

# Violence among the Youth in Turkey: An Assessment of General Strain Theory

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**Abstract:** Most tests of criminological theories have been carried out in the western world, especially the United States. Agnew developed a General Strain Theory and claimed that it could account for deviance/crime in the developing countries. However, the support for the theory was generally mixed at best. The goal of this study is to examine the major theses of general strain theory in relation to youth violence in Nigde, a small city in central part of Turkey. The data came from a random sample of 974 students drawn from the lists of the university students at Nigde University (N=12,514). Data were analyzed by using logistic regression analysis. The present study focused on three important research questions: Is the influence of strain on violence positive, Is the impact of strain on violence is mediated by anger, and Is the effect of strain on violence moderated by some criminal and non-criminal copings? The results indicated that few strain variables had direct positive impacts on violence. Anger had positive effect on the dependent variable. Few interactions between the strain and coping variables were observed. In short, the overall results gave a limited support for the three major arguments of general strain theory.

**Keywords:** General strain theory, Violence, Crime, Deviance, Youth, Turkey.

## INTRODUCTION

General strain theory (or GST) is an extension of classic strain theories, and its major thesis is that when an individual is confronted with unfair treatment by others (for example, bad teachers), with not succeeding in one's own goals (for example, not getting money), and with the loss of someone/something the individual values (for example, loss of loved friends), they feel some negative emotions like anger. The individual, as a result of all of the above factors as well as some constraining (for example, religion) and facilitating factors (for example, criminal peers), will commit or not commit a crime.

Agnew (2006), who was the proponent of GST, asserted that the theory could be applicable to any society irrespective of the economic development in the globe. If this is a true statement, general strain theory then can explain crime in a developing country like Turkey.

As it is the case with most theories of crime, many tests of general strain theory were conducted in the United States (for example, Agnew, Brezina, Wright, & Cullen 2002; Belknap & Holsinger 2006; Eitle, Gunkel, & Gundy 2004; Tittle, Broidy, & Gertz 2008), and these studies gave a mixed support for the theory. Likewise, research findings outside the United States did not differ from the above pattern (for example, Baron 2004;

Baron & Hartnagel 1997; Morash & Moon 2007). Also, there were very few studies which tested general strain theory in the context of Turkey (Özbay 2011; Özbay 2012; Özbay 2014). However, the findings of these Turkish studies gave limited support for GST.

Although this present investigation will not resolve the inconsistent findings on the general strain theory-crime literature in general, it is hoped that the present investigation may shed some light on it outside the United States.

In line with the major concerns in the general strain theory-crime literature, this research focuses on three important research questions: (a) is the influence of strain on violence positive? (b) is the impact of strain on crime is mediated by anger, and (c) is the effect of strain on crime moderated by some criminal and non-criminal copings? The three research questions will be tested by using a random sample of 974 university students at a Turkish state university.

## GENERAL STRAIN THEORY

The aim of the previous strain theorists was to focus *only* one type of strains which was the failure to acquire some prized aims, for example, social status (Cohen 1955) or money (Merton 1938). One of the major criticisms directed to these theorists is that they restricted themselves to *failure to obtain the positive goal* and dismissed some others. The second one is how *some* stressed individuals develop criminal behavior (Agnew 1992).

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Agnew (1992) created a social-psychological theory of crime, deviance or delinquency with the name of general strain theory in the beginning of the 1990s. According to his theory (Agnew 2006), a criminal event is an outcome of the following three processes: First, there is a strained individual or an event. The strain originates primarily from three things: *loss of positive stimuli* (for example, loss of a loved peer), *inability to acquire a positive goal* (for example, not being able to start at a university), and *presence of negative stimuli* (for example, a disparaging parent). Second, strain results in a variety of negative emotions, for example, anger, fear, anxiety. Negative emotions play a *mediating* role in the realization of crime or violence. Third, the effects of both strain and negative emotion on crime are *conditioned* by criminal and non-criminal copings (for example, criminal definition or social support, respectively). According to Agnew, some strains are not related to crimes, for example, educational strain.

## PREVIOUS STUDIES

A general review of research on general strain theory showed that much data on tests of general strain theory came from various samples of the individuals in the United States (for example, Agnew, Brezina, Wright, & Cullen 2002; Belknap & Holsinger 2006; Tittle, Broidy, & Gertz 2008). However, there were a limited number of studies across countries in the world (for example, Liu & Lin 2007 in China; Baron 2008 in Canada; Sigfusdottir, Farkas, & Silver 2004 in Iceland; Mesch, Fishman, & Eisikovits 2003 in Israel; Moon, Blurton, & McCluskey 2008 in South Korea; and Maxwell 2001 in the Philippines).

As is the case with some other theories of crime, the tests of general strain theory are hampered by *the generalizability issue*: Because the title of the theory claims "generalizability" (its originator also claimed its generalizable nature to the "developing" societies), its repeated examinations within the United States, although not futile, would be restricted in the long run. Therefore, any assessment of the theory outside the United States is extremely important.

