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Sarah Rae Puckett

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A TEST OF GENERAL STRAIN THEORY:  
EXPLORING GENDER SPECIFIC EMOTIONAL AND BEHAVIORAL VARIATION

By

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Psychology, Gonzaga University, Spokane, Washington, 2006  
Criminal Justice, Gonzaga University, Spokane, Washington, 2006

Thesis

presented in partial fulfillment of the requirements  
for the degree of

Master of Arts  
in Sociology, Criminology

The University of Montana  
Missoula, MT

Spring 2008

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A Test of General Strain Theory:  
Exploring Gender Specific Emotional and Behavioral Variation.

Chairperson: Dr. Daniel Doyle

Traditional sociological theories examining delinquency typically were formulated to explain male behavior. With the universal recognition of the crime-gender gap, it is important to determine the applicability of these theories to female delinquency. This research uses the National Survey of Children (1981) to test propositions from general strain theory, specifically those outlined by Broidy and Agnew (1997). The data set allows for an expansion of the types of strain and delinquency typically examined in strain tests. Ordinary least squares regression, path analysis and a series of t-tests were used to determine variations in male and female emotional and behavioral responses to strain. The results of this analysis suggest that certain types of strain influence which type of delinquency males and females will pursue and that the intervening effect of negative emotion are consequential for both genders. Suggestions for future research are also discussed.

## Acknowledgements

Many thanks are due to so many amazing people. I feel so fortunate to have had the opportunity to work with my advisor, Dr. Dan Doyle. He included me on many research opportunities and always had suggestions regarding work on my thesis. Many times I came to his office frantic and unsure of my own ability. Dr. Doyle was always a reassuring presence in these times of doubt.

I cannot express how fortunate I feel to have had the opportunity to work with Dr. Dusten Hollist. After my initial thesis project fell through, he was able to help me regroup. I never would have accomplished this project without his guidance, constant mentoring, and statistical advice. I am so grateful for everything you have done for me!

Dr. James Burfeind always challenged my perspective and encouraged me to pursue goals that I had never even imagined. He encouraged me to become a better writer and provided constant support over the course of the last two years. Thank you for all your advice and teasing.

I am so thankful to have had the opportunity to work with Chuck Harris in the Social Science Research Laboratory this year. He always encouraged me to look at situations like a sociologist and broadened my view of the world. He talked me through thesis problems and was very knowledgeable about SPSS. I can not express how much I have learned from you.

Special thanks to Dr. Christine Fiore for serving as the outside member of my committee. I sincerely appreciate your input and suggestions provided on this project.

I would also like to thank my parents, family, and friends for all their support.

## TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
INTRODUCTION.....	1
THEORY.....	2
THE CURRENT STUDY .....	14
MEASURES .....	16
ANALYSIS and FINDINGS .....	20
DISCUSSION and CONCLUSION .....	34
REFERENCES.....	36
APPENDIX A.....	45
APPENDIX B.....	46

## FIGURES AND TABLES

Table 1: Regression results of Strain, Social Control, Social Learning, and Emotional Response on Delinquency. ....	21
Table 2: T-test results of gender variations on strain, social control and social learning.....	23
Table 3: T-test results of gender variation of emotional response .....	25
Figure A: Path-Model Diagram .....	25
Table 4: The Direct, Indirect, and Total Effect of Strain on Substance Abuse .....	26
Table 5: The Direct, Indirect, and Total Effect of Strain on Truancy .....	27
Table 6: The Direct, Indirect, and Total Effect of Strain on Running Away.....	28
Table 7: The Direct, Indirect, and Total Effect of Strain on Property Crime .....	29
Table 8: The Direct, Indirect, and Total Effect of Strain on Violent Crime .....	30
Table 9: The Direct, Indirect, and Total Effect of Strain on Delinquency Not Otherwise Specified.....	31
Table 10: T-test results of gender variations on delinquency.....	32
Table 11: Comparison of Strain Regression Coefficients between Males And Females on Delinquency.....	33

## INTRODUCTION

Traditional sociological theories examining delinquency typically were formulated to explain male behavior with most empirical tests using male samples. Critics argue that “general” theories of deviance are little more than specific theories of male deviance (Smith and Paternoster 1987). However, research over the past three decades has increasingly explored the power of these theories to explain female delinquency. Smith and Paternoster (1987: 142) argue that “while most theories of deviance were constructed to account for male deviance, it does not mean that they *cannot* account for female deviance.”

