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GENDER, CUMULATIVE STRAIN AND DEVIANT BEHAVIOR IN TURKEY

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ABSTRACT

The purpose of this study is to explore whether General Strain Theory played a similar role for male and female deviant acts among the youths in Turkey. Data was derived from 974 students at a Turkish public university. The findings indicated that cumulative strain, anger, and criminal and non-criminal copings played similar roles for both males and females. The results questioned General Strain Theory's gender difference thesis.

Keywords: General strain theory, cumulative strain, gender, university students, Turkey

TÜRKİYE'DE CİNSİYET, KÜMÜLATİF GERİLİM VE SAPMA DAVRANIŞI

ÖZET

Bu çalışmanın amacı Genel Gerilim Teorisinin Türkiye'deki kız ve erkek gençlerin sosyal sapma davranışını açıklamada benzer bir rol oynayıp veya oynamadığını keşfetmektir. Veriler Türkiye'deki bir devlet üniversitesindeki 974 öğrenciden elde edilmiştir. Bulgular kümülatif gerilim, sinirlilik ve suç ve suçsal olmayan mücadele etmelerin kız ve erkeklerin sapma davranışlarında benzer rol oyandıklarını göstermiştir. Bu sonuçlar Genel Gerilim Teorisinin cinsiyet farklılığı tezini sorgulamaktadır.

Anahtar Kelimeler: Genel Gerilim Teorisi, kümülatif gerilim, cinsiyet, üniversite öğrencileri, Türkiye

1. INTRODUCTION

One major theme in the sociology of deviance in relation to gender is that the existing theories have been male-centered and hence are not able to explain the gender differences in deviant behavior. Agnew (2006) argued that his version of strain theory is general and can account for differences in male and female deviance or crime. According to Agnew, although the process leading to deviance is similar, the content of the process is different for females and males (Broidy and Agnew, 1997; Piquero and Sealock, 2004).

The aim of the study is to explore whether General Strain Theory plays a similar role for the explanations of male and female deviance among a sample of the Turkish youth. Stated more specifically, Do strain, anger, and coping variables play a similar role for the explanations of male and female deviance? Data derived from 974 students at a relatively new Turkish public university in the year of 2004 will be used to answer the research question.

2. GENERAL STRAIN THEORY AND GENDER

Agnew (1992) created a type of strain theory named as General Strain Theory. It differed from other similar theories of deviance in terms of concentrating especially on a person's negative relations with other persons. Negative relations corresponded to unwanted treatment of the person by the others. Negative relations with others bring about negative emotions like anger, anxiety, and disappointment. In turn, negative emotions put pressure on the person to engage in deviant behaviors. Also, this process is conditioned by some pro- or anti-deviant contextual factors (e.g., deviant peers, belief, personality traits, social support etc.) (Agnew, 2006).

Agnew (2006) stated that males tend to commit more deviant acts (especially serious damages to property and inter-personal violence) than females. He argued that this gender gap can be accounted for by several theories such as Biopsychological Theory, Social Control Theory, Social Learning, and General Strain Theory. According to Biopsychological Theory, males are more likely to have a higher degree of negative emotionality and a lesser degree of constraint than females. Also, females are more likely to be both smaller and weaker in their bodies. According to Social Control Theory, differences in social control lead to gender differences in deviance. That is, males are less likely to be supervised, punished, committed to school, and to be believers in conventional values than females. According to Social Learning Theory, males tend to have more deviant friends than females, which can lead to support for imitating deviance, buttressing deviance, and conducing deviant opportunities. In some new variant of this theory, it was argued that identities and gender-relevant values lead to a gender gap in deviance. In other words, such features as being aggressive, competitive, strong, and independent are seen as the norm for males, and conversely, being submissive, nurturing, weak, and dependent are seen as the norm for females. Agnew (2006) asserts that all these accounts are valid to explain gender differences in deviant behavior.

Unlike the above theories, Agnew argued that gender differences in deviance can be accounted for by the following three paths (Broidy and Agnew, 1997; Agnew, 2006**)**. First, males are more likely to experience

some *kinds* of strains which result in deviance. Such goals as financial success, the demands of the masculinity role, and autonomy are more likely to be important for males than females, and therefore when these goals are not achieved, this situation can lead to deviant acts. Whereas male strains lead to other-directed deviant acts (serious violence and theft), female strains lead to self-directed deviant acts (drug use, family violence, running away). Second, females and males are distinct from each other in terms of the emotional response to strain. While anger can occur as a reaction to strain for both genders, females tend to experience it with co-occurrences of some other emotions like anxiety, guilt, depression as well as others. Third, due to some differences in terms of the factors leading and not leading to deviant behaviors (e.g., tendency to commit deviance, social control), males incline to react to strain (or anger) with violent or property-related deviant acts. To sum up, according to General Strain Theory (Agnew, 2006), men, compared to women, tend to be more likely expose to strains which lead to crime. Also, men inclined to be more likely to deal with strains through criminal ways.

