

Moving Beyond Anger and Depression:
The Effects of Anxiety and Envy on Maladaptive Coping

by

Ana Rosa Zuniga

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Graduate Supervisory Committee:

Kristy Holtfreter, Chair
Michael Reisig
Xia Wang

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ABSTRACT

General Strain Theory (GST) posits that different types of strain lead to different types of negative emotions, some of which increase the likelihood of maladaptive coping. Much research on GST has focused on anger and depression. Far less attention has been directed toward other negative emotions, including anxiety and envy. The current study uses cross-sectional data from surveys administered to a university-based sample (N = 500) to address these voids and explore gender differences in the effects of strain and negative emotions in maladaptive coping. Results indicate that when gender differences existed in levels of strain and negative emotions, females experienced higher levels than males. Strain significantly predicted all four measures of negative emotions examined in this study. Finally, different negative emotions were found to have differing effects on different measures of maladaptive coping. Implications of this study for theory, future research, and policy are discussed.

TABLE OF CONTENTS

	Page
LIST OF TABLES.....	iv
LIST OF FIGURES.....	v
INTRODUCTION.....	1
REVIEW OF LITERATURE.....	2
CURRENT FOCUS.....	8
METHODS.....	10
Data.....	10
Dependent Variables.....	11
Independent Variable.....	12
Demographic Variables.....	14
ANALYTIC STRATEGY.....	15
RESULTS.....	15
Bivariate Results.....	15
Mean Differences.....	17
Multiple Linear Regressions.....	18
Ordered Logistic Regressions.....	21
DISCUSSION.....	26
REFERENCES.....	30
APPENDIX A.....	33
APPENDIX B.....	35

	Page
APPENDIX C.....	37

LIST OF TABLES

Table	Page
1. Bivariate Correlation Matrix and Summary Statistics.....	16
2. Mean Differences between Females and Males in Strain, Negative Emotions and Coping.....	17
3. The Effect of Strain on Anger and Depression.....	19
4. The Effect of Strain on Anxiety and Envy.....	20
5. The Effect of Strain and Negative Emotions on Going Home with a New Friend.....	22
6. The Effect of Strain and Negative Emotions on Requesting a Fake Driver's License.....	24
7. The Effect of Strain and Negative Emotions on Criminal Offending.....	25

LIST OF FIGURES

Figure	Page
1. Theoretical Framework of General Strain Theory.....	3
2. Three-Factor Higher Order Model.....	13

Introduction

According to Agnew's General Strain Theory (GST), crime and other types of deviant behavior are methods some individuals use to cope with negative emotions that derive from different types of strains. Agnew (1992) outlined three general categories of strain: the inability to obtain any positively valued goal, the removal of positive stimuli, and the presentation of negative stimuli. These three types of strain, Agnew argued, would lead to different types of negative emotions that would in turn result in different types of crime. Agnew (2001) later discussed different types of strain that would be more likely to lead to criminal behavior. A large body of research has continued to find support for GST and more specific strains have been deemed criminogenic. However, the process that led to the identification of these specific strains is a result of research focus on anger.

The mediating effect of negative emotions has been widely neglected in GST research. When negative emotions apart from anger have been incorporated into tests of GST, negative emotions tend to be combined into a measure of cumulative negative emotions other than anger (Broidy, 2001; Francis, 2014; Jang, 2007), or are tested along with very specific strain measures (Moon et al., 2009a; Moon et al., 2009b; Piquero & Sealock, 2000, 2004). Because individuals experience different types of strain and different types of emotions in response to these strains (Broidy & Agnew, 1997), it is important to test measures of individual negative emotions along with basic types of strains to truly understand the effect of these other negative emotions on maladaptive coping.

The current study addresses this gap in the literature by examining the individual effects of anger, depression, anxiety, and envy on maladaptive coping. Gender differences in the effect of these negative emotions on coping are also observed. Using cross-sectional data from a university-based sample, linear regressions are used to observe the effect of strain on each negative emotion. Several ordered logistic regressions are then used to determine whether different types of negative emotions mediate the effect of strain on maladaptive coping.

Review of Literature

According to GST, when people experience undesirable situations they are left with negative emotions that create pressure for coping. People usually cope with their negative emotions in legitimate ways, but experiencing certain negative emotions may cause people to be more likely to cope with deviant or criminal behavior (Agnew, 1992, 2001, 2007). The processes leading to maladaptive coping are complex due to the many different types of strains people may experience, their subjective interpretation of the events, and several conditioning variables such as personal characteristics and contextual circumstances (Agnew, 2013). Agnew (1992) argued that strains could be categorized into three main types of strain. These categories are goal blockage, the removal of positive stimuli, and the presentation of negative stimuli. He also posited that while some situations would be strenuous for most people (and thus considered objective strains), it is also important to consider people's personal experience in the situation. The level of strain experienced is very unique to individuals experiencing different strains given their

specific situation and personality (Agnew, 2001, 2006a, 2013). Figure 1 summarizes the theoretical framework of GST.

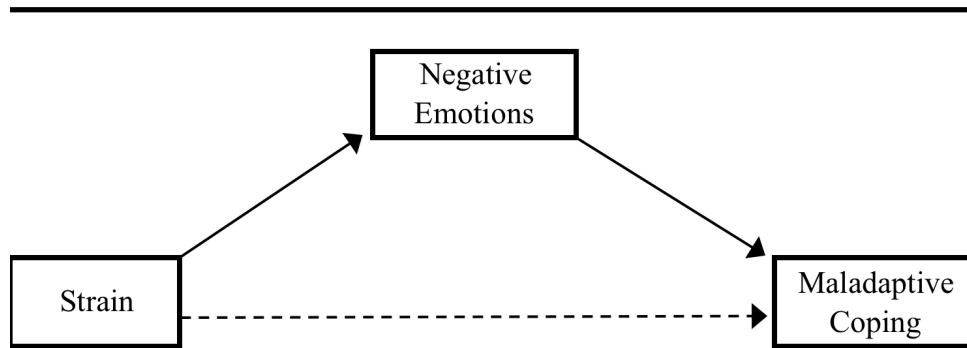


Figure 1. Theoretical Framework of General Strain Theory

The necessity to consider gender differences in types of strains experienced further complicates the process that leads to maladaptive coping (Broidy & Agnew, 1997; Sigfusdottir & Silver, 2009). Broidy and Agnew (1997) argued that these differences could help explain why there is a gender gap in crime. Subsequent research has found that males and females experience different types of strain (Jang, 2007; Sigfusdottir & Silver, 2009), though the levels of strain have been found to be higher for females (Sigfusdottir & Silver, 2009). To better understand the gender differences in maladaptive coping, the mediating influence of negative emotions must be observed. Broidy and Agnew (1997) also argued that, because males and females experience different types of strain, it is also very likely that males and females experience different types of negative emotions in response to the strains.

Due to a consequential pressure to correct a wrong, combined with a mitigated concern for consequences, anger has come to hold “a special place in GST” (Agnew,

2013, p. 656). Not only has anger been found to be correlated with the three basic types of strain (Agnew, 2006; Broidy, 2001), but further research has also identified specific strains that may be more conducive to crime. Such strains include parental rejection, familial conflict, and criminal victimization and discrimination (Agnew, 2013; Aseltine et al., 2000; Jang, 2007; Moon et al., 2009a; Moon et al., 2009b;). The majority of coping measures predicted by anger are violent and aggressive actions (Aseltine et al., 2000, Mazerolle & Piquero, 1997; Piquero & Sealock, 2000, 2004). Less common are positive and significant findings regarding anger's correlation with nonviolent crimes and deviance, such as status offenses (Moon et al., 2009b), general delinquency (Moon et al., 2008), theft (Botchkovar, 2009), and disordered eating (Piquero et al., 2010).

