The Relationship between School Climate and Students' Aggressive Behaviors

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Abstract

This study analyses the correlations between students' aggressive behaviours, school climate and a number of demographic variables on the basis of students' views. This study was carried out in Ankara in the 2019-2020 academic year. The sample for the study was composed of 914 students who attended schools located in 9 districts of Ankara. The research data were collected with Buss-Perry Aggression Questionnaire and School Climate Scale. The data were put into quantitative analysis in this study- which used correlational survey model. In this process, the data were analysed with mean, standard deviation, correlation analysis and hierarchical multiple regression analysis. The findings demonstrated that there were low and negative significant correlations between students' aggressive behaviours and their perceptions of school climate. It was also found that supportive teacher behaviours, safe learning environments and positive peer interactions, gender and academic achievement had significant effects on students' aggressive behaviours.

Keywords: Aggression, School Climate, Secondary School, Students, Relationship

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INTRODUCTION

We often encounter incidents of aggression today in all segments of society. The causes underlying aggression and their effects on society have been analysed in both social media and academic studies (Anderson, Anderson & Deuser, 1996; Aquino & Thau, 2009; Arslan, 2013; Bushman & Huesmann, 2006; Gadegaard, Andersen & Hogh, 2017; Gubler, Herrick, Price & Wood, 2018; Jones & Thorpe, 2016; Pişkin, 2006; Ryan, Esau & Roman, 2018; Wassel, 2009). It can be said that individuals who display aggressive behaviours vary regardless of their age, gender and occupation. Aggression targets animals, humans and even individuals themselves. Aggressive behaviour can be verbal, in the form of burst of anger or hostile approaches as well as physical. In other words, it can occur in different types. There may be biological reasons under this situation, as well as environmental factors. In this regard, Tarhan (2018) stated that aggression is not only physical but also feeds the feeling of worthlessness through emotional and psychological violence such as yelling, ignoring, not being interested, and frequent criticism in interpersonal relationships. It is pointed out that the victims of aggression can have psychological, physical and social destruction. Yet, it can be said that individuals who display aggressive behaviours do not have normal state of mind and they display undesirable behaviours with the triggering of possibly physiological or psychological problems. It is very important to notice the individuals' bias towards aggression, and to adopt preventive approaches. Identifying the problematic behaviours especially in childhood will play critical roles in building healthy individuals and societies. Schools, teachers and parents take on significant tasks in observing children of school age, correcting undesirable behaviours, and in directing the behaviours accordingly.

Student aggressiveness is a phenomenon which attracts the attention of many countries in the world, and for which efforts are made to develop policies to prevent (Benbenishty & Astor, 2005; Guerra, Williams & Sadek, 2011; Ludwig & Warren, 2009). According to Akiba, LeTendre, Baker and Goesling (2002), aggression in school is a global phenomenon that interests the whole world. Countries' level of development or having different educational systems may not prevent them from encountering the phenomenon of aggression. It can be stated that there are individual, familial and environmental factors underlying aggressive behaviors. Students 'gender, academic success, parents' education level, monthly income, number of family members, etc. variables were found to be related to students' aggressive behaviors. In the studies of Akman (2010), Efilti (2006) and Güney (2008), it was determined that male students have a higher perception of violence than girls. In addition, it has been observed in various studies that students who are less successful in terms of academic success frequently exhibit violent behaviors (Akman, 2010; Furlong & Morrison, 2000; Yavuzer, 2011). In addition, it was stated that parental education level (Demirhan, 2002; Kawamura, 2005) and economic income (Akman, 2010; Omay, 2008), which are family-based variables, also affect students' violent behavior.

Akiba et al (2002) studied aggressiveness in 37 countries including Singapore, Sweden, Ireland, the USA, Germany, Canada, Australia, Colombia, New Zealand, Iran, South Africa and Korea. It was found in studies conducted in Turkey that aggressive behaviours have increased in schools (Arslan, 2013; Ögel, Tarı & Ege, 2005; Yavuzer, Gündoğdu & Dikici, 2009). The studies indicated that students suffer from various acts of aggression (physical, sexual, verbal, etc.) in schools (Alikaşifoğlu, Erginöz, Ercan, Uysal, Kaymak & İlter, 2004; Pişkin, 2006; Yurtal & Cenkseven, 2006). Özgür, Yörükoğlu and Arabacı (2011), on the other hand, claim that students mostly are exposed to physical (78.9%) and psychological (45.6%) violence. In a similar vein, the report prepared by the Research Commission of Grand National Assembly of Turkey (2007) also found that students in secondary education encountered physical (22%), verbal (53%), emotional (26.3%) and sexual (15.8%) aggression. In a research, children and adolescents are at risk in terms of encountering violence and using violence. The researcher also stated that violence was observed at the maximum level in the ages of 15-16. The incidents of violence mentioned are also frequently considered in mass media. Teyfur (2014), in a study concerning incidents of violence which appeared in mass media

between 2003 and 2004, found that types of violence such as beating, killing, drug, abuse and fighting, physical (28.9%), psychological (18.9%) and sexual (18.3%) types of violence were in the majority.