3. STRESS, COPING WITH STRESS, NEGATIVE EMOTIONS AMONG MALE AND FEMALE YOUTHS

Studies which dealt with such issues as stress, coping with stress, negative emotions among the Turkish male and female youths were sparse and, thus, not generalizable to the whole country. In general terms, the Turkish youth at attending the universities face with several crucial problems with which they need to be coped. These, for example, are becoming familiar with curriculum, passing classes, having new teachers and classmates, adjusting to their dormitory and new cities, missing their families, having a job after graduation. Naturally, all these factors create stress for students, and they, therefore, require some coping resources to overcome it. Stress and its accompanying negative emotions, and coping with both may vary from male to female.

On these issues, the Turkish studies on the stress level of university male and female students found a mixed finding. Whereas one study (Durna, 2006) found no gender differences on stress level at the university where the present study was conducted, the other study (Örücü & Demir, 2009) found a difference. However, although the latter finding was statistically significant, it was not a substantial difference (the mean perceived stress leve of male was 18.12, that of female was 20.12). One study pointed out that there existed gender differences regarding searching for social support (Cetin & Kuru, 2010): Female youth were more likely to be in search of social support. Again, although there was a statistical difference between males and females' mean scores (male= 23,68, female= 24,93), it was not a really a big

difference in substantial terms. Likewise, in some studies, there appeared to be a gender difference on search for social support (males and females' mean scores were 1,94 and 2,14, respectively), the same study, however, did not find any gender difference on turning to religion (Eksi, 2010). Again, the sex differences on social support did not seem to be in statistical but not in substantial terms. Although no published studies existed on gender differences on anger, some studies compared male and female youths on some other negative emotions, depression (Ceyhan, Ceyhan, & Kurtyilmaz, 2005; Ceyhan, Ceyhan, & Kurtyilmaz, 2009; Karaguven, 2009). In short, these studies did not find any major difference between male and female youths. On the basis of the very few studies on stress, negative emotions and coping resources in Turkey, research did not highlight important differences between male and female university students on these issues.

4. PREVIOUS STUDIES

The literature on the relationship between General Strain Theory and sex differences on deviant acts is almost limited only to the studies carried out in the United States (Agnew & Brezina, 1997; Broidy, 2001; Daigle, Cullen, & Wright, 2007; Hoffman & Cerbone, 1999; Hoffman & Su, 1997; Neff & White, 2007; Johnson & Morris, 2008; Liu & Lin, 2007; Mazerolle, 1998; Piquero & Sealcok, 2004; Robbers, 2004, except for Baron, 2007; Morash & Moon, 2007).

The prior research in relation to the thesis of this study can be put into two groups: those findings which underlined similarity and those which underlined differences. Concerning the first issue (e.g. gender similarity), research showed that strain had similar effects on both male and female deviant behavior (Daigle, Cullen, & Wright, 2007; Hoffman & Cerbone, 1999; Hoffman & Su, 1997; Mazerolle, 1998; Morash & Moon, 2007; Neff & White, 2007). For example, Hoffman and Cerbone (1999) examined the relationship between stressful life events and delinquency among the adolescents in the United States. Their findings showed that stressful life events had similar effects on male and female delinquency. Moreover, most research did not use anger in their tests of General Strain Theory. Few studies indicated that anger played a similar role in the explanation of male and female deviance (Baron, 2007; Piquero & Sealcok, 2004). Also, studies either did not use or did not aim to test gender differences in deviance in terms of criminal or non-criminal copings (e.g., Ostrowsky & Messner, 2005; Liu & Lin, 2007; Morash & Moon, 2007; Baron, 2007). Therefore, at this point, there was a lack of knowledge whether coping variables played any similar role in the accounts of sex differences in deviance.

As for the second issue (e.g., gender differences), studies reported that strain played a different role for male and female deviant behavior (Agnew & Brezina, 1997; Baron, 2007; Daigle, Cullen, & Wright, 2007; Johnson & Morris, 2008; Liu & Lin, 2007; Mazerolle, 1998; Piquero & Sealcok, 2004; Robbers, 2004; Sigfusdottir & Silver, 2008). For instance, Johnson and Morris (2008) tested the influence of the exposure to violence and school problems (as indicators of strain) on violent delinquency and property delinquency in a longitudinal study in the United States. They found that males were more likely to have been exposed to violence and school strain than females. Furthermore, some studies revealed that some negative emotions played a different role for male and female behavior (Broidy, 2001; Ostrowsky & Messner, 2005). For example, Broidy scrutinized the impacts of unfair outcomes, blocked goals, and stress on crime among the undergraduates in the United States. She (2001) reported that female youths were more opt to react to strain with non-aggressive negative emotions. Finally, although there were not many studies on the gender differences of using deviant or non-deviant coping strategies in response to strain, very few studies showed that males and females were distinct from one another in terms of coping resources (Broidy, 2001). Stated in detail, Broidy's study revealed that whereas female youth tended to be more likely to use legitimate coping strategies, male youth inclined to be more likely to use illegitimate coping strategies.

