

DOES GENERAL STRAIN THEORY ACCOUNT FOR YOUTH DEVIANC IN TURKEY?

Doç. Dr. Özden ÖZBAY,
 Niğde Üniversitesi, Fen Edebiyat Fakültesi
 ozden_ozbay@yahoo.com

ABSTRACT

This study was aimed to explore whether General Strain Theory accounted for youth deviance in Turkey. The theory was tested by using a sample of 974 undergraduate university students in a correlational study. Youth deviance included piracy, bribery, and cheating. Of the total twelve strain variables used, half of them were statistically significant and had expected positive influences on the dependent variables. Anger was positively correlated only with one dependent variable. Most criminal and non-criminal coping variables had expected impacts on the deviant behavior. Overall, data gave some support for GST. Future tests of General Strain Theory should use more negative emotions, utilize an index of strain, be tested with males and females

Keywords: General Strain Theory, deviance, crime, youth, Turkey

GENEL GERİLİM TEORİSİ TÜRKİYE'DEKİ GENÇ SOSYAL SAPMASINI AÇIKLAR MI?

ÖZET

Bu çalışma Genel Gerilim Teori'sinin Türkiye'de genç sapmasını açıklayıp-açıklayamadığını keşfetmeyi amaçlamaktadır. İlgili teori, korelasyon analizi yardımı ile, 974 üniversite öğrencisi örneği yardımı ile test edilmiştir. Genç sapması korsancılık, rüşvet ve kopya çekme davranışlarını içermektedir. Araştırmada kullanılan toplam on iki gerilim/stres değişkenlerinden sadece altısı istatistiksel olarak önemli ve bağımlı değişkenler üzerinde beklenen pozitif etkileri göstermişlerdir. Kızgınlık sadece bir değişkenle (beklenen) pozitif korelasyona sahiptir. Çoğu suçu kolaylaştırıcı ve suçu önleyici faktörler beklenen etkileri göstermiştir. Genel olarak, veriler Genel Gerilim Teori'sini kısmen desteklemiştir. İleride yapılacak araştırmalar teoriyi test ederken daha fazla negatif duygulara yer vermeli, gerilim indeks halinde kullanmalı, cinsiyet temelinde analizler yapmalıdır.

Anahtar sözcükler: Genel Gerilim Teorisi, Sapma, Suç, Genç, Türkiye

1. INTRODUCTION

Robert Agnew (2006) argued that although General Strain Theory (hereafter GST) was created in the context of the United States, it could be applicable to other countries in the world regardless of their levels of economic development. He claimed that there will be more deviance when individuals are exposed to more strains leading to crime *and* when they have a greater degree of criminal coping (e.g., connection with criminals, beliefs in support of deviance, and opportunities for crime) at the individual level. Also, Agnew claimed that individuals differ from each other in terms of strainful events and conditions.

Three research questions are tested in the current study: (1) Whether strain, anger, and some criminal and non-criminal coping variables are correlated with cheating, piracy, and bribery. (2) What are the directions of the correlations? (3) What are the strengths of the correlation coefficients? These research questions were explored by using a sample of 974 university students at a state university in Turkey.

2. GENERAL STRAIN THEORY

Robert Agnew (1992) created an important global social-psychological theory of deviance named *General Strain Theory* which argues that a group of strains leads to deviance. Strain corresponds to conditions and events which are not liked by people. There are three major types of strains: (1) *the presence of aversive or negative stimuli* (e.g., sexual or physical abuse); (2) *the incapacity to obtain positively-cherished aims* (wealth, prestige); and (3) *the absence of positively-cherished stimuli* (e.g., loss of wealth, loved parents). It is argued that the three general kinds of strains cover a number of minor strains.

The above strains lead individuals to bad feelings, and the individuals may deal with them by deviance. According to Agnew (2009), strains result in a group of negative emotions. An individual who is exposed to strains feels forced to take an action against them to overcome bad feelings. Furthermore, some negative emotions can diminish worry for the criminal costs, decrease the capacity to deal with problems in a legitimate way, and/or enhance the tendency of the individual for deviance. For instance, anger decreases the knowledge of the criminal costs, leads to a wish for revenge, decreases the capacity to find an efficient way to solve problems, helps to develop a justification for deviance, and motivates the individual for action. In this respect, these are the reasons why anger plays a major role in the theory. According to Agnew (2006), studies mostly point out that strain escalates anger, and the impact of strain on deviance, to some extent, is mediated by anger. In addition to anger, there are other negative

emotions such as frustration, jealousy, fear, hopelessness, shame, and malicious envy which are more likely to play mediating roles.

