

Exposure of Students to Bullying in A Secondary School and Evaluation of Related Factors

Bir Orta Okulda Öğrencilerin Zorbalığa Maruziyeti ve İlgili Faktörlerin Değerlendirilmesi

Ersin Nazlıcan¹, Gonca Gül Çelik², Muhsin Akbaba¹, Ramazan Azim Okyay³,

Burak Kurt⁴, Ayşegül Yolga Tahiroğlu²

¹ Çukurova Üniversitesi Tıp Fakültesi Halk Sağlığı Anabilim Dalı, Adana

² Çukurova Üniversitesi Tıp Fakültesi Çocuk Psikiyatrisi Anabilim Dalı, Adana

³ Sütçü İmam Üniversitesi Tıp Fakültesi Halk Sağlığı Anabilim Dalı, Kahramanmaraş

⁴ Kastamonu Merkez Toplum Sağlığı Merkezi

Yazışma Adresi / Correspondence:

Burak Kurt

Hepkebirler Mah. Cumhuriyet Cad. No:64 (Eski Sağlık Müdürlüğü Binası) Merkez/KASTAMONU

T: +90 533 661 05 33 E-mail: kurtburak@msn.com

Geliş Tarihi / Received : 28.08.2018 Kabul Tarihi / Accepted : 15.01.2019

Abstract

Objective	Bullying that influences health and many health related behaviors in adolescences can lead to negative changes on their behaviors even in the later periods of life. The aim of this study is to evaluate the cases of exposure to bullying, depression, anxiety state, relations with the family and school success among the students in a middle school in Adana. (<i>Sakarya Med J</i> 2019, 9(1):74-83)
Materials and Methods	This cross-sectional study was carried out among middle school students at 6th, 7th and 8th grade in the city of Adana. The survey form applied to the students included socio-demographic attributes, Child Depression Scale, STAI Scale, California Bullying Victimization Scale, Family Assessment Scale and Connors Teacher Rating Scale.
Results	The number of students at 6th, 7th and 8th grade was 53 (44,5%), 29 (24,4%) and 37 (31,1%) respectively . 33 of the students (27,7%) in the study were victims of peer bullying. Students who were subject to violence at home, at lower year levels and with non-graduate mothers were more exposed to bullying. The ones exposed to bullying were detected to have high levels of depression anxiety and hyperactivity.
Conclusion	School bullying is an issue which is common all over the world and should not be underestimated. This study has ascertained that children exposed to bullying have high levels of anxiety and incidence of depression, also these children were found to be more hyperactive.
Keywords	Students; Depression; Bullying

Öz

Amaç	Ergenlerde sağlık ve birçok sağlıkla ilgili davranışları etkileyen zorbalık, yaşamın sonraki dönemlerinde bile davranışlarda olumsuz değişikliğe neden olabilir. Bu çalışmanın amacı, Adana'da ki ortaokul öğrencilerinde zorbalık, depresyon, kaygı durumu, aileyle ilişkiler ve okul başarısı ile ilgili olguların değerlendirilmesidir. (<i>Sakarya Tıp Dergisi</i> 2019, 9(1):74-83).
Gereç ve Yöntemler	Kesitsel tipteki bu çalışma, Adana ilinde 6., 7. ve 8. sınıflarda ortaokul öğrencileri arasında yürütülmüştür. Öğrencilere uygulanan anket formu, sosyodemografik özellikler, Çocuk Depresyon Ölçeği, Durumluk Kaygı Ölçeği, Kaliforniya Zorbalık Mağduriyet Ölçeği, Aile Değerlendirme Ölçeği ve Öğretmenlik Derecelendirme Ölçeğidir.
Bulgular	6., 7. ve 8. sınıflı öğrencilerinin sayısı sırasıyla 53 (% 44,5), 29 (% 24,4) ve 37 (% 31,1) idi. Araştırmada 33 öğrenci (% 27,7) akran zorbalığı kurbanıydı. Evde şiddete maruz kalan, daha düşük sınıfta okuyan ve anneleri okul bitirmemiş olan öğrenciler, zorbalığa daha çok maruz kalmıştı. Zorbalığa maruz kalanlarda yüksek düzeyde depresyon, kaygı ve hiperaktivite saptanmıştır.
Sonuç	Okul zorbalığı, tüm dünyada yaygın olan ve göz ardı edilmemesi gereken bir konudur. Bu çalışma, zorbalığa maruz kalan çocukların yüksek düzeyde kaygı ve depresyon sıklığı taşıdığını ve bu çocukların daha hiperaktif olduklarını tespit etmiştir.
Anahtar Kelimeler	Öğrenciler; Depresyon; Zorbalık

