoli, 2009; Hara, 2002; Natvig, Albrektsen, & Qvarnstrom 2001; Williams, Chambers, Logan, & Robinson, 1996). According to research on the health behaviors in school-aged children conducted in 2006, Turkey is ranked first among 41 countries in the age 11 years group (girls 30%, boys 37%) and third in the age 13 years group (girls 26%, boys 29%) in terms of being exposed to bullying (Currie et al., 2008). The results of the study in Turkey show that bullying is a serious problem for Turkey as well (Alikasifoglu et al., 2010; Karaman Kepenekci & Cinkir, 2006; Kapci, 2004; Piskin, 2002; Yöndem & Totan, 2008).

Bullying is a broad, complex and multidimensional problem. Bullying is a problem that affects not only the bully and the victim, but all students at school. Because it is a problem of the system that involves school, the community, the families and the students, it requires a multifaceted systematic approach that includes all community stakeholders. Bullying is a learned behavior (Selekman & Praeger, 2006). Hence, students, teachers, and parents all must be involved in prevention programs to find a systematic solution to the problem. School-wide programs that are initiated generally decrease bullying behaviors. Unfortunately, these programs are not implemented in Turkey adequately due to high incidence of bullying.

For many years, bullying was considered to be a normal period in child development, "a part of growing up" (Olweus, 1993; Rigby, 2007; Smith & Sharp, 2003). However, studies conducted in many countries indicated that bullying is a more serious problem for school children and adolescents compared to other risky behaviors like substance abuse and sexual intercourse at an early age. Bullying has negative effects on the physical, psycho-social, and academic environments of both the bullies and the victims as well as their learning environments and leads to some problems in the short and long term (Olweus; Rigby; Selekman & Praeger, 2006; Smith & Sharp).

In short term, victims of bullying can usually experience anger (Rigby, 2007), sleep disorders, psychosomatic problems such as abdominal pain,

headache, stomachache and so forth (Due et al., 2005; Fekkes et al., 2004; Gini & Pozzoli, 2009; Natvig et al., 2001; Williams et al., 1996), an increase in the incidence of illnesses in relation to chronic stress, lack of concentration, nail biting (Selekman & Praeger, 2006), low self-respect (Rigby), a decrease in school achievement, loneliness, unhappiness, fatigue, anxiety, bed wetting (Kim, Koh, & Leventhal, 2005; Selekman & Praeger, 2006) and even depression (Fekkes et al., 2004) and suicide can be observed (Kapci, 2004; Wal, Wit, & Hirasing, 2003; Kim, Koh, & Leventhal).

Negative effects of bullying are not limited to school years and they also continue after the school age. Bullying in childhood creates risks for antisocial behaviors (substance abuse, criminal tendency) and psychiatric diseases in adolescence and adulthood (Kumpulainen & Rasanen, 2000; Sourander, Helstela, Helenius, & Piha, 2000).

Although the negative effects of bullying over children is well known, there are few studies that examine the relationship between bullying and health problems (Alikasifoglu et al., 2007). The aim of this research is to analyze the relationship between bullying and exposure to bullying and the health problems in the primary school children.

METHODS

Sample

The sample of the study was comprised of 184 participants, 92 of whom were parents and 92 of whom were sixth grade students in two randomly selected primary schools in Izmir who were present in the classes on the day of data gathering, voluntary to participate in the study and filled the data gathering forms in full.

Schools in the district of Konak of province of Izmir were selected and included in the sampling as students from different socio-economic structures were receiving education there. Schools to be included in the sampling were selected among the schools in the district through sample random method and the branches were determined by lot.

