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Determining Deviance: An Examination of Stress and Antisocial Coping among College Undergraduates

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DETERMINING DEVIANCE: AN EXAMINATION OF STRESS AND ANTISOCIAL COPING AMONG COLLEGE UNDERGRADUATES

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DETERMINING DEVIANCE: AN EXAMINATION OF STRESS AND ANTISOCIAL COPING AMONG COLLEGE UNDERGRADUATES

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Stress and strain impact our ability to achieve success in the goals we set. To understand the stress process better, this study uses a survey of undergraduates in order to 1) identify types of stressful experiences, 2) understand the mediating role of negative emotions, 3) evaluate how stress and emotions are related to student involvement in alcohol and drug use and self injury. In addition to such analyses, the present study investigates the extent to which these pathologies (i.e., from strain to emotions and behaviors) vary by gender. The general strain theory (GST) serves as a theoretical framework for the present study; however, composite measures have failed to identify which particular strains are more strongly or weakly linked to delinquency (Agnew 2001) and how the effects of such unique types of strain vary by gender and other social categories.

Data were collected by administering an 87-item survey to a sample of approximately 820 college undergraduates at a medium-sized university located in the Southeastern region of the United States. Linear and logistic regression analyses were used to measure the relationships among social categories, strain, negative emotions, and deviant behaviors. Findings suggest that a) females experience higher levels of strain, b) most strains are associated with at least one outcome, c) anger and depression mediate some of the effects of strain on negative outcomes, and d) gender moderates the effect of negative emotions on self injury, alcohol, and drug use.

CHAPTER I

INTRODUCTION

A great concern among colleges and universities is the retention of college students and the completion of degrees. More so today than in the past, sources of public, state, and federal funding for higher education are based on college success determined by graduation rates. To face this reality institutions of higher education must identify, design, and implement strategies to help students succeed. The role of extreme stress in preventing such goal attainment is of central focus in the current study. Further, I evaluate the sources of stress for college students and its association with negative emotions and behaviors.

The framework for Robert Agnew's general strain theory is well equipped to model the complex pathology of the effects of our perception of stress on experiences of negative emotions and behaviors. General strain theory (Agnew 1992) suggests that delinquent behaviors result when individuals experience strain as a result of 1) the failure

to receive positively valued goals, 2) the loss of positive stimuli, or 3) the presence of negative stimuli. The second and third criteria build on traditional strain theories (Merton 1938), which only addressed the failure to achieve goals. In addition, Agnew (2002) posits that strains that are perceived as high in magnitude, unjust, and associated with low social control are likely to cause negative emotions, such as anger and depression. Negative emotions create a situation in which individuals are more likely to engage in illegitimate coping.

Broidy and Agnew (1997) theorized that GST could also help explain the differences among types of deviance and rates of offending between males and females. Through information gathered from stress literature, it is suggested that males and females, although experiencing similar levels of strain, respond to different types of strains and experience different emotions. Women tend to respond to strain with depression and men with anger (Dornfeld and Kruttshnitt 1992). Scholars also suggest that men respond with external forms of deviance, whereas women tend to respond with internal, self-directed forms of deviance (Anaschensel and Rutter 1991), such as drug and alcohol abuse and disordered eating (Broidy and Agnew 1997).

This study will seek to explore gender differences in delinquent coping strategies in an undergraduate population. Unlike other tests of GST, the survey was constructed specifically for the purpose of determining types of strain experienced, negative emotions (depression and anger), and deviant coping behaviors among this population (substance abuse, disordered weight control, and self-injurious behavior).

The survey was also designed to address the magnitude of strains based on frequency, recency, subjectivity, and duration. The centrality of strains has also been purported to affect the likelihood of deviant outcomes, and this research will attempt to identify whether or not issues of central importance to the population lead to greater experienced strain and whether or not those strains are more significantly related to deviant outcomes.

Based on mixed results from previous empirical tests, especially related to gender differences, it is imperative that research testing GST continues. In order to fill some of the gaps left by previous studies, this study will examine specific measures of strain and their relationship to negative emotions. It will also examine how deviant behavior varies by social categories, focusing on gender but

also looking at race, age, class status, scholarship status, parental education, and living situation.

CHAPTER II

REVIEW OF LITERATURE

Strain theory, first conceptualized by Merton in 1938, suggests that involvement in criminal or deviant behaviors is a result of structural circumstances that prevent individuals from achieving positively valued goals. These goals were typically related to financial or material success associated with middle-class status (Merton 1938). In 1992 Agnew introduced general stain theory (GST) as an expansion of classic strain theory. Agnew posits that, in addition to the failure to achieve positively valued goals, individuals also experience strain as a result of the removal of positively valued stimuli or the presence of negative stimuli. As subcategories of failure to achieve positively valued goals, GST lists: "failure to achieve aspirations or ideal goals, failure to achieve expectations, and failure to be treated in a just/fair manner" (Broidy and Agnew 1997:277). These categories were presented as "ideal types" so that empirical studies would consider all events that could potentially cause strain (1992).

Agnew further postulated and expanded on strain theory as he explained that it is not the strains themselves that lead to deviance but the negative emotions such as anger and depression that result from the strains (Agnew 1992). GST states that individuals will seek to alleviate the negative emotions through some form of coping. Most often individuals will engage in legitimate coping mechanisms, which explains why not all individuals who experience strain respond with crime or deviance. When legitimate means for coping are ineffective or unavailable, individuals will likely turn to illegitimate coping strategies, such as aggression or substance abuse. GST research has considered anger to be the most important negative emotion associated with deviant outcomes. However, other negative emotions including anxiety and depression are also believed to mediate the effect of strains on deviant behavior (Agnew 1992, 2001, 2006; Broidy and Agnew 1997; Jang 2007).

With regard to the types of strain that will and will not lead to deviance, Agnew (2001, 2002, 2006) suggests that the magnitude of strain is important in predicting which strains will lead to deviant outcomes, as magnitude increases the intensity of negative emotions and impedes an individual's ability to use legitimate coping mechanisms.

He suggests that perceived magnitude is a combination of the recency, duration, frequency, and centrality of a strain.

Recency refers to the amount of time that has passed since the stressful event has occurred. The more recent the event, the stronger the negative emotion will be felt and the greater the likelihood that coping will be necessary.

Duration is important, as the effects of chronic stressors are more intense than those that occur and are quickly forgotten. Therefore, duration not only refers to the length of time a stressful event lasts but also the amount of time one spends dwelling on the event after it has occurred.

Frequency refers to how often a stressful event occurs. A stressful event that occurs once has less impact on negative emotions than does one that occurs several times.

The centrality of a strain also affects the level of magnitude. Strains that are related to roles and/or identities a person considers most important are believed to have a greater effect on the intensity of negative emotions (Agnew 1992).

When GST was first introduced, Agnew (1992) believed that composite measures of strain were appropriate for determining the effects of strain on deviant and criminal

outcomes. More recently Angew (2002) has suggested that researchers abandon composite measures and focus on specific measures of strain in order to determine the strains of greatest magnitude.

Strains among College Undergraduates

Many strain researchers have begun concentrating on identifying sources of strain for different populations. The current study explores strain among college students (a relatively new population in GST research) as well as attempts to understand how strain varies by social category (race, gender, class, etc.) within this population. Among a student population (at a regional university) the study first explores how the experience of strain varies by social category. Based on the extant literature, the following hypothesis is offered:

> Hypothesis 1: The experiences of strain will vary by social categories (i.e., gender, race, class, age, class status, scholarship and living situation).

Second, I seek to test "stressful elements of life" to identify if those I perceived as highest in magnitude would in fact predict alcohol use, drug use, and self-injury. Among this population, in order to determine the central components of identity among the multiple roles of a college student, empirical research has focused largely on academic

stress. Results from this research suggest that college students experience significant strain due to final grades, excessive homework, term papers, exams, and studying for exams (Abouserie 1994; Kohn and Frazer 1986; Mazerolle and Piquero 1998; Rayle, Arredondo, and Kurpius 2005; Struthers, Perry, and Menec 2000).

Other research among college students has focused on intimate relationships with friends, family, and significant others and found that each is a source of strain, particularly for females. (Abouserie 1994; Mazerolle and Piquero 1998; Sharp, Terling-Watt, Atkins, Gilliam, and Sanders 2001). Less explored sources of strain among this population include violent victimization, financial, employment, health, negative feelings about self, and negative life events. Each was found to be a source of strain associated with negative consequences among college students (Mazerolle and Piquero 1998; Sharp et al. 2001).

Capowich, Mazerolle, and Piquero (2001) tested a composite measure of strain that combined many of the above mentioned categories, and found support for GST; however, due to the nature of their measure, it is impossible to determine which individual strains are most significantly associated with negative emotions and deviant behavior.

The current study, similar to the above-mentioned research, explores academic, financial, job, interpersonal relationship, health, self, and violent victimization strains, as well as daily, time, property victimization, and traffic strains among a representative sample. I believe each of these strains has the potential to be high in magnitude for someone in the role of college student.

First, I look at school, job, time, and financial strains as they are areas in which undergraduates are likely to feel increased responsibility and pressure to succeed. These strains are also related to positively valued goals, and they have the potential to produce negative stimuli as well as being high in magnitude due to centrality of roles and identity. Second, I explore intimate partner strain, toxic friends, friendship, and family issues, as interpersonal relationships are often a focus for this population and are related to positive and negative stimuli. Third, my analysis includes strain measures of dissatisfaction with self, negative behaviors of self, and health. Each of these strain measures has the potential to present negative stimuli. Finally, I explore daily hassles and traffic strain. Both categories are believed to be unpleasant for most people. Although I expect these

measures to capture strains perceived as high in magnitude among college students, this research is of an exploratory nature. Based on GST literature, the second hypothesis states:

> Hypothesis 2: Strains perceived as highest in magnitude will be associated with negative coping of alcohol, drug use, and self-injury.

Strains by Social Categories

To date, of all social categories, gender has been the most theorized in relation to GST, and, thus, it is the category about which I state formal expectations. In 1997 Broidy and Agnew suggested that GST could potentially provide an explanation of both male and female involvement in criminality. The foundation of their expansion of GST in proposing gender-specific expectations can be traced to fundamental sociology of gender theories focusing on identity. In a qualitative analysis of socialization and gender roles among elementary school students, Adler, Kless, and Adler (1992) found that norms of autonomy for boys are established at an early age, and they know they must exude toughness and independence to prepare them to be men. As adults, men are likely to continue to measure their success based on established gender roles that emphasize independence through financial achievement, physical

strength and dexterity, and competition. Girls, on the other hand, are socialized to perfect relationships and social interactions. As girls become women, interpersonal relationships continue to be central to their identity as females. Thoits (1991) looked at "identity-relevant stressors," and stated that threats to an individual's most prominent role identities should be more psychologically damaging than threats to less valued role identities. She continued to say that depression is tied to a disruption in a person's sense of self, which comes from these identities. Thoits (1992) mentions that identities are related to other social categories besides gender, such as race and socio-economic status. Based on these studies, I expect strains to vary primarily by gender but also by other social categories into which college students fall.

In addition to literature about social roles and identities, Broidy and Agnew (1997) also draw from stress research, assessed by medical sociologists, in constructing their expectations regarding the role of negative emotions in their theory of gender and GST. First, women are more vulnerable to stress, such that they report higher levels and greater unpleasant experiences than do men (Wethington, McLeod, and Kessler 1987).

Second, Aneshensel and Pearlin (1987) assert that gender roles and social-role occupancy affect the types of stressors men and women find highest in magnitude. Wethington, McLeod, and Kessler (1987) further elaborate that women are more likely to become emotionally involved with others than are men and are more likely to report stress and negative emotions due to these relationships. In contrast to theoretical expectations, Agnew and Breznia (1997) found that interpersonal strain was significantly related to delinquency although the relationship proved stronger for adolescent males than females. A study of African-American adults (Agnew 2002; Jang 2007) found that women were more likely to report health and interpersonal-relation strain, whereas men were more likely to report work-related strain.

Third, researchers conclude that females are more likely to internalize negative feelings and respond with antisocial coping behaviors such as eating disorders, while males are more likely to express external behaviors such as aggression and defiance (Leadbeater, Blatt, and Quinlan 1995). In an examination of the differences in stress outcomes by sex, Hoffman and Su (1997) found that stressors related to delinquency and drug use were the same for males

and females. Jang (2007) found that African-American women were less likely to turn to fighting and substance use, "to cope with strain-generated negative emotions, such as depression, anxiety, and anger, than African American men" (p. 543). Given this literature, the following hypothesis is offered:

> Hypthesis 3: Anger and depression will mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use in men and women.

Finally, research suggests that men and women might differ in the negative emotion they feel after experiencing strain (Broidy 2001; Piquero and Sealock 2004). Broidy (2001) found that, "emotional responses to strain appear to be conditioned by sex" (p. 30). Mazerolle and Piquero (1998) found that, "females were more likely than males to report anger while controlling for various strains" (p. 203). In a study of purging behavior in college females, Sharp, Terling-Watt, Atkins, Gilliam, and Sanders (2001) found that anger was associated with purging when there were high levels of depression. Broidy (2001) explored the use of legitimate coping in response to strain and found that:

> No sex differences exist in anger, but a significant positive correlation exists between sex and other negative emotions. This suggests that, controlling for strain, strain-induced anger is equally likely among males and females, but

> other negative emotional responses to strain are more likely among females (p. 22).
>
> Hypothesis 4: Gender will interact with anger and depression.
>
> a. Women are more likely to react to strain with depression and subsequent alcohol use, drug use, and self injury.
>
> b. Men are more likely to react to strain with anger and subsequent alcohol use, drug use, and self injury.

