

Research Article

The Effect of Self-esteem and Empathic Tendency on the Violence Tendency in Adolescents: A Multivariable Analysis

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A B S T R A C T

Introduction: Personal, familial, and environmental factors affect the tendency to violence in people. This study was carried out to determine the effects of socio-demographic characteristics, empathic tendencies, and self-esteem in adolescents on the levels of their tendency towards violence.

Method: This research is a retrospective record review. In the research, data were obtained from student information forms in high school students' records (n = 982), Violence Tendency Scale (VTS), Rosenberg Self-Esteem Scale (RSES), and Empathic Tendency Scale (ETS). The data were analysed by multivariable Binary Logistic Regression (BLR) and Linear Regression (LR).

Results: Among the adolescents, 48.2% were male, and 38.8% stated that they used social media for 2 hours or more per day. The mean scores of adolescents obtained from the VTS, ETS, and RSES was 34.8, 66.2, and 2.2, respectively, and 25.6% were prone to violence. The factors affecting violence tendency were, in order of importance, low empathic tendency, being male, long social media usage time, low perception of success by the family, father's profession, and not getting prepared for university entrance exams, which were found to be statistically significant. The correlation between self-esteem and violence tendency was not found to be significant in LR and BLR analyses ($p > 0.05$).

Conclusions: One-quarter of adolescents were prone to violence. The empathic tendency, gender, social media use, and familial characteristics were found to influence their tendency towards violence.

Keywords: Adolescents, Violence, Self-esteem, Empathy

Introduction

Adolescence is a transition stage between childhood and adulthood. The World Health Organization classifies the ages between 14 and 16 years as middle adolescence and

between 17 and 21 years as late adolescence. Most of the high school students are in the middle adolescence period, and few are in late adolescence.¹ In this period, rapid physical and psychological development is observed.²

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Under the effect of adolescence, high school students experience the most stormy and exuberant period of their lives. The main issues of this period are living in the community, establishing social relations and assuming roles, being a member of peer groups, desire to be liked, getting yourself accepted, desire to be independent, search for identity, anxiety and concerns about the future, and being introduced to risky behaviours. One of these risky behaviours is the tendency towards violence.³ Since violence leads to undesirable consequences such as spiritual damage, injury and death, it is necessary to identify violent tendencies in adolescents and the effective factors in the early period.⁴ Studies conducted emphasise that individual differences play an important role in the development of the tendency towards violence. Various factors such as socio-demographic characteristics, self-esteem, and empathic level can affect the behaviour of displaying violence.^{5,6}

Self-esteem is the totality of the emotions and behaviours related to one's self which is formed as a result of perception, judgment, and evaluation of the self. School success, communication skills, ability to cope with problems and stress, relationships with friends, and reactions influence self-esteem.^{7,8} Significant differences exist between the behaviours of adolescents with high self-esteem and those with low self-esteem. While adolescents with high self-esteem are confident and establish good communication with their environment, adolescents with low self-esteem can be shy, timid, and prone to violence.⁹

Empathy can be briefly defined as the ability to understand other people's feelings. Adolescents who know others' feelings better and can empathise can establish better relationships with their friends and teachers. These children are more prone to helping and sharing and are loved by their peers and people around them, and their school performance is better.¹⁰⁻¹² Empathy contributes to the development of social behaviours and reduction of violent behaviours.¹³

Today, acts of violence commonly observed among the youth are considered to be one of the most important public health problems. Adolescence is a period in which adolescents should be monitored comprehensively and in detail, and necessary physical and psychological screening should be performed.

In order to raise healthy adults and establish a healthy society, young people should successfully pass through the adolescence period, during which identity development is completed.⁷

The purpose of this study was to examine the effects of socio-demographic characteristics, empathic tendencies, and self-esteem in high school students on their levels of violence tendency.

Method

Study Type

This study is a retrospective record review. The research was carried out by evaluating the data available in the forms used by students of the nursing department in school health practices.

Study Population and Sample

The universe of the research was comprised of record forms belonging to the students studying in the high schools (n = 982) located in the provincial centre of Yozgat in the 2017-2018 academic year. School health practices were held in 7 high schools during the spring term. The high schools included in the study were representative of all high school types such as Anatolian high school, private high school, vocational high school, vocational high school for girls, theology high school, and technical Anatolian high school. High school education in Turkey lasts 4 years, and the students are generally in the 15-19 years age group. Within the scope of school health practices, records of 982 students who voluntarily participated in the health screenings prepared to determine the physical and mental health status of the students and answered the questions in the forms constituted the sample of the research.