INTRODUCTION

Bullying is a topic with a wide coverage on TV, newspaper and social media and remains on the agenda of both Turkey and the world. Having an impact on health and many health related behaviors in adolescences, bullying can cause negative changes on people's behaviors on the forthcoming years. With this respect, bullying is a public health problem.¹ According to Olweus; bullying at school is described as a vulnerable child's continuous exposure to aggressive behaviors of one or more students.² Bullying can be not only physical but also psychological.³

It is possible to divide bullying to four types in general. The first is physical (pushing, slapping, attacking with a dangerous tool, pull one's hair or ears, any kind of physical violence on the body with the aim of threatening, attacking with weapon or knife, pranking); the second is verbal (mocking, nicknaming, sniping, swearing, leaving verbal offending notes); the third is emotional (cast out of the group, belittlement, discrimination, damaging property, unfriendly approach on purpose) and the fourth is sexual bullying (sexually explicit words, molesting and disturbing by touch). The one who bullies can be an individual as well as a group.⁴

People acting aggressively are called bully while the ones who are exposed to bullying are described as victim or aggrieved.^{5,6} Some studies also mention about a third party referred as bully-victim who acts aggressively at one time and gets bullied at another.⁷

When looked at the literature in the light of studies done so far, it is observed that bullied children are not self-confident and assertive; have low self-esteem and are cast out by their friends; do not claim their own rights, show socially insufficient behaviors; have negative sense of self; are depressed and anxious.⁸⁻¹² On the other hand, the children who bully others are considered to act aggressively, give damage on purpose, have high self-esteem and low anxiety; however, similarly to the victims, they might also

be alienated from their friends.¹³⁻¹⁵ The children who bully and get bullied have lower academic success than those who are not involved in these.¹⁶

The aim of this study is to evaluate the cases of exposure to bullying, depression, anxiety state, relations with the family and school success among the students in a middle school in Adana.

MATERIALS and METHODS

Study Design: This cross sectional study was conducted among 6th, 7th and 8th grade middle school students in the city of Adana, Turkey between the months of September- October, 2013. The University of Cukurova granted Ethical approval to carry out the study. (Date 08/23/2013, no. 22/10) Written parental permission was received before the application of survey on the students and surveys were applied to those whose families allowed. The survey was accomplished by reaching 119 students (85%) out of 140. The students filled out the questionnaires and scales based on their declaration, accompanied by school counselors in their classrooms. Credentials were not asked from the students. After a short conversation, they were informed that there would be some questions about themselves and the challenges they faced at school. It was especially pointed out that this was not an exam or test and the questions did not have true or false answers. Besides, the students were assured that their answers were confidential. Following the survey, they were thanked for their cooperation. The survey form applied to the students included socio-demographic attributes, Child Depression Scale, STAI Scale, California Bullying Victimization Scale, Family Assessment Scale and Connors Teacher Rating Scale.

Children's Depression Inventory: Developed by Kovacs, this scale is used to measure the level of depression on children. It is a self-rated scale and can be applied to children aged between 6 and 17 and adolescents. CDI contains 27 items in total and each item contains 3 sentences to choose from by evaluating the last two weeks. Each sen-

tence set contains statements indicating depression symptoms. The inventory can be filled out by reading out for the child or being read by the child himself/herself. The child is asked to evaluate his/her last two weeks and check the most suitable sentence for himself/herself among 3 options. The answers are scored as 0, 1, 2. Depression score is obtained by summing up these scores. The highest possible score is 54. High level of total score means the high severity of depression level. The cut off score is accepted as 19. Its customization in our country was done by Öy (1990).¹⁷