Violence in school is described as purposeful aggressive acts and threatening approaches towards individuals in school environment or in the process of educational activities (Ludwig & Warren, 2009). Olweus (1996), on the other hand, describes it as physical and psychological aggression which is done repetitively with a desire to give harm. Tyranny can also be considered as a form of school violence due to the fact that it is highly related to negative school climate and probable aggressive behaviours besides causing physical and psychological harm (Ericson, 2001). Examining national and international literature, it was found that aggressive behaviours in schools give harm to the teaching-learning process and the desire of living together (Cava, Buelga, Musitu & Murgui, 2010). Children go through intensive physical, social and psychological changes and transformations especially in adolescence (Moral, Suárez & Musitu, 2012). Society, families and schools help strengthen children's psycho-social adaptation (Herrera, Romera, Ortega & Gómez, 2016). Schools are the institutions that can be described as the micro-reflections of the society. Having schools with healthy climate will help students be stronger academically, socially and psychologically. According to Akiba et al. (2002); aggressive behaviours, which have negative impacts on school climate, are an international problem which threatens social health.

Aggressive behaviours observed in schools can also have negative emotional, psychological and social effects in addition to directly observable effects such as physical wounding. Being exposed to aggression can lead to a number of risky behaviours, and to various mental problems. They include stress, extreme forms of anxiety, depression, low self-confidence, temper tantrums, using drug, increase in suicide, low academic performance, school dropout and so on (Esbensen & Carson, 2009; Ludwig & Warren, 2009; Sharp, 1995). The quality of relations between school principal-teachers and students is important in preventing violent behaviours. Teacher-student relations in particular play key roles. In support of this view, classroom management strategies putting students in the centre, which are adopted by teachers, are also influential in students' achievement or failure. Therefore, positive teacher-student relations underlie a good classroom climate (Brophy-Herb, Lee, Nievar & Stollak, 2007). In addition to that, teachers' effective communication skills will also make it easier for students feel safe and valuable. Such a situation will strengthen the ties between the teacher and students, result in more stable social well-being and reduce aggressive and destructive behaviours (Smith & Sandhu, 2004; Volungis, 2016). Yablon (2010), in a study involving primary, secondary and high school students, found that the quality of teacher-student relations have substantial effects on students' willingness to receive help in terms of physical, social and verbal violence.

The relations that students develop in the classroom and in school are directly influential in their psychological states. Psychological research indicated that the elements of school environment can be preventive as well as stressful for students (Hopson & Lee, 2011; Wang, Halcombe, Dishion, & Stormshak, 2010). It was argued that the behaviours of peers, teachers, and of other employees, the physical properties of schools and even environmental factors play roles in the formation and continuity of aggressive behaviours (Adams & Hannum, 2018). All these elements mentioned emphasise a concept which is influential in the school climate and shape the behaviours of students and employees. Climate, which is an important premise of effective schools, is a versatile element involving the physical (the number of students, heat, light, etc.), social (relations, leadership, etc.) and academic (performance, achievement, etc.) properties. There is wide consensus that the social climate in schools has significant effects on aggressive behaviours in schools (Bradshaw, 2015; Carra, 2009; Cohen & Freiberg, 2013; Greene, 2005; Hernandez & Seem, 2004; Janosz, Thiébaud, Bouthillier & Brunet, 2005). The probability for students having close relations with the school to display undesirable behaviours is low (McNeely & Falci, 2004). It was found that students' positive perceptions of school reduced aggressive behaviours (Goldweber, Waasdorp & Bradshaw, 2013; Gottfredson, Gottfredson, Payne & Gottfredson, 2005). It was also found that making positive environmental arrangements and creating student-centred learning environments reduced dropout rates (Gottfredson & Dipietro, 2011). In addition, supportive school climate, adherence to learning and

academic achievement were found to be correlated (Brand, Felner, Shim, Seitsinger & Dumas, 2003). In contrast, the students in schools with negative climate were found to be more aggressive and have weaker relations (Espelage & Swearer, 2003). These examples highlight the finding that school climate has effects on students' bias toward violence.