Whereas the *positive* impact of strain on crime is much proven (for example, Benda & Crowyn 2002; Hay 2003; Hollist, Hughes, & Schaible 2009), the mediation of negative emotions and moderation of criminal and non-criminal copings were partially proven at best (for example, Hoffman & Miller 1998; Jang & Johnson 2003; Manasse & Ganem 2009). In this respect, it will

be important to test whether the impact of strain on crime is positive, whether the impact of strain on crime is mediated by a negative emotion, and whether the impact of strain on crime is conditioned by criminal and non-criminal coping factors.

The role of general strain theory in the explanation of violence is at the center of the present study. The existing literature in the link between general strain theory and violence can be put into two groups on the basis of both types of samples and types of dependent variables: The first one is the tests of general strain theory in relation to *juvenile violence*. Similar to the above general pictures, strain had a positive impact on violence (Aseltine, Gore, & Gordon 2000; Benda & Crowyn 2002; Daigle, Cullen, & Wright 2007; Hoffman & Miller 1998; Johnson & Morris 2008; Mazerolle 1998; Perez, Jennings, & Gover 2008; see Mazerolle, Burton, Cullen, Evans, & Payne 2000 for a mixed support). Unfortunately, most scholars did not exam the mediation of negative emotions or the moderation of coping mechanisms (for example, Daigle, Cullen, & Wright 2007; Johnson & Morris 2008; Mazerolle 1998). The few studies which tested the theory on these points gave little support for the mediation or moderation arguments (Aseltine *et al.* 2000; Benda & Crowyn 2002; Hoffman & Miller 1998; Mazerolle *et al.* 2000; Perez *et al.* 2008). Studies outside the United States were limited only to juvenile violence, and hence ignored youth or adult violence (Bao, Haas, Pi 2004; Baron 2007; Baron 2008; Baron & Hartnagel 1997; Mesch *et al.* 2003; Morash & Moon 2007). What was found in relation to the relationships between general strain theory and juvenile violence in the United States also held true in the studies carried out in some other societies (for example, Baron 2007; Baron & Hartnagel 1997; Morash & Moon 2007).

The second one, more relevant to the present study, is the relationship between strain and *youth violence*. Although there is no study on this issue outside the United States, there are some studies in the United States (Capowich *et al.* 2001; Jang & Johnson 2003; Mazerolle & Piquero 1997; Mazerolle & Piquero 1998; Mazerolle, Piquero, & Capowich 2003; Ostrowsky & Messner 2005; Slocum, Simpson, & Smith 2005). Again, similar to the general picture outlined above, while the signs of the strain variables used were positive which supported the basic thesis of general strain theory. There, however, were not strong evidence in favor of the mediating role of negative emotions and the conditional effect of coping mechanisms. Most scholars used an index of strain

(Capowich *et al.* 2001; Jang & Johnson 2003; Mazerolle & Piquero 1997; Mazerolle & Piquero 1998; Slocum *et al.* 2005), and a half of the scholars (Capowich *et al.* 2001; Mazerolle & Piquero 1997; Mazerolle & Piquero 1998; Mazerolle *et al.* 2003) used the *intention* to violence, instead of the real act of violence.

To summarize, the literature on the link between general strain theory and youth violence emphasized that although the weight of evidence was in favor of general strain theory in relation to the sign of strain, it was not the case with the mediation of negative emotions or the moderation of coping factors. While the present study could not resolve the above problems, it is expected to contribute to the literature on general strain theory, at least, by testing it in a different society (for example, cross-cultural generalizability) via using a youth sample drawn from a Turkish public university.

## METHOD

### Data

Participants ( $n = 974$ ) were recruited from Nigde University in Turkey in 2004. A self-report type of survey was used to elicit the information from the students. The response rate was 75 percent due to the non-participation by some students for unknown reasons. Stratified sampling, on the basis of social class, was used for four-year university students, and quota sampling was used for two-year university students.

Before the administration of the survey, a pre-test of the survey questions was carried out among a small group of students to detect any questions that were unclear, forgotten or needed changes in the questionnaire (the students in the pilot tests might or might not be included in the final sample, depending on whether they were randomly chosen from the sampling frame and voluntarily participated in the research). The survey was given mostly to the students in such settings as classrooms as well as conference rooms and the canteen. Research ethics (for example, confidential and voluntary aspects of the survey) was explained in both verbal and written ways. The university did not have an ethical review board which approved the study at the administration of the survey. The composition of the sample in terms of several major demographic features was as follows: About half of the students were females, average age was 21, and

the median parental income of the students per month was about US\$504 or €417 (or TL750). An average student's income per month (TL200) was \$134 or €111. Of the 974 students, 58.6 percent of their parents lived in cities, followed by small cities and towns (29.9 percent), and villages (10.6 percent).

### Variables

#### *Dependent Variables*

Political violence and other violence were the dependent variables. Political violence refers to physical violence carried out by an individual or one group of students against another individual or other group of students in order to have an ideological hegemony on the university campus, which is supported by both the teachers and the political parties who have the same political views with the perpetrators. Other violence refers to any physical violence which did not involve political hegemony or a fight over an interest in the same girl by two or more young males.