Data Collection Tools

Data were collected through student information form, Violence Tendency Scale (VTS), Empathic Tendency Scale (ETS), and Rosenberg Self-Esteem Scale (RSES).

Student Information Form: It consisted of questions that aim to determine the students' age, gender, class, number of siblings, employment and education status of their parents etc.

Violence Tendency Scale (VTS): The scale was developed by Haskan and Yildirim in 2012 and consists of 20 items, 1 of which is reverse. The scale is rated on a 3-point Likert-type scale (3 = always, 2 = sometimes, 1 = never). The reverse item is reverse-scored. The total score that can be obtained from the VTS ranges between 20 and 60 points. High scores indicate a high tendency to violence. The Cronbach alpha value, which is the internal consistency coefficient of the VTS, was found as 0.88.¹⁴ In this study, those who got a score of 40 or above (sometimes response = 2 x 20 item = 40) were evaluated as having a tendency to violence.

Rosenberg Self-Esteem Scale (RSES): It was developed by Rosenberg in 1965 and the Turkish validity and reliability study of the scale was conducted by Cuhadaroglu in 1986. The scale consists of 63 questions and has 12 sub-dimensions. There are 6 items and a total of 10 questions in the self-esteem subscale. Positively and negatively worded items are listed successively. A high score indicates low

self-esteem. The validity coefficient of the scale was found as 0.71 and the reliability coefficient was found as 0.75.¹⁵

Empathic Tendency Scale (ETS): The ETS, which was developed by Dokmen in 1988, measures the potential of individuals to develop empathy in daily life. The scale was prepared as a Likert-type scale and consists of 20 items, 8 of which are written negatively to prevent individuals' tendency to constantly say yes. The negatively worded items are reverse-scored. A high score implies high empathic tendency. For the validity study, the correlation between the ETS and the "Understanding Emotions" part of the Edwards Personal Preference Schedule was analysed and a correlation level of 0.68 was found.¹⁶

Data Analysis

The data obtained from the research were evaluated by a statistics centre using computer statistical software IBM SPSS. In the analysis of the data, Student's t-test, ANOVA, Pearson correlation analysis, Binary Logistics Regression, and Linear Regression analysis were used. Independent variables which were found to be statistically significant at $p < 0.1$ level in Pearson correlation analysis, Student's t-test, and ANOVA test were included in multiple analyses. VTS score was taken as the dependent variable in multivariable LR analysis. The independent variables of gender (girl = 0, boy = 1), father's profession (no = 0, yes = 1) and preparing for university entrance exams (not preparing = 0, preparing = 1) were included as dummy variables, and others were included in the model as continuous and ordinal variables and were analysed by stepwise method. From the VTS scale, those who score 40 and above are coded 1 and are considered to be prone to violence and those who score below 40 are coded = as 0 and are considered as not prone to violence. Prone to violence were analysed

in multivariable BLR analysis as the dependent variable. Independent variables were found to be significant at $p < 0.1$ level in the univariate analysis were taken into the BLR, and were analysed through the backward elimination method. The variables found significant as a result of both analyses are presented in the Tables.

Ethical Consideration

An institutional permit was obtained for students to do their internships in schools. Necessary information was provided to students' parents about their children's participation in health screening by school psychologists and counsellors and classroom teachers. Informed consent was obtained from all students and their parents included in the study. Approval was obtained from the Ethics Commission in order to use the data in the forms filled in during the applications.

Results

Of the students participating in the study, 48.2% were male, 21.0% were in the 9th grade, 32.3% were in the 12th grade, and 93.1% were living with their parents. 6.2% of the participants stated that their mothers were university graduates. 18.1% of the respondents indicated that their fathers were university graduates. The mothers of 82.0% of the students did not have a wage work, and the fathers of 32.9% of them were wage workers or farmers. 46.2% of the respondents reported that their families had a good level of income, and 63.0% stated that they had 1 or 2 siblings. Again, 69.1% of the students were preparing for the university entrance exam, 54.5% were good in terms of school success, the families of 53.3% evaluated their school success as good, 61.2% used social media for 1 hour or less per day, 67.6% did not play computer games, and 68.8% of them stated that they watched television for 1 hour or less (Table 1).

