School Connection and the Impact of Violent Friends on Adolescents' Tendency to Violence

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ABSTRACT

Objective: This research aimed at evaluating the moderator role of school connection on the impact of violent friends towards aggressive behaviors in adolescent students of Tehran high schools.

Methods: A sample of 3529 participants from Tehran high school students was selected using multistage sampling method. Participants completed school connection questionnaire (SCQ), Iranian adolescents risk-taking scale (IARS), and a demographic questionnaire. Data were analyzed by regression analysis.

Results: School connection affected male and female students differently. In males, school commitment and belongingness (two dimensions of school connection) reduced the impact of friends' violent behaviors. However, regarding female students, school connection acts independently of friends' violent behavior and has no effect on it.

Conclusion: Preventive programs should consider gender differences. In males, enhancing school commitment and belongingness might reduce tendency to violence in spite of the violent behavior of friends. However in females, effective disciplines in school or having nonviolent friends might reduce tendency toward violent behaviors.

1. Introduction

Violent behavior has been defined as a behavior that includes physical injurious attacks and life-threatening use of drugs, murder, and suicide (Dwyer, Osher, & Hoffman, 2000), or an intention to cause physical injury, damage, or intimidation (Elliot, Hamburg, & Williams, 1998). In this study, violence implies externalizing behaviors such as physical fighting with others, verbal assault toward others, willingness to carry cold weapons like knife, getting angry with others, and willingness to attack or kill somebody.

Studies showed that violent behavior of youth is a noticeable problem (Adlaf, Pagual Boak, Beitchman & Wolfe, 2005; Wortley & Tanner, 2006), which has long-term effects. School is a suitable place to socialize, to prepare students for future occupation, and has a unique status in preventive programs. So, programs aiming at recognizing and controlling factors affecting violent behavior in adolescents should necessarily take into account school-related factors. The literature review supports this view: school connection (Battisich et al., 1995; Becker & Luthar, 2002) and investment on school achievement (Comer, 1985) help youth handle difficult conditions. Witnessing violence is associated with personal problems such as depression, post-traumatic stress disorder, aggression, and externalizing behavior (Buka, Stichick, Birdthistle & Earls, 2001).

Belonging to school is associated with lower depression and higher self-efficiency, regardless of the level of past exposure to adversities (Kia-Keating & Ellis, 2007). In this

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regard, Ozer (2005) showed that reported school connectedness showed general protective effects for self-reported depressive and anxiety symptoms and execution of violence. A similar study conducted by Brookmeyer, Fanti, and Henrich (2006) found that both parents and school connectedness have protecting role against the effects of exposure to violence on later violent behavior.

Ludwig and Warren (2009) found that students with higher identification with school and perceived more support from teachers reported higher levels of hope and lower levels of psychological symptoms than students who did not report feeling connected or supported at school. Higher identification with school and higher perceived teacher support were both associated with higher levels of hope. Exposure to violence was more related to externalizing symptoms than internalizing symptoms for both males and females.

Female students who had stronger identification with school experienced fewer psychological symptoms at lower levels of violence exposure. At high violence exposure, the psychological symptom effects were strong and identification with school did not appear to moderate it. Although identification with school may not fully buffer the impact of exposure to violence on total psychological symptoms, female students who do not identify with school appear to experience the same level of total psychological symptoms as those exposed to high levels of exposure to violence. The relationship between identification with school and psychological symptoms appears to be stronger under conditions of low violence exposure. In male students, identification with school was consistently more related to psychological symptoms than teacher support.

Sparks (2003) found that, particularly for minority students, encouragement and support in school influenced academic outcomes more than income, family, or other supports.

Maguin and Loeber (1996) in a meta-analysis found that higher academic performance was associated with lower rates of delinquency.

Being involved with an adult who might be a teacher can serve as a protective factor against violence or other high risk behaviors (Fitzpatrick, 1997; Hagen, 1997; Masten & Marie-Gabrielle, 2002).

In this regard, we designed a method to evaluate the relations of different dimensions of school connection (school belongingness, school commitment, school engagement, and relations with schoolmates), and gender differences with tendency to violent behaviors in adolescent students in Tehran, Iran.