Instruments

Peer Bullying Scale

The Peer Bullying Scale–Adolescent Form developed by Piskin and Ayas (2007) was used to measure the levels of bullying and exposure to bullying among the students. The scale consists of 53 items, and contains two parallel scales named bully scale and victim scale which ask the same questions with different wording. In the bully scale, students are asked to mark how frequently they perform the acts or use the words mentioned in the scale, and in the victim scale, they are asked to mark how frequently they are exposed to these acts or words. The scale was composed of 6 factors. Distribution of the items in the scale according to factors is as follows; items between 1 and 15 include the bully and the victim in relation to physical bullying, items between 16 and 22 are related to verbal bullying, items between 23 and 28 are associated with isolation, items between 29 and 33 are related to spreading rumor, items between 34 and 43 are associated with damage to property and items between 44 and 53 are related to sexual bullying and its victim. The lowest score to be received from the bully and victim dimensions of scale is 53 and the highest score is 265. In the scale, *never* corresponds to 1, *once during the period* equals to 2, *at least once in a month* equals to 3, *at least once in a week* corresponds to 4 and *almost everyday* equals to 5. Higher scores mean higher levels of bullying and victimization. The scale does not have a cut point. The Cronbach's alpha coefficient is .93 for the victim scale and .92 for the bully scale (Piskin & Ayas). In this study the Cronbach's alpha coefficient is .88 for the victim scale and .91 for the bully scale.

Identification of Health Problems Form

To identify the health problems that students experience due to bullying, problems defined in the literature (Due et al., 2005; Fekkes, Pijpers, & Verloov-Vanhorick, 2004; Gini, 2008; Natvig et al., 2001; Williams et al., 1996) as physical health, somatic complaints, psycho-somatic complaints, health problems and so forth were considered and eventually a form was prepared and expert opinion was acquired. The form contains 13 questions (headaches,

abdominal pain, stomachache, backache, skin problems, feeling bad, crying, restlessness, nervousness, sleeping problems, dizziness, respiratory problem, poor appetite).

Parents were asked to state how frequently their kids had the problems mentioned in the form within the last six months, where 0 meant *never*, 1 meant *sometimes*, and 2 meant *often*. The Cronbach's alpha coefficient of the form was calculated as .83.

Procedure

Prior to the start of the study, written permissions were taken from Izmir Provincial Directorate of National Education and the Ethics Committee of the School of Nursing of Dokuz Eylul University, and the parents. Moreover, contacts were established with parents during a school meeting and they were informed about the research with explanations regarding the objective of the study. Parents stated that they allowed their children to participate in the research by signing the parent approval form. Students were also informed about the study before the research was conducted and it was stated that it was not an obligation to participate in the study as participation was voluntary. Moreover, they filled in forms stating that they accepted to participate in the study. None of the children included in the sampling had any diagnosed diseases.

The data were gathered in October and November 2009, by applying the Peer Bullying Scale–Adolescent Form to the students and the Health Problems Identification Form to the parents. Anonymity were used by parents and students as it is thought that writing names on the questionnaires may effect the answers of the students. Moreover, this practice is believed to facilitate the matching of parent and student forms. Student-specific codes were designated (the first two letters of the mother's name, last two digits of the student's birth date, and the first two letters of the father's name) and the parents were asked to use the same code. The scores of the Peer Bullying Scale were categorized into two groups as the "group with low bully/victim scores" and the "group with high bully/victim scores". Mean scores were used in determining the groups

Table 1

Association Between Being Bullied and Health Problems

Symptoms	Group 1 ^a (n=60)		Group 2 ^b (n=32)		OR	(CI 95%)	χ^2	p
	n	%	n	%				
Headaches	39	65.0	27	84.4	2.90	(1.1–8.7)	3.864	< .05
Abdominal pain	36	60.0	21	65.6	1.27	(0.5–3.1)	0.280	NS
Stomachache	11	18.3	9	28.1	1.74	(0.6–4.8)	1.176	NS
Backache	12	20.0	6	18.8	0.92	(0.3–2.7)	0.021	NS
Skin problems	9	15.0	6	18.0	1.30	(0.4–4.7)	0.215	NS
Feeling bad	18	30.0	19	59.4	3.41	(1.3–8.3)	7.490	< .05
Crying	8	13.3	12	37.5	3.90	(1.4–10.9)	7.164	< .05
Restlessness	14	23.3	21	65.6	6.27	(2.4–16.1)	15.836	< .05
Nervousness	33	55.0	27	84.4	4.41	(1.4–13.0)	7.939	< .05
Sleeping problems	8	13.3	15	46.9	5.73	(2.0–15.8)	12.522	< .05
Dizziness	5	8.3	11	34.4	5.76	(1.8–18.7)	9.851	< .05
Respiratory problem	7	11.7	4	12.5	1.08	(0.3–4.0)	0.014	NS
Poor appetite	19	31.7	15	46.9	1.90	(0.8–4.6)	2.072	NS

Note. NS= not significant; OR=odds ratio; CI=confidence interval.