Though most research concludes that the strain pathway suggested by Angew is gendered, at least in part, several studies find no differences in effects by sex. In a sample drawn from an institutionalized, delinquent population, Piquero and Sealock (2004) found no significant differences in the amount of strain experienced by males and females. In a study of adolescents Hoffman and Su (1997) found that, "stressful life events among female and male adolescents are similarly associated with delinquency and drug use" (p. 70). These studies are exceptional due to their samples as well as the strains explored. For instance, Piquero and Sealock (2004) specifically explored abuse as a strain, and Hoffman and Su (1997) used a composite measure of strain. Although results from empirical tests have been inconsistent, based on GST, I expect that:

> Hypothesis 5: Gender combined with strain will moderate negative behaviors.
>
> a. For strains that males feel are high in

magnitude and that they perceive unjust, the moderating effect will illustrate a greater likelihood for males to engage in negative behavior than females.
b. For strains that females feel are high in magnitude and that they perceive unjust, the moderating effect will illustrate a greater likelihood for females to engage in negative behavior than males.

Mixed support for the propositions of GST, especially when related to gender differences, suggests that inquiries should continue. GST is relatively young, and only a handful of potential strains related to deviant outcomes has been explored (Agnew 2006). In addition, much of the previous research has employed a cumulative measure of strain, failing to identify which strains have a stronger or weaker effect on deviant outcomes. This study seeks to fill some of the gaps left in the exploration of previous strain research by identifying specific stressful events experienced by males and females, the negative emotions that accompany them, and the illegitimate coping strategies used by individuals experiencing the strains.

CHAPTER III

METHODS

This chapter will outline the methods by which the data were collected and analyzed. In addition, detailed explanations of strain measures will be provided.

Sample

Data from a survey of approximately 830 undergraduates enrolled in English 100 and 300 classes at a medium-sized university in the Southeastern region of the United States were used to test the hypotheses. Students from English 100 and 300 were surveyed as the classes are required for all degree-seeking undergraduates.

Procedures

All professors teaching English 100 and/or 300 were contacted via email immediately before the spring semester (the spring Semester was chosen as many of the students in English 100 are freshmen, and the survey inquired of stressors and behaviors that occurred within the "present academic year"). Professors were asked to allow 20 to 25 minutes of class time for the research team to give a brief

explanation of the study and administer the survey to students choosing to participate (a sociology professor, two graduate and one undergraduate sociology students comprised the research team for the present study). Professors who did not wish to devote class time to in-class administration were given the option of researchers giving a brief explanation and handing out surveys to be completed by students on their own time and collected by the research team at a later date. Forty-five percent of professors refused access to their classes. Fifty-five percent of students in English 100 and 300 classes were surveyed successfully in the spring of 2008.

Although remuneration was not available to all participants, each respondent was entered into a drawing for a 1 in 100 chance of receiving $25. Upon completion of his or her anonymous questionnaire each respondent was asked to provide his or her name to be checked on a class roster for the purpose of the drawing.

Independent variables

During the first part of the survey, respondents were asked a series of demographic questions that were used as independent variables. Other than age, which ranged from 16-49, responses were coded into dichotomous variables. Sex

was coded 0=”female” and 1=”male”. For the variable race, 0=”white” and 1=”minority.” To give an indication of social class, respondents were asked the level of education attained by parents, and 0=”both parents < college” while 1=”at least one parent having completed college.” Year of school was coded 0=“underclassmen” (freshmen and sophomores) and 1=“upperclassmen” (juniors and seniors). Students were also asked to identify their living situation, with 0=“on campus” and 1=“off campus.” Finally, students were asked whether or not they were receiving a scholarship to help pay for college (0=“yes” and 1=“no”)

Sources of College Strain

The survey consisted of 87 items concerning events that students may find stressful, deviant behaviors, and negative feelings/emotions. Sixty-one items addressed potentially stressful events likely to affect an undergraduate population, including: victimization, daily hassles, school, work, peer relations, family relations, intimate partner relations, health, time constraints, finances, thoughts about the future, and self-related stressors. Students were asked to rate each item on three Likert scales of five points each. On the first scale respondents were asked the frequency (“how often have you been stressed out by…”) with

which the event occurred (1="never," 2="rarely" (once a month); 3="occasionally" (2=3 times a month); 4="often" (once a week); and 5="extremely often" (more than once a week). On the second scale students were asked to rate the unpleasantness of the event or experience (1="not at all," 2="mildly," 3="moderately," 4="very," and 5="extremely"). On the final scale students were asked how long they dwelled on the event or experience 1="very little/not at all," 2="somewhat," 3="Moderately," and 5="a great deal"). Students were asked to respond "not applicable" if the question did not relate to an event they had experienced within the past academic year. This method of measurement for strains was chosen as it fit with Agnew's conception of strain as not simply an occurrence but an event that also causes unpleasant feelings or distracting thoughts.

Each of the 61 questions assessing strain was scaled so that experiences of frequency, unpleasantness, and dwelling could be assessed together (potential range 0-15). Next, for most strain measures additional scaling was performed to group similar strains together (i.e., school strain, family strain, etc.). However, two single questions were used to measure incidents of *violent and property victimization* respectively (range for each 0-12).

Table 1 displays the questions used to construct the "grouped" strain measures (survey questions listed in Appendix A). As little research has been published regarding the specific strains affecting this particular population, this study is highly exploratory. Based on Agnew's (1992) proposition that the centrality of strains leads them to be perceived as high in magnitude, the survey was designed to touch on issues likely to be important to individuals in the role of college student. "Grouped" strain measures were based on the results of factor analysis.

The first four "grouped" strain measures are School, Job, Time, and Financial. College students are in a position in which attaining and maintaining personal responsibility is of maximum importance. Daily these students attempt to juggle and excel in academic roles as college students, employer expectations at work, and roles as autonomous adults managing both their finances and time.

School strain (range 0-72) is comprised of six questions: taking exams unprepared, preparing for/taking exams, grades, doing worse than expected on

Table 1: Items Included in "Grouped" Strains and Alphas

Grouped strain	Items	Alpha
School strain	Q3, Q15, Q24, Q26, Q28, Q52	.85
Job strain	Q11, Q30	.83
Financial strain	Q8, Q19, Q34, Q21, Q25	.78
Time strain	Q23, Q28, Q46	.79
Interpersonal-relationship strain	Q12, Q50, Q56, Q57	.69
Self strain 1	Q2, Q5, Q53, Q21	.69
Self strain 2	Q6, Q31, Q32, Q35, Q37	.67
Daily strain	Q1, Q9, Q45, Q49, Q60	.62
Health strain	Q16, Q20, Q25	.61
Traffic strain	Q10, Q38, Q47, Q48	.61
Friend strain 1	Q4, Q14, Q39	.54
Friend strain 2	Q13, Q36, Q42	.55

assignment/exam, staying up late writing papers/studying, and having several assignments/exams in one week (alpha=.85). Job strain (range 0-24) is measured using two questions relating to working while also going to school and work issues such as demands, wages, and annoyances (alpha=.83). Time strain (0-36) is measured using three

questions asking about time demands/deadlines, not being able to finish things that need to be done, and staying up late writing papers or working on exams (alpha=.79). Financial strain (range 0-60) is comprised of five questions regarding events such as overspending, having to ask for money, lacking money, overdrawing bank account, and bills (alpha=.78).

The next series of "grouped" strains deals with issues relating to romantic partners and friends. Interpersonal relationships are often a focus for college students, and therefore, believed to be significant to this study. Intimate partner strain (range 0-48) is measured using questions relating to dating (lack of interesting partners), fights with romantic partners, break-ups, and finding out a partner has cheated (alpha=.69). Strains related to Friendship issues (Friend 1) (range 0-27) is comprised of three questions: going out with friends, safety concerns when "partying," and having to entertain friends and relatives when they visit (alpha=.54). To capture toxic or negative friend relationships, a Toxic friend (Friend 2) scale was created (range 0-36) consisting of questions relating to arguments with friends, being disturbed while studying, and issues or annoyances related to roommate(s)

(alpha=.55).

In addition to facing challenges in managing the role of an autonomous adult student, for many, the role of an employee, and the management of social relationships with others, college students also face demands from internal sources within the self. It is important at this stage for individuals to develop an identity that they believe will be acceptable to others. Negative feelings about the self are likely to cause college students to experience significant strain leading to negative emotions. Self dissatisfaction (Self 1) (range 0-48) is a strain measure consisting of four negative self-experiences relating to weight management, annoying behavior of self (habits, temper), being displeased with physical appearance, and inability to finish things (alpha=.69) Negative behavior of self (Self 2) (range 0-54) is comprised of questions about accidents/mistakes, being late, losing or misplacing items, engaging in new experiences/challenges, and public speaking (alpha=.67). Health strain (range 0-36) is comprised of three questions about concerns with physical safety, general health, and not having time for physical exercise (alpha=.61).

The final "grouped" strains are hassles that can impede individuals from effectively managing other areas of life.

They are partially representative of general "negative life events" scales used in past studies to assess strain. Traffic strain (range 0-46): car/bike being broken down, parking problems, traffic issues (inconsiderate/careless drivers, delays), and having gotten a ticket (alpha=.61). Daily strain (range 0-50) consists of questions regarding annoying social behavior of others (rude, inconsiderate, sexist, racist), having to sit through a boring class, tedious everyday chores (shopping, cleaning), having to wait in line or for appointments, and problems with technology (computers, printers) (alpha=62).

Mediating Variables

To assess anger (range 0-12), three frequency questions were asked regarding getting mad because the respondent thought things were unfair, he/she lost his/her temper, or was mad at people or things (alpha=.77). To measure depression (range 0-16) students were asked four questions relating to how often they had felt sad or depressed, felt that there was nothing fun to do or just were not interested in doing anything, felt grouchy or irritable, and been in a bad mood to the point of little things making them mad (alpha=.85).

Dependent variables: Deviant coping mechanisms

To measure alcohol use among college students in a variety of different circumstances (i.e., when with friends, alone, bored, to "calm nerves," and to feel better), five frequency questions (each ranging from 0 to 5) were asked and summed to form an additive scale. The codes for each question are as follows: 0=no use of alcohol," 1="no use of alcohol under the circumstances considered," 2="rarely" use (once a month), 3="occasionally" use (2=3 times a month), 4="often" use (once a week), and 5="extremely often" use (once a day or more). The range for the scale is 0-25 with higher scores reflecting more frequent use of alcohol in reaction to the six circumstances considered. The coefficient alpha for this 5-item scale is .91.

To measure drug use, respondents were asked the same five frequency questions (i.e., how often do you use drugs when with friends, alone, bored, to "calm nerves," or to feel better?) Responses were summed to form an additive scale (scale range 0-25). The coefficient alpha for this 5-item scale is .98.

To measure self-injury (reflecting on actions within the present academic year), respondents were asked two frequency questions about weight control (using laxative or

vomiting in order to control weight) and one question about the use of physical harm to the self (such as cutting). The codes for each question are as follows: 0=never, 1=rarely (once a month), 3=occasionally (2-3 times a month), 4=often (once a week), and 5=extremely often (once a day or more). Once the questions were summed, a dichotomous indicator was formed to measure self-injury (due to the lack of variation in the additive scale) contrasting (0) no participation in these behaviors to at least (1) rare participation. The coefficient alpha indicating consistency among the three behaviors considered is .62.

Analysis

To evaluate the variation of strain by social category, a T-test was performed. To evaluate the effects of strain and other controls, the mediating effects of negative emotions, and the moderation of those effects by sex for predicting both alcohol and drug use, linear regression was performed. Because self-injury was a dichotomous variable, logistic regression was used to explore the above-mentioned effects for predicting self-injury.

As this study sought to identify specific strains central to the college experience, the unique effects of each strain measure were modeled separately. My rationale

for testing each strain separately came from Agnew's (2001) statement that some strains lead to deviance while others do not. Thus, by grouping all strains together in a single model, I believe I might miss the unique relationship between individual strain measures and the negative behaviors this study seeks to understand. In other words, including all strains together in a single model, predicting alcohol use for example, might result in some strain effects being masked by stronger strains.

In the following analysis I check for both mediating and moderating effects. In the mediating models, I seek to understand whether anger and depression mediates the relationship between the perception of strain and negative behaviors. Thus, I seek to answer the following question: Are negative emotions one path through which college students perceiving strain engage in deviance? In the moderating models, I seek to understand whether sex moderates both relationships between negative emotions and deviance and the perception of strain and deviance. The question underlying the first moderating effect is: Does sex explain who is more likely to perceive strain and engage in more deviant behavior? The question underlying the second moderating effect is: Does sex explain who is more likely to

experience negative emotions along with their involvement in deviance?

CHAPTER 4

RESULTS

In Table 2 I evaluate how strain varies by social category. Of the seven social categories evaluated, variation by gender is most consistent. With the exception of two strains, property victimization and traffic strain (no significant variation determined), females perceive their strain experiences to be more consistent, intense, and unpleasant than do males. Table 2.1 reveals that five strains (traffic, violent victimization, dissatisfaction with self, health, and exposure to toxic friends) were shown to vary by race. With the exception of violent victimization, white students reported their experiences of traffic strain, dissatisfaction with self strain, health strain, and toxic friend strain to be more consistent, intense, and unpleasant than minority students reported.