State-Trait Anxiety Inventory (STAI-I, STAI-II): Developed by Spielberger and his friends, this test can be applied to children aged over 14. Adaptation of the scale to Turkey, reliability and validity have been done by Öner and Le Compte. State Anxiety Inventory determines how an individual feels at a certain state and under certain circumstances while Trait Anxiety Inventory identifies how an individual feels regardless of situation and circumstances. It is a self-report test, consisting of 20 questions to measure state and trait anxiety. State Anxiety Inventory is quite sensitive to analyzing the emotive reactions that shows instant changes. Found on the second part of inventory with 20 items again, Trait Anxiety Inventory aims to measure the continuity of anxiety usually inclined by a person. Score range is between 20 (low anxiety) and 80 (high anxiety). Scores at 36 and below indicate absence of anxiety, scores between 37 and 42 suggest mild anxiety, scores of 43 and above refer to high level of anxiety. In general, higher levels of state and trait anxiety scores suggest higher levels of anxiety and it is also stated that persons with scores above 60 are required to receive professional support.¹⁸⁻¹⁹

California Bullying Victimization Scale (CBVS): Constructed by Felix and his friends, this is a self-report scale used to assess bullying victimization among middle school students. Adaptation of the scale to Turkish, study of reliability and validity were done by Atik. CBVS includes seven items of victimization: gossip spread behind; being kept out of the group or being ignored, being hit, pushed or get-

ting physical harm, being threatened, property's being stolen or damaged, exposure to sexual comments, jokes and harassments. The pupils assess how often they or anyone at school experience these cases on a five point scale (1 = Never, 2 = Once in the past month, 3= 2 or 3 times in the past month, 4 = About once a week, and 5 = Several times a week). Then, in order to understand power imbalance, the pupils are asked on a three point scale if the people who bully them are more popular, more successful or stronger. In the following questions, students are asked to give information about when and where the bullying occurred. The criterion for categorization of bullied students is 2-3 times a month or more. The non-victim students are those who have never experienced being a victim. Peer victims are students experiencing at least one victimization at any frequency but not reporting power imbalance. As for bullied victims, they refer to students who experience at least 2-3 times of victimization per month and report at least one power imbalance.²⁰

Family Assessment Scale: Developed by Brown University and Butler Hospital within the frame of Family Research Program, this scale is used with the aim of revealing if the family fulfils their functions about which subjects. Validity and reliability tests were done by Epstein, Baldwin and Bishop in 1983 and it is known that this scale was adapted to Turkish by Bulut. The scale includes 7 sub-dimensions as problem solving, communication, roles, affective responsiveness, sufficient involvement, behavior control and general functions. Scale items point at healthiness like "Family members acts in a tolerant way towards each other" or unhealthiness like "At home, we don't share our troubles, worries with each other". Scores vary from 1 (healthy) to 4 (unhealthy). Score average above 2 refers to unhealthiness in family functions and average point below 2 means healthiness in family functions.²¹

Conners Teacher Rating Scale (CTRS-28): This is a 28 item scale developed by Conners (1969) for teachers to rate students' in-class behaviors. Validity and reliability analy-

sis of CTRS was done by Derebooy and his friends (1997) in our country. Questions are answered by teachers on a 4 option Likert scale. Options of “never”, “rarely”, “very Often” and “always” are scored as “0”, “1”, “2” and “3” respectively. As for sub scales, there are eight questions for Attention Deficit/ Passiveness, seven questions for Hyperactivity and eight questions for Conduct Disorder. If the total score is found above 18 for Lack of Attention/Passiveness, above 16 for Hyperactivity and above 18 for Conduct, the child may be said to have ADHD.²²⁻²⁴

Statistical analysis : In our study, we assessed with the help of CBVS if the students were prone to bullying or not. Students were divided into two groups as bullied and non-bullied. These two groups were analyzed in terms of their socio-demographic attributes and their relations with other scales used in the study.

Data management and computations of descriptive statistics of the survey were performed using SPSS 19.0 for Windows software. Pearson chi-square, Fisher’s exact test was applied to assess the results. The level of statistical significance was accepted as $p < 0.05$.

Ethical considerations: Prior to the study, permission has been taken from Ethics Committee of Faculty of Medicine, Cukurova University.