Both political violence and other violence consisted of a dichotomized response option: Those who committed and hence answered with "yes" (coded as 1), and those who did not commit and hence answered with "no" (coded as 0, the reference category). Owing to the binary nature of the dependent variables, logistic regression statistical analysis was used for analyzing the data.

#### *Independent Variables*

##### *Strain Variables*

In this section, a number of strain variables related *only* to the two general types of strain proposed by Agnew were used. These were *inability to succeed in positive goals* (for example, relative deprivation, educational strain, lack of the means to find the best way to earn much money, wishes for living in a Western country, and perception of blocked opportunity) and *presence of negative stimuli* (for example, family conflict, income-expense strain, monetary strain, teacher-related strain, course failure, lack of future employment opportunity, and verbal harassment).

##### *Perceived Blocked Opportunity*

This variable was measured by an index (Cronbach's alpha = .71) which was composed of agreements with the following six statements: "No

matter how hard I work, I will never be given the same opportunities as other kids," "Laws are passed to keep people like me from succeeding," "Even with a good education, people like me will have to work harder to make a good living," and "I believe people like me are treated unfairly when it comes to getting a good job," "I have often been frustrated in my efforts to get ahead in life," and "I would have been more successful," and "Every time I try to get ahead, something or someone stops me." The response items ranged from *never agree* (1) to *strongly agree* (4). While the first four statements of the index of blocked opportunity was obtained from Vowell and May's research (2000), the latter two statements were retrieved from Burton, Cullen, Evans, and Dunaway's research (1994).

### **Relative Deprivation**

Relative deprivation also was an index (Cronbach's alpha = .76) which included agreements with five statements obtained from the literature (Agnew, Cullen, Burton, Evans, & Dunaway 1996; Burton & Dunaway 1994): "In general, my family is not as rich as other families [in the place where my family lives]," "It bothers me that I don't have as much money to buy nice clothes as other students do," "In general, I don't have as much money as other students in this school," "I get angry when people have a lot more money than I do and spend their money on foolish things," and "I get frustrated when people drive nicer cars and live in better homes than I do." The response categories varied from *never agree* (1) to *strongly agree* (4).

### **Best Way to Earn Much Money**

The independent variable best-way-to-earn-much-money was measured by asking "What is the best way to earn much money?" Hard working, good education, and occupation were labeled as "normal" way of earning much money (coded as 0, the base category), and mafia, chance games, and earning much money via prestigious relatives, friends, a huge money from one's family were labeled as "non-normal" way of earning much money (coded as 1).

### **Wishes for Living in a Western Country**

This variable was operationalized by asking two questions: "How much do you aspire to live in Europe, the United States, Canada, and so on?" and "What is the possibility to live in Europe, the United States, and Canada, and so on in practice?" While the response options ranged from *never wishes* (1) to *wishes very much* (4) for the first question, they ranged from *never possible* (1) to *very possible* (4) for the second

question. The difference between the above two question items was used to measure strain relevant to wishes for living in a western country or "western strain."

### **Educational Strain**

Educational strain, likewise, was measured by taking the difference between the following two questions: "How important is it to be an assistant in your major?" and "In reality, what is the possibility of being an assistant?" For the first question, the response options varied from *not very important* (1) to *very important* (4). For the second question, the response options varied from *never possible* (1) to *very possible* (4).

### **Lack of Future Employment Opportunity**

This variable was an index (Cronbach's alpha = .87) which was operationalized by the responses to the following two statements: "What is the possibility of finding a work after graduating from the current university?" and "What is the possibility of finding a work after finishing your major/department?" The response items ranged from *very likely* (1) to *very unlikely* (4) for both statements.

### **Income-Expense Strain**

On the basis of monthly incomes and expenses of students, students' financial situations were categorized into three groups: Expenses > income, expenses = income, and income > expenses. The last one was used as the reference category which was assumed to be a non-stressful position (coded as 0, the others are coded as 1 and 2, respectively).

### **Monetary Wishes and Its Realization**

This variable was measured by the answers for the succeeding two statements: "I always want to earn much money in my life" and "When I look at my life realistically, I suppose that I will not earn much money." The response categories in relation to both statements varied from *never agree* (1) to *strongly agree* (4). The two statements were received from Farnworth and Leiber's research (1989).

### **Verbal Harassment**

Verbal harassment was an index (Cronbach's alpha = .77) operationalized by asking whether a student had experienced verbal abuse by both other students and the individuals in the community where the university is located. The response items for verbal abuse statements ranged from *yes* (1) to *no* (0).

### **Course Failures**

The variable was an interval variable which was operationalized by asking the number of courses failed by a student in the previous academic terms.

### **Family Conflict**

Family conflict was an index (Cronbach's alpha = .56) which was measured by three questions: "How much do your mother and father get along with each other?," "How much do you get along with your mother?," and "How much do you get along with your father?" The response items varied from *get along with each other very well* (1) to *never get along with each other* (4) for the first question, and it varied from *always get along with father/mother* (1) to *never get along with father/mother* (4) for the latter questions.