I also find (Table 2.2) that the perception of strain varies by parental education, and scholarship status (Table 2.3). First, students whose parents received less education perceived more consistent, intense, and unpleasant strain in

Table 2: Variation of Strain by Gender

STRAIN MORE SIGNIFICANT FOR WOMEN THAN MEN—**RANKED FROM HIGH TO LOW BY "MEAN DIFFERENCE" BETWEEN MALE & FEMALES.**

STRAIN SCALE	MEAN FOR MEN	MEAN FOR WOMEN	LEVEL OF STATISTICAL SIGNIFICANCE
Health Strain	7.63	14.53	***
School Strain	37.14	43.87	***
Self 1 Strain	17.97	24.4	***
Financial Strain	17.1	21.54	***
Self2 Strain	18.39	22.06	***
Time Strain	17.95	21.15	***
Friend2 Strain	10.55	13.85	***
Interpersonal relationships Strain	8.93	11.75	***
Daily-hassles/ Strain	21.40	23.65	***
Job Strain	6.53	8.02	**
Friend1 Strain	5.13	6.25	**
Violent Victimization	.229	.551	**

p<.05*; p<.01**; p<.001**

Table 2.1: Variation of Strain by Race

STRAIN SCALES MORE SIGNIFICANT FOR WHITES THAN MINORITIES—**RANKED FROM HIGH TO LOW BY "MEAN DIFFERENCE" BETWEEN WHITES & MINORITIES.**

STRAIN SCALE	MEAN FOR WHITES	MEAN FOR MINORITIES	LEVEL OF STATISTICAL SIGNIFICANCE
Traffic Strain	12.91	10.32	**
Violent Victimization	**.348**	**.754**	*
Self Strain #1	21.72	19.56	t
Health Strain	11.57	9.92	t
Friend 2	12.65	11.13	t

p<.05*; p<.01**; p<.001***

Table 2.2: Variation of Strain by Parental Education

STRAIN SCALE	MEAN FOR < COLLEGE PARENTS	MEAN FOR AT LEAST ONE COLLEGE GRAD PARENT	LEVEL OF STAT. SIG.
Job Strain	8.46	6.17	***
Financial Strain	20.95	18.08	**
Traffic Strain	13.38	11.77	*

p<.05*; p<.01**; p<.001***

Table 2.3: Variation of Strain by Scholarship Status

STRAIN SCALE	MEAN FOR NO SCHOLARSHIP	MEAN FOR SCHOLARSHIP RECIPIENTS	LEVEL OF STAT. SIG.
Financial Strain	20.71	16.46	***
Health Strain	11.90	9.90	**
Traffic Strain	13.07	11.17	*
Job Strain	7.70	6.18	*
Property Victimization	1.46	1.05	t
Self 1 Strain	21.96	20.39	t
School Strain	41.55	39.38	t

p<.05*; p<.01**; p<.001***

Table 2.4: Variation of Strain by Age

STRAIN SCALE	MEAN FOR <20 IN AGE	MEAN FOR >/= 20 IN AGE	LEVEL OF STATISTICAL SIGNIFICANCE
Job Strain	5.89	9.01	***
Traffic Strain	11.49	13.71	***
School Strain	41.98	39.56	*
Self 2 Strain	20.96	19.59	t

p<.05*; p<.01**; p<.001***

job, financial, and traffic strain than students whose parents received more education perceived. Next, Table 2.3 shows that students who were not the recipients of scholarships reported experiencing more consistent, intense, and unpleasant strain than students who were the recipients of scholarships reported in seven areas of strain: financial, health, traffic, job, property victimization, dissatisfaction with self, and school strain.

Continuing with the analysis of strain by social categories, the perception of strain also varies by age (Table 2.4) in four of my strain measures (job, traffic, school, and self 2). Older students report experiencing more consistent, intense, and unpleasant job and traffic strain than younger students report, while younger students perceived more consistent, intense, and unpleasant school and dissatisfaction with self strain than older students report experiencing. In addition to age Table 2.5 shows the perception of strain varies by class status in six of my measures (job, friend 1, school, self 2, health, and friend 2). With the exception of job strain, freshmen and sophomores report experiencing more consistent, intense, and unpleasant strain than upperclassmen perceive and report

Table 2.5: Variation of Strain by Class Status (i.e., Freshman, Sophomore, etc.)

STRAIN SCALE	MEAN FOR UNDERCLASSMEN	MEAN FOR UPPERCLASSMEN	LEVEL OF STATISTICAL SIGNIFICANCE
Job Strain	6.29	9.97	***
Friend 1 Strain	6.04	4.93	**
School Strain	41.65	38.85	*
Self 2 Strain	20.92	18.87	*
Health Strain	11.73	10.41	*
Friend 2 Strain	12.77	11.57	t

p<.05*; p<.01**; p<.001*

Table 2.6: Variation of Strain by Living Situation (i.e., Living On or Off Campus)

STRAIN SCALE	MEAN FOR ON-CAMPUS	MEAN FOR OFF-CAMPUS	LEVEL OF STAT. SIG.
Traffic Strain	11.08	14.53	***
Job Strain	5.19	10.25	***
Friend 2 Strain	13.34	11.28	***
Friend 1 Strain	6.08	5.26	*
Violent Victimization	.51	.26	*

p<.05*; p<.01**; p<.001***

experiencing.

Finally, (Table 2.6) students who live off campus report experiencing more consistent, intense, and unpleasant traffic and job strain than students living on campus report, while students living on campus report experiencing more consistent, intense, and unpleasant strain from friendship issues, toxic friends, and violent victimization. These results confirm the expectation, stated in Hypothesis 1 that experience of strain will vary by social category. Table 3 displays OLS results for alcohol regressed on both demographic and strain measures in eleven separate models. The results for school, job, and time strains are not presented as the effects are not significant on alcohol use. First, six of seven demographic variables had significant effects on the use of alcohol among college students. In each model--men, upperclassmen, and students without a scholarship--were more likely to use alcohol than were women, underclassmen, and students with scholarships. The effects for class, race, and living situation (significant in one model: intimate relationship strain) were less consistent. For the models in which the results for these variables are significant, the effects reveal that

Table 3. Alcohol Regressed on Control and Strain Variables

Sex	1.26***	1.07***	1.38***	1.31***	1.32***	1.34**	1.17***	1.17***	1.46***	1.18**	1.17***
	(.12)	(.10)	(.14)	(.13)	(.13)	(.13)	(.12)	(.12)	(.14)	(.12)	(.12)
Race	.50	.73**	.19	.54	.76	.38	.59***	.59***	.51***	.57***	.27***
	(.03)	(.05)	(.01)	(.04)	(.05)	(.03)	(.04)	(04)	(.03)	(.04)	(.02)
Class	.71*	.59	.83*	.70[t]	.46	.51	.54	.54	.61[t]	.63[t]	.76*
	(.07)	(.06)	(.08)	(.07)	(.05)	(.05)	(.05)	(.05)	(.06)	(.06)	(.08)
Age	-.01	-.01	-.03	-.02	.00	.02	-.02	-.02	.01	-.01	-.01
	(-.01)	(-.00)	(-.02)	(.01)	(.00)	(.01)	(-.01)	(-.01)	(.09)	(-.00)	(-.01)
Year of College	.77***	.79***	.66**	.68**	.79***	.78***	.76***	.76***	.73***	.69**	.76***
	(.15)	(.15)	(.13)	(.13)	(.15)	(.15)	(.15)	(.15)	(.14)	(.13)	(.15)
Scholarship	-1.49***	-1.28***	-1.18**	-1.29**	-1.32***	-1.26**	-1.25**	-1.25**	-1.34**	-1.31***	-1.32***
	(-.13)	(-.11)	(-.11)	(-.12)	(-.12)	(-.11)	(-.11)	(-.11)	(-.12)	(-.12)	-.12
Living Situation	.06	.62	.65	.65*	.32	.61	.75	.75	.64	.56	.32
	(.09)	(.06)	(.06)	(.06)	(.03)	(.06)	(.07)	(.07)	(.06)	(.01)	(.03)
Violent Victimization (N=763)	.40***	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	(.13)										
Property Crime (N=762)	_____	.32***	_____	_____	_____	_____	_____	_____	_____	_____	_____
		(.18)									
Financial Strain (N=740)	_____	_____	.07***	_____	_____	_____	_____	_____	_____	_____	_____
			(.20)								
Int. Relationship (N=745)	_____	_____	_____	.10***	_____	_____	_____	_____	_____	_____	_____
				(.20)							
Friend 1 Strain (N=732)	_____	_____	_____	_____	.25***	_____	_____	_____	_____	_____	_____
					(.26)						
Friend 2 Strain (N=737)	_____	_____	_____	_____	_____	.09***	_____	_____	_____	_____	_____
						(.14)					
Self Strain 1 (N=737)	_____	_____	_____	_____	_____	_____	.05**	_____	_____	_____	_____
							(.11)				
Self Strain 2 (N=740)	_____	_____	_____	_____	_____	_____	_____	.05**	_____	_____	_____
								(.11)			
Health Strain (N=756)	_____	_____	_____	_____	_____	_____	_____	_____	.06**	_____	_____
									(.11)		
Daily Strain (N=733)	_____	_____	_____	_____	_____	_____	_____	_____	_____	.07***	_____
										(.15)	
Traffic Strain (N=750)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	.09***
											(.16)
Constant	5.31***	3.762***	4.11***	3.79***	3.56*	4.00***	2.850***	4.128***	3.695***	3.778**	4.65***
R^2	.085	.10	.10	.11	.134	.088	.08	.076	.078	.085	.09

t p<.10, * p<.05, **p<.01, ***p<.001 (standardized coefficients) **School, Job, and Time strains not reported as findings were not significant.**

minorities, students whose parents earned more education, and students who live off campus were more likely to use alcohol.

Next, although three sources of strain (school, job, and time) failed to affect the variation in use of alcohol, results show that alcohol was used simultaneously with eleven sources of strain net of demographic variables. First, both violent victimization and having property stolen are positively associated with alcohol use. Second, though school, job, and time strain failed to be associated with alcohol use, financial strain is experienced with greater alcohol use. Third, three social sources of strain, strains occurring in friendship and intimate relationships, were also associated with an increase in alcohol use. Fourth, the three internal sources of strain--those dealing with annoying habits, features, or behavior of self or one's health--were also positively associated with alcohol use. Finally, two strains whose sources are more general, negative life events (daily and traffic strains), are the last strain measures associated with significantly more alcohol use. These results support the expectation, stated in Hypothesis 2, that strains that are perceived as highest

in magnitude will be most consistently associated with alcohol use.

Table 4 displays the OLS results for significant strains on alcohol mediated by anger. First, race (moderate-to-highly associated with alcohol use in Table 3, though inconsistent) drops out of all models predicting alcohol use while controlling for anger. Second, when controlling for anger, men, upperclassmen, and students without a scholarship were still more likely to use alcohol than were women, freshmen and sophomores, and recipients of scholarships. Third, the effect of parental education, which was significant in six of eleven models in Table 3, was significant in an additional model (dissatisfaction with self strain) after controlling for anger. The effects reveal that students whose parents received more education continued to be more likely to use alcohol even while controlling for anger. Finally, living situation, which was significant in one model (intimate relationship strain) in Table 3, is no longer significant after controlling for anger.

The following discussion will present results of the mediating effect of anger on the 11 strains with significant

Table 4. Significant Strains on Alcohol Mediated by Anger (standardized coefficients)

Sex	1.38***	1.18***	1.39***	1.34***	1.36***	1.34***	1.17**	1.16**	1.46***	1.18***	1.24***
	(.14)	(.12)	(.14)	(.13)	(.13)	(.13)	(.12)	(.12)	(.13)	(.12)	(.12)
Race	.22	.45	.04	.28	.42	.15	.26	.26	.29	.24	.05
	(.02)	(.03)	(.00)	(.02)	(.03)	(.01)	(.02)	(.02)	(.02)	(.02)	(.00)
Class	.70*	.59	.80*	.69^{t}	.51	.53	.75*	.60	.61^{t}	.68^{t}	.73*
	(.07)	(.06)	(.08)	(.07)	(.05)	(.05)	(.08)	(.06)	(.06)	(.07)	(.07)
Age	.02	.03	.01	.05	.04	.05	-.01	.01	.04	.03	.02
	(.01)	(.02)	(.00)	(.03)	(.02)	(.00)	(-.00)	(.01)	(.02)	(.02)	(.01)
Year of College	.65**	.67***	.60**	.60**	.66**	.66**	.67**	.62**	.62**	.60**	.67**
	(.13)	(.13)	(.12)	(.12)	(.13)	(.13)	(.13)	(.12)	(.12)	(.12)	(.13)
Scholarship	-1.23**	-1.06**	-.99*	-1.01**	-.97*	-1.10**	-1.09**	-1.04*	-1.18**	-1.11**	-1.13**
	(-.11)	(-.09)	(-.09)	(-.09)	(-.09)	(-.10)	(-.01)	(-.09)	(-.10)	(-.10)	(-.10)
Living Situation	.62	.61	.62	.68	.78	.53	.59	.74	.62	.57	.40
	(.06)	(.06)	(.06)	(.07)	(.08)	(.05)	(.06)	(.07)	(.06)	(.06)	(.04)
Viol. Vict. (N=739)	.37***	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	(.20)										
Prop. Vict.(N=738)	_____	.29***	_____	_____	_____	_____	_____	_____	_____	_____	_____
		(.16)									
Financial (N=718)	_____	_____	.06***	_____	_____	_____	_____	_____	_____	_____	_____
			(.16)								
Int. Rel. (N=721)	_____	_____	_____	.07***	_____	_____	_____	_____	_____	_____	_____
				(.15)							
Friend 1 (N=709)	_____	_____	_____	_____	.21***	_____	_____	_____	_____	_____	_____
					(14)						
Friend 2 (N=715)	_____	_____	_____	_____	_____	.05*	_____	_____	_____	_____	_____
						(.08)					
Self Strain 1 (N=714)	_____		_____	_____	_____	_____	.01	_____	_____	_____	_____
							(.02)				
Self Strain 2 (N=717)	_____	_____	_____	_____	_____	_____	_____	.01	_____	_____	_____
								(.03)			
Health Strain (N=733)	_____	_____	_____	_____	_____	_____	_____	_____	.03	_____	_____
									(.05)		
Daily Strain (N=711)	_____	_____	_____	_____	_____	_____	_____	_____	_____	.03	_____
										(.07)	
Traffic Strain (N=727)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	.06**
											(.11)
Anger	.39***	.35***	.27***	.31***	.28***	.34***	.36***	.38***	.37***	.33***	.33***
	(.20)	(.18)	(.14)	(.07)	(.14)	(.17)	(.19)	(.19)	(.19)	(.17)	(.17)
Constant	3.64**	3.05*	3.03*	2.73*	2.31	2.86*	3.91**	3.52*	3.16*	2.95*	3.37*
R^2	.125	.135	.119	.129	.149	.113	.101	.103	.108	.104	.116

(t < .10 ; * < .05; ** < .01; * < .001**

associations with alcohol use in Table 3. First, five (violent victimization, property victimization, financial, intimate relationship, and friend issues) of the eleven significant strains in Table 3 remained positively associated, at the same level of significance, with alcohol use after controlling for anger. Second, two of my strain measures (toxic friends and traffic) remained significant though at decreased size and probability when anger was included.