Table 1. Mean VTS Scores of Adolescents by Socio-demographic Characteristics

Gender	n (%)	VTS X (SS)	VTS ≥ 40 n (%)
Male	473 (48.2)	37.2 (7.31)	160 (33.8)
Female	509 (51.8)	32.6 (7.59)	91 (17.9)
Grade	t (p)	9.76 (< 0.001)	X² = 32.8 p < 0.001
9th	206 (21.0)	33.5 (7.28)	43 (20.9)
10th	197 (20.1)	34.1 (7.27)	43 (21.8)
11th	262 (26.7)	35.0 (7.87)	70 (26.7)
12th	317 (32.3)	36.0 (8.25)	95 (30.0)
Mother's education level	F (p)	5.09 (0.002)	X² = 7.24 p = 0.085
Primary school and lower	462 (47.0)	34.8 (7.80)	118 (25.5)
Secondary school	259 (26.4)	34.9 (7.77)	68 (26.3)
High school	200 (20.4)	34.9 (8.07)	53 (26.5)
University	61 (6.2)	34.3 (7.34)	12 (19.7)
Father's education level	F (p)	0.12 (0.946)	X² = 1.27 p = 0.736
Primary school and lower	260 (26.5)	34.1 (7.93)	61 (23.5)
Secondary school	233 (23.7)	34.8 (7.71)	56 (24.0)

High school	311 (31.7)	35.3 (8.02)	90 (28.9)
University	178 (18.1)	35.0 (7.35)	44 (24.7)
Mother's employment status	F (p)	1.21 (0.305)	X² = 2.82 p = 0.420
Does not work	805 (82.0)	34.8 (7.75)	209 (26.0)
Working	177 (18.0)	34.9 (8.11)	42 (23.7)
Father's employment status	t (p)	0.24 (0.814)	X² = 0.38 p = 0.537
Worker-farmer	323 (32.9)	33.6 (7.66)	64 (19.8)
Civil servant	212 (21.6)	35.2 (7.12)	55 (25.9)
Tradesman	138 (14.1)	36.0 (7.61)	43 (31.2)
Retired	96 (9.8)	36.5 (8.70)	38 (39.6)
Other	213 (21.7)	34.8 (8.15)	51 (23.9)
Mother-father living together	F (p)	4.11 (0.003)	X² = 18.11 p = 0.001
Living together	914 (93.1)	34.7 (7.72)	227 (24.8)
Other	68 (6.9)	36.8 (8.74)	24 (35.3)
Level of family's income	t (p)	2.16 (0.031)	X² = 2.64 p = 0.056
Middle and lower	528 (53.8)	35.4 (7.96)	142 (26.9)
Good	454 (46.2)	34.2 (7.59)	109 (24.0)
Number of siblings	t (p)	2.42 (0.016)	X² = 1.07 p = 0.301
None	37 (3.8)	35.7 (8.05)	11 (29.7)
1	241 (24.5)	34.5 (7.71)	61 (25.3)
2	378 (38.5)	35.2 (7.93)	101 (26.7)
3	203 (20.7)	34.4 (7.69)	50 (24.6)
> 4	123 (12.5)	34.9 (7.79)	28 (22.8)
Preparation for university entrance exam	F (p)	0.54 (0.706)	X² = 2.21 p = 0.876
Not prepared	303 (30.9)	36.5 (8.15)	98 (32.3)
Prepared	679 (69.1)	34.1 (7.54)	153 (22.5)
Perceived school performance	n (%)	VTS X (SS)	VTS ≥ 40 n (%)
Pass/ unsuccessful	103 (10.5)	39.0 (9.17)	49 (47.6)
Moderate	344 (35.0)	35.8 (7.68)	98 (28.5)
Good	438 (44.6)	33.2 (6.98)	83 (18.9)
Very good	97 (9.9)	34.5 (8.19)	21 (21.6)
Family's perception of school performance	KW (p)	44.98 (< 0.001)	X² = 38.62 p < 0.001
Pass/ unsuccessful	152 (15.5)	39.4 (8.69)	68 (44.7)
Moderate	306 (31.2)	35.6 (7.30)	86 (28.1)
Good	402 (40.9)	32.9 (7.01)	73 (18.2)
Very good	122 (12.4)	33.5 (7.86)	24 (19.7)
Social media use (hours per day)	KW (p)	72.09 (< 0.001)	X² = 44.21 p < 0.001
≤ 0.5 ^c	269 (27.4)	33.7 (7.90)	56 (20.8)
1	332 (33.8)	33.5 (7.15)	75 (22.6)
2	121 (12.3)	34.5 (6.94)	24 (19.8)
3	104 (10.6)	35.9 (7.03)	31 (29.8)
≥ 4	156 (15.9)	39.0 (8.65)	65 (41.7)
Playing games on the computer (hours per day)	KW (p)	51.59 (< 0.001)	X² = 29.06 p < 0.001
0	664 (67.6)	34.0 (7.72)	154 (23.2)
0.5	131 (13.3)	36.6 (7.36)	42 (32.1)
1	131 (13.3)	35.5 (7.57)	33 (25.2)