There have been mixed findings regarding the level of anger experienced by males and females and whether the differences are significant. Some studies have found that females and males experience comparable levels of anger as a result of strain (Broidy, 2001; Piquero & Sealock, 2004; Piquero et al., 2010; Sigfusdottir & Silver, 2009), while others have found that females experience significantly higher levels of anger than males (Francis, 2014; Jang, 2007). Research has found that both males and females use deviance to cope with anger, although this is significantly more so the case for males than females (Broidy, 2001; Francis, 2014; Jang, 2007; Piquero & Sealock, 2004; Sigfusdottir & Silver, 2009).

In an effort to explain non-violent coping, the roles of negative emotions other than anger have been included in tests of GST, specifically depression and anxiety. These emotions have been expected to have a different result than anger, since the pressure to

correct a wrong may not be as strong for these emotions (Agnew, 2006a). Instead of aggressive and violent actions toward others, depression and anxiety have been assumed to cause individuals to act in ways that are self-harming (Agnew, 2006a; Broidy & Agnew, 1997). Some of these expected actions include eating disorders, suicidal behavior, and drug and alcohol use (Agnew, 2006a, 2013; Broidy & Agnew, 1997). For the most part, negative emotions other than anger have been combined to form one single variable. Broidy (2001) combined depression, anxiety, and worthlessness along with emotions closely related to anger, such as frustration and resentment into one measure of negative emotions. Subsequent studies have combined depression and anxiety, with an explanation that this practice is consistent with mental health research methods and classification purposes (Francis, 2014; Jang, 2007).

When compared to males, the empirical evidence indicates that females experience negative emotions other than anger at significantly higher levels (Broidy, 2001; Jang, 2007). Francis (2014) found that while depression and anxiety jointly had no effect on deviance for males, there was a significant effect on drug use for females. In addition to predicting drug use, depression and anxiety together reduced the effect of anger on aggression for females, but not for males. These findings must be interpreted with caution because even though anxiety and depression items usually accompany each other, scale items within the joint measure could be driving the results (Essau et al., 2012). Looking at anxiety alone, Aseltine et al. (2000) found that anxiety had no mediating effect on deviance, as strain retained its significance in predicting nonaggressive, aggressive, and drug related measures of delinquency. Subsequent

research has neglected to further test anxiety's independent effect on deviant and criminal behavior.

More often it has been the case that depression is examined independently. In these studies, depression does not tend to have a significant effect on aggression, violence, or status offenses (Moon et al., 2009b; Piquero & Sealock, 2000, 2004). Depression has been found to be a positive and significant predictor of prescription drug misuse and disordered eating (Holtfreter et al., 2015; Piquero et al., 2010) In a separate study, however, depression was negatively and significantly correlated with property offenses (Moon et al., 2009b). While a negative relationship may appear to oppose GST assumptions, it is important to note that this type of finding is consistent with the notion that different types of negative emotions lead to different types of coping. This is especially the case because there are "hundreds of coping strategies from which to choose" (Agnew, 2013, p. 666). Research has found that everyday actions, such as exercising and participating in enjoyable activities, are the most common coping method used by males and females with mild levels of depression. These activities were abandoned as levels of depression increased, and methods such as seeking professional help and drinking took their place (Jorm et al., 2004). Agnew (2013) suggests that deviance may be considered a viable coping option to some people as a method to alleviate these internalizing emotions when non-deviant behaviors fall short in alleviating their depression.

The amount of focus geared toward anger and depression in criminological research testing GST may be the result of the correlations with violent and self-harming

behaviors, respectively. To move forward with GST research, anxiety should be explored independently. This focused attention can lead to a better understanding of the emotion and the circumstances that provoke deviant coping in anxious individuals. Another way to move forward with GST research is to examine different negative emotions. Agnew (2006a, 2006b) suggested the examination of malicious envy. Like anger, perceived injustices play a role in the experience of envy (Agnew 2006b). The circumstances surrounding envy, however, are unique in that elements of internalized negative emotions also accompany envy (Miceli & Castelfranchi, 2007).

According to Miceli and Castelfranchi (2007), there are three components to envy. First is the yearning or the desire to have what one does not have, but somebody else does. There are many outcomes that could be desired, from physical objects to praise for a job well done. Miceli and Castelfranchi (2007) discuss that people are interested in what others think of them and strive to have a good public- and self-image, which facilitates comparing oneself to others. When a person possesses what another individual wants, the latter person is then left with feelings of inferiority. The second component of envy is the suffering that accompanies the feelings of inferiority. People may be willing to express how they feel at this point, but refer to their emotions as admiration. The third component is a feeling of helplessness and not being able to surpass the self-identified inferiority. It is this component that incorporates feelings of injustice with helplessness, and turns admiration into a malicious negative emotion (Miceli & Castelfranchi, 2007).

In a study testing the theory of relative deprivation, Bernburg and his colleagues (2009) examined how students' reference groups, those to whom they compare

themselves, level of deprivation was associated with anger and delinquency. While they did not discuss envy directly as a predictive measure, the study examined how comparing oneself to others in similar and dissimilar financial situations led to feelings of injustice, inferiority, and anger. They found that delinquency could be predicted by a person's level of deprivation, but only when their reference group included individuals who were more affluent than them (Brenburg et al., 2009). A study of the effect of envy on deviant behavior found that higher feelings of envy increased the likelihood of behaviors aimed at sabotaging the work of the person being envied (Cohen-Carash & Mueller, 2007). This was only the case in situations where level of perceived unfairness was also high.

Current Focus

One focus of the current study is to examine gender differences in levels of strain and negative emotions. Research has found that females experience higher levels of strain than males (Broidy, 2001; Sigfusdottir & Silver, 2009). Additional studies have revealed that compared to males, females experience higher levels of anger (Francis, 2014; Jang, 2007), depression (Sigfusdottir & Silver, 2009), and other negative emotions in general (Broidy, 2001; Francis, 2014).

Hypothesis 1: The level of strain experienced by females will be significantly higher than levels of strain experienced by males.

Hypothesis 2: Females will have significantly higher levels of negative emotions than males.

The second focus of this study is the effect of strain on negative emotions and maladaptive coping methods. In prior research, strain measures have been significantly

correlated with anger and depression (Broidy, 2001; Sigfusdottir & Silver, 2009). Specific strains such as family conflict, criminal victimization, discrimination, and parental abuse were significantly correlated to aggression, property crimes, and status offenses (Moon et al., 2009b ; Piquero & Sealock, 2000). Cumulative strain measures were also significantly correlated with violent, non-violent, and non-criminal maladaptive coping methods (Moon et al., 2009a; Piquero et al., 2009).

Hypothesis 3: The relationship between strain and negative emotions will be positive and statistically significant for both males and females.

Hypothesis 4: The relationship between strain and maladaptive coping will be statistically significant for both males and females.

Finally, the current study examines gender differences in the types of negative emotions that mediate the relationship between strain and maladaptive coping. Broidy and Agnew (1997) argued that males and females react differently to negative emotions. Subsequent research found that gender differences exist in the types of negative emotions that lead to delinquency and maladaptive coping. Anger has been found to predict maladaptive coping for males (Broidy 2001; Piquero et al., 2009) and depression and anxiety have been found to have a mediating effect on maladaptive coping for females (Francis, 2014). Because envy has not been tested within the GST framework, it is not yet known whether this complicated emotion will have differing effects for females and males.

Hypothesis 5: Anger will have a mediating effect on the relationship between strain and maladaptive coping for males.