Despite universal recognition of the delinquency and crime gender gap, there are mixed views regarding the narrowing of male and female delinquency rates. It was believed that the women’s liberation movement starting during the 1970s would lead to an overall increase in female deviance, until it paralleled that of males. However, this convergence has been quite small (Steffensmeier and Allen 1996). In recent years, male arrest rates for index offenses remain between four and fourteen times higher than female arrest rates (Empey, Stafford, and Hay 1999:58). When women commit crime, the severity is significantly less than when men commit crime. Steffensmeier & Allen (1996) relate that women are involved in less serious types of crime, and that the resultant damage is typically less than that of similar crimes committed by males.

Men display higher rates of all types of crime with the exception of prostitution (Steffensmeier & Allen 1996). The greatest disparity exists for serious crime, and the least for minor forms of law violation. These findings are consistent regardless of data source, crime type, level of involvement, or measure of participation (Steffensmeier

1983; Kruttschnitt 1994; Steffensmeier and Allan 1995). The importance of studying gender issues in delinquency is reinforced by estimates that 61% of juvenile arrests are male offenders, making gender the most significant predictor of delinquency (OJJDP 2003).

If Steffensmeier and Allan (1996:459) are correct in saying that "women are always and everywhere less likely than men to commit criminal acts," do general criminological theories provide sufficient explanation of female deviance? Studies up until this point have produced inconsistent results. This thesis will examine if the causal propositions in Agnew's general strain theory (GST) can account for gender differences in self-reported delinquency. Allen and Steffensmeier (1996) assert that the principal shortcoming of general theories is that they are not very informative about the specific ways in which differences in the lives of men and women contribute to gender differences in type, frequency, and context of criminal offending.

This analysis is directed by the recommendations of Broidy and Agnew (1997:227) regarding gender variations in vulnerability to strain and delinquency responses. They hypothesize that: (1) males may be subject to different types of strain, with male strain being more conducive to delinquency; (2) males may have a different emotional response to strain, with the male response being more conducive to delinquency; and (3) strain and anger experienced by males may be more likely to lead to delinquency, perhaps because of such things as reduced social control and greater access to delinquent role models. Previous studies of GST have tested various components, but a comprehensive study has yet to be conducted. This thesis attempts to broaden the understanding of gender variation regarding the relationship between strain, emotional



responses, and deviance. The types of strain focused on include *Family Conflict*, *Family Strain*, *Parental Mental Health*, *Peer Strain*, *Neighborhood Strain*, *School Strain*, *Physical and Emotional Victimization*, and *Significant Life Events*. According to Agnew (1992), these strains have a cumulative effect on delinquency and generate negative affect within an individual.

Broidy and Agnew's (1997) propositions regarding the gender gap in delinquency will be examined using questionnaire data from The National Survey of Children (Wave 1 & Wave 2). First, however, GST and its implications for the gender-delinquency relationship will be reviewed.

#### A Review of GST

Traditional strain theory fell out of favor in the sociological community as a result of its narrow explanation for delinquency. Traditional strain theories, by Merton (1938), Cohen (1955), and Cloward and Ohlin (1960), explain crime as a response made by individuals to frustrations stemming from their inability to achieve positively valued economic goals. Agnew's (1992) general strain theory addressed the major criticisms of the traditional approach. It elaborates on the multiple dimensions of strain, which extended beyond the limited focus of material success (Merton), peer acceptance (Cohen) or status (Cloward). The second limitation of tradition strain theories was the focus on social structure as the main type of strain. Instead the emphasis in GST was placed on a micro-level analysis of the social-psychological dynamic of individuals and their environments (Robbers 2004).

Agnew's (1992) general strain theory expands traditional notions of strain by incorporating: 1) the loss of positive stimuli; 2) the presentation of negative stimuli; and

3) several new types of goal blockage. The individual may also be vulnerable to stresses experienced by important individuals, such as family, friends, and possibly community residents (Broidy and Agnew 1997). These types of strain are referred to as vicarious strains. The types of strains most related to delinquency are those seen as unjust, those associated with low social control, those seen as high in magnitude, and those which cause some pressure or incentive to engage in criminal coping (Agnew 2001:319).

The important component that links strain with delinquency is the presence of negative emotion. Specifically, GST argues that strain or negative treatment by others leads to negative emotions like anger and frustration (Agnew 2002:604). Crime or delinquency can minimize the “psychic toll of strain” because it allows, or enables, people to avoid or escape strain, compensate for the negative effects of strain, and/or satisfy a desire for revenge or retaliation (Brezina 2000:12). However it is important to recognize that stress alleviation may be temporary and that law violation can increase depression and negative emotions in the long run because of the threat to conventional roles and relationships (Hagan 1997).