Third, four of my strain measures, including all three of the strains related to self, (dissatisfaction with self, negative behavior of self, health, and daily strain) were no longer significantly related to alcohol use after controlling for anger; therefore, their affect was completely mediated by anger.

Anger is a significant predictor of alcohol use in all models. With the exception of financial strain and intimate relationship strain, anger has the largest effect on predicting alcohol use in all models. These results are inconsistent with my expectation. Hypothesis 3 is weakly, if at all, supported. I expected anger would mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use in both males and females;

however, anger mediated only four of the eleven strain measures.

Table 4.1 shows how the combined effect of gender and anger allows us to understand the "gendered" pathways related to GST. First, inclusion of the moderating effect of sex and anger did not dramatically affect the significance or size of other variables included and discussed in Table 4. Most notably I find that the interaction effect is moderately significant in all models. This result tells us that males who experience more anger use more alcohol than females who report anger. These results confirm my expectation, stated in Hypothesis 4b, that men are more likely to react to strain with anger and subsequent negative behaviors.

Table 5 displays the OLS results for significant strains on alcohol mediated by depression. First, race (having a moderate to highly significant, though inconsistent association with alcohol use in Table 3) drops out of all models predicting alcohol use while controlling for depression as it did with anger. Second, when controlling for depression, men, upperclassmen, and students without scholarships were still more likely to use alcohol than women, freshmen and sophomores, and students with

Table 4. 1 Significant Strains on Alcohol Mediated by Anger with Sex*Anger as Moderator (standardized coefficients)

Sex	1.41***	1.21***	1.41***	1.37***	1.39***	1.36***	1.19**	1.19**	1.40***	1.20***	1.26***
	(.14)	(.12)	(.14)	(.13)	(.13)	(.13)	(.12)	(.12)	(.13)	(.12)	(.12)
Race	.25	.45	.04	.27	.42	.14	.26	.27	.27	.24	.05
	(.02)	(.03)	(.00)	(.02)	(.03)	(.01)	(.02)	(.02)	(.02)	(.02)	(.00)
Class	.72*	.61^{t}	.80*	.71*	.53	.56	.76*	.60	.62^{t}	.69^{t}	.75*
	(.07)	(.06)	(.08)	(.07)	(.05)	(.05)	(.08)	(.06)	(.6)	(.07)	(.07)
Age	.02	.03	-.01	.05	.04	.05	-.01	.01	.04	.03	.02
	(.01)	(.02)	(-.00)	(.03)	(.02)	(.51)	(-.00)	(.01)	(.02)	(.02)	(.01)
Year of College	.63**	.67***	.57*	.57*	.64**	.64**	.64**	.59**	.59**	.58*	.65**
	(.13)	(.13)	(.12)	(.12)	(.13)	(.13)	(.13)	(.12)	(.12)	(.12)	(.13)
Scholarship	-1.28**	-1.11**	-1.04*	-1.13**	-1.03*	-1.16**	-1.15**	-1.10**	-1.23**	-1.16**	-1.19**
	(-.11)	(-.09)	(-.09)	(-.09)	(-.09)	(-.10)	(-.01)	(-.09)	(-.10)	(-.10)	(-.10)
Living Situation	.62	.61	.62	.64	.77^{t}	.53	.57	.73	.61	.55	.38
	(.06)	(.06)	(.06)	(.07)	(.08)	(.05)	(.06)	(.07)	(.06)	(.06)	(.04)
Viol. Vict. (N=739)	.39***	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	(.20)										
Prop. Vict. (N=738)	_____	.29***	_____	_____	_____	_____	_____	_____	_____	_____	_____
		(.16)									
Financial (N=718)	_____	_____	.06***	_____	_____	_____	_____	_____	_____	_____	_____
			(.16)								
Int. Rel. (N=721)	_____	_____	_____	.08***	_____	_____	_____	_____	_____	_____	_____
				(.15)							
Friend 1 (N=709)	_____	_____	_____	_____	.21***	_____	_____	_____	_____	_____	_____
					(14)						
Friend 2 (N=715)	_____	_____	_____	_____	_____	.05*	_____	_____	_____	_____	_____
						(.08)					
Self Strain 1 (N=714)	_____		_____	_____	_____	_____	.01	_____	_____	_____	_____
							(.02)				
Self Strain 2 (N=717)	_____	_____	_____	_____	_____	_____	_____	.01	_____	_____	_____
								(.03)			
Health Strain (N=733)	_____	_____	_____	_____	_____	_____	_____	_____	.03	_____	_____
									(.05)		
Daily Strain (N=711)	_____	_____	_____	_____	_____	_____	_____	_____	_____	.03	_____
										(.07)	
Traffic Strain (N=727)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	.06**
											(.11)
Anger	.39***	.36***	.28***	.32***	.29***	.35***	.37***	.39***	.37***	.33***	.34***
	(.20)	(.18)	(.14)	(.07)	(.14)	(.17)	(.19)	(.19)	(.19)	(.17)	(.17)
Sex*Anger	.38**	.32*	.28*	.37**	.40**	.31*	.32*	.31*	.32*	.31*	.31*
	(.10)	(.08)	(.09)	(.10)	(.10)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)
Constant	4.58***	3.97**	4.29**	3.37*	2.86*	3.69***	3.91**	4.52***	4.02**	3.79***	3.37*
R^2	.134	.141	.124	.137	.159	.119	.101	.109	.114	.110	.116

(t < .10 ; * < .05; ** < .01; * < .001)**

scholarships. Third, when controlling for depression, parental education became more significant in two models (intimate relationship and dissatisfaction with self) and dropped out of two models (health and daily strain).

In models where parental education is significant after controlling for depression, students whose parents received more education were more likely to use alcohol than students whose parents received less education. Fourth, after controlling for depression, age became significant in one model (violent victimization). In that model older students were more likely to use alcohol than were younger students. Finally, after controlling for depression, living situation becomes significant in two models (property victimization and friendship issues) and loses significance in one model (intimate relationship). In the two models that are significant, students living off campus are more likely to use alcohol than students living on campus.

The following discussion will present results of the mediating effect of depression on the 11 strains with significant associations with alcohol use in Table 5. First, six (violent victimization, property victimization, financial, intimate relationship, friendship issues, and

Table 5. Significant Strains on Alcohol Mediated by Depression (standardized coefficients)

Sex	1.47***	1.26***	1.47***	1.43*	1.44***	1.46***	1.34***	1.29***	1.27***	1.27***	1.32***
	(.145)	(.13)	(.15)	(.148)	(.14)	(.14)	(.13)	(.13)	(.13)	(.13)	(.13)
Race	.26	.49	.01	.33	.53	.19	.27	.31	.33	.33	.08
	(.02)	(.03)	(.00)	(-.027)	(.04)	(.01)	(.02)	(.02)	(.02)	(.02)	(.00)
Class	.76*	.62	.81*	.72*	.52	.58	.78*	.61	.67	.67	.78*
	(.08)	(.06)	(.08)	(.082)	(.05)	(.06)	(.08)	(.06)	(.07)	(.07)	(.08)
Age	.76*	.02	-.00	.04	.03	.04	-.01	.00	.02	.02	.01
	(.08)	(.01)	(-.00)	(.02)	(.02)	(.02)	(-.01)	(.00)	(.01)	(.01)	(.01)
Year of College	.68**	.70**	.61**	.62**	.72***	.70**	.72**	.67**	.65**	.65**	.69**
	(.13)	(.14)	(.12)	(.073)	(.14)	(.14)	(.14)	(.13)	(.13)	(.13)	(.13)
Scholarship	-1.40***	-1.21**	-1.13**	-1.22**	-1.13**	-1.24**	-1.24**	-1.18**	-1.25**	-1.25**	-1.26**
	(-.12)	(-.11)	(-.10)	(.092)	(-.10)	(-.11)	(-.11)	(-.11)	(-.11)	(-.11)	(-.11)
Living Situation	.63	.62*	.63	.65	.77*t*	.54	.59	.75	.56	.56	.35
	(.06)	(.06)	(.06)	(.080)	(.08)	(.05)	(.06)	(.07)	(.06)	(.06)	(.03)
Viol. Vict. (N=749)	.36***	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	(.12)										
Prop. Vict. (N=748)	_____	.31***	_____	_____	_____	_____	_____	_____	_____	_____	_____
		(.18)									
Financial (N=726)	_____	_____	.06***	_____	_____	_____	_____	_____	_____	_____	_____
			(.17)								
Int. Rel. N=731)	_____	_____	_____	.09***	_____	_____	_____	_____	_____	_____	_____
				(.174)							
Friend 1 N=718)	_____	_____	_____	_____	.22***	_____	_____	_____	_____	_____	_____
					(.23)						
Friend 2 N=725)	_____	_____	_____	_____	_____	.07**	_____	_____	_____	_____	_____
						(.11)					
Self Strain 1 (N=723)	_____	_____	_____	_____	_____	_____	.03	_____	_____	_____	_____
							(.57)				
Self Strain 2 N=726)	_____	_____	_____	_____	_____	_____	_____	.024	_____	_____	_____
								(.05)			
Health Strain N=742)	_____	_____	_____	_____	_____	_____	_____	_____	.05*	_____	_____
									(.01)		
Daily Strain N=719)	_____	_____	_____	_____	_____	_____	_____	_____	_____	.05*	_____
										(.01)	
Traffic Strain N=736)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	.07***
											(.12)
Depression	.21***	.19***	.12*	.15**	.14**	.17**	.16**	.19***	.19***	.13*	.17***
	(.142)	(.13)	(.09)	(.086)	(.10)	(.12)	(.11)	(.13)	(.13)	(.09)	(.12)
Constant	3.95**	3.26*	3.18*	2.90*	2.61	3.07*	4.14**	3.73**	3.48*	3.24*	3.56*
R^2	.106	.122	.109	.118	.137	.099	.074	.089	.09	.089	.104

(t < .10 ; * < .05; ** < .01; * < .001)**

traffic) of the eleven significant strains in Table 5 remained positively associated, at the same level of significance, with alcohol use after controlling for depression. Second, three of the strain measures (toxic friends, health, and daily strain) remained significant though at decreased size and probability after controlling for depression. Third, depression completely mediated the effects of two of the self strain measures (dissatisfaction with self and negative behavior of self) as neither was significant after including depression. Finally, like anger, depression is a moderate to strong predictor of alcohol use in all models considered. These results are inconsistent with my expectation, stated in Hypothesis 3, that depression will mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use in both males and females.

In summary of the mediating effects of negative emotions, anger is an extremely significant predictor of alcohol use, and, as noted above in discussions of standardized coefficients, anger is the most significant or one of the most significant predictors of alcohol use in most models. In contrast, depression while a significant

predictor in each model has a weaker effect in predicting alcohol use compared to anger.

Just as with anger, I take a look at how the combined effect of gender and depression allows us to understand the "gendered" pathways related to GST in Table 5.1. First, inclusion of the moderating effect of sex and depression did not dramatically affect the significance or size of other variables included. Most notably, I find that the interaction effect is moderately significant in all models. This result tells us that males who experience more depression use more alcohol than do females who report depression. My initial expectation was that female reactions to strain would be correlated with feelings of depression and use of alcohol. In contrast, my analysis contradicts Hypothesis 4a as it reveals that males who are more depressed drink more alcohol than do females who are depressed.