School climate can be described as the quality of relations between students and school employees, the physical properties and adequacies of schools and environmental elements. School climate is a characteristic personality specific to school and containing such elements as communication patterns, norms directed to functioning, values, relations of inter-personal roles and sanctions (Fox, Schmuck, Egmond, Rivto & Jung, 1979; Gage, Prykanowski & Larson, 2014). Hoy, Smith and Sweetland (2002) argue in describing school climate as a complicated structure which is a reflection of the properties of interactions between school employees and students. On the basis of the structure are mostly students' positive or negative perceptions of other employees. Several studies have been conducted to determine the basic elements of school climate (Cohen, McCabe, Michelli & Pickerall, 2009; Çalık & Kurt, 2010; Thapa, Cohen, Guffey & Higgins-D'Alessandro, 2013). The situation has led to the emergence of different variables in the process of analysis. Some of the approaches expressed the variables of climate as affective if they were related to interpersonal and social relations. Some other approaches put psychological processes in the centre and assigned cognitive and emotional meaning to them. A number of researchers, on the other hand, considered school climate in the context of organisation and laid emphasis on the characteristics specific to schools (school safety, physical properties, form of management, etc.) (Fraser, 1994). In the present study, the model proposed by Çalık and Kurt (2010) was taken into consideration. In this model, the school climate are discussed in the context of supportive teacher behaviors, success-oriented and safe learning environment and positive peer interaction. Supportive teacher behaviors emphasize the development of students by prioritizing both their instructional and interpersonal relationships. Achievement-oriented, on the other hand, indicates the motivational factors that play a role in the success of students and encourage their studies. Safe learning environment and positive peer interaction also indicate a perception that students feel protected at school, that their problems are solved, and that they are happy to be with their friends. In solving a global problem such as violence at school, it is thought that addressing its relationship with the school climate will serve to solve the problem. In this way, action plans can be developed for a more positive school climate. By creating intervention programs, violent behaviors can be prevented. Also Wang et al. (2010) underlined that practices aimed at improving the school climate will prevent violence at school. A review of the literature demonstrated that studies concerning behaviours of aggression in schools and elements that may be influential in them had a long history. Despite that, the interventions made to reduce and eliminate student aggression cannot be said to be influential enough. This paper analyses the correlations between aggressive behaviours, school climate and a number of demographic variables on the basis of students' views and investigates the results which can shed light on the applications for the solution of the problem.

1. What are the students' perceptions of aggressive behaviours and school climate?

2. What is the relationship between students' aggressive behaviours and students' perceptions of school climate?

3. How well do students' perceptions of school climate, academic achievement and demographic variables predict their aggressive behaviours?

METHOD

This study uses a correlational survey model since it examines the correlations among a number of variables (Karasar, 1994, p.81). The dependent variables of the study were identified as students' behaviours of anger and physical and verbal violence while the independent variables were identified as supportive teacher behaviours (STB), safe learning environments and positive peer

interactions (SLEP), gender, academic achievement, income and father and mother's level of education.

Population and Sample

The research was done in Ankara, Turkey. The research population was composed of 252,752 students attending 419 secondary schools located in nine central districts of Ankara (Ankara Provincial Directorate of National Education, 2019). It was found that the sample could be represented by approximately 384 students with an error margin of 5% (Krejcie & Morgan, 1970). The number of participants was determined random according to the rate districts were represented in the population in this study which used simple random sampling method. Decision was made to have a sample of 1000 students so as to keep the number of participants high. Thus, 86 of the scales were excluded from the data set due to having incomplete data, failure to hand in the scale or marking more than one alternatives. As a result, 914 of the scales were evaluated. The data concerning demographic variables are shown in Table 1.

As is clear from Table 1, 496 (54.3%) of the participants are female whereas 418 (45.7%) of them are male. In terms of academic achievement, 603 (66%) of them have 70 or scores above it while 311 (34%) have 69 or scores below it. In terms of family-related variables, 357 participants (39.1%) are in high income group while 557 of the participants (60.9%) are in low income group. The data about parents' educational level are also shown in the Table 1.