Hypothesis 6: Depression and anxiety will have a mediating effect on the relationship between strain and maladaptive coping for females.

Hypothesis 7: Envy will have a mediating effect on the relationship between strain and maladaptive coping for both males and females.

Methods

Data

The current study uses data from surveys administered at Arizona State University (ASU) in the fall 2014 and spring 2015 semesters. At the time of the data collection, 67,507 undergraduate students were attending classes in four campuses located throughout the Phoenix metropolitan area and enrolled in courses online. With an undergraduate acceptance rate of 81% in 2014, and a student body made up of individuals from all 50 states and over 100 countries, ASU has a culturally and intellectually diverse population.

The survey, which took about fifteen minutes to administer, was approved by the university's Institutional Review Board and was distributed in twelve undergraduate courses in criminology and criminal justice. Ten sections of introduction to criminology and criminal justice were surveyed. This course fulfills a general education requirement for students of all majors. The final two courses, surveyed for convenience, were upper division courses in discretionary justice and community corrections. Participants were advised of the steps taken to protect their anonymity and their participation was completely voluntary. Members of the research team were present to answer any questions. Of the 507 students who were invited to participate, only 5 declined. After

imputing missing cases (only 1.43% of cells were missing) using similar-response pattern imputation (SRPI) with PRELIS 9.1 (Scientific Software International, Chicago, Illinois), complete data was available for 500 respondents.

The sample consisted of 296 females (59.2%) and 204 males (40.8%). In regard to their racial and ethnic background, 229 participants were Caucasian (45.8%), 171 were Hispanic (34.2%), 23 were African American (4.6%), 34 were Asian (6.8%), 11 were Native American (0.2%) and 32 participants selected “other” and/or identified with more than one category (6.4%). In terms of age, 165 were 18 years old (33%), 119 were 19 (23.8%), 58 were 20 years old (11.6%), and 158 were 21 years or older (31.6%). When compared to the undergraduate population at ASU, the sample consisted of slightly higher percentages of women and racial minorities.

Dependent Variables

Maladaptive Coping. Participants were asked to read two hypothetical scenarios and report how likely they would be to cope in a maladaptive manner on a 4-point Likert-type scale (1 = very unlikely to 4 = very likely). The first item asked, if the person was not yet 21 years old, how likely would the person be to ask his or her friend for a fake driver’s license in order to misrepresent their age and gain access into an establishment that only allows people who are over the age of twenty-one. The second item asked how likely it would be that they would leave a party with somebody they just met. Participants were asked if the stories were realistic and if they could imagine the stories clearly. Although participants were not asked to report their actual behavior, research has found that measures of intention are close reflections of behavior (Ajzen, 1991). For both

scenarios, over 90% of participants reported the scenarios were realistic and could be pictured clearly. Refer to Appendix A for the two scenarios.

Criminal Offending. Criminal offending was measured using an 8-item scale. Items such as littering, buying items believed to be stolen, using marijuana or other drugs, and damaging another person's property were included in the scale (Cronbach's $\alpha = 0.73$; mean item-total $r = 0.25$; mean inter-item total $r = 0.42$). Refer to Appendix A for the criminal offending scale items.

Independent Variables

Strain. Broidy's (2001) "stressful events scale" was used to operationalize strain. Participants reported whether they experienced each of the 21 events in the scale in the past year (0 = never, 1 = once or more times). Items in the scale were categorized to reflect three types of strain: goal blockage, the removal of positive stimuli and the presence of negative stimuli. A higher-order factor model was estimated using Mplus 6.11 (Muthen & Muthen, Los Angeles). Figure 2 depicts this model. The goal blockage measure included three items: receiving a bad grade (0.79, $p \leq 0.001$), failing an exam (0.66, $p \leq 0.001$), and having money problems (0.44, $p \leq 0.001$). Four items measured the removal of positive stimuli: breaking up with an intimate partner (0.60, $p \leq 0.001$), having a close friend or intimate partner move away (0.73, $p \leq 0.001$), moving away from a close friend or intimate partner (0.64, $p \leq 0.001$) and having someone close pass away (0.57, $p \leq 0.001$). The four items that made up the presentation of negative stimuli include being a victim of a crime (0.67, $p \leq 0.001$), being physically harassed or abused (0.90, $p \leq 0.001$), being sexually harassed or abused (0.80, $p \leq 0.001$), and being

discriminated against on the basis of sex, race, religion, or sexual orientation ($0.62, p \leq 0.001$). A measure for total strain was made up of goal blockage ($0.59, p \leq 0.001$), the presentation of negative stimuli ($0.74, p \leq 0.001$) and the removal of positive stimuli ($0.75, p \leq 0.001$). (CFI = 0.92, TLI = 0.90, RMSEA = 0.06). Refer to Appendix B for a full list of the strain scale items.

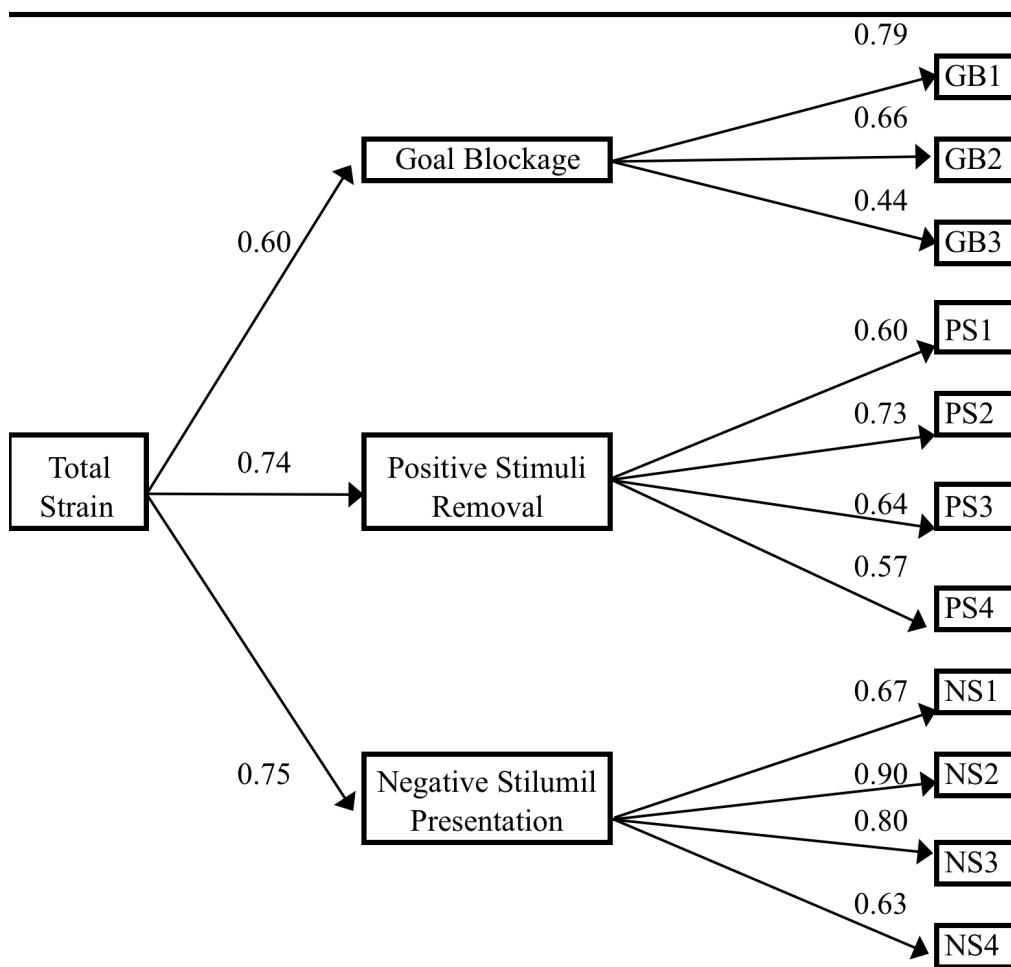


Figure 2. Three-factor higher order model.
 Note. All paths are significant ($p < 0.01$).