Finally, according to Agnew, whether or not individuals respond to strain in a deviant way depends on the outcome of three things: (a) tendency for deviance, (b) criminal costs, and (c) the capability of involvement in legitimate and illegitimate coping. The factors which lead to an increase in criminal coping are (1) weak traditional coping abilities and resources (e.g., weak self-efficacy, low social standing, low constraint, low emotionality, weak problem-solving, and weak social skills), (2) deviant skills and sources (e.g., big physical body), (3) weak conventional social supports, (4) weak social control (weak direct/indirect controls and stake in conformity), (5) definitions in favor of crime and criminal peers, and (6) exposure to conditions in which the criminal costs are none or small and the gains are great. More recently, he claimed that the response of individuals to deviance is an outcome of both the features of the individuals *and* the features of the experienced strain (Agnew, 2009).

According to Agnew (2006), not all strains are associated with deviant behavior (e.g., not succeeding in an educational goal). He (2001) claimed that there are some strains which tend mostly to end up with deviance: those strains (1) are related to weak social control, (2) are great in size, (3) are viewed as not just, and (4) produce some motivation or force to promote involvement in deviant action. For example, experiencing ethnic/racial and gender-related discrimination and prejudice, being victims of crime, living in financially poor communities, failing to achieve certain aims like status of masculinity, great degrees of autonomy, wishes for a great amount of money in a short period of time, negative school experiences (e.g., bad relationships with mentors, low grades), family control which is harsh, excessive, and erratic, and child abuse and neglect, to mention a few, are illustrative of such strains (Agnew, 2009).

In short, strain corresponds to conditions and events which are not liked by people. People respond to strains with a negative emotion which, in turn, requires them to take an action which makes them feel better. Some third factors in this process also increase or decrease the realization of criminal action.

3. PAST STUDIES

The existing research has repeatedly tested GST especially in the United States where it first was developed. Nevertheless, there have been very few studies that tested GST across the countries in the world, for example, in China (Bao, Haas, & Pi, 2004; Liu & Lin, 2007), Canada (Baron, 2004; Baron, 2007; Baron, 2008; Baron & Hartnagel, 1997), Iceland

(Sigfusdottir, Farkas, & Silver, 2004), Israel (Landau, 1998; Mesch, Fishman, & Eisikovits, 2003), South Korea (Moon, Blurton, & McCluskey, 2008; Moon, Hwang, & McCluskey, in press; Morash & Moon, 2007), and the Philippines (Maxwell, 2001). In contrast to the prediction of the theory, much research in these countries has reported a partial support for GST. Also, in Turkey, there have recently been a very small number of studies that tested only the classic strain theory of Merton (Özbay, 2003; Özbay, 2008; Özbay & Özcan, 2006). The findings showed that the relationship between classic strain theory and deviant behavior were weak. The present study is the first to test GST in the context of the Turkish society.

When the signs of strain, anger, and coping variables were examined, the following findings were observed: First, most of the research showed that an increase in strain leads to a great increase in delinquency or deviance in the United States (for example, see Agnew & White, 1992; Benda & Crowyn, 2002; Daigle, Cullen, & Wright, 2007; Mazerolle & Piquero, 1997). Second, cross-cultural research lent support for the same finding: The greater strain is, the greater deviance is (for example, see Baron & Hartnagel, 1997; Maxwell, 2001; Moon, Blurton, & McCluskey, 2008; Sigfusdottir, Farkas, & Silver, 2004).

Second, the research indicated that anger increases engagement in deviant acts in the United States (for example, see Aseltine, Gore, & Gordon, 2000; Brezina, Piquero, & Mazerolle, 2001; Hay, 2003) as well as across the World (for example, see Bao, Haas, and Pi 2004; Baron, 2004; Moon, Blurton, and McCluskey, 2008, see for exceptions Baron & Hartnagel, 1997; Moon, Hwang, and McCluskey, 2008).

Third, most studies did not use any coping variables in the United States (for example, see Mazerolle, 1998; Sharp, Brewster, & Love, 2005; Simons, Chen, Stewart, & Brody, 2003; Slocum, Simpson, & Smith, 2005) as well as around the World (Bao, Haas, & Pi, 2004; Baron, 2008; Liu & Lin, 2007; Sigfusdottir, Farkas, & Silver, 2004; Mesch, Fishman, & Eisikovits, 2003; Moon, Blurton, & McCluskey, 2008; Maxwell, 2001). Depending on the types of coping variables, studies showed that while criminal coping variables have positive influences on deviant behavior, non-criminal coping variables have negative influence on it in the United States (for example, see Mazerolle & Piquero, 1998; Rebellon, Piquero, Piquero, Thaxton, 2009; Robbers, 2004) as well as some other countries (for example, see Baron, 2008; Morash & Moon, 2007).

In short, the extant research pointed out that strain was related positively to deviant behavior. In fact, this was the case with anger. Likewise, based on the kinds of coping variables (e.g., criminal and non criminal ones), coping variables either had positive or negative influences on deviant acts. Given that most studies were carried out in the United States,

the present test the theory in a different society, Turkey. Likewise, Agnew (2006) argued that although GST originally was developed to explain deviance in advanced industrial societies, it also could account for deviance in other societies like Turkey. Therefore, it becomes crucial to explore the theory in a developing country which has been ridden with economic, political, and social strains or conflicts.