RESULTS

Out of 119 students participating the study, 56 (47,1 %) were female and 63 (52,9 %) were male. Average age was 13.1 ± 0.9 (min=12, max=15). While average age of the female students was 12.9 ± 0.8 , average age of male students was 13.2 ± 0.9 . There was a difference in the average age of male and female students. ($p=0,026$)

53 students in the study were at 6th grade class (44,5%) , 29 were at 7th grade and 37 were at 8th grade. Socio-demographic attributes of these students are shown in Table 1.

Socio-demographic Attributes	Number	Percent
Mother’s Education		
Illiterate	7	5.9
Literate	1	0.8
Elementary School	61	51.2
High School	34	28.6
College	16	13.4
Father’s Education		
Illiterate	4	3.4
Literate	2	1.7
Elementary School	46	38.6
High School	38	31.9
College	29	24.4
Mother’s Occupation		
Housewife	79	66.4
Civil Servant	21	17.6
Laborer	11	9.3
Tradeswoman	8	6.7
Father’s Occupation		
Civil Servant	41	34.5
Self-employed	35	29.4
Laborer	20	16.8
Unemployed	12	10.1
Tradesman	11	9.2
House Status		
Rent	62	52.1
Own	57	47.9
Economic Status		
Bad	8	12.6
Fair	46	38.7
Good	50	42.0
Very good	15	6.7
Family type		
Parents together	115	96.6
Parents divorced	4	3.4
Total	119	100.0

When students were asked about their success in lessons, 13 (10,9%) of them were very successful, 92 (77,3%) were

successful and 14 (11,8%) were unsuccessful, they said. 23 students (19,3%) were working during summer holiday and 5 students (4,2%) were working both during summer and school period. 3 students (2,5%) mentioned that they were smoking, 70 students (58,8%) said one of their parents was smoking. 16 students (13,4%) also said that their fathers are drinking alcohol.

When they were asked if they see physical violence at home, 3 students (2,5%) said they were subject to it and 2 (1,7%) said their mother was exposed to it.

Our study revealed that 33 students (27, 7%) were victims of peer bullying. Symptoms of depression were seen in 19 students (16, 0%). According to state scale of STAI, 37 students had high level of anxiety while trait scale of STAI found high levels of anxiety in 60 students (50, 4%). 17 students had attention deficit, 5 students (4,2%) had hyperactivity and 4 students (3,4%) had conduct disorder. The gender distribution in the results of scales used in the study is shown in Table 2.

When we compared being bullied with socio-demographic

Table 2. Distribution of scale scores by gender							
Scale Result	Female		Male		Total		χ^2, p value
	Nr.	%*	Nr.	%*	Nr.	%**	
CBVS							
Non-bullied	37	43.0	49	57.0	86	72.3	$\chi^2=2,027$
Bullied	19	57.6	14	42.4	33	27.7	p=0.155
CDI							
Depressed	44	44.0	56	56.0	100	84.0	$\chi^2=2,352$
Non depressed	12	63.2	7	36.8	19	16.0	p=0.125
FAS							
Healthiness in family functions	55	48.7	58	51.3	113	95.0	$\chi^2=2,343$
Unhealthiness in family functions	1	16.7	5	83.3	6	5.0	p=0.126
STAI -State							
Absence of anxiety	24	40.0	36	60.0	60	50.4	$\chi^2=7,234$
Mild anxiety	16	72.7	6	27.3	22	18.5	p=0.027
Severe anxiety	16	43.2	21	56.8	37	31.1	
STAI - Trait							
Absence of anxiety	9	31	20	69	29	24.4	$\chi^2=4,3109$
Mild anxiety	17	56.7	13	43.3	30	25.2	p=0.116
Severe anxiety	30	50.0	30	50.0	60	50.4	
Conners Attention Deficit							
Absence of AD	50	49.0	52	51.0	102	85.7	$\chi^2=1,102$
Presence of AD	6	35.3	11	67.7	17	14.3	p=0.294
Conners Hiperactivity							
Absence of Hyperactivity	56	49.1	58	50.9	114	95.8	$\chi^2=4,639$
Presence of Hyperactivity	0	0.0	5	100.0	5	4.2	p=0.031
Conners Conduct							
Absence of Conduct Disorder	56	48.7	59	51.3	115	96.6	$\chi^2=3,679$
Presence of Conduct Disorder	0	0.0	4	100.0	4	3.4	p=0.055
* row percentage **column percentage CBVS: California Bullying Victimization Scale CDI: Children's Depression Inventory FAS: Family Assessment Scale STAI: State-Trait Anxiety Inventory							

attributes, it was detected that lower class students were more subject to bullying ($p < 0,05$). Exposure to bullying was seen more in students who had non-graduate mother and those who had domestic violence against themselves or their mother ($p < 0,05$). There was not a meaningful correlation between exposure to bullying, father' education, parents' occupation, status of house and economic status ($p > 0,05$). (Table 3)