Negative Emotions. To measure negative emotions, participants were asked whether they agreed with a series of statements using a 4-point, closed-ended response set (1 = strongly disagree to 4 = strongly agree). A six-item scale was used to measure anger, with items including “I feel angry most of the time,” and “I feel angry about what I have to look forward to” (Cronbach’s $\alpha = 0.83$; mean item-total $r = 0.45$; mean inter-item total $r = 0.60$). Depression was measured using a five-item scale (Cronbach’s $\alpha = 0.67$; mean item-total $r = 0.30$; mean inter-item total $r = 0.44$). Statements measuring depression included “I feel pretty worthless right now,” and “I prefer to go home rather than going out and doing things.” Anxiety was measured using a seven-items scale with statements such as, “I am unable to relax,” and “I worry a lot” (Cronbach’s $\alpha = 0.80$; mean item-total $r = 0.37$; mean inter-item total $r = 0.54$). Envy was measured by using a five-item scale, with statements including, “It is so frustrating to see some people succeed so easily,” and “Frankly, the success of other students makes me resent them” (Cronbach’s $\alpha = 0.80$; mean item-total $r = 0.44$; mean inter-item total $r = 0.58$). All negative emotion scales were coded so that higher scores represent higher levels of negative emotions. Refer to Appendix B for a full list of the negative emotions’ scale items.

Demographic Variables

Two demographic control variables are included in the regression analyses to guard against spuriousness. Age is a 4-point scale, ranging from 18 years to 21 years and over. Race was dummy-coded into three groups: Hispanic, other racial minority, and Caucasian (the reference category). For the purpose of this study, gender is not used as a

control variable. Separate models are estimated for the total sample as well as for males and females. This method is consistent with theoretical expectations and prior research.

Analytic Strategy

Bivariate relationships were first estimated to examine whether collinearity exists between variables used in this study. Several stages of analyses were subsequently performed to test the research hypotheses. Mean differences and their significance were compared between female and male participants. The means for the total sample are also presented. Next, a multiple linear regression was used to observe the relationship between strain and negative emotions, controlling for age and race. Then, three ordered logistic regression models were estimated. The first ordinal regression was performed to determine the extent to which strain and each negative emotion can predict staying the night with a new friend. The second ordinal regression was performed using the same independent variables to predict requesting a fake driver's license from a friend. Lastly, an ordinal regression was estimated to determine the effect of the independent and demographic variables on criminal offending. Robust standard errors are used to adjust for heteroscedastic errors that were revealed through a series of Breusch-Pagan tests.

Results

Bivariate Results

The bivariate correlation matrix and summary statistics for the variables in this study are found in Table 1. The three dependent variables are all significantly correlated, with criminal offending and going home with a new friend having the strongest correlation ($r = 0.53$, $p \leq .01$). All four negative emotions are also significantly

Table 1: Bivariate Correlation Matrix and Summary Statistics (n=500)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Going Home with a New Friend	1.00												
2 Requesting a Fake Driver's License	0.26**	1.00											
3 Criminal Offending	0.34**	0.53**	1.00										
4 Strain	0.06	0.19**	0.30**	1.00									
5 Anger	0.08	0.10*	0.11*	0.22**	1.00								
6 Depression	0.00	-0.08	-0.06	0.15**	0.58**	1.00							
7 Anxiety	-0.07	-0.02	-0.05	0.24**	0.56**	0.69**	1.00						
8 Envy	0.06	0.01	0.02	0.22**	0.58**	0.61**	0.66**	1.00					
9 Female	-0.53**	-0.04	-0.16**	0.09*	-0.02	0.12**	0.30**	0.08	1.00				
10 Age	0.05	-0.09*	-0.10*	-0.08	0.06	-0.01	-0.09*	-0.13**	-0.18**	1.00			
11 Caucasian	0.25**	-0.01	0.02	-0.09*	-0.10*	-0.08	-0.09*	-0.05	-0.12**	0.01	1.00		
12 Hispanic/Latino	-0.18**	0.00	-0.08	0.01	0.00	0.02	0.08	0.00	0.08	0.01	-0.66**	1.00	
13 Other Racial Minority	-0.10*	0.02	0.08	0.11*	0.12**	0.06	0.01	0.06	0.05	-0.02	-0.46**	-0.36**	1.00
Mean or Percent	2.29	2.34	15.71	0.01	10.95	10.96	16.63	10.13	59.2%	2.42	45.8%	34.2%	20%
Standard Deviation	1.17	1.24	4.51	0.32	3.69	3.02	4.60	3.45	0.49	1.24	0.50	0.47	0.40

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

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

correlated, with the strongest correlation being depression and anxiety ($r = 0.69, p \leq .01$). Looking at the bivariate correlations of all other independent variables, the highest correlation does not exceed the absolute value of 0.30. Being that the standard threshold is the absolute value of 0.70, levels of collinearity will not bias estimates.

Mean Differences

The mean differences between females and males in the dependent and independent variables are presented in Table 2, with the p -values indicating whether these differences between females and males are significantly different. The means for the total sample are also included. Females in the sample experienced significantly higher levels of strain, which supports hypothesis one. Females in the sample were also found to experience higher levels of depression and anxiety. This partially supports hypothesis two, that females experience higher negative emotions than males. The lack of significance in the level of anger experienced by the females and males in the sample supports prior research that failed to find sex differences in anger. Similar to anger, there are no significant gender differences in envy.

Table 2: Mean Differences between Male and Females in Strain, Negative Emotions, and Coping

Variables	Females (n = 296)		Males (n = 204)		p -value (two-tailed)	Total Sample (n = 500)	
	M	SD	M	SD		M	SD
Strain	0.03	0.33	-0.03	0.29	0.04	0.01	0.32
Anger	10.89	3.68	11.05	3.72	0.63	10.95	3.69
Depression	11.25	0.17	10.54	3.03	0.01	10.96	3.02
Anxiety	17.79	4.18	14.95	4.67	0.00	16.63	4.60
Envy	10.36	3.36	9.80	3.55	0.08	10.13	3.45
Fake ID	2.30	1.22	2.40	1.26	0.35	2.34	1.24
Going Home	1.78	0.98	3.03	1.02	0.00	2.29	1.17
Total Delinquency	15.11	4.42	16.57	4.52	0.00	15.71	4.51

Multiple Linear Regressions

Tables 3 and 4 examine the effect of strain on negative emotions. The base model effects are found in Appendix D. In Table 3, the effect of strain on anger is positive and statistically significant for the total sample ($t = 4.95, p \leq 0.001$). Those who are from a racial minority other than Caucasian and Hispanic are significantly more likely to experience anger ($t = 2.35, p \leq .01$). When this is examined among the female subsample, being of another racial minority is not a significant predictor of anger, but strain maintains the same level of significance ($t = 4.62, p \leq 0.001$). Among males, however, being of an “other” racial minority ($t = 2.65, p \leq 0.01$) predicts anger more strongly than strain ($t = 2.13, p \leq 0.05$). The effect being of another racial minority is, however, reduced from the base model ($t = 2.93, p \leq 0.01$) when strain is included. Also in Table 3 is the effect of strain on depression. For the total sample ($t = 3.17, p \leq 0.01$), as well as for females ($t = 2.35, p \leq 0.05$) and males ($t = 2.04, p \leq 0.05$), strain positively and significantly predicts depression.