In Turkey, tests of criminological theories had been in increase for about a decade, and limited to investigations of several theories such as classic and general strain theories (e.g., Özbay, 2003; Özbay and Özcan, 2006a; Özbay, 2011), social bonding theory (e.g., Çam, 2010; Özbay and Özcan, 2006b), self-control theory (e.g., Özbay, 2008; Özbay and Köksoy, 2009), neutralization techniques (Ferzan, 2009). There had been only one study which was closely related to the aim of this study (Özbay and Özcan, 2006). According to this study, effects of strain variables on delinquent acts mostly played a similar role for both males and females.

In sum, the literature on the link between strain, anger, and coping mechanisms and gender in relation to deviant behavior is limited almost only to the research done in the United States. More important, the extant studies show support for both gender similarity and gender differences in the relationships in question. This key issue needs to be addressed with new studies especially outside the United States. Also, there have not been many studies that tested anger and coping behaviors in the context of General Strain Theory and gender. Although, the present study can not resolve these research gaps by itself, it contributes to the prior research by using a number of strains, anger in response to those strains, and some deviant and non-deviant coping variables in a developing country, Turkey.

5. METHOD

5.1. Data

A sample of 974 undergraduate students was obtained from the population of a relatively new public university in the Cappadocia region of Turkey in 2004. Stratified and quota sampling types were used to choose the students from the sampling framework. While stratified sampling strategy was utilized for four-year school students, quota sampling strategy was utilized for two-year school students. The main reason for using separate sampling strategies was that the two-year schools had undergone some structural changes (e.g., closing of some departments). Due to the unstable number of the student population in two-year schools at the time of the administration of the survey, 19 percent of the students were randomly selected (450 students) from the universe of this population without using any statistical formula. The reason for the stratified sampling strategy used for the four-year faculties was that it was presupposed that students from some faculties had a greater socio-economic status that students from some other faculties. As a result, from the list of the universe of the four-year faculties, a random sample of students was drawn by using the sampling proportionate to size procedure. The questionnaires were passed out to the students in such settings as classrooms, conference halls, and school canteens. The undergraduate students were told that the participation in the survey was confidential and voluntary. The rate of response for the survey was 75 percent.

The sample involved 62 percent day-time students. It was consisted of 62 percent of four-year undergraduate students. In addition, males composed 50 percent of the sample. The median parental income on a monthly basis was US$504. At the time of the survey, the government-defined minimum monthly income was US$204. The students' ages were varied from a low of 17 to a high of 38. The median age was 21.

5.2. Measures

5.2.1. Dependent Variables

Due to the low responses given to a number of deviant acts in the data, it became a requirement to use four dependent variables which relatively received high responses from the participants in the present study. These were violence, alcohol use, cigarette use, and cheating on exams. The respondents were asked to report in a prior year whether they used alcohol and cigarettes, acted in a violent way, and cheated on exams. For example, "Starting from the end of the last educational year, please indicate whether you were committed or exposed to the acts below." The acts included

violence, alcohol use, cigarette use, and cheating on exams. The response categories for the four dependent variable were *no* (= 0) and *yes* (= 1).

5.2.2. Independent Variables

5.2.2.1. Cumulative Strain

It included 35 items which tapped such strains as relative deprivation, blocked opportunity, absence of future opportunity, conflict in family, teacher-related strain, and failed courses (Cronbach's alpha = .85).[1] Overall, cumulative strain was recorded in such a way that higher scores corresponded to a higher level of strain.

5.2.2.2. Negative Emotion: Anger

Although anger was not the only negative emotion that mediated between strain and deviant behavior, however, this was the only negative emotion the data contained. Anger was an index which was composed of the answers to the following statements (Cronbach's alpha = .62): "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," "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." The response items for anger ranged from *never* (= 1) to *always* (= 4), and higher scores reflected higher anger. The question for anger index came from the study of Tittle, Ward, and Grasmick (2003).

5.2.2.3. Non-Criminal and Criminal Copings

Parental Control. It was operationalized by the degree of agreement to the following seven items (Cronbach's alpha = .80): "Does your father/male guardian get involved in your behavior in terms of flirtation, marital partner, friendships, religious worship, casting vote, clothing, and use of money?" Also, it was operationalized by the degree of agreement to the following seven items: "Does your mother/female guardian get involved in your behavior in terms of flirtation, marital partner, friendships, religious worship, casting vote, clothing, and use of money?" The response categories for these fourteen items were *no* (= 0) and *yes* (= 1). Finally, four questions related to the dimension of family supervision were asked: "How often would your mother/female guardian know who you are with?," "In the course of a day, how often would your mother/female guardian know where you are?," "How often would your father/male guardian know who you are with?," and "In the course of a day, how often would your father/male

guardian know where you are?" The response items ranged from *never* (= 1) to *always* (= 4). Because the above statements had different number of response items, all statements first were standardized and then summed so as to create a family control index.