When we compared exposure to bullying with other scales, we identified that bullied children were more depressed, had higher levels of anxiety and hyperactivity ($p < 0,05$). On the other hand, there was not a meaningful correlation found between exposure to bullying and unhealthiness in family functions, Conners attention deficit and Conners conduct disorder. ($p > 0, 05$) (Table 4)

Table 3. Comparison of exposure to bullying and socio-demographic variables							
	Female		Male		Total		χ^2, p value
	Nr.	%*	Nr.	%*	Nr.	%**	
Class Grade							
6th grade	23	43.4	30	56.6	53	44.5	$\chi^2=12.493$
7th grade	6	20.7	23	79.3	29	24.4	$p=0.02$
8th grade	4	10.8	33	89.2	37	31.1	
Mother's Education							
Non-graduate	5	62.5	3	37.5	8	6.7	$\chi^2=5.173$
Graduate	28	25.2	83	74.8	111	93.3	$p=0.023$
Father's Education							
Non-graduate	1	16.7	5	83.3	6	5.0	$\chi^2=0.386$
Graduate	32	28.3	81	71.7	113	95.0	$p=0.534$
Mother's Occupation							
Housewife	19	24.1	60	75.9	79	66.4	$\chi^2=1.589$
Working	14	35.0	26	65.0	40	33.6	$p=0.208$
Father's Occupation							
Unemployed	2	16.7	10	83.3	12	10.1	$\chi^2=0.815$
Working	31	29.0	76	71.0	107	89.9	$p=0.367$
House Status							
Rent	19	30.6	43	69.4	62	52.1	$\chi^2=0.548$
Own	14	24.6	43	75.4	57	47.9	$p=0.459$
Economic Status							
Bad	1	12.5	7	87.5	8	6.7	$\chi^2=2.054$
Fair	15	32.6	31	67.4	46	38.7	$p=0.561$
Good	12	24.0	38	76.0	50	42.0	
Very good	5	33.3	10	66.7	15	12.6	
Domestic violence							
Violence towards my mother or me	4	80.0	1	20.0	5	4.2	$p=0.021$
No violence towards my mother or me	29	25.4	85	74.6	114	95.8	

Table 4. Comparison of exposure to bullying and scale sores							
	Not Bullied		Bullied		Total		χ^2, p value
	Sayı	%*	Sayı	%*	Sayı	%**	
CDI							
Depressed	77	77.0	23	23.0	100	84	$\chi^2=6,995$
Non depressed	9	47.4	10	52.6	19	16	p=0.008
FAS							
Healthiness in family functions	80	70.8	33	29.2	113	95.0	$\chi^2=2.425$
Unhealthiness in family functions	6	100.0	0	0.0	6	5.0	p=0.119
STAI -State							
Absence of anxiety	54	90.0	6	10.0	60	50.4	$\chi^2=19.299$
Mild anxiety	11	50.0	11	50.0	22	18.5	p<0.001
Severe anxiety	21	56.8	16	43.2	37	31.1	
STAI - Trait							
Absence of anxiety	25	86.2	4	13.8	29	24.4	$\chi^2=7,071$
Mild anxiety	24	80.0	6	20.0	30	25.2	p=0.029
Severe anxiety	37	61.7	23	38.3	60	50.4	
Conners Attention Deficit							
Absence of AD	73	71.6	29	28.4	102	85.7	$\chi^2=0.175$
Presence of AD	13	76.5	4	23.5	17	14.3	p=0.676
Conners Hiperactivity							
Absence of Hyperactivity	85	74.6	29	25.4	114	95.8	
Presence of Hyperactivity	1	20.0	4	80.0	5	4.2	p=0.021
Conners Conduct							
Absence of Conduct Disorder	82	71.3	33	28.7	115	96.6	$\chi^2=1.588$
Presence of Conduct Disorder	4	100.0	0	0.0	4	3.4	p=0.208
CBVS: California Bullying Victimization Scale CDI: Children's Depression Inventory FAS: Family Assessment Scale STAI: State-Trait Anxiety Inventory							