Table 4 examines the effect of strain on anxiety and envy. For the total sample in the base model, anxiety was significantly predicted by age ($t = -2.09, p \leq 0.05$), and by being Hispanic ($t = 2.17, p \leq 0.05$). As seen in Table 4, the effect of strain eliminated the significance of age, and slightly reduced the significance of being Hispanic ($t = 1.98, p \leq 0.05$). For both females and males, strain significantly predicted anxiety ($t = 4.15, p \leq .01$ and $t = 3.35, p \leq .01$, respectively). Age has a negative and significant effect for the total sample ($t = -2.68, p \leq 0.01$) when strain is included in the model, with a slight decrease from the base model ($t = -3.00, p \leq 0.01$). However, the effect of strain on envy is very

Table 3: The Effect of Strain on Anger and Depression.^a

	Anger						Depression											
	Total Sample			Females			Males			Total Sample			Females			Males		
	<i>b</i>	SE	<i>t</i> -value	<i>b</i>	SE	<i>t</i> -value	<i>b</i>	SE	<i>t</i> -value	<i>b</i>	SE	<i>t</i> -value	<i>b</i>	SE	<i>t</i> -value	<i>b</i>	SE	<i>t</i> -value
Age	0.24	0.13	1.83	0.14	0.17	0.79	0.29	0.20	1.45	0.14	0.11	0.13	0.03	0.15	0.18	0.10	0.18	0.56
Hispanic	0.30	0.36	0.85	0.42	0.46	0.92	0.17	0.58	0.29	0.30	0.31	0.89	0.38	0.41	0.93	0.00	0.48	-0.01
Other Racial Minority	1.05	0.45	2.35**	0.67	0.58	1.16	1.80	0.68	2.65**	0.50	0.34	1.47	0.32	0.44	0.71	0.76	0.55	1.25
Strain	2.48	0.50	4.95***	2.91	0.63	4.62***	1.76	0.82	2.13*	1.38	0.44	3.17**	1.25	0.53	2.35*	1.45	0.71	2.04*
	F-test = 9.29***			F-test = 6.89***			F-test = 2.43**			F-test = 3.64**			F-test = 2.06			F-test = 1.58		
	R ² = 0.06			R ² = 0.08			R ² = 0.06			R ² = 0.03			R ² = 0.02			R ² = 0.03		
	n = 500			n = 296			n = 204			n = 500			n = 296			n = 204		

Note. Entries are unstandardized regression coefficients (*b*) and robust standard errors (SE).

^a Multiple Linear Regression.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed test).

Table 4: The Effect of Strain on Anxiety and Envy ^a

	Anxiety												Envy										
	Total Sample				Females				Males				Total Sample			Females			Males				
	<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value
Age	-0.27	0.16	-1.73		-0.16	0.20	-0.79		0.03	0.27	0.10		-0.33	0.12	-2.68**		-0.26	0.16	-1.62		-0.35	0.20	-1.69
Hispanic	0.86	0.44	1.98*		0.20	0.54	0.37		1.12	0.68	1.64		0.12	0.34	0.35		-0.16	0.44	-0.36		0.40	0.56	0.72
Other Racial Minority	0.19	0.56	0.33		-0.37	0.66	-0.56		0.35	0.97	0.36		0.34	0.41	0.82		0.00	0.53	-0.01		0.76	0.67	1.13
Strain	3.31	0.62	5.37***		2.85	0.69	4.15***		3.49	1.04	3.35***		2.29	0.45	5.07***		2.18	0.56	3.89***		2.38	0.79	3.01**
	F-test = 9.93 ***				F-test = 4.79 ***				F-test = 3.62**				F-test = 9.52 ***			F-test = 4.43 ***			F-test = 4.77 ***				
	R ² = 0.07				R ² = 0.05				R ² = 0.06				R ² = 0.06			R ² = 0.06			R ² = 0.07				
	n = 500				n = 296				n = 204				n = 500			n = 296			n = 204				

Note. Entries are unstandardized regression coefficients (*b*) and robust standard errors (SE).

^a Multiple Linear Regression.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed test).

strong, positive, and significant ($t = 5.07, p \leq 0.001$) for the total sample. Strain continues to be a significant predictor of envy for both females ($t = 3.89, p \leq 0.001$) and for males ($t = 3.01, p \leq 0.01$). The results from Tables 3 and 4 provide support for hypothesis 3, that strain is a positive and statistically significant predictor of negative emotions for both females and males.

Ordered Logistic Regressions

Tables 5 through 7 examine the effects of strain and negative emotions on the three measures of maladaptive coping. Model 1 of each table is the base model where the effects of the control variables and strain on coping are examined for the total sample, females, and males. Each subsequent model examines the effect of each negative emotion on coping when it is independently added to the base model. In Table 5, Model 1 shows that being of any racial minority negatively and significantly affects going home with a new friend for the total sample. The same effect is reflected among females and males. For the total sample, it appears as though strain does not have an effect on this method of maladaptive coping. However, strain is significant among the female subsample ($t = 2.69, p \leq 0.01$), but not the males. This partially supports hypothesis 4. This effect is seen to decrease slightly ($t = 2.35, p \leq 0.01$) when anger is introduced into Model 2; but anger is only a positive and significant predictor of going home with a new friend when the total sample is observed ($t = 2.01, p \leq 0.05$). Being that this effect disappears when looking at the subsamples, this finding does not support hypothesis 5. The effect of being of a racial minority remained negative and significant in all five models for the total sample, females, and males. For females, the effect of strain remained negative when depression,

Table 5: The Effect of Strain and Negative Emotions on Going Home with a New Friend ^a

	Going Home with a new Friend														
	Model 1			Model 2			Model 3			Model 4			Model 5		
	T	F	M	T	F	M	T	F	M	T	F	M	T	F	M
Age	0.09 (0.07)	-0.05 (0.09)	-0.06 (0.10)	0.08 (0.07)	-0.06 (0.09)	-0.07 (0.10)	0.09 (0.07)	-0.05 (0.09)	-0.07 (0.10)	0.08 (0.07)	-0.04 (0.09)	-0.06 (0.10)	0.11 (0.07)	-0.03 (0.09)	-0.05 (0.10)
Hispanic	1.37	-0.57	-0.62	1.23	-0.67	-0.70	1.37	-0.56	-0.63	1.22	-0.44	-0.62	1.55	-0.38	-0.46
	-1.01 (0.20)	-1.14 (0.28)	-0.72 (0.32)	-1.03 (0.20)	-1.18 (0.28)	-0.74 (0.32)	-1.01 (0.20)	-1.16 (0.28)	-0.72 (0.32)	-0.99 (0.20)	-1.16 (0.28)	-0.76 (0.32)	-1.02 (0.20)	-1.15 (0.28)	-0.74 (0.32)
Other Racial Minority	-5.12***	-4.12***	-2.29*	-5.19***	-4.19***	-2.32*	-5.11***	-4.17***	-2.27*	-5.00***	-4.18***	-2.39***	-5.12***	-4.13***	-2.33**
	-0.91 (0.21)	-0.80 (0.29)	-1.05 (0.35)	-0.96 (0.21)	-0.85 (0.30)	-1.11 (0.36)	-0.91 (0.21)	-0.82 (0.29)	-1.07 (0.35)	-0.91 (0.21)	-0.79 (0.29)	-1.06 (0.35)	-0.92 (0.21)	-0.80 (0.29)	-1.10 (0.35)
Strain	4.30***	-2.73**	-2.96**	4.53***	-2.85***	-3.12**	4.31***	-2.78**	-3.03**	4.27***	-2.70**	-3.06**	4.40***	-2.74**	-3.12**
	0.49 (0.28)	0.97 (0.36)	0.68 (0.50)	0.39 (0.28)	0.83 (0.35)	0.61 (0.51)	0.49 (0.28)	0.92 (0.36)	0.63 (0.50)	0.59 (0.29)	0.85 (0.36)	0.55 (0.51)	0.40 (0.28)	0.84 (0.36)	0.53 (0.51)
Anger	1.77	2.69***	1.36	1.40	2.35***	1.21	1.74	2.58***	1.26	2.06	2.40***	1.09	1.42	2.32	1.04
	-	-	-	0.05 (0.02)	0.06 (0.03)	0.04 (0.04)	-	-	-	-	-	-	-	-	-
Depression	-	-	-	2.01*	1.83	0.86	0.00 (0.03)	0.04 (0.04)	0.03 (0.05)	-	-	-	-	-	-
	-	-	-	-	-	-	0.14	1.13	0.74	-	-	-	-	-	-
Anxiety	-	-	-	-	-	-	-	-	-	-0.03 (0.02)	0.05 (0.03)	0.04 (0.03)	-	-	-
	-	-	-	-	-	-	-	-	-	-1.5	1.76	1.31	-	-	-
Envy	-	-	-	-	-	-	-	-	-	-	-	-	0.04 (0.03)	0.06 (0.03)	0.05 (0.04)
	-	-	-	-	-	-	-	-	-	-	-	-	1.59	1.86	1.42
Wald χ^2	37.81***	23.95***	12.87**	40.90***	24.56***	13.62**	37.85***	24.52***	13.6**	40.13***	25.32***	15.37**	40.20***	26.85***	15.24**
Pseudo R ²	0.03	0.04	0.02	0.03	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.03