Table 1. Descriptive Statistics for the Sample

	Central Districts of Ankara									
	District 1	District 2	District 3	District 4	District 5	District 6	District 7	District 8	District 9	Total
Number of students in the population	24169	30030	29225	6735	51570	35278	10412	35197	30136	252752
Number of schools in the population	47	72	36	26	61	63	15	47	52	419
Number of students in the sample	87	109	106	24	186	128	38	127	109	914
Number of schools in the sample	5	8	4	3	7	7	2	5	6	47
Gender										
Female	47	60	55	15	102	73	20	65	59	496
Male	40	49	51	9	84	55	18	62	50	418
Academic achievement										
70 and above	60	68	71	18	122	78	25	75	86	603
69 and below	27	41	35	6	64	50	13	52	23	311
Income*										
High	35	74	40	9	51	45	15	50	38	357
Low	52	35	66	15	135	83	23	77	71	557
Mother's level of education										
University	5	15	4	1	6	4	1	6	4	46
Other	82	94	102	23	180	124	37	121	105	868
Father's level of education										
University	11	45	18	5	14	13	6	10	9	131
Other	76	64	88	19	172	115	32	117	100	783

* As the income level, the minimum wage in the period in which the study was conducted is taken as reference. According to Turkish Statistical Institute data, the minimum monthly wage for employees is stated as 2331 TL (Milliyet, 2019). At least 3 minimum wage amount (7000 TL) has been accepted for high income level.

Data Collection Tools

The Aggression Questionnaire, which was adapted by Buss and Perry (1992), contains 29 items and four factors. This study uses the version of the scale which was adapted into Turkish by Demirtaş Madran (2012). The school climate scale, on the other hand, was developed by Çalık and Kurt (2010) as having three factors and 22 items. The psychometric values for the scales are as in the following.

Buss-Perry Aggression Questionnaire (BPAQ)

The BPAQ is composed of 29 items and four factors. Demirtaş Madran (2012) stated that the four-factor (physical aggression, anger, hostility, verbal aggression) structure of the scale explained 41.4% of the total variance. It was found that the total Cronbach's Alpha was .85 for the scale and that the factors took on values of .78, .76, .71 and .48, respectively. The scale validity was analysed with confirmatory factor analysis (CFA) in this study. Items 1, 3, 4 and 23 were removed from the data set since the t-values for them were found to be insignificant following the analysis. The analysis was repeated and correlations were formed between items 6 and 7 in accordance with recommendations for modification. After the final analysis, goodness of fit values were found to be adequate [$\chi2$ = 1119.66; df = 274; $\chi2/df$ = 4.08; AGFI = .89; NFI = .89; CFI = .92; IFI = .92; RMR = .09 and RMSEA = .058 (N=914)]. Besides, Cronbach's Alpha coefficients were also found as .85 (BPAQ).74 (physical aggression), .60 (anger), .69 (hostility) and .52 (verbal aggression).

School Climate Scale (SCS)

The SCS is composed of three factors and 22 items. Çalık and Kurt (2010) analysed the validity of the 3-factor structure of the scale through CFA. Following the analysis, the values of $\chi2$ = 703.51; df = 203; $\chi2/df$ = 3.46; AGFI = .85; CFI = .94 and RMSEA = .072 were found. The reliability coefficients for the scale were found as .79 (STB), .77 (Success-Oriented-SO) and .85 (SLEP). Item 16 was removed from the data set since the skewness and kurtosis values were not within the range of -2 and +2, and items 3 and 4 were removed from the data set since the t-values for them were found to be insignificant after CFA and thus, the analysis was repeated. In addition to that, correlations were formed between items 6 and 7 by taking modification recommendations into consideration. The goodness of fit values were found as $\chi2$ = 719.18; df = 151; $\chi2/df$ = 4.76; AGFI = .90; NFI = .84; CFI = .87; IFI = .87; RMR = .08 and RMSEA = .064 (N=914) for the scale. The number of items in the factor of being SO fell to two due to the items removed after the analysis, and thus they were not evaluated. The reliability coefficients for the factors were calculated as .79 (STB) and .83 (SLEP).

Procedures and Data Analysis

The research was conducted on the basis of 914 students' views who attended state secondary schools located in nine central districts of Ankara in the 2019-2020 academic year. The data were collected through the researchers' visits to the schools. The students' perceptions of aggression were determined through the BPAQ and their perceptions of school climate were determined through the SCS. The scales were completed in approximately 10-15 minutes. According to Can (2017), some assumptions need to be met for hierarchical multiple regression analysis. These are normality, multicollinearity, homoscedasticity and lack of auto-correlation. In the research, the skewness-kurtosis values [aggression between -1.24 and -.67), school climate (between -.75 and -.51)] were found to be normal. It was pointed out that having values between -2 and +2 was adequate (Kalaycı, 2014, p. 8). Besides, the Q-Q chart also indicated that the distribution of the data met normality assumption. VIF and tolerance values were examined for multicollinearity. These values are expected to be less than 10 for VIF and greater than 0.2 for tolerance (Field, 2005). The values reached indicated that there was no multiple correlation for physical aggression (VIF: 1.01; T: .98), verbal aggression (VIF: 1.01; T: .98)