DISCUSSION

School bullying is an issue which is common all over the world and should not be underestimated. In various studies, It is possible to come across with findings that ratios of both bully and victim (students exposed to peer bullying) reach to 50% 25. The researches done in the last 30 years set forth that bullying is a serious threat on the healthy development of children and it has reached to severe levels at schools. Piskin (2005) summarizes below the ratios he found in his scanning related to the prevalence of bullying and victimization worldwide:

Ratios of victim students are 30% in Australia, 28-40 % in Italy, 04-36 % in England, 15-30% In Greece, 20-22% in Portugal, 21% In Canada, 10% in USA, 10% in Norway. Bullying student ratios are found to be 20% in England, 15-20% in Italy, 6% in Greece, 12% in Canada, 13% in USA, 7% in Norway and varies between 11% and 50% in Turkey. This ratio is found to be 27,7% in our study.²⁵ Our study indicates that the prevalence of bullying in Turkey is close to and even more than in these countries.

Victims are more sensitive and touchy than other students. They have some common characteristics such as weak communication and having the ability to solve problem²⁶⁻²⁸. As a result of interviews with parents of male victims, Olweus determined that these victims were identified with prudence and susceptibility since their childhood²⁶. Due to these characteristics accompanied with physical weakness, they have difficulty in standing out and showing themselves in peer groups. These are important reasons, contributing to their victimization. At the same time, continuous exposure to harassment of their peers increase their feelings of anxiety and insecurity. It also causes negative self-assessment to become further negative.^{27,28} The findings of our study that bully victims have hyperactivity and high anxiety levels support these studies. In addition, the fact that we more frequently encounter exposure to bullying in students at lower classes can be linked to physical weaknesses of these students.

Following their reviews on literature; Dake, Price and Teljohann summarize the attributes of victims as following:

- They fall into depression.
- They have suicidal ideas.
- They feel lonely.
- They have low self-esteem.
- They are anxious.
- They confront psychiatric problems.
- They have eating disorders.
- They are less popular than other children.
- They spend most of their time alone.
- They have parents who provides very few opportunities to control social status.
- They have parents who are less responsible and less supportive.
- They come from cruel and bad home environment.
- They have problems of abuse.
- Their social adaptation is weak.
- Their attachment with school is weak.
- Their absence rates are high.²⁹

In our study, non-graduate mother and presence of violence amongst family were risk factors for exposure to bullying. This situation also seems in accordance with the current literature. According to McNamar, children in victim status usually come from over protective and watchful families. These parents believe that their children are worried and defenseless. They try to prevent any kind of conflict their children might confront as far as possible because they think their children cannot overcome these problems. However, by keeping them out of conflicts constantly, these parents indeed hinder their children's learning conflict solving skills. Researchers believe that families' attitude of overprotecting their children is both the reason and the result of being exposed to bullying.^{2,30,31}

In order to prevent peer bullying at schools, with a team work including all personnel (executives, teachers and psychological advisors), parents and also students; school counselling service can develop an effective prevention program by giving trainings on awareness about bullying to all it may concern.³² The focus should be not only on the persons in roles of bully and victim but also persons in other roles during the process of bullying. A small try might cause a big impact.

The approach in avoidance of peer bullying should be in the way of assessment, prevention and intervention. Assessment as the first step should include observation, interview, socio-metric measurements, surveys, teacher comments and self-assessment of bullies. The stage of assessment should be planned meticulously and conducted by professionals such as executives, psychological counselors, teachers and psychologists.³³

Regarding bullying processes that the students are exposed to, it is beneficial to receive help from social service officers so that teachers and parents become aware of them and provide solutions.³⁴ If the bullied person were an adult, no one would pay much attention to the bullying. However the victim's being a child requires the help of adults and instructors. Interviews with parents, effective communica-

tion, special attention of parents and teachers will have an impact on prevention of tyrannous behaviors.³⁵

In this study, high levels of anxiety, high incidence of depression and also more hyperactivity have been found amongst bullied children. School bullying is a common problem over the world which should not be underestimated. The main reason why school bullying is deemed as such important is the nature of its results. A bullied child will be alienated from the school where the bullying takes place, will live in fear and anxiety, will be absent from school in every possible situation, thus his success will fall and he will adopt violent methods. In addition, it seems inevitable that they might also have different psychological issues. For these reasons, large scale social projects are needed to be devised in order to prevent violence in schools.