Belief

It was operationalized by the following eight statements (Cronbach's alpha = .69): "I respect the police," "The police do not discriminate against people," "My family respects the police," "I respect the judge," "The judges were fair in their decisions," "I respect the law," "My family respects the law," and "The law is fair." The response categories were *no* (= 0) and *yes* (= 1).

Social Aid

It was operationalized by "Whether close relatives supported your [students'] family in terms of food, clothing, wood/coal etc?" The response categories were *no* (= 0) and *yes* (= 1).

Religiosity

It was operationalized by the following eight statements: "Whether the students prayed in the last year" "Whether the students fasted in the last year," "Whether the students read Kur'an in the last year," "Whether the students worshipped in the last year," "Whether the students conversed with friends on religious topics in the last year," "Whether the students read religious sections of books, magazines, and newspapers in the last year," "Whether the students listened/watched religiously-oriented radio, television in the last year," and "Whether the students accepted fate as true." An index of religiosity out of the eight statements was produced, and it was grouped into a low (= 0) and high religiosity (= 1).

Deviant Peers

It was operationalized by "Whether any of the students' best friends were detained by the police or the gendarme in the prior year?" The response options included *no* (= 0) and *yes* (= 1).

Risk Seeking

It was operationalized by responses to the following statements (Cronbach's alpha = .83): "I like to test myself every now and then by doing something a little risky," "Excitement and adventure are more important to me than security," "I sometimes find it exciting to do things for which I might get in trouble," and "Sometimes I will take a risk just for the fun of it." The response categories varied from *never* (= 1) to *always* (= 4). These statements were taken from Tittle, Ward, and Grasmick's research (2003).

5.2.2.4. Control Variables

Four control variables were used: Income, age, timing of education, and duration of school. Income was operationalized by asking "Who brought money in the family and how much did each person earn in a month?" The total amount of money per month was calculated and used in the analysis. Because the total family income was not distributed normally, its logarithmic transformation was used. Age was measured by "What is your age?" Timing of education was measured by "Do you take your courses during the day or night time?": *Evening time* (= 0), and *day time* (= 1). Duration of school was indirectly operationalized by whether "What is area of study?" On the basis of this information, students were put into two groups: *Two year university students* (= 0), and *four year university students* (= 1).

6. FINDINGS

Before exploring the multivariate results, it is important to examine gender differences according to the key variables used in the present study (Table 1). When the male and female differences in terms of deviant acts are examined, males are more likely to use cigarettes and alcohol, cheat on exams, and commit violence. Males are more likely to have a greater degree of cumulative strain than females. Males and females are not different from each other in terms of anger. However, males and females are distinct in terms of social aid, deviant peers, and risk seeking. That is, 20.4% of the overall males' families received some material aid from their relatives, 14.1% of the overall females' families received the same type of aid. Also, 20.8% of the overall male students' close friends were detained by the criminal justice agents, 6.5% of the overall female students' close friends were detained by the same agents.

Table 1. Descriptive Statistics

Variables	Female M	Female SD	Male M	Male SD	Difference Tests
Dependent variables					
Smoking	.45	.498	.62	.486	χ^2= 26.857*
Alcohol use	.21	.407	.47	.500	χ^2= 71.745*
Violence	.22	.416	.32	.467	χ^2= 11.424*
Cheating	.33	.471	.44	.496	χ^2= 10.825*
Independent variables					
Age	21.1	1.7	21.5	1.8	*t* = -3.056*
Parental monthly income (log)	-	-	-	-	-
Cumulative Strain	78.1	11.9	79.9	13.3	*t* = -1.951*
Anger	9.4	2.5	9.1	2.6	*t* = 1.645
Parental control (standardized)	-	-	-	-	-
Belief	6.0	1.5	5.8	1.8	*t* = 1.532
Social aid	-	-	-	-	χ^2= 6.401*
Religiosity	-	-	-	-	χ^2= .897
Deviant peer	-	-	-	-	χ^2= 40.118*
Risk seeking	6.8	2.4	7.7	2.7	*t* = -5.840*

* $p \leq .05$

6.1. Violence

Male Sample

The strain index had a significant positive impact on male violence (Model 1 through 3 in Table 2). Anger was more likely to lead to greater violence (Model 2 through 4). However, it slightly reduced the influence of the strain index on the dependent variable. In the final model (Model 4), the strain index was not related to male violence. Among the non-criminal and criminal coping variables, belief and deviant peers had significant impacts on the dependent variable: Whereas belief had a negative influence on male violence, deviant peers had a positive influence on it. None of the interactions of the strain index with the non-criminal and criminal coping variables (e.g., parental control, belief, social aid, religiosity, deviant peer, and risk seeking) were significant.