and hostility (VIF: 1.01; T: .98). Multivariate normality assumption is associated with homoscedasticity. Meeting the normality assumption indicates homoscedasticity. In this regard, the scatter plot showing the spread as the same width towards the middle indicates the homoscedasticity (Tabachnick & Fidell, 2018). The lack of auto-correlation was questioned with the value of Durbin-Watson. This value is generally between 1.5 and 2.5 and interpreted as not auto-correlated (Kalaycı, 2014, p. 268). Durbin-Watson values were calculated as 1.83 for physical aggression; 1.89 for verbal aggression and 1.93 for hostility. In addition, the interpretation of the DFA values for the construct validity of the scale, the $\chi2/df$ value between 3 and 5 is "moderate", the RMSEA value between .05 and .08 is "good" and the AGFI, NFI, CFI, IFI values are .90 between .95 was expressed as "good" fit index (Çokluk, Şekercioğlu, & Büyüköztürk, 2012). Mean and standard deviations were found for descriptive analysis of the data, correlation analysis was done to identify the correlations between the variables and hierarchical multiple regression analysis was done for predictiveness. Arithmetic averages were interpreted as very low (1.00-1.80), low (1.81-2.60), medium (2.61-3.40), high (3.41-4.20) and very high (4.21-5.00) since the scales are of 5-point Likert type. In addition, the correlation was evaluated as low (.00-.30), medium (.31-.70) and high (.71-1.00) (Büyüköztürk, Çokluk & Köklü, 2012, p. 92).

RESULTS

The students' mean scores and standard deviations for the factors and the correlations between the variables are shown in Table 2.

Table 2. Descriptive Statistics for the Factors and the Findings for Correlation Analysis

Scales	Factors	$\overline{X}$	df	1	2	3	4	5	6
BPAQ	1.PAGG	2.48	.79	-					
	2.VAGG	2.56	.84	.53**	-				
	3.ANG	2.80	.77	.54**	.50**	-			
	4.HOST	2.97	.85	.49**	.48**	.50**	-		
SCS	5.STB	3.18	1.10	-.15**	-.09**	-.06	-.07*	-	
	6.SLEP	2.98	.91	-.17**	.03	.05	-.07*	.69**	-

**p<.01; *p<.05; N=914
PAGG: Physical aggression   HOST: Hostility
VAGG: Verbal aggression   STB: Supportive teacher behaviours
ANG: Anger   SLEP: Safe learning environments and positive peer interactions

An examination of Table 2 makes it clear that the students had low physical ($\overline{M}$=2.48) and verbal ($\overline{M}$=2.56) aggression behaviours, but medium anger ($\overline{M}$=2.80) and hostility behaviours ($\overline{M}$=2.97). It was found that the students had medium perceptions of supportive teacher behaviours ($\overline{M}$=3.18), and of safe learning environments and positive peer interactions ($\overline{M}$=2.98).

This study analysed the correlations between variables through hierarchical multiple regression analysis. At stage one –based on literature-, using the Enter model, the students' demographic properties (gender, academic achievement, income, father and mother's level of education) were coded as dummy variable for control variable [Female: 1, male: 0, 70 and above (high): 1.69 and below (low): 0; 7000 TL and above (high): 1, 6999 TL and below (low): 0; university: 1, other: 0]. At stage two, the factors of school climate were included in the analysis. Following the analyses, efforts were made to determine the predictive effects of the factors of school climate on physical and verbal aggression, anger and hostile behaviours. The findings for regression analysis of physical aggression are shown in Table 3.

Table 3. The Findings of Hierarchical Multiple Regression Analysis of Physical Aggression

	Physical aggression					
	B	*SE of B*	*B*	*t*	R^2	ΔR^2
	3.119	.108			.031	.028
Gender	-.215	.053	-.134	-4.070*		
Academic achievement	-.008	.058	-.004	-.108		
Income	.053	.056	.040	1.149		
Mother's level of education	.041	.124	.025	.728		
Father's level of education	.067	.082	.055	1.520		
					.068	.064
STB	-.054	.038	-.013	-.274		
SLEP	-.076	.033	-.117	-2.281*		

N=914. Control variables were coded as dummy – Gender: female (1), male (0); Academic achievement: high (1), low (0); Income: high (1), low (0); mother and father's level of education: University (1), other (0)
*p<.05.