DECLARATIONS

Ethics approval and consent to participate: The University of Cukurova granted Ethical approval to carry out the study. (Date 08/23/2013, no. 22/10) Written parental permission was received before the application of survey on the students and surveys were applied to those whose families allowed.

Consent for publication: This article is original, has not already been published in a journal, and is not currently under consideration by another journal. All authors of the manuscript have read and agreed to its content and are accountable for all aspects of the accuracy and integrity of the manuscript in accordance with ICMJE criteria.

Availability of data and material: The datasets used are available from the corresponding author on reasonable request.

Competing interests: The authors declare that they have no competing interests.

Funding: This study was not supported by a funding or a

scholarship.

Authors' contributions: EN designed methodology and statistical analysis & editing of manuscript, GGÇ and AYT designed survey form and collected data, MA supervised the research and did editing and reviewing of manuscript, RAO and BK did editing and reviewing of manuscript.

Acknowledgements: Authors are grateful and would like to thank all students and their families who collaborated in this research.

References

1. Brown DW, Riley L, Butchart A, Kann L. Bullying among youth from eight African countries and associations with adverse health behaviors. *Pediatric Health*. 2008;2(3):289-299.
2. Volk AA., Dane AV, Marini ZA. What is bullying? A theoretical redefinition. *Developmental Review*, 2014;34(4): 327-343.
3. Fleming LC, Jacobsen KH. Bullying among middle-school students in low and middle income countries. *Health Promotion International*. 2010;25(1):73-84.
4. Çetinkaya S, Nur N, Ayyaz A, Özdemir D, Kavakcı Ö. Sosyoekonomik durumu farklı üç ilköğretim okulu öğrencilerinde kriz zorbalarının depresyon ve benlik saygısı düzeyiyle ilişkisi. *Anatolian Journal of Psychiatry* 2009; 10:151-158
5. Newman D, Horne A, Bartolomucci C. *Bully Busters: A teacher's manual*. Champaign, IL: Research Press, 2000.
6. Cook CR., Williams KR, Guerra NG, Kim TE, Sadek S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School psychology quarterly*, 2010;25(2): 65.
7. Andreou E. Bully/Victim problems and their association with coping behaviour in conflictual peer interactions among school-age children. *Educ Psychol* 2001; 21:59-66.
8. Reijntjes A, Kamphuis JH, Prinzie P, Boelen PA, van der Schoot M, Telch, M. J. Prospective linkages between peer victimization and externalizing problems in children: A meta-analysis. *Aggressive Behavior*, 2011;37: 215-222.
9. Kochenderfer-Ladd B, Skinner K. Children's coping strategies: Moderators of the effects of peer victimization? *Dev Psychol* 2002;38: 267-278.
10. Schwartz D, Forver J, Chang L ve ark. Victimization in South Korean children's peer groups. *J Abnorm Child Psychol*. 2002;30:113-125.
11. Marsh HW, Parada RH, Yeung AS ve ark. Aggressive school trouble makers and victims: A longitudinal model examining the pivotal role of self-concept. *J Educ Psychol* 2001;93: 411-419.
12. Prinstein MJ, Boergers J, Vernberg EM. Overt and relational aggression in adolescents: Social psychological adjustment of aggressors and victims. *J Clin Child Psychol* 2001;30: 479-491.