4. METHODOLOGY

4.1. Data

The data for this study came from a self-reported survey of 974 students carried out in the year of 2004 at a relatively new public university which was established in 1992 in Turkey. Although there were 1,304 students in the original sample, 974 students participated in the survey, and the response rate, therefore, was 75 percent. The students were chosen by using two sampling strategies, stratified and quota.

A pilot study was carried out on a small group of students to determine their concerns and validate the questionnaire items. In a latter stage, the questionnaires were handed out to students in classrooms under the control of the researcher. The students were informed about the voluntary and confidential nature of the survey. The gender makeup in the sample was 50 percent males. The ages of the students ranged from 17 to 28, and the median age was 21. The monthly median family income of the overall university students was 750 Turkish Liras (US\$504 or 417 Euro). About 41 percent of the university students were below this level. The state-determined minimum salary on a monthly base is 303 Turkish Liras (US\$204 or 168 Euro).

In contemporary Turkey, some deviant acts such as piracy, bribery, and cheating are very common. People pirate on electrical tools in order to pay less money or for ease of availability from close friends. The main reason for using the case for Turkey is that the Turkish authorities do not apply any sanctions on the violations of deviant acts, for example, piracy of various kinds. This leads to a widespread use in the informal economy. This point also is mentioned by the International Intellectual Property Alliance Report in 2004. According to the report (2004, p. 391),

“Turkey is one of the world’s worst markets for book piracy. In addition, optical disc pirate production, mainly of “burned” CD-Rs, increased in 2003, with little reaction by enforcement authorities. The sale of pirate discs, including CD-Rs by street vendors (directly supplied by local networks operating in complete secrecy) also continued to proliferate.”

Finally, according to a recent study done in the university where the data for the present study came from (Özbay, 2011), the percentage of the university students ($n = 703$) who cheated on exams was 40.8 out of the overall 703 students. This indicates that cheating is a very common act in the university where the study was conducted. In fact, this is not limited only to the university in this study, and is a common act among university students in Turkey.

As for the bribing act, to the author's knowledge, a proxy variable for bribing is perception of corruption index. According to Transparency International Report, Turkey's rank of corruption index in the World was 55 ($N = 99$ countries) in the year of 1999, 81 ($N = 145$ countries) in the year of 2004, and 61 ($N = 180$ countries) in the year of 2009 (Transparency International Report, 1999, 2004, 2009).

It is important to note that studying university students has shortcomings. They do not represent the population at large, and university students, relatively speaking, are inclined to have a lesser degrees of strain and anger than the rest of the society (Capowich, Mazerolle, & Piquero, 2003). In spite of these problems, because the existing study is the first to test GST in Turkey, it is worth exploring it via the university sample.

4.2. Measures

4.2.1. Dependent Variables

Three dependent variables were used in the study (see Table 1 for the descriptive statistics). These were piracy of music cassettes, CDs, and books, bribery in terms of traffic violations (only the male sample), and cheating on exams. There are several reasons for using piracy, bribery, and cheating as the dependent variables: First, according to Agnew (2006), GST is a general theory and it accounts for diverse types of crime unlike the classical strain theory of, for example, Robert K. Merton. Agnew (2006, p. 15-16) stated that "GST can help explain any act which is condemned by most others in the society or that carries more than a trivial risk of punishment.... GST, then, can help explain a broad range of criminal acts." Agnew (2006) mentioned that the theory can account for street crimes, status offenses, white-collar crime, and terrorism. Second, Agnew (2006) claims that GST cover all types of strains, including financial ones like relative deprivation. I believe that piracy and bribery, to some degree, have to do with economic aspects of life, especially piracy.

All of these dependent variables only included two response categories, *yes* (=1) for those who were engaged in each deviant acts, *no* (=0) for those who were not engaged. In the GST literature, studies frequently used delinquency as their dependent variables in their tests of the theory (e.g., Agnew & White, 1992; Bao et al., 2004; Daigle et al., 2007; Hay, 2003; Hoffman & Su, 1997; Moon et al., 2008; Sigfusdottir et al., 2004). However, we are not aware of any study which focused on such uncommon use of deviant acts as piracy and bribery as dependent variables which are important for the tests of the scope condition of any theory, including GST.

4.2.2. Independent Variables

4.2.2.1. Strain Variables

A dozen strain variables were used in the study. Nevertheless, since the data did not allow the use of *the loss of positive stimuli* as one type of strain, the current study was limited to the other two types of strains: *The presentation of the negative stimuli* (e.g., income-expense strain, monetary strain, verbal harassment, course failure, family conflict, and teacher-related strain) and *the incapacity to obtain positively-valued aims* (e.g., perception of blocked opportunity, relative deprivation, lack of future employment opportunity, best way to earn much money, wishes for living in a Western country, and educational strain). In the GST literature, researchers generally used the presentation of negative stimuli in their tests of the theory (Agnew et al., 2002; Eitle & Turner, 2003; Hoffman & Cerbone, 1999; Sigfusdottir et al., 2004; Mesch et al., 2003), which was followed by the other two. In this respect, the present study included more types of strain than the previous research. Moreover, in the GST literature, most tests of GST covered only one strain variable (e.g., Belknap & Holsinger, 2006; Eitle, Gunkel, & Gundy, 2004; Hoffman & Miller, 1998; Johnson & Kercher, 2007). There, however, are twelve strain variables used in the current study (the closer one was Baron's study (2004) which used ten strains at most).