Table 6 displays the OLS results for drugs regressed on both demographic and strain measures in nine separate models. First, three of seven demographic variables had significant effects on the use of drugs among college students. In each model men, students living off

Table 5.1. Significant Strains on Alcohol Mediated by Depression with Sex*Depression as Moderator (standardized coefficients)

Sex	1.54***	1.31***	1.50***	1.50***	1.49***	1.50***	1.38***	1.34***	1.55***	1.31***	1.37***
	(.145)	(.13)	(.15)	(.148)	(.14)	(.14)	(.13)	(.13)	(.13)	(.13)	(.13)
Race	.30	.49	.01	.33	.54	.19	.27	.32	.32	.35	.09
	(.02)	(.03)	(.00)	(.027)	(.04)	(.01)	(.02)	(.02)	(.02)	(.02)	(.00)
Class	.76*	.63^{t}	.81*	.73*	.51	.59	.77*	.62^{t}	.66^{t}	.67^{t}	.78*
	(.08)	(.06)	(.08)	(.082)	(.05)	(.06)	(.08)	(.06)	(.07)	(.07)	(.08)
Age	.00	.02	-.00	.04	.02	.04	-.02	.00	.02	.02	.01
	(.08)	(.01)	(-.00)	(.02)	(.02)	(.02)	(-.01)	(.00)	(.01)	(.01)	(.01)
Year of College	.66**	.68**	.59**	.59**	.69**	.68**	.69**	.65**	.63**	.62**	.67**
	(.13)	(.14)	(.12)	(.07)	(.14)	(.14)	(.14)	(.13)	(.13)	(.13)	(.13)
Scholarship	-1.43***	-1.24**	-1.17**	-1.26**	-1.17**	-1.29**	-1.28**	-1.22**	-1.35**	-1.27**	-1.30**
	(-.12)	(-.11)	(-.10)	(.09)	(-.10)	(-.11)	(-.11)	(-.11)	(-.11)	(-.11)	(-.11)
Living Situation	.63	.62*	.63	.64	.78^{t}	.54	.59	.74^{t}	.62	.56	.36
	(.06)	(.06)	(.06)	(.08)	(.08)	(.05)	(.06)	(.07)	(.06)	(.06)	(.03)
Viol. Vict. N=749)	.40***	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	(.12)										
Prop. Vict. N=748)	_____	.31***	_____	_____	_____	_____	_____	_____	_____	_____	_____
		(.18)									
Financial (N=726)	_____	_____	.06***	_____	_____	_____	_____	_____	_____	_____	_____
			(.17)								
Int. Rel. N=731)	_____	_____	_____	.09***	_____	_____	_____	_____	_____	_____	_____
				(.17)							
Friend 1 (N=718)	_____	_____	_____	_____	.22***	_____	_____	_____	_____	_____	_____
					(.23)						
Friend 2 (N=725)	_____	_____	_____	_____	_____	.06**	_____	_____	_____	_____	_____
						(.11)					
Self Strain 1 (N=723)	_____	_____	_____	_____	_____	_____	.03	_____	_____	_____	_____
							(.57)				
Self Strain 2 N=726)	_____	_____	_____	_____	_____	_____	_____	.02	_____	_____	_____
								(.05)			
Health Strain N=742)	_____	_____	_____	_____	_____	_____	_____	_____	.04	_____	_____
									(.01)		
Daily Strain N=719)	_____	_____	_____	_____	_____	_____	_____	_____	_____	.05*	_____
										(.01)	
Traffic Strain N=736)	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	.07***
											(.12)
Depression	.21***	.19***	.14*	.16**	.15**	.18***	.17**	.20***	.19***	.14*	.18***
	(.14)	(.13)	(.09)	(.09)	(.10)	(.12)	(.11)	(.13)	(.13)	(.09)	(.12)
Sex*Depression	.35***	.27**	.22*	.31**	.31**	.27**	.28**	.26*	.29**	26*	.27**
	(.12)	(.09)	(.08)	(.10)	(.11)	(.09)	(.10)	(.09)	(.10)	(.09)	(.09)
Constant	4.77**	4.06**	4.23*	3.38*	3.09*	3.72**	4.77***	4.54**	4.13**	3.69**	4.26**
R^2	.119	.13	.114	.129	.148	.108	.095	.096	.101	.097	.112

(t < .10 ; * < .05; ** < .01; * < .001)**

Table 6. Drugs Regressed on Control and Strain variables

Sex	2.05***	1.94***	2.11***	2.04***	2.12***	2.36***	2.19***	2.05***	2.14***
	(.21)	(.19)	(.21)	(.21)	(.22)	(.24)	(.22)	(.21)	(.22)
Race	.78	.88^{t}	.69	.71	.94^{t}	.87	.86^{t}	.87	.63
	(.05)	(.06)	(.05)	(.05)	(.07)	(.06)	(.06)	(.06)	(.04)
Class	.42	.37	.53	.42	.34	.43	.33	.38	.50
	(.04)	(.037)	(.05)	(.04)	(.04)	(.04)	(.03)	(.04)	(.05)
Age	-.07	-.06	-.08	-.05	-.08	-.06	-.05	-.05	-.06
	(-.04)	(-.04)	(-.05)	(-.03)	(-.05)	(-.04)	(-.04)	(-.03	(-.04)
Year of College	.05	.04	.02	.03	.05	.04	.03	.07	.05
	(.01)	(.01)	(.00)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Scholarship	-1.29***	-1.15**	-1.08**	-1.32***	-1.16**	-1.21**	-1.10**	-1.15**	-1.22**
	(-12)	(-.10)	(-.10)	(-.12)	(-.11)	(-.11)	(-.10)	(-.11)	(-.11)
Living Situation	.98*	1.04*	.98*	1.06*	1.06*	1.02*	1.01*	.96*	.78^{t}
	(.10)	(.10)	(.10)	(.11)	(.11)	(.10)	(.10)	(.10)	(.08)
Violent Victimization (N=756)	.28**(.09)	_____	_____	_____	_____	_____	_____	_____	_____
Property Crime (N=755)	_____	.24*** (.14)	_____	_____	_____	_____	_____	_____	_____
Financial Strain (N=733)	_____	_____	.04*** (.12)	_____	_____	_____	_____	_____	_____
Int. Relationship (N=738)	_____	_____	_____	.05**(.10)	_____	_____	_____	_____	_____
Friend 1 Strain (N=725)	_____	_____	_____	_____	.08* (.09)	_____	_____	_____	_____
Self Strain 1 (N=730)	_____	_____	_____	_____	_____	.05** (.11)	_____	_____	_____
Self Strain 2 (N=733)	_____	_____	_____	_____	_____	_____	.06*** (.13)	_____	_____
Daily Strain (N=725)	_____	_____	_____	_____	_____	_____	_____	.06*** (.13)	_____
Traffic Strain (N=743)	_____	_____	_____	_____	_____	_____	_____	_____	.24*** (.14)
Constant	3.51**	3.11*	3.04*	2.93*	3.37*	2.58^{t}	2.31^{t}	2.09	3.28*
R^2	.075	.089	.078	.08	.079	.081	.083	.08	.078

^{t} p<.10, * p<.05, **p<.01, ***p<.001 (standardized coefficients)

campus, and students without a scholarship were more likely to use drugs than were women, students living on campus, and students who are receiving a scholarship.

Next, while five sources of strain (school, job, time, toxic friends, and health) failed to affect the variation in use of drugs, results show that drugs were used simultaneously with nine sources of strain. First, both violent victimization and having property stolen were positively associated with the use of drugs. Second, consistent with alcohol use, school, job, and time strains failed to be associated with drug use, while financial strain is experienced with greater drug use. Third, two of my three social sources of strain were associated with an increase in drug use. As previously mentioned, there was no relationship discovered between my toxic friends scale and increased drug use. Fourth, of my internal sources of strain, both self strains were associated with an increase in drug use, while no positive relationship was found between health strain and drug use. Finally, both of my two general negative life events (daily and traffic strains) are associated with increased drug use. These results confirm the expectation, stated in Hypothesis 2, that strains which

are perceived as highest in magnitude will be most consistently associated with drug use. Again, school, job, and time strains, which were believed to be high in magnitude, failed to have a significant association with drug use.

Table 7 displays OLS results for significant strains on drugs mediated by anger. First, race (having a small level of significance in three models in Table 5) drops out of all models predicting drug use after controlling for anger. Second, after controlling for depression, men and students without scholarships are still more likely to use drugs than are women and recipients of scholarships. Third, living situation remains significant in all but one model (traffic) after anger is introduced. In the models that remain significant, students living off campus are more likely to use drugs than are students living on campus. Finally, year of college, which was not significant in Table 5, becomes significant in one model (traffic) after controlling for anger. In this model freshmen and sophomores are more likely to use drugs once anger is introduced.

The following discussion will present results of the mediating effects of anger on the nine strains with significant associations with drug use in Table 5. First, only one strain (property victimization) remains

Table 7. Significant Strains on Drugs Mediated by Anger (standardized coefficients)

Sex	2.15***	2.03***	2.14***	2.09***	2.18***	2.34***	2.23***	2.08***	2.20***
	(.21)	(.20)	(.21)	(.21)	(.22)	(.23)	(.23)	(.21)	(.22)
Race	.66	.77	.63	.61	.82	.81	.73	.80	.58
	(.05)	(.05)	(.04)	(.04)	(.06)	(.05)	(.05)	(.05)	(.04)
Class	.44	.39	.54	.43	.38	.45	.37	.41	.51
	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.05)
Age	-.07	-.06	-.08	-.06	-.09	-.07	-.06	-.06	-.07
	(-.04)	(-.04)	(-.05)	(-.04)	(-.05)	(-.04)	(-.01)	(-.04)	(-.04)
Year of College	.04	.03	.00	-.02	-.06	-.02	-.04	-.05	-1.12**
	(.01)	(.01)	(.00)	(-.00)	(-.01)	(-.00)	(-.01)	(-.01)	(-.10)
Scholarship	-1.16**	-1.04*	-.98*	-1.21**	-1.05**	-1.11**	-.99*	-1.05*	.83^{t}
	(-.10)	(-.09)	(-.09)	(-.11)	(-.10)	(-.10)	(-.10)	(-.10)	(.08)
Living Situation	.99*	1.04*	.99*	1.09*	1.06*	1.03*	1.02*	.98*	.03
	(.10)	(.10)	(.01)	(.11)	(.11)	(.10)	(.10)	(-.10)	(.06)
Viol. Vict.	.27*	_____	_____	_____	_____	_____	_____	_____	_____
(N=735)	(.09)								
Prop. Vict.	_____	.24***	_____	_____	_____	_____	_____	_____	_____
(N=734)		(.14)							
Financial	_____	_____	.04**	_____	_____	_____	_____	_____	_____
(N=714)			(.11)						
Int. Rel.	_____	_____	_____	.04*	_____	_____	_____	_____	_____
(N=717)				(.08)					
Friend 1 (N=705)	_____	_____	_____	_____	.06^{t}	_____	_____	_____	_____
					(.07)				
Self Strain 1	_____	_____	_____	_____	_____	.04*	_____	_____	_____
(N=710)						(.09)			
Self Strain 2	_____	_____	_____	_____	_____	_____	.05**	_____	_____
(N=713)							(.11)		
Daily Strain	_____	_____	_____	_____	_____	_____	_____	.05**	_____
(N=706)								(.11)	
Traffic Strain	_____	_____	_____	_____	_____	_____	_____	_____	.03
(N=723)									(.06)
Anger	.18*	.14^{t}	.010	.14^{t}	.14^{t}	.11	.11	.07	.16*
	(.09)	(.07)	(.05)	(.07)	(.07)	(.05)	(.06)	(.04)	(.08)
Constant	3.06*	2.67^{t}	2.89*	2.71^{t}	3.20*	2.56^{t}	2.21	2.14	3.03*
R^2	.084	.095	.081	.085	.083	.082	.087	.08	.084

^{t} < .10 ; * < .05; ** < .01; *** < .001

significantly associated with increased drug use at the same level after controlling for anger. Second, seven (violent victimization, financial, intimate relationship, friendship issues, dissatisfaction with self, negative self behavior, and daily strain) of the nine strains associated with drug use in Table 5 remain significant at lower levels after controlling for anger. Finally, one strain (traffic) drops out of the model once anger is introduced. Anger is a marginally significant predictor of drug use in five models (violent victimization, property victimization, intimate relationship, friendship issues, and traffic strain). This finding confirms my expectation stated in Hypothesis 3 that anger will mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use in both males and females.

Just as with negative emotions and alcohol, I take a look at how the combined effect of gender and anger allows us to understand the gendered pathways related to GST in Table 7.1. First, inclusion of the moderating effect of sex and anger did not dramatically affect the significance or size of other variables (results presented in Table 7). Most notably I find that the interaction effect is not

Table 7.1 Significant Strains on Drugs Mediated by Anger with Sex*Anger as Moderator (standardized coefficients)

Sex	2.16***	2.04***	2.15***	2.10***	2.19***	2.35***	2.23***	2.08***	2.21***
	(.21)	(.20)	(.21)	(.21)	(.22)	(.23)	(.23)	(.21)	(.22)
Race	.67	.77	.63	.61	.82	.81	.73	.80	.58
	(.05)	(.05)	(.04)	(.04)	(.06)	(.05)	(.05)	(.05)	(.04)
Class	.45	.40	.54	.44	.39	.45	.37	.41	.52
	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.04)	(.05)
Age	-.07	-.06	-.08	-.06	-.09	-.07	-.06	-.06	-.07
	(-.04)	(-.04)	(-.05)	(-.04)	(-.05)	(-.04)	(-.01)	(-.04)	(-.04)
Year of College	.03	.02	.00	-.04	-.06	-.02	-.05	-.05	-1.14**
	(.01)	(.01)	(.00)	(-.00)	(-.01)	(-.00)	(-.01)	(-.01)	(-.10)
Scholarship	-1.18**	-1.06*	-.99*	-1.23**	-1.05**	-1.11**	-1.02*	-1.06*	-.83^{t}
	(-.10)	(-.09)	(-.09)	(-.11)	(-.10)	(-.10)	(-.10)	(-.10)	(.08)
Living Situation	.99*	1.04*	1.00*	1.08*	1.06*	1.03*	1.02*	.98*	.03
	(.10)	(.10)	(.01)	(.11)	(.11)	(.10)	(.10)	(-.10)	(.06)
Viol. Vict.	.28*	_____	_____	_____	_____	_____	_____	_____	_____
(N=735)	(.09)								
Prop. Vict.	_____	.24***	_____	_____	_____	_____	_____	_____	_____
(N=734)		(.14)							
Financial	_____	_____	.04**	_____	_____	_____	_____	_____	_____
(N=714)			(.11)						
Int. Rel.	_____	_____	_____	.04*	_____	_____	_____	_____	_____
(N=717)				(.08)					
Friend 1 (N=705)	_____	_____	_____	_____	.06^{t} (.07)	_____	_____	_____	_____
Self Strain 1	_____	_____	_____	_____	_____	.04*(.09)	_____	_____	_____
(N=710)									
Self Strain 2	_____	_____	_____	_____	_____	_____	.05**	_____	_____
(N=713)							(.11)		
Daily Strain	_____	_____	_____	_____	_____	_____	_____	.05**	_____
(N=706)								(.11)	
Traffic Strain	_____	_____	_____	_____	_____	_____	_____	_____	.03
(N=723)									(.06)
Anger	.18*	.14*	.010	.14^{t}	.14*	.11	.11	.07	.16*
	(.09)	(.07)	(.05)	(.07)	(.07)	(.05)	(.06)	(.04)	(.08)
Sex*Anger	.21	.16	.07	.15	.15	.11	.14	.10	.15
	(.05)	(.04)	(.02)	(.04)	(.04)	(.03)	(.04)	(.02)	(.04)
Constant	2.67*	2.21	2.17	2.18	2.45^{t}	1.77	1.49	1.34	2.55^{t}
R^2	.087	.097	.081	.086	.085	.083	.088	.087	.085

^{t} < .10 ; * < .05; ** < .01; *** < .001

significant in any of my models. This result tells us that sex does not moderate the feelings of negative emotion in the prediction of drug use.