### **Teacher-Related Strain**

Eighteen questions in relation to students' assessment of their teachers regarding the nature of their teaching and the perception of unfair treatment corresponded to teacher-related strain (Cronbach's alpha = .90). Concerning the nature of teaching, for example, it was asked whether teachers began their classes on time, completed their courses in the given time period of a class, and lectured only on the relevant topics. As for discrimination, it was asked whether teachers unfairly treated students in terms of grades, gender, ethnicity, and religion.

### **Negative Emotion**

#### **Anger**

Anger, as one of the possible negative emotions, was an index (Cronbach's alpha = .62) which included responses to the following statements: "When I am really angry, other people better stay away from me," "Often, when I am angry at people, I feel more like hurting them than talking to them about why I am angry," "When I have a serious disagreement with someone, it is usually hard for me to talk calmly about it without getting upset," and "I lose my temper pretty easily." The response items for the four statements ranged from *never* (1) to *always* (4). The items for anger were obtained from the research of Tittle, Ward, and Grasmick (2003).

### **Non-criminal and Criminal Copings**

#### **Family Control**

Family control was an eighteen item index (Cronbach's alpha = .80) which consisted of the

responses to the following statements: "How often would your father/male guardian know who you are with?," "In the course of a day, how often would your father/male guardian know where you are?," "How often would your mother/female guardian know who you are with?," and "In the course of a day, how often would your mother/female guardian know where you are?" The response categories for the above questions ranged from *never* (1) to *always* (4). Moreover, fourteen statements related to other aspects of family control were added into the index of family control. These were whether male *and* female guardians decided the behavior of the students concerning clothing, religious worship, voting acts, use of money, marriage partner, and choosing of the students' friends. The response options varied from *yes* (1) to *no* (0). All the eighteen items, first, were standardized (mean equal to zero and standard deviation equal to one), and, later, added together in order to create a family control index.

#### **Belief**

Belief in the conventional values of society was an index (Cronbach's alpha = .69) which was composed of the responses by the students (and also the report of the students' parental attitudes) towards the police, the judges, and the law in terms of respect and fairness. The response items varied from *yes* (1) to *no* (0).

#### **Social Support**

Social support was a categorical variable which was operationalized by asking whether students' family received any support (for example, clothes, food, heating materials etc.) from their relatives in the last eight months. The response options varied from *yes* (1) to *no* (0, the base category).

#### **Religion**

Religion was an ordinal variable which was operationalized by asking whether students accepted fate as true, read religious sections of books, journals, and newspapers, listened/watched religiously-oriented radio, television, read the Koran, conversed with friends on religious topics, fasted, worshipped, and prayed. The response options ranged from *yes* (1) to *no* (0). On the basis of the above eight items, religion was put into low religiosity (0, the reference category) and high religiosity categories (1).

#### **Deviant Friend**

Deviant friend was a categorical variable which was measured by asking whether any of the students' best

friends was detained by the police or the gendarme (military force who deals with criminal events *only* in the country sides in Turkey) in the previous year. The response options for deviant friend varied from *yes* (1) to *no* (0, the reference category).

### **Risk Seeking**

This variable was an index (Cronbach's alpha = .83) which included the subsequent four statements: "Excitement and adventure are more important to me than security," "Sometimes I will take a risk just for the fun of it," "I like to test myself every now and then by doing something a little risky," and "I sometimes find it exciting to do things for which I might get in trouble." The response options ranged from *never* (1) to *always* (4). The above statements were obtained from the study of Tittle, Ward, and Grasmick (2003).

### **Control Variables**

Income, gender, age, duration of education, and timing of education were used as control variables. Income was measured by total parental income per month, and its logarithm was used owing to its non-normal distribution. Sex corresponded to *male* (coded as 1) and *female* (coded as 0, the base category). Age was an interval variable which referred to biological age. Duration of school was operationalized by whether the school attended was *four* (coded as 1) or *two year university* (coded as 0, the base category). Finally, timing of education was measured by whether the students attended classes in the course of *day* (coded as 1) or *evening time* (coded as 0, the base category). All the above independent variables (except for the dependent variables) have been employed in earlier works (Özbay, 2011; Özbay 2012; Özbay 2014).

## **RESULTS**

The following analyses were based on four general models: The first model (Model 1) contained only the general strain and control variables. The second model included only anger as one type of negative emotion (Model 2). The third model involved only criminal and non-criminal coping factors (Model 3), and the final model (Model 4 through Model 16) contained the interaction analyses of the strain and the coping variables.