Perceived Blocked Opportunity

Perception of blocked opportunity index (Cronbach's $\alpha = .71$) was measured by the extent to which the respondents agreed with the following statements: "I believe people like me are treated unfairly when it comes to getting a good job," "Laws are passed to keep people like me from succeeding," "No matter how hard I work, I will never be given the same opportunities as other kids," "Even with a good education, people like me will have to work harder to make a good living." These statements were

derived from Vowell and May's study (2000). Also, two more statements were added to the above ones: "Every time I try to get ahead, something or someone stops me," "I have often been frustrated in my efforts to get ahead in life," and "I would have been more successful." The response options varied from *never agree* (=1) to *strongly agree* (=4). The greater scores corresponded to greater perception of blocked opportunity. The two statements were obtained from Burton, Cullen, Evans, and Dunaway's study (1994).

Relative Deprivation

The relative deprivation index (Cronbach's $\alpha = .76$) was measured by the degree of agreement to the following statements: "In general, I don't have as much money as other students in this school," "In general, my family is not as rich as other families [in the place where my family lives]," and "It bothers me that I don't have as much money to buy nice clothes as other students do." These statements were obtained from Burton and Dunaway's study (1994). Additionally, "I get frustrated when people drive nicer cars and live in better homes than I do" and "I get angry when people have a lot more money than I do and spend their money on foolish things." The response options varied from *never agree* (=1) to *strongly agree* (=4). The higher scores were related to greater relative deprivation. The last two statements were adapted from Agnew, Cullen, Burton, Evans, and Dunaway's study (1996).

Best Way to Earn Much Money

According to classical strain theory, if an individual wanted to earn their living in legitimate or normal ways like having a job or working hard, they would not need to commit crime. If the legitimate or normal way of earning a living was blocked, the individuals, then, would try to innovate some "non-normal" ways to cope with the monetary strain. In line with this argument, the students were asked to respond to the question which asked for the best way to earn a large amount of money. The response categories included those students who chose a "normal" way of earning this money (good education, good occupation, hard working etc, and coded as 0) and those students who chose a "non-normal" way of earning this money via prestigious relatives, friends, a huge inheritance from one's family, and so on (=1). The "normal" way of earning much money was used as the base category.

Wishes for Living in a Western Country

In developing countries like Turkey, individuals aspire to live in a country with a high standard of living like the United States, European countries, and Canada, to mention a few. It is thought that while this is a positive goal for most individuals to aspire to, there are, however, a limited number of individuals who can realize it in practice especially given that there are very strict rules to be a citizen of the Western countries. We think that this is a unique kind of strain which is relevant only to the individuals of the less developed countries. Two questions in relation to the wish for living in a western country were asked: "How much do you aspire to live in such countries as Europe, the United States, Canada, and so on?" The response items varied from *never wishes* (=1) to *wishes very much* (=4). "What is the possibility to live in such countries as Europe, the United States, and Canada in practice?" The response items ranged from *never possible* (=1) to *very possible* (=4). Following the logic of the measurement of the difference between aspiration and expectation offered by Farnsworth and Leiber (1989), the difference between the above two questions was taken, and, hence, used in the analysis.

Educational Strain

Being a research assistant in Turkey is very hard if a person does not have "torpil" (e.g., influential ties) at the time of the administration of this survey. Recently, the Turkish Higher Education Council requires a person who wants to be a research assistant to take and pass several exams (e.g., a written foreign language and written knowledge and ability tests as well as having "torpil," the third criteria occurs during the final verbal exam) at the nation-wide level. Educational strain was measured by taking the difference between the importance of being a research assistant in one's department and the possibility of its realization. Response categories for the importance of being a research assistant ranged from *not very important* (=1) to *very important* (=4). Response categories for the possibility of being research assistant ranged from *never possible* (=1) to *very possible* (=4). As before, the logic of the creation of the statements for the variable were derived from Farnsworth and Leiber's study (1989).

Lack of Future Employment Opportunity

The variable was measured with responses to two questions: What is the possibility of finding a work after finishing a university and, also, after finishing a major. The response options for both questions ranged from *very likely* (=1) to *very unlikely* (=4). A scale was constructed by combining the

two questions (Cronbach's $\alpha = .87$). The greater scores reflected greater absence of future employment opportunity.