Female Sample

The strain index was positively related to female violence only in the first model. Anger also had a positive influence (Model 2 through 4 in Table 2). When anger entered into Model 2, the impact of the strain index disappeared. That is, the influence of strain on female violence was fully mediated by anger. None of the non-criminal and criminal coping variables were related to female violence. Of the overall six interactions, the interaction of the strain index with belief was the only significant one.

6.2. Alcohol Use

Male Sample

The strain index had a positive influence on male alcohol use only in Model 1 and 2 (Table 3). Anger was positively related to the dependent variable only in Model 2. When the non-criminal and criminal coping variables were included in Model 3, the impacts of strain and anger on alcohol use were reduced to non-significance. Belief, religiosity, deviant peers, and risk seeking had significant impacts on male alcohol use: While belief and religiosity exerted negative influences on alcohol use, deviant peers and risk seeking exerted positive influences on it. Of the overall six interactions, there only existed the interactions of the strain index with belief.

Female Sample

The strain index was more likely to have a positive influence on female alcohol use only in Model 1 and 2 (Table 3). Anger was not statistically significant in any of the models. Among the non-criminal and criminal coping variables, belief, religiosity, and risk seeking were associated with alcohol use. As before, while the impacts of belief and religiosity on alcohol use were negative, that of risk seeking was positive. Again, of the overall six interactions, there only existed the interactions of the strain index with belief.

6.3. Cigarette Use

Male Sample

The strain index had a positive impact on male cigarette use (Model 1 through 3 in Table 4). Likewise, an increase in anger was associated with an increase in the dependent variable (Model 2 through 4). The influence of strain on cigarette use was slightly mediated by anger. Risk seeking was the only significant criminal coping variable which had a positive effect on the dependent variable. No interactions were observed between the strain index and the criminal and non-criminal coping factors.

Female Sample

The strain index did not play any role in female cigarette use (Model 1 through Model 4 in Table 4). Anger was significant only in Model 2 where it first entered into the analysis. The criminal and non-criminal coping variables were not significant predictors. The interaction of the strain index with risk seeking was the only significant one.

6.4. Cheating

Male Sample

The strain index had a positive impact on male cheating during exams (only Model 1 and 2 in Table 5). Anger was not a significant predictor in any models. Among the non-criminal copings, social aid had a positive influence on the dependent variable. There were not any significant interactions between the strain index and the coping variables.

Female Sample

The strain index was positively related to female cheating (Model 1 through Model 3 in Table 5). Anger had a positive effect on cheating (Model 2 through Model 4). Parental control and religiosity were the only significant predicators among the coping variables: Although high religiosity was less likely to lead to cheating, high parental control was more likely to lead to it. There was only one significant interaction which occurred between strain and religiosity.

7. CONCLUSION

The present research aimed to focus on the one key theme in the deviance-gender literature: Do strain, anger, and coping variables have a similar impact on male and female deviance? Data for the study were gathered from a sample of 974 college students at a state university in 2004 in Turkey. The findings of the extant literature on the issue of gender differences in deviance concerning General Strain Theory can be put into two general groups: Gender similarity and gender differences. Although this study did not have the purpose of solving the gender-gap problem in the sociology of deviance, it might shed some light on it.

The findings showed that cumulative strain had a positive influence for both males and females. One important finding in terms of cumulative strain is that it was not statistically significant in all the final models. This seemed to indicate that the impact of strain on deviant acts was not direct, a finding which is in line with the main argument of General Strain Theory.

Similarly, anger plays a positive role for both sexes, especially when the dependent variables were violence for both sexes, male cigarette use, and female cheating. There existed some slight mediations of anger in the relationships between cumulative strain and deviant acts, but anger did not mostly act as a full mediating factor for both sexes, again a finding which is in harmony with the major thesis of General Strain Theory.

Generally, whereas criminal coping variables (e.g., deviant peers, risk seeking) had expected positive impacts on the deviant acts, non-criminal coping variables (e.g., religiosity, belief) had expected negative impacts. The

coping variables, to a lesser degree, appear to mediate the effects of strain on some deviant acts (male violence, male and female alcohol use, and male cigarette use). Relatedly, few interactions between cumulative strain and the coping variables occurred in the study.