Table 8 displays OLS results for significant strains on drugs mediated by depression. First, race (having a small level of significance in three models in Table 5) drops out of all models predicting drug use after controlling for depression. Second, men and students living off campus continued to be more likely to use drugs than are women and students living on campus after controlling for depression. Third, scholarship is no longer associated with drug use in one model (violent victimization) and becomes slightly more significant in one model (traffic) after depression is introduced.

The following discussion will present results of the mediating effects of depression on the nine strains with significant associations with drug use in Table 5. First, only one strain (property victimization) remains significantly associated with increased drug use at the same level after controlling for depression. Second, four of nine strains (violent victimization, financial, negative behavior of self, and daily strain) remain significant,

Table 8. Significant Strains on Drugs Mediated by Depression (standardized coefficients)

Sex	**2.24*** (.22)**	**2.13*** (.36)**	**2.21*** (.22)**	**2.16*** (.22)**	**2.29*** (.23)**	**2.32*** (.23)**	**2.29*** (.36)**	**2.14*** (.22)**	**2.3*** (.04)**
Race	**.65 (.05)**	**.76 (.05)**	**.65 (.05)**	**.61 (.04)**	**.80 (.06)**	**.84 (.06)**	**.73 (.05)**	**.76 (.05)**	**.57 (.04)**
Class	**.54 (.05)**	**.49 (.05)**	**.60 (.06)**	**.54 (-.05)**	**.50 (.05)**	**.56 (.06)**	**.47 (.05)**	**.50 (.05)**	**.61 (.06)**
Age	**-.08 (-.05)**	**-.07 (-.04)**	**-.08 (-.05)**	**-.06 (-.04)**	**-.09 (-.05)**	**-.07 (-.04)**	**-.06 (-.04)**	**-.06 (-.04)**	**-.07 (-.04)**
Year of College	**-.03 (-.01)**	**-.03 (-.01)**	**-.05 (-.01)**	**-.08 (-.02)**	**-.12 (-.02)**	**-.06 (-.01)**	**-.10 (-.02)**	**-.09 (-.02)**	**-.11 (-.02)**
Scholarship	**-1.32 (-.12)**	**-1.19** (.40)**	**-1.16** (-.10)**	**-1.36*** (-.12)**	**-1.22** (-.11)**	**-1.29** (-.11)**	**-1.13** (-.10)**	**-1.20** (-.11)**	**-1.28*** (-.12)**
Living Situation	**.98* (.10)**	**1.02* (.10)**	**.96* (.10)**	**1.06* (.11)**	**1.01* (.10)**	**.96* (.09)**	**1.00* (.10)**	**.96* (.10)**	**.82^{t} (.08)**
Viol. Vict. (N=743)	**.22* (.07)**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**
Prop. Vict. (N=742)	**_____**	**.23*** (.13)**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**
Financial (N=720)	**_____**	**_____**	**.03^{t} (.08)**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**
Int. Rel. (N=725)	**_____**	**_____**	**_____**	**.03 (.06)**	**_____**	**_____**	**_____**	**_____**	**_____**
Friend 1 (N=712)	**_____**	**_____**	**_____**	**_____**	**.05 (.05)**	**_____**	**_____**	**_____**	**_____**
Self Strain 1 (N=717)	**_____**	**_____**	**_____**	**_____**	**_____**	**.02 (.04)**	**_____**	**_____**	**_____**
Self Strain 2 (N=720)	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**.03^{t} (.08)**	**_____**	**_____**
Daily Strain (N=712)	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**.04^{t} (.10)**	**_____**
Traffic Strain (N=730)	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**_____**	**.03 (.05)**
Depression	**.25*** (.17)**	**.22*** (.15)**	**.20*** (.14)**	**.21*** (.15)**	**.24*** (.17)**	**.23*** (.15)**	**.21*** (.15)**	**.19*** (.13)**	**.23*** (.16)**
Constant	**2.46^{t}**	**2.04**	**2.33**	**2.25^{t}**	**2.57**	**2.06**	**1.84**	**1.84**	**2.41^{t}**
R^2	**.101**	**.11**	**.09**	**.099**	**.10**	**.097**	**.10**	**.09**	**.10**

^{t} < .10 ; * < .05; ** < .01; * < .001**

^{t} < .10 ; * < .05; ** < .01; * < .001**

though at lower levels, after controlling for depression. Third, four strain measures (intimate relationship, friendship issues, dissatisfaction with self, and traffic)

are no longer significant once depression is introduced. Depression is a highly significant predictor of drug use in all models. With the exception of sex, depression has the largest impact on predicting drug use. These results confirm Hypothesis 3, depression will mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use in both males and females.

In conclusion, depression serves as a better mediator of the impact of strain on drug use than does anger. Further, while depression is significant in all models and mediates seven of the nine strain variables considered, anger is significant in only some models and completely mediates only a single strain of the nine considered. Just as with anger, I take a look at how the combined effect of gender and depression allows us to understand the gendered pathways related to GST in Table 8.1. First, inclusion of the moderating effect of sex and depression does not dramatically affect the significance or size of other variables included. Most notably I find that the interaction effect is marginally significant in eight of nine models. This finding tells us that males who experience more depression use more drugs than do females who report

Table 8.1 Significant Strains on Drugs Mediated by Depression with Sex*Depression as Moderator (standardized coefficients)

Sex	2.29***	2.13***	2.21***	2.16***	2.29***	2.32***	2.29***	2.14***	2.3***
	(.22)	(.36	(.22)	(.22)	(.23)	(.23)	(.36)	(.22)	(.04)
Race	.68	.76	.65	.61	.80	.84	.73	.76	.57
	(.05)	(.05)	(-.22)	(.04)	(.06)	(.06)	(.05)	(.05)	(.04)
Class	.54	.49	.60	.54	.50	.56	.47	.50	.61
	(.05)	(.05)	(.06)	(-.05)	(.05)	(.06)	(.05)	(.05)	(.06)
Age	-.08	-.07	-.08	-.06	-.09	-.07	-.06	-.06	-.07
	(-.05)	(-.04)	(-.05)	(-.04)	(-.05)	(-.04)	(-.04)	(-.04)	(-.04)
Year of	-.05	-.03	-.05	-.08	-.12	-.06	-.10	-.09	-.11
College	(-.01)	(-.01)	(-.01)	(-.02)	(-.02)	(-.01)	(-.02)	(-.02)	(-.02)
Scholarship	-1.34***	-1.19**	-1.16**	-1.36***	-1.22**	-1.29**	-1.13**	-1.20**	-1.28***
	(-.12)	(.40)	(-.10)	(-.12)	(-.11)	(-.11)	(-.10)	(-.11)	(-.12)
Living	.10*	1.02*	.96*	1.06*	1.01*	.96*	1.00*	.96*	.82^{t}
Situation	(.10)	(.10)	(.10)	(.11)	(.10)	(.09)	(.10)	(.10)	(.08)
Viol. Vict.	.24*	_____	_____	_____	_____	_____	_____	_____	_____
(N=743)	(.07)								
Prop. Vict.	_____	.23***	_____	_____	_____	_____	_____	_____	_____
(N=742)		(.13)							
Financial	_____	_____	.03t	_____	_____	_____	_____	_____	_____
(N=720)			(.08)						
Int. Rel.	_____	_____	_____	.03	_____	_____	_____	_____	_____
(N=725)				(.06)					
Friend 1	_____	_____	_____	_____	.05	_____	_____	_____	_____
(N=712)					(.05)				
Self Strain 1	_____	_____	_____	_____	_____	.02	_____	_____	_____
(N=717)						(.04)			
Self Strain 2	_____	_____	_____	_____	_____	_____	.03^{t}	_____	_____
(N=720)							(.08)		
Daily Strain	_____	_____	_____	_____	_____	_____	_____	.04^{t}	_____
(N=712)								(.10)	
Traffic	_____	_____	_____	_____	_____	_____	_____	_____	.03
Strain									(.05)
(N=730)									
Depression	.25***	.22***	.20***	.21***	.24***	.23***	.21***	.19***	.23***
	(.17)	(.15)	(.14)	(.15)	(.17)	(.15)	(.15)	(.13)	(.16)
Sex*	.25*	.21*	.18^{t}	.19^{t}	.24*	.20^{t}	.19^{t}	.16	.21*
Depression	(.09)	(.07)	(.06)	(.06)	(.08)	(.07)	(.07)	(.06)	(.07)
Constant	3.04*	2.55^{t}	2.67^{t}	2.66^{t}	3.16*	2.49^{t}	2.19	2.09	2.92*
R^2	.108	.115	.097	.103	.109	.102	.105	.095	.106

^{t} < .10 ; * < .05; ** < .01; *** < .001

depression. This result does not support my expectation stated in Hypothesis 4a that women will be more likely to react to strain with depression and subsequent negative behaviors (alcohol use, drug use, and self injury).

Logistic Regression analysis was performed to evaluate the effects of strain on self-injury (results displayed in Table 9). First, four of seven demographic variables has a significant effect on self-injury among college students. Men were found to have significantly lesser odds of self-injury than women, ranging from 100-112 percent. Race was found to be marginally significant in models two and four, such that racial minorities are 48 percent and 47 percent less likely than whites to self injure. Another marginal variable is scholarship. In three of six models scholarship recipients had 73-77 percent greater odds of self-injury than non-scholarship recipients. Finally, those living off campus had 100-149 percent greater odds of self-injury than those living on campus in each of the six strain models.

Next, although seven sources of strain (property crime, school, financial, time, intimate relationship, toxic friends, negative behavior of self, and traffic) fail to affect the variation in self-injury, my results show that self-injury occurs simultaneously with six sources of strain. First, those who hadbeen the victims of violence experience 17 percent greater chance of self-injury than those respondents who had not been victims of violence.

Table 9. Self-Injury Regressed on Control and Strain Variables

	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)
Sex	- .75*	2.12	-.75*	2.12	-.69*	2.00	-.48	1.62	-.53	1.70	-.75*	2.11
	(.34)		(.34)		(.34)		(.32)		(.36)		(.34)	
Race	-.46	.63	-.66^{t}	.52	-.52	.59	-.52	.60	-.64^{t}	.53	-.52	.59
	(.38)		(.38)		(.39)		(.40)		(.38)		(.38)	
Class	-.15	.86	-.19	.83	-.33	.72	-.21	.81	-.30	.74	-.28	.76
	(.31)		(.32)		(.31)		(.31)		(.31)		(.31)	
Age	-.20	.82	-.20	.82	-.20	.82	-.18	.83	-.21	.81	-.21	.81
	(.14)		(.15)		(.15)		(.14)		(.15)		(.15)	
Year of College	-.32	.72	-.41	.67	-.34	.71	-.38	.68	-.33	.72	-.36	.70
	(.25)		(.26)		(.25)		(.26)		(.26)		(.26)	
Scholarship	.46	1.59	.49	1.63	.57^{t}	1.77	.57^{t}	1.76	.55^{t}	1.73	.52	1.68
	(.32)		(.33)		(.32)		(.33)		(.32)		(.32)	
Living Situation	.82*	2.28	.69*	2.00	.89**	2.43	.74*	2.10	.80*	2.22	.79*	2.21
	(.34)		(.65)		(.34)		(.35)		(.34)		(.34)	
Violent Victimization	.16**	1.17	_____		_____		_____		_____		_____	
(N=747)	(.06)											
Job Strain	_____		.04*	1.05	_____		_____		_____		_____	
(N=740)			(.02)									
Friend 1 Strain	_____		_____		.78**	1.08	_____		_____		_____	
(N=716)					(.03)							
Self Strain 1	_____		_____		_____		.05**	1.05	_____		_____	
(N=721)							(.02)					
Health Strain	_____		_____		_____		_____		.04*	1.04	_____	
(N=740)									(.02)			
Daily Strain	_____		_____		_____		_____		_____		.03*	1.03
(N=718)											(.02)	
Constant	1.27		1.38		1.02		.36		1.43		1.04	
Chi Square	32.22***		31.39***		36.51***		30.90***		32.84***		32.01***	
Degrees of Freedom	8		8		8		8		8		8	
R^2	.04		.043		.05		.042		.043		.044	

t p<.10, * p<.05, **p<.01, ***p<.001 (Standard errors

Next, each unit increase in job strain increases the odds of self-injury by 5 percent. Third, each unit increase in my friendship issues strain measures increases the odds of self-injury by 8 percent. Also, each unit increase in dissatisfaction with self strain increases the odds of self-injury by 5 percent while each unit increase in health strain increases the odds of self-injury by 4 percent. Finally, each unit increase in daily strain increases the odds of self-injury by 3 percent. These findings provide mixed support for Hypothesis 2, that strains perceived as highest in magnitude will predict alcohol, drug use, and self-injury.