≥ 2	56 (5.7)	38.5 (8.73)	22 (39.3)
Watching TV (hours per day)	F (p)	9.00 (< 0.001)	X² = 10.42 p = 0.015
≤ 0.5 ^d	381 (38.8)	34.7 (8.23)	99 (26.0)
1	295 (30.0)	34.4 (7.57)	72 (24.4)
2	137 (14.0)	34.6 (6.90)	30 (21.9)
3	103 (10.5)	34.2 (6.85)	21 (20.4)
≥ 4	66 (6.7)	39.1 (8.43)	29 (43.9)
Playing games outside (hours per day)	KW (p)	18.60 (0.001)	X² = 14.37 p = 0.006
0	568 (57.8)	34.4 (8.02)	140 (24.6)
1	231 (23.5)	34.2 (6.86)	49 (21.2)
2	91 (9.3)	35.7 (6.84)	21 (23.1)
≥ 3	92 (9.4)	38.2 (8.74)	41 (44.6)
	KW (p)	20.0 (< 0.001)	X² = 20.30 p < 0.001
Total	987 (100.0)	34.8 (7.81)	251 (25.6)
ETS X (SS)	t (p)	7.27 (< 0.001)	62.7 (9.37)
RSES X (SS)	MWU (p)	1.36 (0.174)	2.3 (1.21)

a %3 ≤ bad, b %4.4 very good, c %3.9 ≤ Half an hour, d 14 person ≤ Half an hour, VTS: Violence Tendency Scale, RSES: Rosenberg Self-Esteem Scale, ETS: Empathic Tendency Scale

Students' VTS, ETS, and RSES mean scores were 34.8, 66.2 and 2.2, respectively. According to the tests in which mean scores were compared in independent groups, the VTS mean score was found to be higher in boys, those who studied in higher grade levels, those with low family income level, those whose fathers were not workers-farmers, those whose parents were separated, those who were not preparing for the university entrance exam, those whose school success was perceived as low by themselves and their families, and those who had longer periods of using social media, playing computer games and watching television (Table 1). According to the post-hoc Scheffe test of the father's employment status, VTS mean score was significantly higher in those whose fathers were tradesmen ($X = 36.0$) or were retired ($X = 36.5$) as compared to those whose fathers were workers-farmers ($X = 33.6$) ($p < 0.05$).

When multivariable analysis was performed by subjecting the variables found to be related to the VTS score in the correlation analysis and the variables with a different mean score from the VTS in the univariate tests to linear regression test, the variables whose effect was found to be statistically significant (Standardised Coefficients β) from the highest to the lowest were low empathic tendency ($\beta = -0.239$), being male ($\beta = 0.234$), long duration of social media use ($\beta = 0.202$), low perception of success by the family ($\beta = -0.098$), father not being a worker-farmer ($\beta = -0.086$) and not preparing for the university entrance exam ($\beta = -0.074$). These statistical variables explain 23.2% (Standardised $R^2 = 0.232$) of the change in violence tendency score (Table 2).

Of the students, 25.6% were rated as violent as they scored

40 and above on the VTS (Table 1). When violence tendency was analysed with multivariable BLR analysis by encoding Yes = 1 and No = 0, the risk of violence tendency increased as empathic tendency score decreased, the duration of social media use increased and the family's perception of school success decreased. In addition, the risk of violence tendency was found to be 2.1 times higher among boys as compared to girls, and it was found to be 2.8 and 1.7 times higher in the ones whose fathers were retired and were tradesmen respectively than those whose fathers were workers-farmers.