### **Political Violence**

Agnew asserted that strain would lead individuals to engage in deviant behavior. Among the twelve strain

variables (Model 1 in Table 1), the only significant variable surprisingly was monetary strain (monetary wishes-its realization), which was also consistently significant (Model 1 through Model 16 in Table 1). That is, when there existed a gap between monetary wishes and their realization among the university students, this gap was related to a lesser likelihood of engagement in political violence. This finding especially contradicts Merton's strain theory as well as Agnew's. Moreover, Agnew claimed that the impacts of strain variables were mediated by negative emotions like anger, depression, and so forth. In the present study, anger was used to test this argument. When anger was included in the analysis, it, as expected, had a significant positive impact on political violence (Model 2 in Table 1). More importantly, while anger did not affect some strain variables (monetary strain and teacher-related strain) it reduced the effects of other variables, or made some strain indicators insignificant (best way to earn much money and perceived blocked opportunity). Agnew also argued that some criminal and non-criminal coping variables would either lead to or prevent strained individuals from committing deviant acts. Among the six coping variables, only religion and risk seeking were statistically significant (Model 3, also Model 4 through 16 in Table 1). Whereas risk seeking had an expected positive impact on political violence, those youths with a high religious tendency were more likely to engage in it. This finding on religion did not support the moderating impact of the coping variables on the deviant act. Finally, Agnew claimed that the effects of strain variables on deviant acts would be conditioned (moderated) by coping variables. When the interaction analyses in relation to political violence (Model 4 through 16 in Table 1) were examined, only 13 interactions were significant out of the overall 78 interactions. That is, no support was found for the conditioning impacts of the coping variables on the relationship between the strain variables and political violence.

### **Other Violence**

Wishes for living in a Western country, verbal harassment, and teacher-related strain had significantly consistent influences on other violence (Model 1 through Model 16 in Table 2). The gap between wishes for living in a Western society and its possibility of realization (for example, "Western strain") was less likely to lead to violence, which was an unexpected finding. However, in line with GST, both a greater level of verbal abuse by others and a teacher-relevant strain were more likely to result in a greater level of violence.

**Table 1: Logistic Regression Analysis of Political Violence and Strain Variables**

Independent Variables	Political Violence								
	Model 1 <sup>a</sup>	Model 2 <sup>b</sup>	Model 3	Block. Opp. (n=512)	Depriv. (n=512)	Much Money (n=512)	West. Wish (n=512)	Educ. Strain (n=512)	Fut. Emp. (n=514)
	OR	OR	OR	Model 4 <sup>c</sup>	Model 5	Model 6	Model 7	Model 8	Model 9
<b>Control Variables</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>
Constant	-6.812	-9.439	-16.060	-19.409	-15.881	-15.456	-16.196	-17.156	-12.343
Age	1.102	1.162	1.347**	1.350**	1.341**	1.330**	1.340**	1.370**	1.329**
Gender (=male)	2.480*	2.410*	1.269	1.304	1.518	1.257	1.268	1.334	1.204
Income	.555	.553	.504	.336	.452	.521	.467	.432	.482
Timing of Education (=day time)	.626	.658	.759	.616	.754	.778	.835	.803	.716
Duration of Education (=four year)	.637	.579	.879	.685	.913	.915	.889	1.024	.967
<i>Strain Variables</i>									
Perceived Blocked Opportunity	1.125*	1.080	1.037	1.382**	1.025	1.028	1.040	1.052	1.008
Relative Deprivation	1.049	1.035	1.047	1.038	1.073	1.038	1.024	1.067	1.018
Best Way to Earn Much Money (=“non-normal” ways)	3.013**	2.327*	1.675	2.126	1.520	.162	1.987	2.025	1.835
Wishes for Living in a Western Country	.959	.968	1.167	1.157	1.220	1.161	1.063	1.196	1.080
Educational Strain	.953	.941	1.043	.988	1.048	1.159	1.075	3.061**	1.240
Lack of Future Employment Opportunity	.847	.894	1.057	1.037	1.043	1.072	1.040	.977	.754
<i>Income-Expense Strain</i>									
Expense>Income	1.647	1.801	1.341	1.101	1.196	1.118	1.127	1.104	1.360
Expense=Income	.980	.995	1.202	1.084	1.111	.978	1.340	1.213	1.169
Monetary Wishes-Realizations	.733*	.734*	.596**	.596**	.564**	.579**	.580**	.552**	.703**
Verbal Harassment	1.251	1.163	1.016	1.014	1.062	1.088	.977	.894	1.144
Course Failures	1.076	1.067	1.177	1.247*	1.149	1.191	1.195	1.242*	1.144
Family Conflict	1.017	1.004	.990	.950	.996	.995	.987	.977	1.024
Teacher-related Strain	1.032*	1.035*	1.023	1.033	1.033	1.026	1.024	1.020	1.016
<i>Negative Emotion</i>									
Anger		1.246**	1.284**	1.345***	1.276**	1.247**	1.277**	1.268**	1.259**
<i>Copings</i>									
Family Control			.999	.965	.990	1.014	1.006	.993	1.005
Belief			.836	.798	.819	.815	.853	.857	.814
Social Support (=yes)			.705	.817	.554	.557	.762	.759	.981
Religion (=high)			3.137**	5.389**	3.139**	2.464*	3.653**	3.298**	2.595**
Deviant Friend (=yes)			1.365	2.178	1.227	1.277	1.215	1.227	1.389
Risk Seeking			1.564***	1.455***	1.542***	1.603***	1.646***	1.598***	1.466***
<i>Interactions</i>									
Blocked Opp.* Family Control				1.055**					
Blocked Opp.*Religion				.313**					
Blocked Opp.*Deviant Friend				.334*					
Much Money*Family Control						.785*			
Western Wishes*Deviant Friend							.464*		
Educational Strain*Religion								.304**	
Model X <sup>2</sup>	32.488**	40.884**	79.405***	90.628***	82.393***	86.337***	83.920***	87.886***	71.955***
Nagelkerke	.157	.195	.366	.413	.379	.395	.385	.402	.323

\*p ≤ 10, \*\* p ≤ .05, \*\*\* p ≤ .01.