2. Methods

Procedure

The current study is a part of a cross-sectional research which evaluated the risk-taking behaviors among high school students. The sample consisted of 3529 participants selected from the study population of Tehran high school students. Participants were selected by cluster sampling from three major fields of studies in Iranian high schools (Humanities, Mathematics, and Experimental Sciences). In the first step of sampling, Tehran was divided into 4 regions (north, west, east, and south).

Then, some districts were randomly chosen from each of these regions. Next, by using the list of high schools and vocational schools of these districts and with regard to the number of schools in each district, the sample high schools were chosen. Sampling in the schools was made according to grade and education of students. All participants were informed about the goals of the survey and received the instructions for filling the questionnaires. After getting the consent from participants, they were asked to complete the questionnaires.

Measures

Demographic questionnaire

it included some personal questions e.g. gender and grade as well as some family questions such as family income, parents' life state (living vs. deceased), and level of education (no education or less than 12 years of education, 12-18 years of education, more than 18 years of education). Participants signed written informed consent and then completed the questionnaires anonymously.

Iranian adolescents risk-taking scale (IARS)

IARS included 38 questions which assesses 7 high risk behaviors categories, including dangerous driving, violence, cigarette smoking, substance abuse, alcohol consumption, sexual behavior and relationship, and relation with opposite sex. In constructing this scale, several questions from adolescents risk behavior questionnaire (ARQ) (Gullone, Moore, Moss, & Boyd, 2000) and youth risk behavior survey scale (YRBS) (Brener et al., 1995) were used.

The result of Kaiser-Meyer-Olkin (KMO) (0.952) was appropriate and Bartlett's test of sphericity was statistically significant (χ^2=21.26191, df=703, P=0.001). In addi-

Table 1. Distribution of demographic variables among participants.

	Number	%
Gender		
Female	1872	53.0
Male	1657	47.0
Grade		
1	1074	30.7
2	973	27.8
3	1027	29.3
4	430	12.3
Having friend(s) with violent behavior		
No	2879	82.2
Yes	623	17.8

tion, IARS and its subscales have an appropriate reliability. The results of Cronbach α were as follows: substance abuse (α=0.90, 8 questions); alcohol consumption (α=0.90, 6 questions); smoking (α=0.93, 5 questions); violence (α=0.78, 5 questions); sexual relationship and sexual behavior (α=0.87, 4 questions); attitude toward opposite gender (α=0.83, 4 questions), and dangerous driving (α=0.74, 6 question) (Zadeh-Mohammadi & Ahmadabadi, 2008).

School connection questionnaire (SCQ)

This measure is a 21-item questionnaire which evaluates 4 dimension of school connection: school belongingness (8 items), school engagement (7 items), school commitment (3 items), and relationship with peers (3 items) (Poshtmashhadi et al., 2009). The school belongingness dimension covers a sense of closeness to teachers and students, being comfortable to express problems to school personnel, admitting that school disciplines are fair, being proud of their school and having interest to teachers and school. The dimension of school engagement deals with attachment to school homework, approval of school homework as being useful, approval of efficiency of school education in future occupational status, and trying to acquire better scores. Dimension of school commitment covers areas of avoiding absenteeism and escaping from school. The dimension of relation with peers considers having friends in school, having relation with school friends out of school environment, and getting help from school friends.

The result of KMO (0.885) is acceptable for this measure and Bartlett's test of sphericity is statistically significant (χ^2=288.2564, df=210, P=0.001). SCQ and its subscales have an acceptable reliability as well. The results of Cronbach α were as follows: total questionnaire (α=0.83); school belongingness (α=0.82); school engagement (α=0.81); school commitment (α=0.58); and relation with peers (α=0.5).

Statistical analysis

We used SPSS to analyze data, which comprised descriptive statistics and step wise regression analysis to assess variables and derive results

3. Results

Demographic characteristics of the sample are shown in Table 1. As it is shown in Table, 53.1% of the participants were female. About 58.5% of participants were studying at

Table 2. Mean (Standard Deviations) of School connection and tendency to violence regarding different genders.