In univariate tests, parents' living together, students preparing for the university entrance exam, school achievement perception, the duration of playing computer games, the duration of watching TV, and the duration of playing outside were found to be important regarding the tendency to violence, but these variables were not found to be significant in the multivariable BLR test (Table 3).

According to the correlation analysis, VTS score was found to have a positive correlation with RSES score ($r = 0.088$), grade level ($r = 0.123$), duration of watching television ($r = 0.078$), duration of playing computer games ($r = 0.145$), duration of social media use ($r = 0.251$), and duration of playing outside ($r = 0.127$), while it was determined to have a negative correlation with ETS score ($r = -0.299$), family income level ($r = -0.130$), school success perception by self ($r = -0.208$) and family ($r = -0.285$), and preparing for the university entrance exam ($r = -0.143$), ($p < 0.05$). No relationship was found between the violence tendency level and the education level of the mother and father (Table 4).

Table 2. Multivariate Analysis of Variables that may be Effective in VTS Score with Linear Regression

	Unstandardised Coefficients		Standardised Coefficients	t	p	95.0% Confidence Interval for B		Adj. R ²
	B	Std Err.	β			Lower	Upper	
(Constant)	48.398	1.674		28.906	0.000	45.112	51.684	
ETS	-0.202	0.024	-0.239	-8.282	0.000	-0.250	-0.154	0.088
Gender = Male	3.648	0.447	0.234	8.159	0.000	2.771	4.525	0.164
Social media use	0.878	0.123	0.202	7.117	0.000	0.636	1.121	0.210
Family's perception of school performance	-0.852	0.263	-0.098	-3.243	0.001	-1.368	-0.337	0.222
Father's employment status = Worker-farmer	-1.426	0.468	-0.086	-3.043	0.002	-2.345	-0.506	0.228
Preparation for university entrance exam = prepared	-1.248	0.486	-0.074	-2.570	0.010	-2.202	-0.295	0.232

Variable(s) entered on step 1: ETS, RSES, gender, grades, level of family's income, preparation for university entrance exam, perceived school performance, family's perception of school performance, father's employment status, usage of social media, watching TV, playing games on the computer VTS: Violence Tendency Scale, RSES: Rosenberg Self-Esteem Scale, ETS: Empathic Tendency Scale

Table 3. Multivariate Analysis of Variables that may be Effective in VTS Score with Binary Logistic Regression

	B	p	OR	95% CI for OR	
				Lower	Upper
ETS	-0.052	0.000	0.950	0.933	0.966
Gender = female	0.761	0.000	2.141	1.560	2.940
Father's employment status = Worker-farmer		0.002			
Civil servant	0.249	0.267	1.282	0.827	1.989
Tradesman	0.545	0.027	1.724	1.062	2.797
Retired	1.041	0.000	2.833	1.672	4.799
Other	0.247	0.276	1.280	0.821	1.996
Social media use	0.188	0.000	1.207	1.113	1.310
Family's perception of school performance	-0.266	0.004	0.767	0.641	0.916
Constant	1.862	0.002	6.438		

Variable(s) entered on step 1: ETS, RSES, gender, grades, level of family's income, preparation for university entrance exam, perceived school performance, family's perception of school performance, father's employment status, usage of social media, watching TV, playing games on the computer, playing games outside, parent living together Hosmer and Lemeshow Test p = 0.261. Omnibus Tests model p < 0.001. VTS: Violence Tendency Scale, RSES: Rosenberg Self-Esteem Scale, ETS: Empathic Tendency Scale

Table 4. Correlation Analysis between the Level and the Factors affecting VTS

	VTS	1.ETS	2.RSES	3	4	5	6	7	8	9	10	11	12
ETS	-0.299**	1											
RSES	0.088**	-0.200**	1										
Grade	0.123**	-0.069*	0.008	1									
Mother's education Level	-0.011	0.106**	0.025	-0.132**	1								