<sup>a</sup>The model 1 through 3 here and in the following tables were based on the model with only the interaction of perceived blocked opportunity with the coping variables.

<sup>b</sup>Here and in the following tables, some outliers were identified and excluded from the analyses.

<sup>c</sup>Due to the space limitation, all non-significant interactions were omitted here and in the following tables.

**Table 1: Logistic Regression Analysis of Political Violence and Strain Variables (continued)**

Independent Variables	Political Violence						
	Expense>Income (n=512)	Expense=Income (n=512)	Monetary Strain (n=512)	Verbal Harassm. (n=514)	Course Failures (n=512)	Family Conflict (n=510)	Teacher Strain (n=512)
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
<b>Control Variables</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>
Constant	-16.348	-16.281	-15.912	-13.294	-17.670	-14.820	-21.814
Age	1.360**	1.343**	1.341**	1.284*	1.369**	1.456**	1.341**
Gender (=male)	1.343	1.333	1.203	1.173	1.162	1.503	1.463
Income	.503	.459	.511	.562	.539	.469	.443
Timing of Education (=day time)	.651	.770	.775	.628	.806	.996	.795
Duration of Education (=four year)	1.013	.973	.864	.884	.955	.745	1.049
<i>Strain Variables</i>							
Perceived Blocked Opportunity	1.022	1.043	1.041	1.014	1.050	.989	1.008
Relative Deprivation	1.112	1.033	1.037	1.041	1.053	1.091	1.067
Best Way to Earn Much Money (=“non-normal ways”)	1.916	1.800	1.664	1.821	1.445	2.317	2.034
Wishes for Living in a Western Country	1.176	1.147	1.158	1.094	1.157	1.206	1.151
Educational Strain	1.157	1.030	1.047	1.178	1.061	1.044	1.200
Lack of Future Employment Opportunity	1.048	1.042	1.097	1.033	1.026	.980	1.030
<i>Income-Expense Strain</i>							
Expense>Income	.032*	1.326	1.462	1.361	1.342	1.175	1.099
Expense=Income	1.235	1.650	1.166	1.109	1.188	1.588	1.099
Monetary Wishes-Realizations	.580**	.610**	.562	.697**	.570**	.496***	.641**
Verbal Harassment	.998	1.036	.999	1.200	.992	1.044	.988
Course Failures	1.174	1.168	1.175	1.169	1.275	1.185	1.243*
Family Conflict	.950	1.015	.981	1.009	.989	.470	.999
Teacher-related Strain	1.018	1.022	1.021	1.018	1.026	1.035	1.122**
<i>Negative Emotion</i>							
Anger	1.296**	1.282**	1.288**	1.257**	1.302**	1.289**	1.345***
<i>Copings</i>							
Family Control	.991	1.001	.994	1.008	.994	1.007	.990
Belief	.874	.867	.823	.799*	.862	.831	.858
Social Support (=yes)	.551	.811	.723	.919	.676	.526	.343
Religion (=high)	2.270	2.955*	3.313**	2.374*	3.609**	3.755**	7.230**
Deviant Friend (=yes)	1.206	2.042	1.336	1.362	1.333	1.655	1.040
Risk Seeking	1.557***	1.604***	1.571***	1.459***	1.592***	1.680***	1.747***
<i>Interactions</i>							
Expense>Income*Social Support	31.161*						
Expense>Income*Religion	17.317*						
Course Failures*Belief					.770*		
Family Conflict*Religion						3.654**	
Teacher-related Strain*Risk Seeking							.603**
Teacher-related Strain*Social Support							3.671*
Teacher-related Strain*Religion							.255**
Model X <sup>2</sup>	86.645***	82.072***	80.576***	71.210***	83.382***	91.113***	91.651***
Nagelkerke	.396	.377	.371	.320	.383	.422	.417

\*p ≤ 10, \*\* p ≤ .05, \*\*\* p ≤ .01.