When a "Z test" was carried out for *only* the *main* effects of the strain index, anger, and the criminal and non-criminal coping variables, there was only one significant difference between male and female deviants: Religiosity was more likely to result in a decrease in alcohol use for females than males. In other words, General Strain Theory played a similar role in relation to deviant behavior for both sexes, at least, according to the data used in the present study. The major thesis of General Strain Theory on male and female crime is that males are more likely to be exposed to strains leading to crime, and are more likely to cope with strains in a criminal fashion in comparison to females. Because the data used in the study generally highlighted *gender similiarity* than gender difference, the findings were not in favor of General Strain Theory. On the basis of this result, it would be very premature to have a final decision about the gender and General Strain Theory.

The current study contains some limitations which are needed to be taken into consideration when its findings are evaluated. First of all, the sample was restricted only to one public university. Second, university students are more likely to be a relatively less strained population in general. Third, owing to the restrictions inherent in the data, it was not possible to include different emotions other than anger. Fourth, some other criminal and non-criminal coping variables may be more important than the ones in the present study to increase or decrease the effect of strain on deviant behavior. Fifth, there is no control for prior criminal acts in the list of control variables, and this may lead to spurious relationships. Finally, measurements of some dependent and independent variables at the categorical or ordinal levels might result in less sounder findings.

Notes

1. *Relative deprivation* as one component of cumulative strain index was operationalized by the degree of agreement to such statements as "In general, I don't have as much money as other students in this school," "It bothers me that I don't have as much money to buy nice clothes as other students do," and "In general, my family is not as rich as other families [in the place where my family lives]." Furthermore, "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 first three statements were taken from Burton and Dunaway's study (1994), and the last two were gathered from Agnew, Cullen, Burton, Evans, and Dunaway's study (1996). *Perceived blocked opportunity* was operationalized by the subsequent seven statements: "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," "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," "Every time I try to get ahead, something or someone stops me," and "I would have been more successful." The response items ranged from *never agree* (= 1) to *strongly agree* (= 4). The first four statements were taken from Vowell and May's study (2000), and the last three statements were gathered from Burton, Cullen, Evans, and Dunaway's study (1994). *Absence of future employment opportunity* was operationalized by the following two statements: "What is the possibility of finding a work after graduating a university?" and "What is the possibility of finding work after completing a major?" The response categories varied from *very likely* (= 1) to *very unlikely* (= 4). *Conflict in family* was operationalized by the following statements: "How much do you get along with your father?," "How much do you get along with your mother?," and "How much do your mother and father get along with each other?" The response items varied from *always* (= 1) to *never* (= 4). *Teacher-relevant strain* was operationalized by the eighteen statements. For instance, the students were asked to indicate their agreements with "Our teachers do not discriminate against students on the basis of religion," "Our teachers do not discriminate against students on the basis of ethnicity," "Our teachers do not discriminate against students on the basis of ideology," "Our teachers do not discriminate against students on the basis of gender," and so on. The response categories ranged from *strongly agree* (= 1) to *strongly disagree* (= 4). *Failure in courses* was operationalized by "In the previous academic terms (including the current term), how many courses did you fail?" The response categories covered *zero* (= 0), *one-two* (= 1), *three-four* (= 2), *five and over failures* (= 3).

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Table 2. Logistic Regression Analysis of Violence and Gender

	Male (n = 321)				**Female** (n = 265)				
Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Z Test
Control Variables	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	(Only Model 4s)
Age	.000	.039	.016	.018	.141	.148	**.170***	**.178***	
	(.072)	(.075)	(.078)	(.079)	(.096)	(.096)	(.100)	(.103)	
Parental Monthly Total Income (log)	.204	.160	-.146	-.142	**1.923****	2.041	**2.072*****	**2.104*****	
	(.401)	(.406)	(.434)	(.441)	(.641)	(.649)	(.668)	(.687)	
Strain Variable									
Strain Index	**.030*****	**.027****	**.020***	.011	**.029****	.023	.022	-.011	-
	(.010)	(.010)	(.011)	(.050)	(.014)	(.014)	(.016)	(.157)	
Negative Emotion									
Anger		**.143****	**.118****	**.130****		**.136****	**.128***	**.150****	-.233
		(.048)	(.050)	(.052)		(.065)	(.066)	(.069)	
Copings									
Parental Control			-.007	-.012			.011	.018	-
			(.016)	(.017)			(.020)	(.021)	
Belief			-.126	**-.149***			.000	-.134	-
			(.079)	(.090)			(.119)	(.127)	
Social Aid (=yes)			-.353	-.549			-.032	.019	-
			(.334)	(1.383)			(.434)	(.445)	
Religiosity (=high)			-.359	-.266			.177	.101	-
			(.259)	(.270)			(.332)	(.344)	
Deviant Peer (=yes)			**.655***	**.690****			-.456	-.345	-
			(.313)	(.327)			(.707)	(.749)	
Risk Seeking			-.026	-.037			.053	.043	-
			(.050)	(.053)			(.068)	(.075)	
Interactions									
Strain Index * Parental Control				.019				-.005	
				(.016)				(.022)	
Strain Index * Belief				.056				**.663****	
				(.108)				(.262)	
Strain Index * Social Aid				.455				-.684	
				(.406)				(.522)	
Strain Index * Religiosity				-.279				.079	
				(.268)				(.409)	
Strain Index * Deviant Peer				.114				.252	
				(.327)				(.997)	
Strain Index * Risk Seeking				.038				.328	
				(.135)				(.220)	
Constant	-3.432	-5.243	-2.096	-1.317	-12.306	-13.608	-14.359	-11.318	
Model Chi-Square	11.604**	20.752**	32.294***	36.476**	19.011**	23.440***	25.041**	33.604	
Cox & Snell	.036	.063	.096	.107	.069	.085	.090	.119	
Nagelkerke	.049	.087	.133	.149	.107	.131	.139	.184	