Father's education Level	0.047	0.049	0.033	-0.091**	0.573**	1								
Level of family's income	-0.130**	0.098**	0.064*	-0.121**	0.262**	0.249**	1							
Watching TV	0.078*	0.005	0.042	0.027	0.053	0.096**	-0.005	1						
Playing games on the computer	0.145**	-0.049	0.010	-0.042	0.083**	0.048	0.025	0.167**	1					
Social media use	0.251**	-0.037	0.028	0.313**	0.070*	0.056	-0.029	0.068*	0.121**	1				
Playing games outside	0.127**	-0.024	-0.017	-0.060	-0.030	-0.008	-0.034	0.122**	0.135**	0.072*	1			
Perceived school performance	-0.208**	0.199**	-0.028	0.049	-0.019	-0.009	0.178**	-0.039	-0.165**	-0.097**	-0.143**	1		
Family's perception of school performance	-0.285**	0.250**	-0.142**	-0.008	-0.049	-0.098**	0.118**	-0.076*	-0.148**	-0.156**	-0.131**	0.586**	1	
Preparation for university entrance exam	-0.143**	0.084**	-0.075*	0.101**	0.065*	0.097**	0.059	-0.028	-0.127**	-0.073*	-0.048	0.257**	0.204**	1

** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

VTS: Violence Tendency Scale, RSES: Rosenberg Self-Esteem Scale, ETS: Empathic Tendency Scale

Discussion

In this study, the violent tendency of high school students and the effect of especially empathic level and self-esteem and other socio-demographic factors on this tendency were investigated. Factors affecting self-esteem and empathic tendency were not examined.

In our study, the violent tendencies of adolescents were found to be close to a moderate level ($X = 34.8$), and it was observed that the VTS score increased as the grade level increased (9th grades $X = 33.5$, 8th grades $X = 36.0$) (Table 1). Higher grade level means that the students are older and the tendency towards violence increases as the age increases ($r = 0.123$) (Table 4). However, in both multivariable LR and BLR analyses, grade level, that is, age was not determined to be statistically significant (Tables 2 and 3). Our findings are similar to the mean scores of violence tendency obtained in a study conducted in high schools in the same provincial centre ($X = 33.8$) and a study conducted in the provincial centre of Denizli ($X = 34.8$).^{17,18} In a study conducted in the high schools in the West Black Sea region, it was observed that the violence tendency of students was moderate ($X = 43.9$), the tendency towards violence increased as the grade level increased, and that 11th and 12th grades were similar in this respect.⁶ In another study conducted in a high school in a touristic district in the Mediterranean region, it was stated that the

violence tendency of the students was at a moderate level ($X = 44.08$).¹⁹ However, the mean scores obtained in the other studies were approximately 10 points higher than the mean score obtained in our study. The rapid progress of physical development during adolescence may be a factor that increases the tendency towards violence by providing adolescents an increase in strength. Physical violence and its consequences being more visible than other types of violence may affect adolescents' level of awareness.²⁰⁻²² Therefore, adolescents living in Central Anatolia may have perceived physical violence as violence. In determining violence tendencies, it is important for adolescents to know and identify other types of violence as well.

In our study, empathic tendency ranked first among violence tendency risk factors (Stn. Coef. Beta = -0.239) (Table 2). There is a significant and reverse correlation ($r = -0.299$) between violence tendency and empathic tendency (Table 4). In a previous study conducted in the same city centre, it was found that the empathic tendency decreased as the tendency towards violence increased ($r = -0.31$).¹⁸ Strong empathic skills facilitate the social adaptation of adolescents by contributing to the development of social behaviours such as sharing, solidarity, and cooperation.²³ Inadequate empathy is associated with psychological problems such as aggression and bullying.²⁴⁻²⁶ As long as adolescents solve their problems by communicating well, their tendency towards violence may decrease.

In our study, the second risk factor that affected the tendency towards violence was being a male. The VTS mean score was higher in boys ($X = 37.2$) than in girls ($X = 32.6$) (Tables 1 and 2). In a study conducted in high schools in Osmaniye, it was found that boys regarded violence more positively than girls.²⁷ Similar results were found in previous studies carried out in high schools in the same city.^{18,28} In a study conducted with university students in our country as a different group, it was found that boys were more prone to violence than girls.²⁹ In the study conducted by Aslan and Bakan, it was determined that boys had a higher tendency towards violence than girls due to cultural features.³⁰ Our society assigns boys roles such as being strong, competitive, successful, and winner, and supports men's violent behaviour.^{19,21,31,32} This situation is an important cultural factor that affects the violent tendencies of men. For this reason, it is important to monitor male adolescents more carefully in terms of violence and to plan interventions for men in order to prevent violence before it occurs.