Income-Expense Strain

The students were asked to indicate their financial strain with the question of how much money they received from their mothers and fathers and relatives or from the state in the form of monthly payments in a given educational year. Furthermore, a parallel question was provided so as to get monthly expenses within the same time period. Three likely outcomes on the basis of the two questions were (1) expenses > incomes, (2) expenses = incomes, and (3) incomes > expenses. The final response category was treated as the base one.

Monetary Wishes and Its Realization

Another monetary strain variable was measured with the agreement to the following 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 options for the two statements varied from *never agree* (=1) to *strongly agree* (=4). It was assumed that the difference between monetary wishes and its realization would reflect the monetary strain. Again, the statements for this variable were gathered from Farnworth and Leiber's study (1989).

Verbal Harassment

The students were asked to report whether they had been verbally abused by both students *and* individuals outside the university in their academic life. The response categories for the two questions included *yes* (=1) and *no* (=0) (Cronbach's $\alpha = .77$). The higher scores corresponded to the greater level of verbal harassment.

Course Failures

The students were asked to indicate how many courses they failed during the past academic years. The scores of the course failure were divided into two groups: Those above the median (= 1, the values between 3-25), and below the median (= 0, the values between 0-2). The latter was used as the reference category.

Family Conflict

This variable was measured by the responses to the three questions: “How much do your mother and father get along with each other?,” “How much do you get along with your father?,” and “How much do you get along with your mother?” For the first question, the response categories ranged from *my mother and father get along with each other very well* (=1) to *my mother and father never get along with each other* (=4). For the last two questions, the response categories ranged from *always get along with father/mother* (=1) to *never get along with father/mother* (=4) (Cronbach’s $\alpha = .56$). The greater scores represented high family conflict.

Teacher-related Strain

This strain included eighteen questions concerning students’ evaluation of their teachers in terms of discrimination and style of teaching (Cronbach’s $\alpha = .90$). For example, the teachers do not discriminate against students on the basis of religion, ethnicity, ideology, grade, and gender. Also, the teachers started their classes on time, finished their classes within the officially specified period, talked about what the teachers were supposed to talk in a given day curriculum, did not want the students to recite, did not do political propaganda, did not disparage the students, and so forth. The greater scores reflected higher teacher-related strain.

4.2.2.2. Negative Emotion

Even though Agnew (2009) mentioned some other negative emotions like depression and anxiety to mention a few, the data used did not contain these negative emotional traits. So, the study had to use only anger. Agnew claimed that there are two types of emotions: The first one is *emotional states* which means the real experience of an emotion, and the second is *emotional traits* which means the overall inclination of the individual for experiencing a specific emotion. Hence, the below anger scale reflected the emotional trait type of emotions.

Anger

The anger scale (Cronbach’s $\alpha = .62$) involved four items: “I lose my temper pretty easily,” “Often, when I am angry at people, I feel more like hurting them than talking to them about why I am angry,” “When I am really angry, other people better stay away from me,” and “When I have a serious disagreement with someone, it is usually hard for me to talk calmly about it without getting upset.” The response categories varied from *always* (=1) to *never* (=4). These items were reverse coded such that higher scores indicated

higher anger. The questions for this variable were derived from Tittle, Ward, and Grasmick's study (2003).

4.2.2.3. Copings

Family Control

Family control variables were composed of two major dimensions: Indirect (family supervision) and direct family controls. Indirect family control included four items: "In the course of a day, how often would your mother/female guardian know where you are?," "How often would your mother/female guardian know who you are with?," "In the course of a day, how often would your father/male guardian know where you are?," and "How often would your father/male guardian know who you are with?" The response categories varied from *never* (=1) to *always* (=4). Also, direct parental control consisted of fourteen items: The respondents were asked to indicate whether their mother/female guardian determined their behavior in choosing their friends, voting behavior, religious worship, flirtation, marriage partner, clothing, and use of money. Likewise, the same questions on the same issues were asked separately for father/male guardians. The response categories ranged from *no* (=0) to *yes* (=1). Because the two family control dimensions had two different response categories, they first were standardized (mean = 0, standard deviation = 1), and they later were added up to create a family control index (Cronbach's $\alpha=.80$). The higher scores reflected greater family control.

Belief

The respondents (as well as their parents in relation to some items) were asked to report their respect for and their opinion on the fairness of the police, judge, and law. That is, the students were asked to report whether they had respect for the police, judges, and the law; whether the police, judges, and the law were fair; whether the parents of the students respected the police and the law. The response categories ranged from *no* (=1) to *yes* (=2). The greater scores corresponded to greater belief in the norms of society (Cronbach's $\alpha=.69$).

Social Support

The students were asked to indicate whether their relatives supported their parents in terms of food, clothing, heating materials (coal, wood), and so on. The response categories ranged from *yes* (=1) to *no* (=2). Those who

said “no” were the comparison category. Although this variable was named as “social support,” it also could be named as “material support.”