Note. Entries are unstandardized regression coefficients. Robust standard errors are in parentheses.

^a Ordered Logistic Regression. T = Total Sample (n=500). F = Females (n = 296). M = Males (n=204).

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed test).

anxiety, and envy were included in the models; but depression, anxiety, and envy failed to demonstrated any significant effect on going home with a new friend; and consequently the finding fails to support hypotheses 6 and 7.

Table 6 examines the effects of strain and negative emotions on asking a friend for a fake driver's license. Strain was a positive and significant predictor of requesting a fake driver's license in all five models for the total sample, females, and males. This finding supports hypothesis 4. Depression was the only negative emotion to have a significant effect on this method of coping ($-2.30, p \leq 0.05$). As seen in Model 3, however, depression is only significant for the total sample and disappears within the two subsamples. Again, this finding fails to support hypotheses 5 through 7. While depression was only significant for the total sample, the direction of the effect is similar to previous research (Moon et al., 2009b).

Table 7 shows that criminal offending was predicted by age ($-2.10, p \leq 0.01$) and strain ($6.99, p \leq 0.001$) in Model 1. Strain remained significant for both females ($5.38, p \leq 0.001$) and males ($4.83, p \leq 0.001$), providing support for hypothesis 4. Although age was not a significant predictor of offending for females, it was a significant predictor for males ($-2.81, p \leq 0.01$). This pattern was similar throughout the rest of the models. Depression ($-2.58, p \leq 0.01$) and anxiety ($2.79, p \leq 0.01$) both had a negative and significant effect on criminal offending for the total sample, but only depression had a significant effect on offending for the male subsample ($-2.77, p \leq 0.01$). These findings oppose hypotheses 5 and 6, and fail to support hypothesis 7. While the findings in the

Table 6: The Effect of Total Stain and Negative Emotions on Asking a Friend for a Fake Driver's License *

	Model 1				Model 2				Model 3				Model 4				Model 5			
	T ^b	F ^c	M ^d	T ^b	F ^c	M ^d	T ^b	F ^c	M ^d	T ^b	F ^c	M ^d	T ^b	F ^c	M ^d	T ^b	F ^c	M ^d		
Age	-0.12 (0.07)	-0.02 (0.09)	-0.29 (0.11)	-0.13 (0.07)	-0.03 (0.09)	-0.30 (0.11)	-0.12 (0.07)	-0.03 (0.09)	-0.29 (0.11)	-0.13 (0.07)	-0.03 (0.09)	-0.30 (0.11)	-0.13 (0.07)	-0.03 (0.09)	-0.31 (0.11)	-0.13 (0.07)	-0.03 (0.09)	-0.31 (0.11)		
Hispanic	-1.80	-0.28	-2.78**	-1.92	-0.37	-2.84	-1.83	-0.29	-2.76	-1.94	-0.33	-2.80	-1.90	-0.36	-2.85**	-1.90	-0.36	-2.85**		
	-0.05 (0.19)	0.09 (0.25)	-0.26 (0.29)	-0.07 (0.19)	0.08 (0.25)	-0.27 (0.29)	-0.03 (0.19)	0.10 (0.25)	-0.25 (0.29)	-0.02 (0.19)	0.09 (0.25)	-0.23 (0.29)	-0.04 (0.19)	0.083 (0.25)	-0.24 (0.30)	-0.04 (0.19)	0.083 (0.25)	-0.24 (0.30)		
	-0.27	0.36	-0.9	-1.92*	0.3	-0.93	-0.18	0.4	-0.87	-0.13	0.36	-0.78	-0.23	0.33	-0.81	-0.23	0.33	-0.81		
Other Racial Minority	-0.02 (0.23)	-0.08 (0.29)	0.14 (0.37)	-0.06 (0.23)	-0.10 (0.29)	0.10 (0.38)	0.01 (0.23)	-0.07 (0.29)	0.21 (0.37)	-0.02 (0.23)	-0.09 (0.30)	0.16 (0.37)	-0.01 (0.23)	-0.09 (0.30)	0.17 (0.38)	-0.01 (0.23)	-0.09 (0.30)	0.17 (0.38)		
	-0.09	-0.26	0.39	-0.25	-0.33	0.27	0.03	-0.25	0.59	-0.07	-0.32	0.44	-0.06	-0.29	0.44	-0.06	-0.29	0.44		
Strain	1.14 (0.28)	1.14 (0.37)	1.12 (0.44)	1.06 (0.28)	1.02 (0.37)	1.09 (0.44)	1.23 (0.30)	1.20 (0.38)	1.23 (0.44)	1.25 (0.30)	1.22 (0.38)	1.21 (0.45)	1.19 (0.30)	1.19 (0.38)	1.18 (0.46)	1.19 (0.30)	1.19 (0.38)	1.18 (0.46)		
	4.02***	3.08**	2.58**	3.73***	2.73**	2.50**	4.26***	3.20***	2.76**	4.27***	3.20***	2.67**	4.13***	3.17**	2.57**	4.13***	3.17**	2.57**		
Anger	-	-	-	0.04 (0.02)	0.05 (0.03)	0.02 (0.04)	-	-	-	-	-	-	-	-	-	-	-	-		
	-	-	-	1.54	1.51	0.56	-	-	-	-	-	-	-	-	-	-	-	-		
Depression	-	-	-	-	-	-	-0.07 (0.03)	-0.05 (0.04)	-0.09 (0.05)	-	-	-	-	-	-	-	-	-		
	-	-	-	-	-	-	-2.30**	-1.27	-1.87	-	-	-	-	-	-	-	-	-		
Anxiety	-	-	-	-	-	-	-	-	-	-0.03 (0.02)	-0.03 (0.03)	-0.02 (0.03)	-	-	-	-	-	-		
	-	-	-	-	-	-	-	-	-	-1.62	-0.94	-0.8	-	-	-	-	-	-		
Envy	-	-	-	-	-	-	-	-	-	-	-	-	-0.02 (0.03)	-0.03 (0.03)	-0.02 (0.04)	-0.89	-0.72	-0.48		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Wald $\chi^2 = 21.04$ ***	11.55*	15.77**	23.64***	13.85**	16.32**	26.61***	13.26*	18.36**	23.42***	12.53*	15.76**	21.78***	12.16*	15.87**	12.16*	15.87**	12.16*	15.87**		
Pseudo R ² = 0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.04	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.03		

Note: Entries are unstandardized regression coefficients. Robust standard errors are in parentheses.