	Total (n=3529)	Girls (n=1872)	Boys (n=1657)
School engagement	17.91 (5.24)	18.47 (4.98)	[b] 17.27 (5.45)
School belongingness	14.22 (5.85)	13.68 (5.69)	[b] 14.84 (5.97)
School commitment	8.45 (3.12)	9.03 (2.63)	[b] 7.79 (3.48)
Peer relation at school	7.09 (2.33)	6.81 (2.22)	[b] 7.41 (2.42)
Tendency to violence	1.47 (0.94)	1.40 (0.92)	[b] 1.54 (0.95)

b Significant gender difference at P<0.0001.

Table 3. Zero-order correlations for girls and boys.

Girls \ Boys	School engagement	School belonging	School commitment	Peer relation at school	Tendency to violence
School engagement		0.596**	0.463**	-0.085*	-0.269**
School belonging	0.534**		0.321**	-0.003	-0.227**
School commitment	0.374**	0.263**		-0.167**	-0.395**
Peer relation at school	-0.035	0.013	-0.160**		0.127**
Tendency to violence	-0.283**	-0.215**	-0.328**	0.091*	

*P<0.01 **P<0.001

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first and second grade and 17.8% of students of both sexes admitted having a friend with violent behavior.

Analyses of gender differences showed that boys (24.6%) were more likely (12%) to have friends with violent behaviors than girls (Chi-square=97.695, P<0.0001).

Multivariate ANOVA revealed that there were significant differences between boys and girls with respect to the overall means of subscales of school connection (overall Wilks's Λ (4, 3222)=80.994, P<0.0001). Also, ANOVA was conducted to examine gender differences in the means of each subscale of school connection and revealed the following effects: boys reported a significantly greater mean of school belonging (F(1, 3225)=35.452, P<0.0001) and peer relation at school (F(1, 3225)=48.314, P<0.0001). Girls reported greater school engagement (F(1, 3225)=42.962, P<0.0001) and school commitment (F(1, 3225)=145.814, P<0.0001). Also boys reported greater tendency to violence than girls (t=4.516, P<0.0001) (Table 2).

To determine whether school connection was related to the tendency to violence, we performed Pearson correlation. The results showed that school engagement, belong-

Table 4. Hierarchical regression analyses of tendency to violence from having friends with violent behaviors and school connection among boys.

Boys	Unstandardized Coefficients		Standardized Coefficients	t	R^2 Change	F Change
	B	Std. Error	Beta			
Step 1					0.212	400.984***
Having friends with violent behaviors (=1)	0.41	0.02	0.46***	20.025		
Step 2					0.085	45.148***
School engagement	-0.02	0.02	-0.02	-0.751		
School belonging	-0.06	0.02	-0.06*	-2.182		
School commitment	-0.24	0.02	-0.26***	-10.343		
Peer relation at school	0.03	0.02	0.02	1.172		
Step 3					0.01	3.839**
HFVB× school engagement	0.03	0.02	0.04	1.186		
HFVB× school belonging	-0.06	0.02	-0.08**	-2.800		
HFVB× school commitment	-0.04	0.01	-0.06*	-1.990		
HFVB× peer relation at school	0.01	0.01	0.02	0.835		

HFVB=having friends with violent behaviors.

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*P<0.05 **P<0.01 ***P<0.001

Table 5. Hierarchical regression analyses of tendency to violence from having friends with violent behaviors and school connection among girls.

Girls	Unstandardized Coefficients		Standardized Coefficients	t	R^2 Change	F Change
	B	Std. Error	Beta			
Step 1					0.095	181.552***
Having friends with violent behaviors (=1)	0.36	0.03	0.31***	13.474		
Step 2					0.108	58.285***
School engagement	-0.13	0.03	-0.13***	-4.944		
School belonging	-0.07	0.02	-0.07**	-2.856		
School commitment	-0.24	0.02	-0.21***	-9.020		
Peer relation at school	0.03	0.02	0.04	1.702		
Step 3					0.002	0.899
HFVB × school engagement	0.02	0.02	0.02	0.859		
HFVB × school belonging	-0.03	0.02	-0.03	-1.246		
HFVB × school commitment	0.01	0.02	0.01	0.578		
HFVB × peer relation at school	0.03	0.02	0.03	1.271		

HFVB=having friends with violent behaviors.