**Table 2: Logistic Regression Analysis of Other Violence and Strain Variables**

Independent Variables	Other Violence								
	Model 1	Model 2	Model 3	Block. Opp. (n= 509)	Depriv. (n=509 )	Much Money (n= 509)	West. Wish (n=509 )	Educ. Strain (n= 509)	Fut. Emp. (n= 509)
	OR	OR	OR	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
<b>Control Variables</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>
Constant	-5.603	-6.991	-5.138	-4.419	-5.482	-5.169	-5.109	-5.486	-4.650
Age	1.049	1.079	1.058	1.070	1.058	1.042	1.067	1.065	1.062
Gender (=male)	2.629***	2.644***	2.553***	2.726***	2.567***	2.533***	2.675***	2.515***	2.600***
Income	1.296	1.249	1.150	1.142	1.179	1.263	1.126	1.132	1.130
Timing of Education (=day time)	.836	.854	.851	.842	.845	.864	.826	.840	.857
Duration of Education (=four year)	.874	.829	.880	.897	.848	.850	.911	.827	.870
<i>Strain Variables</i>									
Perceived Blocked Opportunity	.998	.975	.970	.901*	.972	.962	.969	.971	.971
Relative Deprivation	1.058	1.047	1.058	1.055	1.087	1.063	1.053	1.052	1.058
Best Way to Earn Much Money (=“non-normal” ways)	1.312	1.099	1.040	1.029	1.017	.817	1.084	1.104	.994
Wishes for Living in a Western Country	.831**	.830**	.819**	.831**	.822**	.816**	.969	.826**	.815**
Educational Strain	1.121	1.097	1.115	1.090	1.125	1.115	1.121	1.041	1.102
Lack of Future Employment Opportunity	1.065	1.074	1.061	1.068	1.046	1.073	1.085	1.055	.879
<i>Income-Expense Strain</i>									
Expense>Income	.661	.703	.669	.738	.635	.632	.636	.712	.667
Expense=Income	.676	.677*	.694	.722	.703	.691	.682	.730	.699
Monetary Wishes-Realizations	1.097	1.101	1.092	1.109	1.092	1.083	1.087	1.099	1.094
Verbal Harassment	1.788***	1.730***	1.739***	1.804***	1.798***	1.786***	1.737***	1.713***	1.778***
Course Failures	1.009	.995	.984	.980	.986	.978	.981	.993	.975
Family Conflict	1.053	1.049	1.034	1.022	1.043	1.026	1.036	1.029	1.033
Teacher-related Strain	1.027**	1.028**	1.024*	1.025**	1.023*	1.027**	1.021*	1.029**	1.026**
<i>Negative Emotion</i>									
Anger		1.159***	1.151**	1.144**	1.153**	1.155**	1.156**	1.159**	1.161***
<i>Copings</i>									
Family Control			.996	1.000	.994	.999	.999	.995	.996
Belief			.906	.919	.908	.909	.892	.920	.912
Social Support (=yes)			.837	.871	.787	.849	.726	.788	.877
Religion (=high)			.777	.775	.808	.843	.765	.804	.779
Deviant Friend (=yes)			1.379	1.401	1.468	1.062	1.498	1.438	1.332
Risk Seeking			.979	.986	.969	.977	.972	.982	.981
<i>Interactions</i>									
Blocked Opp.*Religion				1.681**					
Much Money*Deviant Friend						11.223**			
Western Wishes*Social Support							.469**		
Educational Strain*Belief								.792*	
Educational Strain*Social Support								1.882*	
Model X <sup>2</sup>	49.668***	60.424***	65.567***	72.512***	68.612***	74.637***	73.672***	74.956***	71.464***
Nagelkerke	.134	.162	.175	.192	.182	.197	.195	.198	.189

\*p ≤ 10, \*\* p ≤ .05, \*\*\* p ≤ .01.

**Table 2. Logistic Regression Analysis of Other Violence and Strain Variables (continued)**

Independent Variables	Other Violence						
	Expense>Income (n=509)	Expense=Income (n=509)	Monetary Strain (n=509)	Verbal Harassm. (n= 509)	Course Failures (n= 509)	Family Conflict (n= 509)	Teacher Strain (n= 509)
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16
<b>Control Variables</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>	<b>OR</b>
Constant	-5.187	-5.679	-5.289	-5.112	-4.996	-5.204	-6.179
Age	1.058	1.067	1.064	1.057	1.059	1.066	1.054
Gender (=male)	2.567***	2.582***	2.538***	2.540***	2.639***	2.567***	2.686***
Income	1.130	1.149	1.123	1.164	1.161	1.126	1.216
Timing of Education (=day time)	.849	.843	.871	.833	.833	.855	.821
Duration of Education (=four year)	.874	.858	.911	.854	.838	.897	.901
<i>Strain Variables</i>							
Perceived Blocked Opportunity	.969	.969	.973	.966	.973	.973	.975
Relative Deprivation	1.057	1.062	1.052	1.064	1.052	1.056	1.063
Best Way to Earn Much Money (=“non-normal” ways)	1.018	1.038	1.035	1.019	1.071	1.066	1.107
Wishes for Living in a Western Country	.817**	.827**	.817**	.809**	.814**	.826**	.792**
Educational Strain	1.117	1.113	1.125	1.093	1.115	1.110	1.108
Lack of Future Employment Opportunity	1.060	1.062	1.049	1.061	1.051	1.050	1.064
<i>Income-Expense Strain</i>							
Expense>Income	.832	.687	.702	.638	.668	.588	.733
Expense=Income	.692	.743	.734	.666*	.683	.684	.680*
Monetary Wishes-Realizations	1.083	1.098	1.188	1.088	1.086	1.102	1.091
Verbal Harassment	1.742***	1.752***	1.721***	1.950**	1.771***	1.678***	1.758***
Course Failures	.983	.981	.981	.991	.925	.983	.976
Family Conflict	1.033	1.030	1.031	1.029	1.040	.934	1.015
Teacher-related Strain	1.025*	1.025*	1.024*	1.023*	1.023*	1.029**	1.050**
<i>Negative Emotion</i>							
Anger	1.152**	1.156**	1.158*	1.154**	1.158**	1.153**	1.150**
<i>Copings</i>							
Family Control	.995	.995	.998	.996	.997	.996	.993
Belief	.912	.965	.913	.904	.904	.954	.894
Social Support (= yes)	.913	.753	.830	.842	.807	.775	.857
Religion (= high)	.801	.878	.769	.779	.800	.791	.774
Deviant Friend (= yes)	1.273	1.372	1.465	1.372	1.355	1.450	1.368
Risk Seeking	.980	.964	.976	.977	.974	.976	.974
<i>Interactions</i>							
Family Conflict*Belief						.758**	
Teacher-related Strain*Family Control							1.024*
Teacher-related Strain*Religion							.660*
Model X <sup>2</sup>	67.473***	67.479***	67.653***	68.220***	68.466***	73.459***	72.943***
Nagelkerke	.180	.180	.180	.181	.182	.194	.193