^aLow score victim group; ^bhigh score victim group.

due to the fact that the scale does not have a cut point.

The *never*, *sometimes* and *often* responses on the health forms were converted into a binary variable; *sometimes* and *often* responses are combined, *never* equals to 0 and *sometimes* and *often* equals to 1.

Analysis

Data were analyzed through χ^2 analysis and odds ratios with a 95% confidence interval in SPSS program (SPSS, Inc., Chicago, IL, USA) in order to determine the relationship between health problems and bullying (Akgul, 2005).

RESULTS

About 48.9% ($n=45$) of the students were male, 51.1% ($n=47$) were female, and the average age was 11.6 ± 0.53 years; 70.7% ($n=65$) of the parents were mothers, 29.3% ($n=27$) were fathers; the rate of participation in the study was 82%. Peer bullying

scale is composed of bully and victim scales. According to bully scale, 30 students compose the high scored bully group and 62 students compose the low scored bully group while according to victim scale; 32 students are included in the high scored victim group and 60 students are included in the low scored victim group.

Table 1 gives results on the relationship between health problems among students who were bullied. Table 2 indicates the relationship between health problems among students who were active bullying together with the symptom percentages for each health problem. Children in the group with high victim scores experience headache, feeling bad, crying restlessness, nervousness, sleeping problems, dizziness significantly more frequently than those in the group with low victim scores. Abdominal pain, stomachache, backache, skin problems, respiratory problem and poor appetite not significant (Table 1). Children in the group with high bullying scores experience only poor appetite significantly more frequently than those in the group with low bully scores and no difference

Table 2

Association Between Active Bullying and Health Problems

Symptoms	Group 1 ^a (n = 62)		Group 2 ^b (n = 30)		OR	(CI 95%)	χ^2	p
	n	%	n	%				
Headaches	43	69.4	23	76.7	1.45	(0.5–3.9)	0.533	NS
Abdominal pain	36	58.1	21	70.0	1.68	(0.6–4.2)	1.222	NS
Stomachache	13	21.0	7	23.3	1.14	(0.4–3.2)	0.66	NS
Backache	9	14.5	9	30.0	2.52	(0.8–7.2)	3.080	NS
Skin problems	7	11.3	8	26.7	2.85	(0.9–8.8)	3.503	NS
Feeling bad	22	35.5	15	50.0	1.81	(0.7–4.4)	1.772	NS
Crying	11	17.7	9	30.0	1.98	(0.7–5.4)	1.786	NS
Restlessness	20	32.3	15	50.0	2.10	(0.8–5.1)	2.700	NS
Nervousness	37	59.7	23	76.7	2.22	(0.8–5.9)	2.572	NS
Sleeping problems	12	19.4	11	36.7	2.41	(0.9–6.3)	3.232	NS
Dizziness	9	14.5	7	23.3	1.79	(0.5–5.3)	1.094	NS
Respiratory problem	8	12.9	3	10.0	0.75	(0.1–3.0)	0.162	NS
Poor appetite	17	27.4	17	56.7	3.46	(1.3–8.6)	7.423	<.05

Note. NS= not significant; OR= odds ratio; CI= confidence interval.

^aLow score victim group; ^bhigh score victim group.

is observed as regards to the experience other symptoms (Table 2).

DISCUSSION

In this study, it was determined that victims of bullying experience significantly more symptoms than the bullies. Significant differences were not observed in relation to prevalence of some symptoms between two groups. It is thought that this is caused by the limited number of students included in the groups.