Religion

The respondents were asked to report whether they prayed, fasted, read Kur'an, worshiped, chatted with friends on religious topics, read religious sections of books, journals, and newspapers, listened/watched religiously-oriented radio, television, and believed in fate. The response categories ranged from *yes* (=1) to *no* (=2). A religion index was created by summing up the above items. Further, the index was divided into two categories: A high religiosity (equal and above the mean of the index, coded as 1, the reference category) and a low religiosity (below the mean of the index, coded as 0).

Deviant Friend

The students were asked to indicate whether their closest friends were detained by the criminal justice agents. The response categories ranged from *yes* (=1) to *no* (=2), the latter being the base category.

Risk Seeking

The risk seeking index (Cronbach's $\alpha = .83$) consisted of four items: “I like to test myself every now and then by doing something a little risky,” “Sometimes I will take a risk just for the fun of it,” “I sometimes find it exciting to do things for which I might get in trouble,” and “Excitement and adventure are more important to me than security.” The response categories varied from *always* (=1) to *never* (=4). These items were reverse coded so that greater scores indicated greater risk seeking. The questions for the variable were gathered from Tittle et al.'s study (2003).

The readers had be warned that except for the above dependent variables, all the independent variables were used in some other papers by the author of the present study due to the space limitations in a single article required by academic journals.

Table 1. Descriptive Statistics

Variables	n (%)	Min.	Max.	Mean	Std. Dev.
Dependent Variables					
Cheating on exams (=yes) ^a	38.2 (371)	0	1	-	-
Piracy on cassettes, CDs, books (=yes)	88 (9.1)	0	1	-	-
Bribery in relation to the traffic police (=yes)	83 (8.6)	0	1	-	-
Independent Variables					
<i>Strain Variables</i>					
Perceived blocked opportunity index ($\alpha=.71$)	-	6	24	15.40	3.48
Relative deprivation index ($\alpha=.76$)	-	5	20	10.47	3.27
Best way to earn much money					
“Non-normal” way (via prestigious relatives etc)	84 (8.7)	0	1	-	-
Normal way (good education, hardworking etc)	865 (89.2)	0	0	-	-
Wishes for living in a western country ^b	-	-	-	-	-
Educational strain ^b	-	-	-	-	-
Lack of future emp. opportunity index ($\alpha=.87$)	-	2	8	3.98	1.24
Income-expense strain					
Expense>income	115 (11.9)	0	1	-	-
Expense=income	389 (40.1)	0	1	-	-
Income>expense	384 (39.6)	0	0	-	-
Monetary wishes-realizations ^b	-	-	-	-	-
Verbal harassment ($\alpha=.77$)	-	0	2	.62	.83
Course failures (= three and more class failures)	46.5	0	1		
Family conflict ($\alpha=.56$)	-	3	27	5.26	1.76
Teacher-related strain ($\alpha=.90$)	-	18	72	42.62	10.06
<i>Negative Emotion</i>					
Anger index ($\alpha=.62$)	-	4	16	9.23	2.52
<i>Criminal and Non-Criminal Copings</i>					
Family control index ^c ($\alpha=.80$)	-	-19	28	-.26	8.46
Belief index ($\alpha=.69$)	-	0	8	5.87	1.66
Social support					
Yes	164 (16.9)	0	1	-	-
No	791 (81.5)	0	0	-	-
Religion					
High	456 (47.0)	0	1	-	-
Low	432 (44.5)	0	0	-	-
Deviant friend					
Yes	129 (13.3)	0	1	-	-
No	825 (85.1)	0	0	-	-
Risk seeking index ($\alpha=.83$)	-	4	16	7.25	2.62

^a Sample sizes were 510 (cheating), 269 (bribery, only males), varied from 501 to 509(piracy).

^b For these variables, it was not possible to show their statistics due to their natures (e.g., logarithm or differences between two measures were used).

^c It was a standardized index.

5. RESULTS

Correlation Analysis

Correlation analysis showed that the correlation coefficients varied from a non-significant value to -.39 (see Table 2). Only 11 strain variables out of the total 39 correlations were significant. In specific, the findings concerning the relationships between the strain variables and cheating, piracy, and bribery were as follows: Blocked opportunity was positively correlated with bribery ($r = .08$). Additionally, compared to students who believed in the best way to earn much money via a "normal way" (e.g., good education, hard working etc.), those students who believed in earning much money via a "non-normal way" (e.g., prestigious relatives etc.) were more likely to cheat on exams ($r = .07$). Also, compared to those students whose incomes were greater than their expenses, those students whose expenses were greater than their incomes were more likely to cheat on exams ($r = .09$) and pirate on cassettes, CDs, and books ($r = .08$). Relatedly, compared to those students whose incomes were greater than their expenses, those students whose expenses were equal to their incomes were less likely to commit bribery in relation to the traffic police ($r = -.08$). Furthermore, the number of course failure was positively correlated with cheating and piracy ($r = .13$, $r = .10$, respectively). Moreover, family conflict was positively correlated with piracy ($r = .11$). Finally, teacher-related strain was positively correlated with cheating and piracy ($r = .14$, $r = .13$, respectively).