*p ≤ .10, ** p ≤ .05, *** p ≤ .01. Note: Due to the space limitations here and in the following tables, timing of schooling and duration of schooling as the control variables were not included. Also, z tests were done only for strain index, anger, and the coping variables here and in the following tables wherever it was necessary.

Table 3. Logistic Regression Analysis of Alcohol Use and Gender

	Male (n = 317)				**Female** (n = 266)				
Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Z Test
Control Variables	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	(Only Model 4s)
Age	.070	.097	.116	.121	.071	.072	.043	.050	
	(.071)	(.073)	(.080)	(.083)	(.092)	(.092)	(.100)	(.102)	
Parental Monthly Total Income (log)	**1.597*** **	**1.564*** **	**1.065** **	**1.061** **	**2.228*** **	**2.245*** **	**2.063** **	**1.999** **	
	(.421)	(.421)	(.452)	(.464)	(.625)	(.628)	(.699)	(.719)	
Strain Variable									
Strain Index	**.034*** **	**.032*** **	.014	-.046	**.024***	**.023***	.013	-.051	-
	(.009)	(.010)	(.011)	(.060)	(.014)	(.014)	(.016)	(.142)	
Negative Emotion									
Anger		**.094** **	.050	.043		.021	-.054	-.038	-
		(.047)	(.051)	(.053)		(.065)	(.074)	(.076)	
Copings									
Parental Control			-.021	-.019			-.023	-.019	-
			(.016)	(.017)			(.022)	(.023)	
Belief			**-.261** **	**-.175***			**-.296** **	**-.274** **	.596
			(.091)	(.101)			(.124)	(.132)	
Social Aid (=yes)			.348	.420			.343	.494	-
			(.333)	(.345)			(.442)	(.464)	
Religiosity (=high)			**-.995*** **	**-1.073*** **			**-1.154*** **	**-1.206*** **	**2.832*** **
			(.266)	(.280)			(.354)	(.377)	
Deviant Peer (=yes)			**.647***	**.758** **			.221	.511	-
			(.345)	(.357)			(.678)	(.704)	
Risk Seeking			**.090***	**.100***			**.212*** **	**.238*** **	-1.506
			(.052)	(.054)			(.070)	(.074)	
Interactions									
Strain Index * Parental Control				-.002				-.004	
				(.017)				(.025)	
Strain Index * Belief				**-.415** **				**.017** **	
				(.177)				(.268)	
Strain Index * Social Aid				-.285				.478	
				(.385)				(.528)	
Strain Index * Religiosity				.284				.017	
				(.287)				(.268)	
Strain Index * Deviant Peer				.421				.599	
				(.387)				(.900)	
Strain Index * Risk Seeking				-.076				.003	
				(.138)				(.216)	
Constant	-8.341	-9.517	-5.545	-1.529	-10.817	-11.024	-7.845	-3.290	
Model Chi-Square	37.823***	41.806***	79.510***	88.485***	18.374	18.477	51.638	59.590	
Cox & Snell	.112	.124	.222	.244	.067	.067	.176	.210	
Nagelkerke	.150	.165	.296	.325	.102	.102	.269	.306	

*p ≤ .10, ** p ≤ .05, *** p ≤ .01.