\*p ≤ 10, \*\* p ≤ .05, \*\*\* p ≤ .01.

Likewise, an increase in anger was associated with an increase in violence (Model 2 in Table 2). Inclusion of anger into the model did not change both the significance and sizes of the above three strain variables, which did not support the mediating role of anger. Unexpectedly, none of the six coping variables were related to violent behavior (Model 3, also Model 4 through Model 16 in Table 2). Last, the interaction analyses (Model 4 through Model 16 in Table 2) indicated that 8 interactions were found to be significant out of the overall 78 interactions. There was weak support for the conditioning impacts of the coping variables on the link between the strain variables and other violence.

## DISCUSSION AND CONCLUSION

The present study addressed three research questions which are at the center of general strain theory: First, is the influence of strain on violence positive? Second, is the influence of strain on violence mediated by anger? Third, is the influence of strain on violence moderated by some criminal and non-criminal copings? A sample of 974 university students at a public university in Turkey was used to test the three research questions. The crime literature on the relationship between strain and youth violence pointed out that whereas strain had a positive influence on violence, mediation of anger and moderations of criminal and non-criminal coping factors were not supportive of GST. In this context, it was important to test the above three theses in the context of Turkey.

The findings on *political violence* gave a mixed support for GST: The above three theses were both supported and not supported according to the evidence obtained from the data. Only money-related strain (the gap between monetary wishes and possibility of its realization) was statistically significant in relation to political violence. However, its negative sign was contradictory to the expectation of the theory. As expected, anger had a positive impact on political violence. However, its mediating influence was partial, which was not supportive of GST. Among the coping variables, although the positive influence of risk seeking on the link between strain and political violence was an expected outcome, the positive influence of religion on the link between strain and political violence was an unexpected outcome. More important, a very limited number of interactions (13 out of 78 interactions) were found between the strain and the coping variables.

The findings on *other violence* followed more or less the above pattern found for political violence: While verbal harassment and teacher-related strain had positive influences on other violence, wishes for living in a western society had a negative influence on the dependent variable. As before, although anger had a positive influence on other violence, it did not *fully* mediate the relationship between strain and other violence. None of the coping variables were statistically significant, and very few interactions (8 out of 78) occurred between the strain and coping variables.

All in all, the results here gave a very limited support for the three major arguments of GST in the university sample used in the case of Turkey (also, see Özbay 2014). One possible reason for the unexpected results in relation to monetary strain and wishes for living in a Western society is that not all strains lead to crime, as pointed out by Agnew (2006). More important, he asserted that when a strain was characterized by being more central, contemporary, lengthy, and higher in level, it would be viewed as great in size. In our case, both 'western wishes' and monetary strain may not have one or more of these characteristics. Also, both strains have to do with *economic domain*, it is more likely that they could have an impact on not violence but *economic* crimes like theft. Moreover, it was not really known how much stress the two strains generated in the lives of the university students (for example, subjective strain). Finally, as Agnew (2009) asserted, some measures of the variables (including dependent variables) were used at the categorical level which did not really reflect variation in the relevant variables, for example, social support, religion, deviant friend as the independent variables, and political and other violence as the dependent variables.

## LIMITATIONS AND STRENGTHS

As mentioned above, the findings of the current study should be read with the following cautions: Some independent and dependent variables were measured with a single indicator or at a nominal level of measurement. This situation could lead to non-significant results as it was found in the article. Also, GST was tested only in one university, and the use of university as a sample might not provide an ideal place to test GST due to a relatively lesser level of stressful life events. Last but not least, the present study did not control for a previous violent act which may have had an influence on the findings here.

In spite of its limitations, the present study had some strength which was worth mentioning. First of all, because Agnew claimed that GST was a 'general' theory of crime, deviance or delinquency, its tests outside the United States were very important endeavor. Second, most research on the link between strain and youth violence did not contain mediation of a negative emotion and moderation of criminal and non-criminal coping factors which were at the heart of the arguments of general strain theory.

## CONFLICT OF INTEREST

The author confirms that this article content has no conflict of interest.

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