Table 10 displays the results of logistic regression for significant strains on self-injury mediated by anger. First, after controlling for anger, sex remains significant in four of six models. Before anger was introduced, men had 100-112 percent lesser odds of committing self-injury than did women. After controlling for anger, the odds dropped slightly to 89-103 percent. Second, race also remains significant in two models, though to a lesser degree than in Table 8. After introducing anger, racial minorities are 45 percent and 49 percent less likely than whites to self

Table 10. Significant Strains on Self-Injury Mediated by Anger

	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)
Sex	- .68*	1.98	-.66^{t}	1.93	-.64^{t}	1.89	-.50	1.70	-.53	1.7	-.71*	2.03
	(.34)		(.34)		(.34)		(.36)		(.36)		(.34)	
Race	-.51	.60	-.66^{t}	.51	-.58	.56	-.52	.53	-.65t	.55	-.55	.57
	(.38)		(.38)		(.39)		(.38)		(.38)		(.38)	
Class	-.13	.88	-.19	.83	-.28	.76	-.19	.74	-.28	.76	-.25	.78
	(.31)		(.32)		(.31)		(.31)		(.31)		(.31)	
Age	-.18	.84	-.19	.83	-.18	.84	-.18	.81	-.19	.83	-.20	.82
	(.14)		(.15)		(.15)		(.15)		(.15)		(.15)	
Year of College	-.36	.70	-.42	.66	-.37	.69	-.39	.72	-.36	.70	-.37	.69
	(.25)		(.26)		(.26)		(.26)		(.26)		(.26)	
Scholarship	.55	1.73	.56^{t}	1.76	.62^{t}	1.86	.60^{t}	1.73	.60t	1.82	.57t	1.77
	(.32)		(.33)		(.33)		(.32)		(.32)		(.32)	
Living Situation	.82*	2.27	.73*	2.06	.88**	2.42	.73*	2.22	.81*	2.26	.79*	2.21
	(.34)		(.35)		(.34)		(.34)		(.34)		(.33)	
Viol. Victimization	.13**	1.14	_____		_____		_____		_____		_____	
(N=726)	(.06)											
Job Strain	_____		.04^{t}	1.04	_____		_____		_____		_____	
(N=719)			(.02)									
Friend 1 Strain	_____		_____		.07*	1.07	_____		_____		_____	
(N=696)					(.03)							
Self Strain 1	_____		_____		_____		.04*	1.04	_____		_____	
(N=701)							(.02)					
Health Strain	_____		_____		_____		_____		.03	1.12	_____	
(N=720)									(.02)			
Daily Strain	_____		_____		_____		_____		_____		.02	1.02
(N=699)											(.02)	
Anger	.16**	1.15	.10^{t}	1.11	.09	1.01	.08	1.08	.11^{t}	1.12	.10	1.10
	(.06)		(.06)		(.06)		(.06)		(.06)		(.06)	
Constant	.37		.77		.44		.11		.75		.66	
Chi Square	37.89***		33.40***		37.84***		31.07***		35.18***		33.48***	
DF	9		9		9		9		9		9	
R^2	.051		.045		.052		.043		.048		.047	

t p<.10, * p<.05, **p<.01, ***p<.001 (Standard errors)

injure. Third, scholarship (marginally significant in three models in Table 8) is significant in five models, with recipients of scholarships having 73-86 percent greater odds of self-injury than students who were not recipients of scholarships after controlling for anger. Finally, living situation continues to be significant in all six models after anger was introduced. Students who live off campus have 106-142 percent greater odds of self-injuring than do students living on campus after controlling for anger. The following discussion will present results of the mediating effects of anger on the six strains with significant associations with self-injury in Table 8. First, after controlling for anger, the odds of self-injury for students who report an experience violent victimization drops from 17 percent to 14 percent. Second, when anger is included the odds of self-injury associated with job strain dropped from 5 percent to 4 percent. Third, after controlling for anger, the odds of self-injury related to "friendship issues" dropped from 8 percent to 7 percent. Fourth, after controlling for anger, the odds of self-injury associated with dissatisfaction with self drops from 5 percent to 4 percent. Finally, the effect of both health and daily

strain on self-injury is totally mediated once anger is included in the models. Anger is a marginally to moderately significant predictor of self-injury in three models. This confirms my expectation stated in Hypothesis 3 that anger will mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use in both males and females.

Next, I take a look at how the combined effect of gender and anger allows us to understand the gendered pathways related to GST in Table 10.1. First, inclusion of the moderating effect of sex and anger does not dramatically affect the significance or size of other variables included. Most notably I find that the interaction effect is marginally significant in all models. This tells us that males who experience more anger are more likely to self-injure than are females. This result confirms expectations stated in Hypothesis 4b that men are more likely to react to strain with anger and subsequent negative behaviors (alcohol use, drug use, and self injury).

The following discussion will present results (see Table 11) of the mediating effects of depression on the six strains with significant associations with self-injury in

Table 10. 1 Significant Strains on Self-Injury Mediated by Anger Sex*Anger as Moderator

	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)
Sex	- 1.01*	.37	-.85*	.43	-.82*	.44	-.68^{t}	.51	-.71^{t}	.49	-.89*	.41
	(.40)		(.37)		(.37)		(.38)		(.39)		(.37)	
Race	-.50	.60	-.70^{t}	.51	-.59	.56	-.53	.53	-.65^{t}	.55	-.55	.57
	(.38)		(.38)		(.39)		(.38)		(.38)		(.38)	
Class	-.11	.88	-.16	.83	-.27	.76	-.19	.74	-.28	.76	-.25	.78
	(.31)		(.32)		(.31)		(.31)		(.31)		(.31)	
Age	-.21	.84	-.22	.83	-.21	.84	-.20	.81	-.19	.83	-.20	.82
	(.14)		(.15)		(.15)		(.15)		(.15)		(.15)	
Year of College	-.38	.70	-.46 ^{t}	.66	-.39	.69	-.41	.72	-.36	.70	-.37	.69
	(.25)		(.26)		(.26)		(.26)		(.26)		(.26)	
Scholarship	.49	1.73	.51	1.76	.57^{t}	1.86	.54	1.73	.60^{t}	1.82	.52	1.77
	(.32)		(.33)		(.33)		(.32)		(.32)		(.32)	
Living Situation	.82*	2.27	.74*	2.06	.88**	2.42	.72*	2.22	.81*	2.26	.79*	2.21
	(.34)		(.35)		(.34)		(.34)		(.34)		(.33)	
Viol. Victimization	.14*	1.14	_____		_____		_____		_____		_____	
(N=726)	(.06)											
Job Strain	_____		.04^{t}	1.04	_____		_____		_____		_____	
(N=719)			(.02)									
Friend 1 Strain	_____		_____		.07*	1.07	_____		_____		_____	
(N=696)					(.03)							
Self Strain 1	_____		_____		_____		.04*	1.04	_____		_____	
(N=701)							(.02)					
Health Strain	_____		_____		_____		_____		.03^{t}	1.12	_____	
(N=720)									(.02)			
Daily Strain	_____		_____		_____		_____		_____		.02	1.02
(N=699)											(.02)	
Anger	20***	1.15	.15*	1.11	.13*	1.14	.12^{t}	1.12	.15*	1.16	.14*	1.15
	(.06)		(.06)		(.06)		(.06)		(.06)		(.06)	
Sex*Anger	.33**	1.39	.27*	1.31	.24^{t}	1.27	.23^{t}	1.26	.26 *	1.30	.24^{t}	1.27
	(.13)		(.13)		(.12)		(.13)		(.13)		(.13)	
Constant	2.01		2.21		1.74		1.22		2.05		2.00	
Chi Square	45.00***		33.40***		37.84***		31.07***		35.18***		33.48***	
DF	9		9		9		9		9		9	
R^2	.051		.045		.052		.043		.048		.047	

t p<.10, * p<.05, **p<.01, ***p<.001 (Standard errors

Table 11. Significant Strains on Self-Injury Mediated by Depression

	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)
Sex	-.63^{t}	1.88	-.62^{t}	1.86	-.59^{t}	1.80	-.49	1.63	-.53	1.7	-.65^{t}	1.91
	(-.34)		(-.34)		(-.34)		(-.35)		(-.36)		(-.34)	
Race	-.60	.55	-.72^{t}	.49	-.63	.53	-.56	.57	-.70^{t}	.50	-.64^{t}	.53
	(.39)		(.38)		(.39)		(.41)		(.38)		(.38)	
Class	-.08	.92	-.14	.87	-.23	.80	-.13	.88	-.23	.80	-.20	.82
	(.31)		(.32)		(.32)		(.32)		(.31)		(.31)	
Age	-.17	.84	-.18	.84	-.18	.84	-.17	.85	-.18	.83	-.19	.83
	(.13)		(.14)		(.14)		(.13)		(.14)		(.14)	
Year of College	-.40	.67	-.45^{t}	.64	-.42^{t}	.66	-.41	.67	-.39	.68	-.40	.67
	(.25)		(.26)		(.25)		(.26)		(.26)		(.26)	
Scholarship	.46	1.58	.48^{t}	1.62	.54^{t}	1.72	.53	1.69	.51	1.66	.50	1.64
	(.33)		(.33)		(.33)		(.33)		(.32)		(.32)	
Living Situation	.80*	2.23	.71*	2.04	.86*	2.35	.68^{t}	1.96	.78*	2.18	.77*	2.16
	(.35)		(.35)		(.34)		(.35)		(.34)		(.34)	
Viol. Victimization	.11^{t}	1.11	_____		_____		_____		_____		_____	
(N=737)	(.06)											
Job Strain	_____		.03	1.03	_____		_____		_____		_____	
(N=730)			(.02)									
Friend 1 Strain	_____		_____		.06*	1.07	_____		_____		_____	
(N=706)					(.03)							
Self Strain 1	_____		_____		_____		.03	1.03	_____		_____	
(N=711)							(.02)					
Health Strain	_____		_____		_____		_____		.02	1.02	_____	
(N=730)									(.02)			
Daily Strain	_____		_____		_____		_____		_____		.01	1.01
(N=708)											(.02)	
Depression	.15**	1.17	.12**	1.13	.13**	1.14	.13**	1.13	.13**	1.36	.13**	1.14
	(.04)		(.04)		(.04)		(.04)		(.04)		(.04)	
Constant	-.08		.31		.00		-.39		.31		.26	
Chi Square	44.97***		38.53***		45.22***		37.95***		41.63***		40.56***	
DF	9		9		9		9		9		9	
R^2	.059		.051		.06		.052		.055		.056	

t p<.10, * p<.05, **p<.01, ***p<.001 (Standard errors)

Table 10. First, after controlling for depression, sex remains significant at marginal levels in four of six models. Before depression was introduced, men had 100-112 percent lesser odds of committing self-injury than did women. After controlling for depression, the odds drop to 80-91 percent.

Second, race, which had been significant in two models (job and health strain), becomes significant in an additional model (daily strain) after depression was introduced. In those three models, minorities are 47-51 percent less likely than whites to self injure. Third, after controlling for depression, year of college becomes significant in two models (job and strain related to friendship issues). Upperclassmen are 36 percent and 34 percent less likely to self-injure than are freshmen and sophomores. Fourth, scholarship (marginally significant in three models in Table 8) is significant in two models (job and friendship issues) after controlling for depression, with recipients of scholarships having 73 percent and 77 percent greater odds of self-injury than students who were not recipients of scholarships. Finally, living situation continues to be significant in all six models after

depression is introduced. Students who live off campus have 96-135 percent greater odds of self-injuring than do students living on campus after controlling for depression. The following discussion will present results (see Table 11.1) of the mediating effects of depression on the six strains with significant associations with self-injury in Table 10. First, after controlling for anger, the odds of self-injury for students who have had experiences of violent victimization drops from 17 percent to 11 percent. Second, the effect of four of my six significant strain measures (job dissatisfaction with self, health, and daily) on predicting self injury is completely mediated after depression is included. Finally, the odds of self-injury related to my friendship issues strain drops from 8 percent to 7 percent. Depression is a marginally to moderately significant predictor of self injury in all models. This finding confirms my expectations stated in Hypothesis 3 that depression will mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use in both males and females.

In conclusion, depression serves as a better mediator of the impact of strain on self injury than does anger.

Table 11.1 Significant Strains on Self-Injury Mediated by Depression Sex*Depression as Moderator

	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)	Coef	Exp(B)
Sex	-1.08**	1.88	-95*	1.86	-.90*	1.80	-.82*	1.63	-.84*	1.7	-.98*	1.91
	(-.34)		(-.34)		(-.34)		(-.35)		(-.36)		(-.34)	
Race	-.60	.55	-.72^{t}	.49	-.63	.53	-.56	.57	-.70^{t}	.50	-.64^{t}	.53
	(.39)		(.38)		(.39)		(.41)		(.38)		(.38)	
Class	-.08	.92	-.14	.87	-.23	.80	-.13	.88	-.23	.80	-.20	.82
	(.31)		(.32)		(.32)		(.32)		(.31)		(.31)	
Age	-.17	.84	-.18	.84	-.18	.84	-.17	.85	-.18	.83	-.19	.83
	(.13)		(.14)		(.14)		(.13)		(.14)		(.14)	
Year of College	-.40	.67	-.45^{t}	.64	-.42^{t}	.66	-.41	.67	-.39	.68	-.40	.67
	(.25)		(.26)		(.25)		(.26)		(.26)		(.26)	
Scholarship	.46	1.58	.48^{t}	1.62	.54^{t}	1.72	.53	1.69	.51	1.66	.50	1.64
	(.33)		(.33)		(.33)		(.33)		(.32)		(.32)	
Living Situation	.80*	2.23	.71*	2.04	.86*	2.35	.68^{t}	1.96	.78*	2.18	.77*	2.16
	(.35)		(.35)		(.34)		(.35)		(.34)		(.34)	
Viol. Victimization	.11^{t}	1.11	_____		_____		_____		_____		_____	
(N=737)	(.06)											
Job Strain	_____		.03	1.03	_____		_____		_____		_____	
(N=730)			(.02)									
Friend 1 Strain	_____		_____		.06*	1.07	_____		_____		_____	
(N=706)					(.03)							
Self Strain 1	_____		_____		_____		.03	1.03	_____		_____	
(N=711)							(.02)					
Health Strain	_____		_____		_____		_____		.02	1.02	_____	
(N=730)									(.02)			
Daily Strain	_____		_____		_____		_____		_____		.01	1.01
(N=708)											(.02)	
Depression	.20***	1.17	.17***	1.19	.17***	1.19	.17***	1.25	.18***	1.20	.18***	1.20
	(.04)		(.04)		(.04)		(.04)		(.04)		(.05)	
Sex*Depression	.28**	1.33	.26**	1.30	.23*	1.26	.23*	1.25	.25*	1.20	.24*	1.28
	(.10)		(.10)		(.10)		(.10)		(.10)		(.10)	
Constant	-.08		.31		.00		-.39		.31		.26	
Chi Square	44.97***		38.53***		45.22***		37.95***		41.63***		40.56***	
DF	9		9		9		9		9		9	
R^2	.059		.051		.06		.052		.055		.056	

t p<.10, * p<.05, **p<.01, ***p<.001 (Standard errors)

Further, while depression is significant in all models and mediates four of the six strain variables considered, anger is significant in only some models and completely mediates only two of the nine considered.