The tested model predicting physical aggression was found to be significant ($F_{(7-906)}$=8.722, p<.05). It was seen that independent variables significantly predicted physical aggression in the study. STB and SLEP along with demographic variables explained 6.8% of the variance in terms of students' physical aggression (*F*=8.242, *p*<.05). Demographic variables on their own, however, explained 3.1% of the variance (β=-.106, *p*<.05). Gender (β=-.134, *p*<.05) and SLEP (β=-.106, *p*<.05) were found to have significant correlations with physical aggression behaviours. Accordingly, it can be thought that male students display physical aggression behaviours more frequently than female students. Apart from that, SLEP was also found to have negative correlations with physical aggression behaviours. This finding can be interpreted as that students who perceive the school as a safe place will avoid undesirable behaviors such as physical aggression. In addition, it can be thought that positive peer interaction is an element that can reduce their physical aggression. The findings for regression analysis of verbal aggression are shown in Table 4.

Table 4. The Findings of Hierarchical Multiple Regression Analysis of Verbal Aggression

	Verbal aggression					
	B	*SE of B*	*B*	*t*	R^2	ΔR^2
	2.741	.118			.011	.006
Gender	-.010	.057	.001	.029		
Academic achievement	.064	.063	.050	1.420		
Income	.067	.062	.053	1.499		
Mother's level of education	-.047	.135	-.028	-.807		
Father's level of education	.083	.089	.065	1.755		
					.025	.020
STB	-.090	.036	-.132	-2.745*		
SLEP	-.075	.041	.085	1.785		

N=914. Control variables were coded as dummy – Gender: female (1), male (0); Academic achievement: high (1), low (0); Income: high (1), low (0); mother and father's level of education: University (1), other (0)
*p<.05.

The tested model predicting verbal aggression was found to be significant ($F_{(7-906)}$=3.384, p<.05). According to the findings, verbal aggression was significantly predicted by independent variables in the study. Control variables and STB and SLEP explained 2.5% of the variance in terms of verbal aggression behaviours (*F*=2.905, *p*<.05). The demographic variables explained only 1.1% of the variance. STB, on the other hand, (β=-.132, p<.05) was found to have negative and significant

interactions with verbal aggression behaviours. Accordingly, it can be thought that students who feel supported by their teachers exhibit less verbal aggression behaviors. The factor of anger behaviours was removed from the research due to the fact that the ANOVA test- which was given in relation to students' anger behaviours- yielded insignificant values. The findings for regression analysis of hostility aggression are shown in Table 5.

Table 5. The Findings of Hierarchical Multiple Regression Analysis of Hostility Aggression

	Hostility aggression					
	B	*SE of B*	*β*	*t*	R^2	ΔR^2
	2.920	.111			.041	.037
Gender	.175	.054	.144	4.311*		
Academic achievement	.168	.059	.111	3.176*		
Income	-.047	.058	-.016	-.452		
Mother's level of education	.049	.127	.032	.918		
Father's level of education	.066	.084	.041	1.119		
					.050	.047
STB	.143	.034	-.067	-1.423		
SLEP	-.108	.039	-.047	-.992		

N=914. Control variables were coded as dummy – Gender: female (1), male (0); Academic achievement: high (1), low (0); Income: high (1), low (0); mother and father's level of education: University (1), other (0)
*$p<.05$.

The tested model predicting hostility aggression was found to be significant ($F_{(7-906)}=4.946$, $p<.05$). Findings indicated that independent variables significantly predicted hostility aggression. On considering the students' hostile behaviours, it may be said that all the variables explain 5% of the variance ($F=5.989$, $p<.05$). Demographic variables on their own, however, explained 4% of the variance ($F=7.712$, $p<.05$). Gender ($β=.144$, $p<.05$) and academic achievement ($β=.111$, $p<.05$) were found to be significantly correlated to hostile behaviours. Thus, female students can be thought to display hostile behaviours more frequently. In addition to that, it was also found that students with high academic achievement displayed more hostile behaviours. Finally, it was remarkable that the students' aggressive behaviours increased as their level of income and father and mother's education- which were family-related variables- rose despite the fact that they did not have significant effects on students' aggressive behaviours.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This paper investigated the effects of school climate and a number of demographic variables on secondary school students' aggressive behaviours. 914 students who attended the secondary schools located in nine central districts of Ankara were included in the study. The findings indicated that students' physical and verbal aggression behaviours were relatively at lower level while their more passive behaviours of aggression such as anger and hostility were at relatively medium level. Studies supportive of this finding are available (Akman, 2010; Ulu & Ikis, 2016). One of the reasons for such a result may be that the approaches (functionalization of the student behavior evaluation board, increasing family-school cooperation, widespread student-centered approaches, etc.) towards preventing the undesirable student behaviours in schools have diversified and increased in recent years. Physical aggression can cause slight or serious wounding while verbal aggression can cause environments of argument on the part of students. It can be thought that such types of aggression will easily attract other students' attention in school environment, and that it will be relatively easier to identify students who have aggressive attitudes. In addition, it can be stated that this situation will increase the probability of students to face legal sanctions. Therefore, it can be said that students will abstain from displaying more active behaviours of aggression. However, it can be assumed that identifying behaviours such as anger and hostility will be more difficult since they are passive types of aggression. Because similar reasons, research conducted by the Ministry of National Education (2010)