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*P<0.05 **P<0.01 ***P<0.001

ingness, and commitment were negatively correlated with tendency to violence, for girls and boys, but peer relation at school was positively associated with tendency to violence, again for both sexes (Table 3).

Correlation coefficients in the lower side of diagonal line belong to girls and the coefficients in the upper side of diagonal line to boys.

To examine research hypotheses, a set of hierarchical regression analyses was run. In the first step, "having friends with violent behavior" was entered into the regression. School connection subscales, including school engagement, belongingness, commitment, and peer relation at school were added in the second step. At final step, interaction of school connection subscales and having violent friends were entered. Results are summarized in Tables 4 and 5.

As indicated in Table 4, school belongingness had an attenuating influence on the relationship between having violent friends and tendency to violence among boys. A significant $R^2\Delta$ and beta (β) for the interaction terms were revealed for school belongingness ($R^2\Delta$=0.01, β=-0.08, P<0.01) and school commitment ($R^2\Delta$=0.01, β=-0.06, P<0.05).

For significant models, the ordinal interaction indicated that high proportions of violent friends coupled with low level of school belongingness and school commitment were associated with the highest level of tendency to violence.

4. Discussion

Based on the results, dimensions of school connection differed among female and male participants, and having more friends with violent behavior beside lower levels of school belongingness and school commitment were associated with the highest level of tendency to violence. As McNeely and Falci (2004) argued, the degree to which school connection protects the adolescent from high risk behaviors depends on their relation to school and peers. We can conclude that investment on school and considering it as a pleasant place with fair discipline can protect adolescents from engaging in violent behaviors, and other similar activities like substance abuse (Poshtmashhadi et al., 2010; Diaz, 2004). Likewise, research has shown that school-related factors like poor academic performance, dropping out of school (Bonnell & Zizys, 2005; U.S. Department of Health and Human Services, 2001; Schiraldi & Ziedenberg, 2001), and lack of involvement in school activities (Mayer, 1995) are associated with violence in adolescents.

Another finding was that in female students, school connection acted independently from having friends with violent behavior while in males, school belongingness and school commitment altered the impact of having friends

with violent behavior on the tendency of respondents to violence (Tables 4, 5). This result shows that preventive programs for girls and boys should consider gender differences. As Prinstein, Boergers, and Spirito (2001) reported, peer behaviors accounted for 5%-27% of variance in adolescents' high risk behaviors. They showed that violent behavior like substance abuse or heavy drinking are associated with relation with friends with similar behaviors as well.

Authors conclude that violent behaviors- among other high risk behaviors- are reinforced by peers conducting the same violent behaviors. In this respect, Hawkins et al. (2000) found that involvement with gang members is associated with youth violence. Our findings suggested that different factors mediate the impact of violent friends on female and male adolescents' tendency to violent behavior. It is noteworthy that in the present study, we evaluated tendency to violence and not the overt violent behavior, so discrepancy between our results and findings of other researchers might be due to this factor.

This study had some limitations too. First, despite the sufficiency of sample size, it was limited to adolescents studying in Tehran. Therefore, a similar research in other cities of Iran is suggested. Second, we only used self-report measures and had no other sources of information such as family report to test reliability of the students' answers. So, in generalizing the results of this study, this limitation should be considered too. We suggest that future research takes into account other resources of information like family and school reports. We also believe that the other factors influencing violence in adolescents, which we did not assess, need further studies. As Ferguson, San Miguel, and Hartley (2009) in their study on Hispanic-majority sample found that depressed mood and delinquent peer associations were the most consistent and strongest predictors of violent behavior of youth, future researchers could study this complicated phenomena from different points of view.

We conclude that tendency to violent behavior among adolescents is influenced by dimensions of school connection and being exposed to friends with violent behaviors.

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