13. Cole, J., Cornell, C. M., Dewey G., Sheras, P. Identification of School Bullies by Survey Methods., *Professional School Counseling*, 10962409, 2006;9,(4)305-319 Harper Collins
14. Salmivalli C. Bullying and the peer group: A review. *Aggression and violent behavior*, 2010;15(2): 112-120.
15. Schwartz, D. (2000). Subtypes of victims and aggressors in children's peer groups. *Journal of Abnormal Child Psychology*, 2000;28:181-192.
16. Pekel-Uludağlı, N., Uçanok, Z. (2005). Akran Zorbalığı Gruplarında Yalnızlık ve Akademik Başarıları ile Sosyometrik Statüye Göre Zorba-Kurban Davranış Türleri, *Türk Psikoloji Dergisi*, 2005;20 (56):77-92
17. Öy B. Çocuklar için depresyon ölçeği: geçerlik ve güvenilirlik çalışması. *Türk Psikiyatri Dergisi* 1991; 2:132-136.
18. Spielberger CD, Gorsuch RL, Lushene RE. *Manual for the State-Trait Anxiety Inventory*. California: Consulting Psychologists Press, Palo Alto, 1970, p. 23-49.
19. Öner N, Le Compte A. *Durumluk Sürekli Kaygı Envanteri El Kitabı*, İstanbul, Boğaziçi Üniversitesi Yayınları 1983, s: 1-26.
20. Atik G. Ortaokul Öğrencilerinin Mağduriyetinde Etkili Olan Öğrenci ve Okul Düzeyi Faktörleri: Ekolojik Bir Bakış Açısı. Orta Doğu Teknik Üniversitesi, Rehberlik ve Psikolojik Danışmanlık Doktora Tezi 2013.
21. Bulut, I. *Aile Değerlendirme Ölçeği El Kitabı*. Ankara: Özgünel Matbaası, 1990.
22. Connors CK. A teacher ratings scale for use in drug studies with children. *Am J Psychiatry*. 1969;126:884-888.
23. Şener Ş, Dereboy Ç, Dereboy F, et al. Connors Öğretmen Derecelendirme Ölçeği Türkçe Uyarlaması-1. *Çocuk ve Gençlik Ruh Sağlığı Dergisi*. 1995;2:131-141.
24. Dereboy Ç, Şener Ş, Dereboy F, et al. Connors Öğretmen Derecelendirme Ölçeği Türkçe Uyarlaması-2. *Çocuk ve Gençlik Ruh Sağlığı Dergisi*. 1997;4:10-18.
25. Pişkin, M. (2005). Okulda Akran Zorbalığı. Ankara Valiliği İl Millî Eğitim Müdürlüğü Özel Eğitim Rehberlik ve Psikolojik Danışma Hizmetleri Bölümü "Okullarda Şiddet" Paneli. Ankara, 2005.
26. Olweus, D. Sweden. In P. K. Smith, Y. Morita, J. Junger-Tas, D. Olweus, R. Catalano & P. Slee (Eds.), *The nature of school bullying: A cross national perspective* (pp. 7-27). London and New York: Routledge, 1999.
27. Salmon, G., Jones, A., and Smith, D.M. Bullying in school: Self-reported anxiety and self-esteem in secondary school children. *British Medical Journal*, 1998;317, (7163) 924-5.
28. Glew, G., Rivara, F. and Feudtner, C. (2000). Bullying: Children hurting children. *Pediatrics in Review*, 2000;21: 183-190.
29. Dake, J.A., Price, J.H. and Telljohann, J.K. The nature and extent of bullying at school. *Journal of Scholl Health*, 2003;73(5): 173-181.
30. McNamara, B., & McNamara, F. *Keys to dealing with bullies*. Hauppauge, NY: Barron's, 1997.
31. Smokowski, P.R. and Kopasz, K.H. Bullying in school: an overview of types, effects, family characteristics and intervention strategies. *Children & Schools*, 2005;27: 101- 110.
32. Alikışifoğlu, M. Akran istismarı, *Türk Pediatri Arşivi Dergisi* 2011;46: 31-34.
33. Crothers, L. M. and Levinson, E. M. Assessment of bullying: a review of methods and instruments, *Journal of Counseling & Development*, 2004, p.496-503.
34. Mishna, F., Scardello, I., Pepler, D. ve Wiener, J. Teachers' Understanding of Bullying. *Canadian Journal of Education* 2005;28 (4), 718-738.
35. Şahin, M., Demirağ, S., Aykaç, F. (2009), "Ana sınıfı öğretmenlerinin akran zorbalığı ile ilgili algıları", *Sakarya Üniversitesi Eğitim Fakültesi Dergisi* 2009;17:1-16.