* Ordered Logistic Regression. T = Total Sample (n=500). F = Females (n = 296). M = Males (n=204).

** p ≤ 0.05; *** p ≤ 0.01; **** p ≤ 0.001 (two-tailed test).

Table 7: The Effect of Total Strain and Negative Emotions on Criminal Offending.^a

	Criminal Offending														
	Model 1			Model 2			Model 3			Model 4			Model 5		
	T	F	M	T	F	M	T	F	M	T	F	M	T	F	M
Age	-0.14 (0.07)	-0.10 (0.09)	-0.30 (0.11)	-0.14 (0.07)	-0.10 (0.09)	-0.31 (0.11)	-0.14 (0.07)	-0.10 (0.09)	-0.28 (0.11)	-0.15 (0.07)	-0.10 (0.09)	-0.30 (0.11)	-0.15 (0.07)	-0.10 (0.09)	-0.31 (0.11)
Hispanic	-2.10*	-1.06	-2.81***	-2.18*	-1.08	-2.86***	-2.08*	-1.07	-2.60**	-2.28*	-1.1	-2.76**	-2.21*	-1.1	-2.92***
	-0.28 (0.17)	-0.22 (0.23)	-0.21 (0.26)	-0.29 (0.17)	-0.23 (0.23)	-0.22 (0.26)	-0.27 (0.17)	-0.22 (0.23)	-0.20 (0.26)	-0.24 (0.17)	-0.22 (0.23)	-0.15 (0.26)	-0.27 (0.17)	-0.22 (0.23)	-0.18 (0.26)
Other Racial Minority	-1.62	-0.97	-2.81***	-1.65	-0.98	-0.84	-1.57	-0.96	-0.76	-1.38	-0.96	-0.58	-1.57	-0.98	-0.68
	0.08 (0.22)	0.05 (0.28)	0.31 (0.38)	0.06 (0.22)	0.05 (0.28)	0.28 (0.38)	0.10 (0.22)	0.06 (0.28)	0.38 (0.37)	0.08 (0.22)	0.04 (0.28)	0.31 (0.39)	0.08 (0.22)	0.05 (0.28)	0.34 (0.39)
Strain	0.37	0.19	0.82	0.29	0.18	0.74	0.48	0.2	1.03	0.35	0.15	0.81	0.37	0.16	0.88
	1.75 (0.25)	1.65 (0.31)	2.10 (0.43)	1.71 (0.25)	1.63 (0.31)	2.06 (0.44)	1.83 (0.24)	1.68 (0.30)	2.26 (0.43)	1.90 (0.25)	1.70 (0.31)	2.23 (0.43)	1.81 (0.25)	1.68 (0.30)	2.20 (0.45)
Anger	6.99***	5.38***	4.83***	6.85***	5.27***	4.73***	7.48***	5.49***	5.26***	7.69***	5.56***	5.14***	7.24***	5.54***	4.90***
	-	-	-	0.02 (0.02)	0.01 (0.03)	0.03 (0.03)	-	-	-	-	-	-	-	-	-
Depression	-	-	-	1.04	0.32	0.93	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-0.07 (0.03)	-0.02 (0.03)	-0.11 (0.04)	-	-	-	-	-	-
Anxiety	-	-	-	-	-	-	-2.58**	-0.7	-2.77**	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-0.05 (0.02)	-0.02 (0.02)	-0.04 (0.03)	-	-	-
Envy	-	-	-	-	-	-	-	-	-	-2.79**	-0.79	-1.4	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-0.03 (0.02)	-0.02 (0.03)	-0.04 (0.04)
	-	-	-	-	-	-	-	-	-	-	-	-	-1.15	-0.59	-1.08
Wald χ^2 =	55.46***	31.22***	42.44***	54.86***	31.30***	41.20***	70.20***	33.01***	69.75***	72.33***	33.99***	51.24***	61.96***	34.06***	46.98***
Pseudo R ² =	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03

Note. Entries are unstandardized regression coefficients. Robust standard errors are in parentheses.

^a Ordered Logistic Regression. T = Total Sample (n=500), F = Females (n = 296), M = Males (n=204).

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed test).

current study differed slightly from previous research, several aspects of GST were supported. The implications of the findings in this study are discussed in the section that follows.

Discussion

Gaps in the criminology literature were addressed in the current study by using GST's theoretical framework to examine gender differences in the mediating effects of anger, depression, anxiety, and envy on maladaptive coping. Gender differences were found in level of strain experienced, types of negative emotions derived from strain, and in maladaptive coping in response to strain. The findings in this study will help guide future research testing GST and can assist in understanding the type of resources that could be helpful in addressing maladaptive coping.

This study is a contribution to research as it examined the effects of anxiety and envy on coping, emotions that have previously been neglected. Agnew (1992, 2006a) argued different negative emotions derived from strain lead to different types of deviant behavior. Previous tests of GST have seldom focused on the effect of negative emotions other than anger and depression. In this study, depression had a negative yet significant effect on requesting a fake driver's license. The direction of this relationship is similar to findings in prior research (Moon et al., 2009b). Similar findings regarding the mediating effect of depression and anxiety on maladaptive coping highlights the importance of furthering research regarding the surrounding circumstances that lead depressed and anxious individuals to abandon legitimate coping methods and turn to deviant behavior (Agnew, 2013; Essau et al., 2012).

While prior psychological research has addressed behavioral responses to envy, this negative emotion has been neglected in criminology despite Agnew's (2006b) suggestion to examine its effect within GST's theoretical framework. The current study examined the effect of envy on three different types of maladaptive coping, without any significant predictions. Given the unique components of envy (Miceli & Castelfranchi, 2007), this should not be interpreted as yet another component that lacks of support for GST. Just as with depression and anxiety, surrounding circumstances must be taken into account. Envy, unlike anger, is not an emotion that individuals readily share and express; but like depression and anxiety, it is accompanied with a level of helplessness that warrants further consideration.

There are four major elements that future research should examine. First, as Agnew (2013) highlighted, it is important to understand how individuals cope with negative emotions before they turn to deviant and delinquent coping methods. Understanding how and at what point legitimate coping methods fail will provide a better understanding of the process leading to maladaptive coping. Second, future research should also examine the three different types of strain introduced by Agnew (1992). This process may provide a better understanding of the specific strains that lead to the type of depression, anxiety, and envy that results in leads deviant and criminal coping. Third, levels of subjective strain should be examined, especially perceived injustice. Lastly, GST research would benefit from the future incorporation of personal characteristics such as self-esteem, self-control, and social support.

It is common for university students to experience strain and negative emotions, and universities provide students with mental health services for this reason. Prior research has shown, however, that individuals do not seek these services until they experience high levels of negative emotions (Jorm et al., 2004). The lack of action in response to anxiety and depression could be mistaken for characteristics of compliance (Essau et al., 2012). All the while, the severity of the symptoms could worsen for individuals experiencing these emotions, causing the likelihood of deviance and criminality to increase. Therefore, the most suitable policy implication in regard to the findings in this study would be awareness programs for young adults to supplement existing mental health services.