Among the strain variables, teacher-related strain had the greatest impact on cheating ($r = .14$), followed by teacher-related strain on piracy ($r = .13$), course failure on cheating ($r = .13$), and other strain variables. The strengths of the associations between the strain variables and the dependent variables were low. Some strain variables did not have any influences on the three dependent variables. These were relative deprivation, wishes for living in a western country, educational strain, lack of future employment opportunity, monetary strain, and verbal harassment.

As for the rest of the variables in the correlation analysis, when anger increased, cheating increased too ($r = .10$). Also, belief in the norms of society was negatively associated with cheating ($r = -.09$), piracy ($r = -.15$), and bribery ($r = -.14$). Moreover, those students whose family received some material support from the relatives were more likely to commit cheating on exams ($r = .07$). Furthermore, those students who had deviant friends were more likely to engage in cheating ($r = .10$), piracy ($r = .14$), and bribery ($r = .23$). Last, risk seeking was positively associated with cheating ($r = .15$), piracy ($r = .10$), and bribery ($r = .19$). Among this group of the variables, deviant friend has the greatest effect on bribery ($r = .23$), followed by risk

seeking on bribery ($r = .19$), risk seeking on cheating ($r = .15$), belief on piracy ($r = -.15$). Family control and religion were not correlated with any of the three dependent variables.

When the associations of the strain variables with anger was examined, perception of blocked opportunity ($r = .19$), relative deprivation ($r = .10$), best way to earn much money in a “non-normal” way ($r = .14$), educational strain ($r = .08$), verbal harassment ($r = .11$), and family conflict ($r = .14$) were positively correlated with anger.

When the correlations between criminal copings and strain were scrutinized, the following associations were found: Deviant friend were correlated positively with blocked opportunity ($r = .13$), lack of employment opportunity ($r = .07$), monetary strain ($r = .09$), and course failure ($r = .14$). Risk seeking were correlated positively with blocked opportunity ($r = .12$), relative deprivation ($r = .10$), best way to earn much money in a “non-normal” way ($r = .14$), expense greater than income ($r = .13$), monetary strain ($r = .11$), family conflict ($r = .08$), and teacher-related strain ($r = .12$). It was only negatively correlated with educational strain ($r = -.09$). When the correlations between non-criminal copings and strain were examined, family control was negatively correlated with expense equal to income ($r = -.07$), family conflict ($r = -.13$), and teacher-related strain ($r = -.10$) (however, it was positively correlated with verbal harassment ($r = .11$)). Also, belief was negatively associated with blocked opportunity ($r = -.15$), lack of employment opportunity ($r = -.07$), verbal harassment ($r = -.11$), family conflict ($r = -.18$), and teacher-related strain ($r = -.39$) (it was positively correlated with educational strain ($r = .08$))). Moreover, social support was positively correlated with relative deprivation ($r = .13$). Furthermore, religion was negatively correlated with wishes for living in a western country ($r = -.10$), monetary strain ($r = -.08$), and course failure ($r = -.13$).

Finally, when the correlations between criminal copings and anger were examined, the following associations were revealed: Both deviant friend ($r = .10$) and risk seeking ($r = .21$) was positively correlated with anger. When the correlations between non-criminal copings and anger were examined, belief had the only association with anger (it was negatively correlated with anger ($r = -.12$)).

Table 2. Correlation Analysis^a

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1.Cheating ^b																						
2. Piracy	.06																					
3. Bribery	.06	.14																				
4. Blocked opp.	.03	.04	.08																			
5. Relat. depriv.	.02	.03	.02	.35																		
6. Best way mon.	.07	-.02	.00	.07	-.02																	
7. Western wish.	.06	.04	-.03	.17	.15	.03																
8. Educat. strain	-.02	-.00	-.01	.16	.08	-.04	.16															
9. Lack emp.	-.03	.04	.04	.25	.16	.04	.19	.11														
10.Expense>inc.	.09	.08	.07	-.02	.12	.02	.11	-.01	.08													
11.Expense=inc.	-.01	-.02	.08	.08	-.03	-.01	-.02	-.01	.02	-.34												
12.Money strain	.03	.06	.06	-.05	.01	.02	.04	.02	-.10	.05	-.01											
13.Harassment	.02	-.05	-.03	.04	-.08	.07	.01	-.01	-.11	.02	-.01	-.02										
14. High Course fail.	.13	.08	.06	-.01	.00	-.00	.11	.05	.02	.09	.05	.02	-.01									
15. Family conf.	.05	.11	.00	.12	.20	.08	.03	-.03	.16	.03	.05	-.06	.12	.03								
16. Teacher strain	.14	.13	.03	.06	.05	.05	-.02	-.09	.09	.07	-.01	-.07	.13	.11	.18							
17. Anger	.10	-.00	.01	.19	.10	.14	.03	.08	.04	-.04	.01	-.03	.11	.02	.14	.05						
18. Family cont.	-.02	-.05	-.01	.07	.03	-.06	.02	.06	.01	-.01	-.07	.02	.11	.02	-.13	-.10	.05					
19. Belief	-.09	-.15	-.14	-.15	-.05	-.05	.02	.08	-.07	-.06	.02	.04	-.11	-.03	-.18	-.39	-.12	.14				
20. Social sup.	.07	.04	.00	.04	.13	.00	.02	.04	-.02	-.04	.03	.03	-.04	-.00	.02	-.01	.00	.06	-.02			
21. Religion	-.00	-.04	-.03	.03	.05	-.07	-.10	-.03	-.05	-.04	.04	-.08	-.04	-.13	-.03	.02	-.05	.13	.07	.12		
22. Deviant fri.	.10	.14	.23	.13	.04	.05	.06	.03	.07	.04	.04	.09	-.01	.14	.05	.06	.10	-.01	-.13	.07	.02	
23. Risk seeking	.15	.10	.19	.12	.10	.14	.03	-.09	.01	.13	.01	.11	.05	.04	.08	.12	.21	-.09	-.18	.05	-.06	.17