In our study, it was found that as students' self-esteem decreased (high score, low self-esteem), the tendency towards violence increased and this relationship was very weak ($r = 0.088$) (Table 4). However, the effect of self-esteem on violence tendency was not found significant in multivariable LR analysis (Table 2). In a study conducted in high schools in Denizli, it was found that the tendency towards violence increased as self-esteem decreased.¹⁷ In the study by Aliye and Karakus, it was determined that adolescents who had high self-esteem had a positive mood and were less prone to violence.³³ On the contrary, it was determined that being exposed to violence reduced self-esteem.³⁴ In summary, in other studies, since the relationship between self-esteem and tendency towards violence was not examined with multivariable regression, its effect independent of other factors was not shown. It can be said that as high self-esteem in adolescents causes them to feel better and enables them to establish better relationships, it leads to an increase in their empathic tendencies and indirectly decreases their tendency towards violence.

In our study, while there was a linear correlation between the tendency towards violence and the duration of social media use ($r = 0.251$), duration of playing computer games ($r = 0.145$), duration of playing computer games was not found statistically significant in multivariable LR and BLR analysis (Tables 1 and 4). News and videos about violence are frequently broadcast on social media platforms such as Facebook, Instagram, Twitter, YouTube etc. These contents may develop insensitivity to violence in individuals. Violence generating, experiencing, perceiving, and social implications have differentiated on social media.^{35,36} Research shows that social media negatively affects young people's self-

esteem, well-being, and body image.³⁷ The increase in tendency towards violence depending on the duration of social media use may have stemmed from the fact that adolescents are affected by the violent content published on social media without even noticing it.

The family's expectation of high success from the adolescent can cause overload and stress in him/ her. The tendency towards violence in adolescents who state that they are perceived as unsuccessful in the eyes of their families ($X = 39.0$) is higher than those who state that they are perceived as successful ($X = 33.2-34.5$). If the adolescent fails in the eyes of his family, it may cause him to commit violence. In a study conducted among high school students in the same city, it was observed that students with low school success displayed more aggressive behaviour than those who were successful.²⁸

Successful adolescents saw schools as institutions that prepare them as individuals well-equipped for the future. For this reason, it was determined that they exhibited harmonious behaviours at school, and their self-esteem and empathic tendencies were high.^{8,38,39} In another study, it was found that students who received support from the school and family circle had a low tendency towards violence.³¹ Success and being loved, respected, accepted, and appreciated by their environment are very important for adolescents in this period. The adolescent's having a supportive environment can be considered as a factor that increases school success and decreases the tendency towards violence.

The income status of the family is mostly determined by the profession/ income of the father in our country. In our study, it was found that the tendency towards violence was lower in those whose fathers were in the worker-farmer group ($X = 33.6$) with a low income. The effect of father's profession on violence tendency was also found important in multivariable LR and BLR analysis (Tables 1 and 3). The worker-farmer profession group has both a lower income level and a lower education level. While studies conducted showed that violence types such as violence tendency and aggression increased as income level decreased,^{19,28} in our study, on the contrary, it was seen that they decreased. The reason for this difference is that income situation is an effective factor in choosing the living environment. It can be said that in the places where studies are carried out, the tendency towards violence is affected due to the stressors they encounter in the environments in which adolescents live.

The fact that the students are getting prepared for university entrance exams shows that they have goals and plans for the future. Adolescents who are not preparing for the exam become more prone to violence (Tables 1 and 4). Not preparing for the exam means that the student is alienated

from the school and that the meaning and importance of education provided at the school is lost. In such a case, the exam does not make sense for the student and s/ he does not feel the need to prepare for the exam. In a study conducted in a high school in Osmaniye, it was found that adolescents regarded violence more positively as the level of alienation from school increased.²⁷

Limitations

Since the study results were obtained only from the records of high schools in a city centre, they do not include high school students in districts and towns. The study's strengths were that it was the first study to be conducted in the field to reveal the relationship between the tendency towards violence and empathic tendency and self-esteem with multivariable analysis, and that the study also included the family and digital media use.

Recommendations

The tendency towards violence can be reduced by identifying adolescents who are at risk with comprehensive health screening at schools in the early period and cooperating with their families.

Conclusion

Adolescents had a tendency towards violence at a level close to moderate and thus were at risk. Being a male, low empathic tendency, overuse of social media and the family's considering the success of the adolescent as insufficient have a significant influence on the tendency towards violence.

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