Due to the inward nature of these emotions and the feelings of helplessness that lead to decreased action in the earlier stages (Agnew, 2013; Jorm et al., 2014), awareness programs should address the symptoms that accompany depression, anxiety, and envy. Among other types of strain, students at universities are held to high standard to accomplish positively valued goals. This could leave students prone to compare their accomplishments to other students'. Being aware of these emotions and being equipped with appropriate coping methods would assist young adults in the competitive environment of a university. The skills and coping methods learned could also better prepare individuals for the competitiveness of a work environment in the future. Such preparation is especially important given that strain in the work place has also been linked to corporate crime (Wang & Holtfreter, 2012).

The findings in this study should be interpreted with caution, as cross-sectional data cannot determine the causal ordering of events. Despite this limitation, the findings conform to the expected direction predicted by the theory. It may also be considered a limitation that the current study used a university-based sample. A related concern is the use of vignettes to tap into behavioral intentions, as opposed to measuring actual behavior. Behavioral intentions, however, are highly correlated with future behavior (Ajzen, 1991). As a result, a large body of research testing criminological theory has relied on the scenario-based method in student samples, and findings generally are in the expected theoretical direction (Holtfreter, Reisig, Piquero, & Piquero, 2010). Given the diverse student body at ASU, the significant findings related to previously neglected negative emotions warrants further attention in general population samples. Another potential limitation of the current study is the use of a cumulative measure of strain. Using three measures of strain may result in a better understanding of the negative emotions examined.

In the end, this study is an attempt to address the true complexity of the process leading to maladaptive coping by examining the effects of negative emotions previously neglected by criminology research. Further attention must be given to negative emotions other than anger, with particular focus on the surrounding circumstances that lead individuals to abandon legitimate coping methods. Doing so will help address gender differences in coping and result in an increased understanding of the mechanisms driving people toward deviance.

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APPENDIX A
SCALE ITEMS

Appendix A. Scale Items: Strain and Negative Emotions

Scales and items

Strain

Goal Blockage

- Received a bad grade in class
- Failed an exam
- Had money problems

Positive Stimuli Removal

- Broke up with an intimate partner
- Had a close friend or intimate partner move away
- Moved away from a close friend or intimate partner
- Had someone that you really care about die

Negative Stimuli Presentation

- Been a victim of a crime
- Been physically harassed or abused
- Been sexually harassed or abused
- Been discriminated against on the basis of your sex, race, religion, or sexual orientation

Negative Emotions

Anger

- I feel angry most of the time
- I feel angry about what I have to look forward to
- I am pretty angry about things these days
- My feelings of anger sometimes keep me from making good decisions
- More people than usual are beginning to make me feel angry
- My feelings of anger leave me less interested in sex than I used to be

Depression

- I feel pretty worthless right now
- I often get bored
- I prefer to go home rather than going out and doing things
- I am basically satisfied with my life
- I often feel helpless

Anxiety

- I am unable to relax
- When someone snaps at me, I spend the rest of the day thinking about it
- No matter what I do, I can't get my mind off my problems
- I am easily alarmed, frightened, or surprised
- I am afraid of what awaits me in the future
- I worry a lot
- I have difficulty concentrating or remembering things

Envy

- I am troubled by a feeling of inadequacy
 - The bitter truth is that I generally feel inferior to others
 - Frankly, the success of other students makes me resent them
 - It is so frustrating to see some people succeed so easily
 - It somehow doesn't seem fair that some people seem to have all the talent
-

APPENDIX B
MALADAPTIVE COPING MEASURES

Appendix B: Maladaptive Coping Measures

Vignette Scenarios

Requesting a friend for a fake driver's license:

A new nightclub is opening up in your town this weekend and your friends are planning to go. You really want to go and hang out with all of them, but you must be 21 years old to enter the nightclub. Unfortunately, at this time you are not 21. One of your close friends tells you that he/she knows someone who provides fake driver's licenses that are realistic and reliable. The ones he/she has provided to other people have been successful, and they even scan when read by a computer! Your friend asks you if you want to get a fake driver's license. If you found yourself in this situation, how likely would it be that you'd ask your friend to get you a fake driver's license?

Going home with a new friend:

You and a friend attend a house party on a Friday night some distance from where you live. At the party you meet someone you find extremely attractive and it is clear that the attraction is mutual. You really enjoy talking to this person, and as the party winds down your new friend invites you over to his/her house so you can be alone and get to know one another better. Your new friend offers to drive you home in the morning. If you found yourself in this situation, how likely would it be that you'd stay the night at your new friend's house?

Criminal Offending Scale Items

- Illegally disposed of trash and litter
 - Made a lot of noise at night
 - Broke traffic laws
 - Bought something you thought might be stolen
 - Drank alcohol in a place where you are not supposed to
 - Used marijuana or some other drug
 - Illegally downloaded music from the Internet
 - Damaged another person's property without their permission
-

APPENDIX C

BASE MODELS OF STRAIN'S EFFECT ON NEGATIVE EMOTIONS

Base Models of the Effect of Strain on Anger and Depression^a

	Anger												Depression										
	Total Sample				Females				Males				Total Sample			Females			Males				
	<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value
Age	0.19	0.13	1.44		0.14	0.17	0.79		0.23	0.20	1.13		-0.01	0.11	-0.11		0.03	0.15	0.18		0.04	0.17	0.24
Hispanic	0.39	0.37	1.07		0.52	0.48	1.09		0.19	0.59	0.33		0.35	0.31	1.13		0.42	0.41	1.03		0.02	0.48	0.03
Other Racial Minority	1.29	0.45	2.89**		0.92	0.59	1.57		1.98	0.67	2.93**		0.64	0.34	1.87		0.42	0.44	0.95		0.84	0.55	1.53
	F-test = 3.58**				F-test = 1.27				F-test = 3.43**				F-test = 1.23			F-test = 0.55			F-test = 0.92				
	R ² = 0.02				R ² = 0.01				R ² = 0.04				R ² = 0.01			R ² = 0.01			R ² = 0.01				
	n = 500				n = 296				n = 204				n = 500			n = 296			n = 204				

Note. Entries are unstandardized regression coefficients (*b*) and robust standard errors (SE).

^a Multiple Linear Regression

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed test).

Base Models of the Effect of Strain on Anxiety and Envy^a

	Anxiety											
	Total Sample				Females				Males			
	<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value	
Age	-0.34	0.16	-2.09*		-0.15	0.20	-0.77		-0.11	0.27	-0.40	
Hispanic	0.98	0.45	2.17*		0.30	0.56	0.54		1.16	0.71	1.65	
Other Racial Minority	0.51	0.56	0.91		-0.13	0.66	-0.20		0.71	0.96	0.74	
	F-test = 2.74*				F-test = 0.34				F-test = 0.99			
	R ² = 0.02				R ² = 0.00				R ² = 0.01			
	n = 500				n = 296				n = 204			
	Total Sample				Females				Males			
	<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value		<i>b</i>	SE	<i>t</i> -value	
	-0.37	0.12	-3.00**		-0.26	0.17	-1.59		-0.44	0.20	-2.20*	
	0.20	0.34	0.57		-0.08	0.45	-0.18		0.44	0.57	0.77	
	0.56	0.41	1.36		0.18	0.53	0.34		1.01	0.69	1.45	
	F-test = 3.47**				F-test = 0.96				F-test = 2.39			
	R ² = 0.02				R ² = 0.01				R ² = 0.04			
	n = 500				n = 296				n = 204			

Note. Entries are unstandardized regression coefficients (*b*) and robust standard errors (SE).

^a Multiple Linear Regression

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed test).