Table 4. Logistic Regression Analysis of Cigarette Use and Gender (n = 320)

	Male (n = 320)				**Female** (n = 268)				
Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Z Test
Control Variables	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	(Only Model 4s)
Age	.077	.115	.123	.119	.104	.110	.118	.121	
	(.073)	(.075)	(.078)	(.079)	(.081)	(.082)	(.086)	(.088)	
Parental Monthly Total Income (log)	.434	.379	.118	.027	**1.591*** **	**1.661*** **	**1.517** **	**1.607*** **	
	(.401)	(.409)	(.436)	(.446)	(.498)	(.502)	(.509)	(.520)	
Strain Variable									
Strain Index	**.040*** **	**.037*** **	**.025** **	-.042	.014	.009	.005	-.041	-
	(.010)	(.010)	(.011)	(.055)	(.011)	(.012)	(.013)	(.112)	
Negative Emotion									
Anger		**.127** **	**.095***	**.095***		**.097***	.075	.060	-
		(.048)	(.051)	(.052)		(.055)	(.057)	(.058)	
Copings									
Parental Control			-.020	-.020			.008	.009	-
			(.016)	(.016)			(.017)	(.017)	
Belief			-.102	-.077			-.115	-.123	-
			(.088)	(.094)			(.101)	(.106)	
Social Aid (=yes)			.541	.549			.211	.188	-
			(.342)	(.350)			(.364)	(.372)	
Religiosity (=high)			-.264	-.291			-.388	-.401	-
			(.264)	(.270)			(.271)	(.276)	
Deviant Peer (=yes)			.295	.337			.053	.092	-
			(.348)	(.350)			(.533)	(.599)	
Risk Seeking			**.109** **	**.114** **			.084	.096	-
			(.054)	(.054)			(.059)	(.062)	
Interactions									
Strain Index * Parental Control				.002				.002	
				(.016)				(.017)	
Strain Index * Belief				-.150				-.040	
				(.142)				(.195)	
Strain Index * Social Aid				.007				.212	
				(.388)				(.402)	
Strain Index * Religiosity				.117				.283	
				(.269)				(.319)	
Strain Index * Deviant Peer				.453				.211	
				(.362)				(.712)	
Strain Index * Risk Seeking				-.136				**-.288***	
				(.139)				(.173)	
Constant	-5.535	-7.114	-5.614	-.111	-7.869	-8.739	-7.674	-4.227	
Model Chi-Square	21.722***	28.903***	42.565***	45.715***	21.681***	24.806***	31.048**	37.059**	
Cox & Snell	.066	.086	.125	.133	.078	.088	.109	.129	
Nagelkerke	.090	.118	.171	.183	.104	.118	.146	.173	

*p ≤ .10, ** p ≤ .05, *** p ≤ .01.

Table 5. Logistic Regression Analysis of Cheating and Gender

	Male (n = 320)				**Female** (n = 269)				
Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Z Test
Control Variables	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	B *(Std. Error)*	(Only Model 4s)
Age	-.041	-.028	-.028	-.017	.002	.010	.034	.035	
	(.069)	(.070)	(.071)	(.073)	(.081)	(.081)	(.085)	(.087)	
Parental Monthly Total Income (log)	-.183	-.207	-.228	-.233	-.178	-.091	-.218	-.315	
	(.379)	(.381)	(.405)	(.410)	(.476)	(.481)	(.497)	(.512)	
Strain Variable									
Strain Index	**.021****	**.020****	.014	.010	**.034****	**.029****	**.023***	.003	-
	(.009)	(.009)	(.010)	(.046)	(.012)	(.012)	(.013)	(.115)	
Negative Emotion									
Anger		.051	.038	.037		**.133****	**.123****	**.133****	-
		(.044)	(.047)	(.047)		(.057)	(.059)	(.061)	
Copings									
Parental Control			-.019	-.020			**.037****	**.039****	-
			(.015)	(.015)			(.017)	(.018)	
Belief			-.030	-.074			-.127	-.080	-
			(.074)	(.084)			(.100)	(.106)	
Social Aid (=yes)			**.573***	**.584***			-.321	-.399	-
			(.300)	(.312)			(.397)	(.432)	
Religiosity (=high)			.160	.171			**-.506***	**-.529***	-
			(.243)	(.251)			(.286)	(.294)	
Deviant Peer (=yes)			.158	.168			.299	.506	-
			(.302)	(.313)			(.527)	(.586)	
Risk Seeking			.054	.042			.080	.093	-
			(.047)	(.048)			(.060)	(.062)	
Interactions									
Strain Index * Parental Control				.010				.015	
				(.014)				(.020)	
Strain Index * Belief				.116				-.286	
				(.100)				(.226)	
Strain Index * Social Aid				.156				.685	
				(.128)				(.526)	
Strain Index * Religiosity				-.041				**-.568***	
				(.328)				(.345)	
Strain Index * Deviant Peer				-.018				.215	
				(.247)				(.730)	
Strain Index * Risk Seeking				.030				-.191	
				(.306)				(.184)	
Constant	-.668	-1.259	-1.103	-.605	-2.504	-3.748	-3.040	-1.726	
Model Chi-Square	6.921	8.269	16.308	18.932	10.400*	16.046**	26.554**	32.944**	
Cox & Snell	.021	.026	.050	.057	.038	.058	.094	.115	
Nagelkerke	.029	.034	.067	.077	.052	.080	.129	.159	

*p ≤ .10, ** p ≤ .05, *** p ≤ .01.