Just as with anger, I take a look at how the combined effect of gender and depression allows us to understand the gendered pathways related to GST in Table 11.1. First, inclusion of the moderating effect of sex and depression does not dramatically affect the significance or size of other variables included. Most notably I find that the interaction effect is marginally to moderately significant in all models. This result tells us that males who experience increased levels of depression are more likely to self-injure than are females who experience depression. This result does not support my expectation stated in Hypothesis 4a that women will be more likely to react to strain with depression and subsequent negative behaviors.

Table 12 addresses my hypotheses concerning possible moderating effects between gender and my strain measures. First, no moderators for sex and strain are found for the six models predicting self-injury. Next, only one interaction term, between sex and financial strain, is

Table 12. Moderating Effects

ALCOHOL				DRUGS					
Sex	1.42***	1.49***	Sex	2.03***	2.15***	2.27***	2.33***	2.20***	2.32***
	(.14)	(.15)		(.20)	(.21)	(.23)	(.24)	(.22)	(.23)
Race	.09	.06	Race	.66	.62	.83	.83	.70	.68
	(.01)	(.00)		(.05)	(.04)	(.06)	(.06)	(.05)	(.05)
Class	.80*	.81*	Class	.48	.59	.40	.50	.51	.61
	(.08)	(.08)		(.05)	(.06)	(-.03)	(.05)	(.05)	(.06)
Age	-.01	-.01	Age	-.07	-.08	-.05	-.06	-.07	-.07
	(-.00)	(-.00)		(-.04)	(-.05)	(-.01)	(-.04)	(-.04)	(-.04)
Year of	.57*	.60**	Year of	.05	-.01	-.07	-.13	-.06	-.12
College	(.11)	(.12)	College	(.01)	(-.00)	(-.01)	(-.03)	(-.01)	(-.02)
Scholarship	-.95*	-1.11**	Scholarship	-1.18**	-1.32***	-1.04*	-1.16**	-1.15**	-1.32***
	(-.08)	(-.10)		(-.11)	(-.12)	(-.10)	(-.11)	(-.10)	(-.12)
Living	.60	.61	Living	1.00*	.98*	1.02*	1.01*	.85*	.85*
Situation	(.06)	(.06)	Situation	(.10)	(.10)	(.10)	(.10)	(.09)	(.08)
Financial	.06***	.06***	Violent	.06	.04				
Strain	(.17)	(.18)	Vict.	(.02)	(.01)				
Anger	.26***		Self			.05**	.04*		
	(.13)		Strain 2			(.12)	(.08)		
Depression		.11^{t}	Traffic					.03	.02
		(.07)	Strain					(.07)	(.05)
Sex X	.07**	.06*	Anger	.17*		.12		.16*	
Financial	(-.10)	(-.09)		(.09)		(.06)		(.08)	
Constant	4.28	4.55	Depression		.24***		.21***		.23***
					(.17)		(.15)		(.16)
R^2	.129	.116	Sex X	-.69*	-.64*				
			Viol. Vict.	(-.11)	(-.10)				
			Sex X Self 2			.09**	.08*		
						(.10)	(.09)		
			Sex X Traffic					.08*	.08*
								(.08)	(.08)
			Constant	1.97	1.33	1.96	1.28	2.15	1.44
			R^2	.091	.108	.096	.108	.09	.107

p<.10, * p<.05, **p<.01, ***p<.001 (standardized coefficients)

significant in predicting alcohol use. In specific, I find that males who experience greater financial strain are more likely to use alcohol than are females who report more financial strain. Finally, for predicting drugs three interaction terms are significant between sex and 1) violent victimization, 2) dissatisfaction with self, and 3) traffic strain. In specific, males who experience greater strain in association with violent victimization, negative self behavior, and traffic are more likely to use drugs than

females who experience those strains.

CHAPTER V

CONCLUSION

The present research attempted to test the propositions of GST among a college population. The purpose of this study was to identify specific strains for male and female undergraduates and determine the relationship between strains and negative emotions (anger, depression), and deviant outcomes (alcohol consumption, drug use, and self-injury). In addition to gender, I explored strain by social categories such as race, age, class status, parental education, scholarship status, and living situation.

Support was found for my first hypothesis as data show that experiences of strain did vary by social category. As expected, the most significant differences in strain perceptions were between males and females. Females reported experiencing more strain than males in all of the strain measures except for traffic strain and property victimization (the two strains with no significant variation by gender). This finding is consistent with of strain than men do (Broidy and Agnew 1997; Wethington et al. 1987) and

contrary to the research suggesting that men and women report similar levels of strain (Piquero and Sealock 2004).

Fewer perceptions of strain were found to vary by race, parental education, scholarship status, age, class standing, and living situation although they did exist. White students reported greater levels of traffic strain, health strain, dissatisfaction with self, and toxic friend strain, while minority students reported greater strain related to violent victimization. Students whose parents had received less than a college education reported greater job, financial, and traffic strain than those students with at least one parent with a college degree. This finding is likely due to the ability of more educated parents to provide financial assistance to their children, alleviating financial and job strain. As for the significance of traffic strain, one might surmise that older students are less likely to have parents with a college education and are more likely to live off campus, allowing for greater exposure to traffic-related issues.

Students without scholarships reported more financial strain, health strain, traffic strain, job strain, property victimization, dissatisfaction with self, and school strain.

It is logical to think that students without scholarships are under increased financial burden due to the cost of tuition and books. They are also more likely to have to work to offset their increased expenses, increasing job strain. Having to work off campus would likely lead to increased exposure to traffic and also diminish time available to prepare for classes, increasing school strain. Likewise, having to work while going to school decreases the amount of time that can be spent exercising and could, therefore, lead to increased dissatisfaction with self. In addition, health strain might be more prominent for students without scholarships due to an inability to afford medical treatment. Finally, property victimization is more stressful for those who are unable to afford the luxury of replacing damaged or stolen belongings.

As for variation in perceived strain by age, I find that older students report more job and traffic strain than younger students. It is easy to surmise that older students are more likely to hold jobs than younger students and are also exposed to more traffic due to those jobs. Younger students report more school strain and negative behaviors of self. This finding could possibly be the result of younger

students having not yet settled into the increased academic demands of college and being more self-conscious as they attempt to establish positive identities among new friends and acquaintances.

Variation in perception of strain by class status is similar as it is logical to assume that freshmen and sophomores are, as a rule, younger than juniors and seniors. Upperclassmen report more job strain, while freshmen and sophomores report more health strain, school strain, negative behaviors of self, toxic friend strain, and friend issues. The friendship strain stands out among this population and could be related to dorm living (supported by my next findings).

The final social category to vary significantly in perception of strain is "living situation." Students living off campus (who are likely older and of higher class standing than students living on campus) perceived higher levels of job and traffic strain, while students living on campus reported higher levels of both friend strains and violent victimization. Again, dorm living is likely to increase contact with toxic friends and create issues among friends due to close quarters.

Substantial support was found for Hypothesis 2, that strains perceived as highest in magnitude will predict alcohol use, drug use, and self-injury in both males and females. Alcohol was used with eleven sources of strain net of demographic variables. Drug use was associated with seven strains net of demographic variables. And, self injury occurred simultaneously with six sources of strain.

Results partially supported expectations, stated in Hypothesis 3, that anger and depression will mediate the direct impact of strain on negative behaviors such as self-injury, alcohol, and drug use. Both anger and depression were significant in all models predicting use of alcohol, drugs, and self-injury. In addition, the inclusion of anger and depression mediated the effects of strains either partially or completely. The mediating effects of anger and depression were inconsistent; however, depression was found to be better than anger at mediating the relationship between strain and antisocial coping.

Notably, of the social categories, race became insignificant when controlling for negative emotions. Consistently, before and after controlling for negative emotions, I found that men, students without scholarships,

and those living off campus were more likely to use alcohol and drugs than were women, recipients of scholarships, and those living on campus. The opposite was true for self injury. Females, students with scholarships, and students living on campus were more likely to self injure than were their counterparts.

Partial support was discovered for my expectation stated in Hypothesis 4: Gender will interact with anger and depression, in that a) women are more likely to react to strain with depression and subsequent negative behaviors, and b) men are more likely to react to strain with anger and subsequent negative behaviors. Findings suggest that males who report anger and depression are more likely than females who report anger and depression to use alcohol and drugs. Although I found that females were more likely to self injure than were males, results show that males who report anger and/or depression are more likely to self injure than are females who report anger/or depression.

I found some support for the expectations, stated in Hypothesis 5, that gender combined with strain will moderate negative behaviors. For strains which males feel are high in magnitude and which they perceive unjust, the moderating

effect will illustrate a greater likelihood for males to engage in negative behavior than females. For strains which females feel are high in magnitude and that they perceive unjust, the moderating effect will illustrate a greater likelihood for females rather than males to engage in negative behavior. First, no moderators for sex and strain were found for the six models predicting self-injury. Next, only one interaction term, between sex and financial strain, was significant in predicting alcohol use. In specific I find that males who experience greater financial strain are more likely to use alcohol than are females who report more financial strain. Finally, for predicting drugs three interaction terms were significant between sex and 1) violent victimization, 2) dissatisfaction with self behavior, and 3) traffic strain. In specific, males who experience greater strain in association with violent victimization, negative self behavior, and traffic are more likely to use drugs than are females who experience those strains.

This study is by no means exhaustive of all possible strains affecting college students but adds to the growing exploratory research into gender and GST. Future research

might benefit from including negative emotions such as fear, guilt, and hopelessness. It would also be beneficial to explore outcomes other than drug and alcohol use, such as aggression and crime. In addition, research that explores the effects of strain on drug use could be strengthened by specifying types of drugs as it is possible that types of drugs (i.e., marijuana, prescription pain killers, cocaine, etc.) vary by social category. Finally, in continuing to test Broidy and Agnew's (1997) hypotheses, scales should be developed to measure justice and social control.

APPENDIX A

COLLEGE SURVEY ITEMS (factor loadings)

Grouped strain measures

During the present academic year, I have been "stressed out" by...

School strain

Q3: taking exams when unprepared? (.648)

Q15: exams (e.g., preparing for, taking)? (.829)

Q24: grades? (.811)

Q26: doing worse than expected on an exam/paper? (.796)

Q28: staying up late writing a paper or exam? (.719)

Q52: having lots of exams/ assignments in one week (e.g., mid-term/ finals week)? (.750)

Job strain

Q11: working while also going to school? (.925)

Q30: job/work issues (e.g., demands, wages, annoyances)? (.925)

Financial strain

Q8: having to ask for money? (.715)

Q19: bank account being overdrawn? (.657)

Q21: your overspending? (.718)

Q34: lack of money? (.831)

Q55: your bills? (.727)

Time strain

Q23: can't finish everything you need to do? (.838)

Q28: staying up late writing a paper or exam? (.719)

Q46: time demands/deadlines? (.855)

Intimate relationship strain

Q12: dating (e.g., noticing lack of, uninteresting partner? (.699)

Q50: fights with boy/girlfriend? (.666)

Q56: having broken up with boyfriend/girlfriend? (.813)

Q57: finding out your boyfriend/girlfriend cheated? (.725)

Self 1 strain (self dissatisfaction)

Q2: annoying behavior of self (e.g., habits, temper)? (.662)

Q5: your appearance (e.g., noticing unattractive features, grooming)? (.784)

Q23: not being able to finish everything you need to do. (.696)

Q51: weight/dietary management (e.g., not sticking to plans)? (.725)

Self 2 strain (negative behavior of self)

Q6: an accident or mistake you made? (.719)

Q31: missing or being late for an appointment/class? (.656)

Q32: lost or misplaced something? (.727)

Q35: engaging in new experiences or challenges? (.665)

Q37: oral presentations/public speaking? (.508)

Daily strain

Q1: annoying social behavior of others (e.g., rude, sexist/racist inconsiderate, etc)? (.557)

Q9: having sat through a boring class? (.609)

Q45: tedious everyday chores (e.g., shopping, cleaning apartment, etc.)? (.667)

Q49: having to wait (e.g., for appointments, in lines)? (.689)

Q61: problems with technology (e.g., computer, printer)? (.616)

Health strain

Q16: having no time for physical exercise? (.664)

Q20: fears of physical safety (e.g., while walking alone)? (.791)

Q25: physical health concerns (e.g., flu, headaches, PMS, allergies, illness)? (.794)

Traffic strain

Q10: car/bike having broken down, flat tire, etc.? (.627)

Q38: parking problems (e.g., on campus, at work, at home)? (.722)

Q47: traffic problems (e.g., inconsiderate or careless drivers, traffic delays)? (.732)

Q48: having gotten a traffic or parking ticket? (.637)

Friend 1 (friend issues)

Q4: having to entertain a friend or relative when he or she visits you? (.641)

Q14: "going out" with friends? (.799)

Q39: safety concerns when "partying?" (.709)

Friend 2 (toxic friends)

Q13: arguments with friends? (.702)

Q36: noise disturbed you while you were working/studying? (.684)

Q42: issues or annoyances related to roommate(s) or housemate(s)? (.790)

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