and by Grand National Assembly of Turkey (2010) in the period between 2006 and 2010 found that the behaviours of violence had a tendency to fall (cited in Süngü, 2013).

Another finding was that there were significant and negative correlations between students' physical aggression behaviours and SLEP. In addition to that, gender and SLEP were found to be the significant negative predictors of physical aggression. The findings demonstrated that male students displayed behaviours of physical aggression more intensely than female students. Several studies obtained similar findings (Bernstein & Gesn, 1997; Buss & Perry, 1992; Çelik & Onat Kocabıyık, 2014; Donat Bacıoğlu & Özdemir, 2012; Eroğlu, 2009; Goldstein & Tisak, 2004; Ulu & İkis, 2016). Reasons for the fact may be the values that are attributed to men socially. The expectations that men should be more active, ambitious and competitive, and that women should be more quiet, dependent and adaptable can reinforce men's physically aggressive attitudes (Onur & Koyuncu, 2004; Prentice & Carranza, 2002). To Burney (2006), it is caused by the society's teaching the gender roles. In support of this, Aronson, Wilson and Akert (2005) and Carlson (1998) also pointed to the biological theory and thus highlighted the hormonal effects. Moral et al (2012), on the other hand, stated that children were in multi-directional changes during adolescence. It can be thought that children who cannot internalise this process of change can develop aggressive attitudes. Besides, it was also found that lower levels of aggressive behaviours were encountered in school where there was SLEP. In this context, Hill, Howell, Hawkins and Battin-Pearson (1999) considered behaviours of aggression in terms of risk factors and claimed that adolescents' perceptions of low security would increase their inclination towards violence. It is commonly known that teachers have important duties in creating safe learning environments and sustaining them. It may be said that especially the positive relations that teachers develop with students promote students' adherence to the school. It is pointed out in many studies that positive teacher-student relations and mutual effective interactions diminish destructive behaviours and physical violence (Volungis, 2016; Yablon, 2010). Espelage and Swearer (2003) pointed to the fact that students in schools where peer interactions are weak develop aggressive attitudes. It affects peer adherence in negative ways and gives harm to positive school climate (Brand et al., 2003). It can be stressed that it is a finding compatible with the one obtained in this study.

It was found in this study that academic achievement, income, mother and father's level of education and STB did not significantly predict physical aggression. However, studies which demonstrate that academic achievement is positively correlated to physical aggression (Donat Bacıoğlu & Özdemir, 2012; Uzbaş & Topçu, 2010) as well as studies which do not support the finding are available (Akman, 2010; Yelci, 2018) in the literature. Apart from that, Eroğlu (2009) also found that children of families with high income level had significantly higher tendency to display physical violence. Supportive of this, Akman (2010) found that the behaviours of physical violence displayed by children of families with income of 2001 TL and above were significantly differed from the ones displayed by children of families with income of 0-500 TL[1]. In addition to that, Yelci (2018) reached the conclusion that father and mother's level of education was not influential in students' physical aggression, which was a result similar to the one obtained in this study. In contrast to that, Akman (2010) found that children whose mother was a university graduate displayed behaviours of physical violence more frequently than those whose mother was a graduate of primary or secondary school. Academic achievement, level of income and father and mother's level of education may be thought to be correlated. It was found that a rise in individuals' levels of education caused positive effects on their total income. An increase in income is a factor which diversifies and amplifies the possibilities promoting children's academic competence. In a way, income and the level of education facilitate a family to rise socio-economically. In this respect, Cheng and Kaplowitz (2016) say that children with families of high socio-economic level are academically more successful. In a similar way, De Graaf, De Graaf and Kraaykamp (2000) pointed to the fact that economic, social and cultural familial factors influenced children's achievement in education. One of the reasons for why academic achievement, level of income and high level of parent education increase physical aggression- which is mentioned in the literature- may be the fact that parents are involved in the process of labour, and that they devote

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[1] As of 2009, the minimum wage was determined as 527 TL (Hürriyet, 2008).

less time to their children. Considering the fact that the children in the study group were in adolescence when rapid psychological changes in particular occur, it can be said that they did not receive enough help from their families when struggling with problems. It, in turn, can strengthen the bias towards physical aggression. However, considering both the literature and current study findings, significant or insignificant findings were encountered regarding variables such as academic achievement, income, parental education level on students' physical aggression behavior. It can be thought to be caused by many factors as the region where the study takes place, the age levels of the students, family size, etc..