Relationship between exposure to bullying and health problems

It was found in this study that children with high victim scores experience headache, feeling bad, crying, dizziness, restlessness, nervousness, sleeping problems significantly more frequently. It has been detected in the studies that the children who are victims of bullying have more health problems compared to children not involved in bullying (Alikasifoglu et al., 2007; Due et al., 2005; Fekkes et al., 2004; Fekkes, Pijpers,

Fredriks, Vogels, & Verloove-Vanhorick, 2006; Gini, 2008; Gini & Pozzoli, 2009; Natvig et al., 2001; Williams et al., 1996). In their study where they compared bullying and symptoms in school aged children throughout 28 countries, Due et al. detected that symptoms observed in victims have increased. In all studies examined in a meta analysis, it was determined that victims of bullying experience more psychosomatic problems when compared to the other students. The findings of this study show parallelism with those of previous studies. In terms of symptoms, the highest odds ratios were observed in restlessness, dizziness and sleeping problems in the victims of bullying. These results are similar to the results obtained by Gini (2008). Abdominal pain (Fekkes et al., 2006) and stomachache (Due et al.; Natvig et al.) are symptoms which have been commonly observed in many studies but they did not display a significant difference in this study. Of these findings, abdominal pain was not found as significant in the study of Gini, as well. It was determined in many studies that sleep problems and dizziness were observed significantly in most of the victims.

Relationship between active bullying and health problems

In most of the studies in the literature, the aim was to determine the problems experienced only by victims (Due et al., 2005; Natvig et al., 2001; Williams et al., 1996) while a limited number of studies were conducted with the aim of determining problems of bullies (Fekkes et al., 2004; Gini, 2008).

Not only the victims, but also the bullies experience the negative effects of bullying. It was detected in this study that children in the group with high bullying scores experience only poor appetite significantly more frequently than those in the group with low bullying scores. No difference was observed in terms of experiencing the other symptoms in the group of bullying students. In their studies, Fekkes et al. (2004) did not detect any relationship with the other symptoms except for headache and bed-wetting.

In the study of Gini (2008), a significant difference was not detected in symptoms apart from hyperactivity, sleep problems and feeling tense in bullies. In the majority of the studies, findings showing that symptoms at high levels are observed in bullies were not available. While most of the researchers describe bullies as anxious, insecure and depressed, some researchers describe them as psychologically strong individuals with a high social status and moderate to high self-esteem (Gini). These differences are thought to result from characteristics of bullies. Even though problems caused by bullying are observed less frequently in bullies than victims, its negative effects on bullies are specified in long term follow-up studies (Kumpulainen & Rasanen, 2000; Sourander et al., 2000).

Study limitations

This study aimed to specify the problems experienced by the bullies and the victims and there are limitations as follows: Only sixth grade students and their parents were included in the study as this is the age group when bullying is frequently observed. As this is a cross sectional study, its results do not explain the effect and cause relations. The targeted number of sampling had been determined as 112 students and parents but data of only 92 students were obtained

as the parents did not fill in the forms or they filled in them incompletely. In this study, only parents were asked to fill in the health problems identification forms by considering that teachers did not have adequate information regarding the health problems of students.

Instruments which were designed for identification of health situations in children and had undergone a reliability and validity test in Turkey were examined but were not used as they were not aimed at determining problems related to bullying. The form prepared by the researchers in line with the relevant literature (Due et al., 2005; Fekkes et al., 2004; Gini, 2008; Natvig et al., 2001; Williams et al., 1996) was used.

CONCLUSIONS

Bullying is a problem that affects not only the bully and the victim, but all students at school. It causes headache, feeling bad, crying, dizziness, restlessness, nervousness, sleeping problems and poor appetite to be experienced by children significantly more frequently. Children exposed to bullying at high levels experience more problems than their peers. Health professionals should consider that such symptoms of children may be related to bullying.

Further studies should be conducted to identify problems by type of bullying and by gender; students, parents and teachers should be included in the studies all together; large scale studies should be conducted with larger samples including both victims-bullies and the observer students; prevention programs should be developed in order to prevent negative effects of bullying and more studies should also be carried out so as to determine the effect of prevention programs on health symptoms.

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