^aCorrelations that were significant at the .005 level (two tailed) were highlighted.

^b Due to the space limitations, the control variables were not included here.

6. CONCLUSION AND DISCUSSION

Three research questions are posed in the present study: (1) Whether strain, anger, and some criminal and non-criminal coping variables have any impacts on cheating, piracy, and bribery. (2) What are the signs of the associations? (3) What are the sizes of the correlation coefficients of the associations? To respond to these questions, GST was tested on a sample of 974 undergraduate students at a Turkish public university by using a correlation analysis design. When the literature on GST was examined, two related patterns emerged: First, the extant literature was heavily based on the data from the United States. Second, Agnew claims that GST can account for deviance everywhere in the world (generalizability thesis). In these respects, it becomes important to explore the theory in the context of Turkey.

To start with the above first two research questions, only 6 strain variables out of the overall 12 strain variables were statistically significant. All the significant ones had expected positive effects on the dependent variables. Anger had positive impact only on one dependent variable. Four criminal and non-criminal coping variables out of the overall 6 coping variables had generally expected positive or negative impacts on the deviant acts.

As for the third research question, the number of the overall correlations of the strain, anger and coping variables *only with* the three dependent variables varied from a non-significant value to .23 (e.g., the first three columns in Table 2). Having a deviant friend has the greatest impact on bribery ($r = .23$). This was followed by the influence of risk taking on bribery ($r = .19$), and influence of risk taking on cheating ($r = .15$), influence of belief on piracy ($r = -.15$), and some other independent variables.

These findings had some implications for GST. First, Agnew (2006) claimed that some strains do not lead to deviance, for example, not obtaining educational and occupational goals. Likewise, he argued that if a strain is more contemporary, more repeated, more lengthy, and supposed to exist in the future, more central, and greater in degree, it will be perceived as being high in magnitude. In this sense, wishes for living in a western country as one of the strain variables, for example, may not be a central aim, value, or need in the lives of the students used in the current study. Second, according to GST, anger was expected to have impacts only on violence. In our case, the anger had a positive influence only on cheating. If this finding did not occur by chance, it can be interpreted like this: When the students had some strains, they felt anger and tried to resolve it through engaging in cheating. So, anger did not have to play a role *only* on violence. When the correlations of anger were examined, it, for example, was positively correlated with blocked opportunity, relative deprivation, and educational strain. Third, compared to the strain variables, criminal and non-criminal coping variables

appeared to be more consistently associated with three dependent variables and had greater strengths in general. In a way, this questions the central role of strain variables in the explanation of deviance, at least, the ones used here.

In short, the present study gave limited support for GST. This limited support might be caused, first, by the types of deviant behaviors used in the study. Secondly, Agnew (2009) argued that a great deal of research used one-item measures which weakly reflected the size and characteristics of strains, and which led to the weak validity of measures. In other words, weak measures of variables (in our cases, some uses of variables at the categorical level) posed a problem for sounder results. Thirdly, the present study was limited only one university in Turkey. Finally, because the study did not use any control variables (age, gender, social class) due to the nature of the correlational design, the interpretations should have been made with care.

Despite of all these weaknesses, the current study contributed to the GST literature in some important ways: First, it tested GST theory in a different socio-cultural society where the country has been under economic, political, and social stresses for a long time. Second, the study expanded the scope of the GST literature via including such uncommon use of deviant acts as piracy and bribery as its dependent variables.

Future studies should test the GST in the following issues: First, the tests of the GST should be done through using global index of strain in addition to specific strain variables. Second, the tests of the theory should be done with male and female samples because males and females can experience different types of strains. Third, the present study included only one negative emotion (anger). The future research should include some other negative strains like fear, hopelessness, shame, and malicious envy, frustration, and jealousy. Finally, scholars should test the GST in more strained social contexts or issues like the Kurdish problem in Turkey.

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