Another finding obtained in this study was that students' verbal aggression behaviours were significantly and negatively predicted by STB. Having affection, respect and trust in teacher-student relations can increase students' adherence to school. Brewster and Bowen (2004) state that students who are supported by their teachers have higher commitment to school. It was observed that students' adherence to school diminished undesirable student behaviours while increasing achievement (Blum, 2005; McNeely & Falci, 2004). In a similar way, Cothran and Ennis (1997) pointed out that first the classroom environment and then students' behaviours changed in positive ways in teacher-student relations where trust was felt. Besides, Furlong, Chung, Bates and Morrison (1995) also found that students who faced violence in schools were not in expectations of support from their teachers. The elements mentioned can be said to be positive teacher behaviours. Such supportive teacher behaviours could be thought to increase students' psychological wellbeing, and thus to reduce their aggressive approaches. Additionally, this study also found that gender, academic achievement, income, parents' levels of education and SLEP did not significantly predict verbal aggression. . Findings concerning gender and academic achievement were consistent with the findings obtained in various studies (Akman, 2010; Donat Bacıoğlu & Özdemir, 2012). Apart from that, Akman (2010) is also supportive of the finding obtained in this study that father's level of education does not have significant effects on students' verbal aggression behaviours.

This current study found that students' hostile behaviours were significantly and positively predicted by gender and academic achievement. The findings demonstrated that female students displayed hostile behaviours more frequently. Brody and Hall (2008) attributed it to the fact that women were more experienced in discovering their feelings than men (Cited in Goleman, 2017). In other words, women can be said to become skilled in controlling their feelings at earlier ages. Female students mostly break the relations when they face a problem unlike male students who choose physical aggression (Brody & Hall, 2008). This approach makes us think that women develop different tactics for struggling by reasoning, and thus they increase their experience, and therefore they are cognitively more creative than men. Buss and Perry (1992) also laid emphasis on the cognitive side of aggression in considering hostility. Besides, the study also found that students with high academic achievement displayed hostile behaviours more frequently. It can be said that students who achieve success in schools are mostly the students who attract attention, who others are interested in and are referred to as models to other students. This situation will satisfy academically successful students emotionally. Yet, success can be considered as a concept involving ambition and competition. Ambition and competition can develop anxiety by increasing pressure on students. As a result, the successful students, who are already in adolescence, can develop negative feelings against other students with anxiety. It was determined that gender and academic success did not have a significant effect on hostility behaviors in the study of Donat Bacıoğlu and Özdemir (2012). They also found that father and mother's level of education and school climate were not the predictors of students' hostile behaviours.

In conclusion, it was found that (*i*) students' active aggression behaviours such as physical and verbal aggression were lower than the types of passive aggression such as anger and hostility, (*ii*) gender significantly predicted physical aggression (higher in male students), (*iii*) high academic achievement was a predictor of hostility, (*iv*) supportive teacher behaviours was a predictor of verbal aggression, and safe learning environments and positive peer relations were a predictor of physical aggression,

In the light of the conclusions reached in this study, the following recommendations can be made to researchers: (*i*) the number of studies concerning anger and hostility behaviours which are considered as the antecedents of active aggression types should be increased. (*ii*) Longitudinal studies concerning aggression behaviours should be emphasised to determine how the process of aggression develops in schools. (*iii*) Comparative studies should be done with students, teachers and managers who are different socio-economically. (*iv*) The effects of income, father and mother's education and the level of academic achievement on behaviours of aggression could be analysed on national scale. In terms of practice, however, (*i*) All school staff-mainly school directors and guidance teachers- should be offered training on national scale to raise their awareness of aggression. (*ii*) Parents' levels of consciousness of aggression should be raised for a healthier family environment. (*iii*) Prospective teachers' efficacy in the antecedents of aggression and their effects should be increased in teacher training institutions. (*iv*) Students' aggressive attitudes should be regularly analysed, the results should be reported, they should be publicised and thus social awareness should be raised by psychologists and domain experts. *(v)* School administrators and teachers should be trained to improve interpersonal communication skills. *(vi)* Out-of-school activities as excursions, picnics, sports activities etc. should be planned to increase interaction among school administrators, teachers and students.

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