Not everyone who is strained engages in criminal behavior. Some may cognitively reinterpret their strain, make an emotional adjustment to minimize its effects, or resort to conventional behaviors that effectively reduce the source of strain or satisfy the need for revenge (Hollist, 2007). According to GST, the decision whether or not to use criminal coping depends on constraints and dispositions, which in turn are influenced by a variety of internal and external factors (Agnew 1992; Ellwanger 2007; Hollist 2007). Constraints to delinquency include high self-esteem, high self-efficacy, temperament, conventional social supports, and personal belief systems. Facilitators of delinquency

include delinquent peers, neighborhood disadvantage, externalization of blame, belief in the efficacy of delinquency as an effective problem solving tool, and disposition to delinquency (Paternoster and Mazerolle 1994; Hoffman & Miller 1998; Baron 2004).

The ability of these factors to mediate delinquency is largely related to gender (Morash and Moon 2007). Males and females may experience the same emotional reactions to the same types of strain, but males still may be more likely to respond with delinquency as a result of having more limited resources for nondelinquent coping, a greater predisposition for delinquency, or fewer constraints to delinquent coping (Hay 2003). Mazerolle (1998) found that males have greater delinquent peer relations and a stronger disposition for delinquency. Delinquent peers provide role models and impart delinquent values, thus reinforcing the adolescent's own delinquency propensity (Agnew and White 1992). Females perceive higher levels of support (Turner and Noh 1983; Vaux 1988; Windle 1992; Wilcox-Rountree and Warner 1999), and females are more likely than males to utilize social support when confronted by stress (Burke and Weir 1978; Windle 1992). These relationships may serve to bond an individual to society or provide emotional support in times of stress (Coyne and Downey 1991; Cullen 1994; Thoits 1995; Richman, Rosenfeld, and Bowen 1998).

Recent tests of these mediating factors found that high levels of self-efficacy and self-esteem produce limited support for controlling delinquency (e.g. Paternoster & Mazerolle 1994; Aseltine, Gore, and Gordon 2000; Jang & Johnson 2003). Hoffman & Miller (1998) were unable to find evidence to support the three coping strategies outlined by Brezina (1996): escape-avoidance, compensation, and retaliation. Some suggest that research should expand these mediating factors to include religiosity, intelligence, and

moral beliefs (Jang & Johnson 2003; Hoffman & Ireland 2004). Having low levels of self-control is also an important component according to Agnew, Brezina, Wright, and Cullen (2002). Specifically, “individuals low in constraint should be less aware of and concerned with the negative consequences of delinquent behavior, less able to cope in noncriminal ways, and more disposed to criminal coping given their attraction to risky behavior” (Agnew et al. 2002:46). Hay & Evans (2006) found significant support for this mediating factor.

### Gender and GST

One aspect of the theory that has been relatively neglected concerns the ability of GST to explain why demographic variables such as gender, age, and race/ethnicity are related to delinquency (Hay 2003:107). Research shows that females experience as much or more strain as males (Turner, Wheaton, & Lloyd 1995; Wagner & Compas 1990; Piquero & Sealock 2004). If the theory is sound, women should report similar or greater negative emotions with an increased need for resolution of the strain-potentially through deviance; however this is not the case. These findings suggest that GST cannot explain the higher rate of male crime by simply arguing that males experience more strain.

Broidy and Agnew (1997) propose that gender differences in experiences of strain and gender differences in reaction to strain, may help explain the gender differential in delinquency. The debate over whether differential exposure or differential vulnerability to stress better explains gender differences in responses to stress has remained central in the literature on adult mental health (DeCoster 2005). Compas & Wagner (1991) found that females are more vulnerable to communal stresses and are more likely to be exposed to these types of stresses. Some have suggested that males may focus more and be more

vulnerable to agentic concerns, or “concerns for oneself as an individual in separation from others” (DeCoster 2005: 157). Essentially, males and females may experience different types of strain and may perceive strain differently. While males and females report similar levels of strain, men may be more vulnerable to the types of strain that are conducive to anger and criminal coping. Overall, differential vulnerability to strain is a much more potent predictor of the gender gap in law violation than is differential exposure to strain (DeCoster 2005).

### Types of Strain

There are a great multitude of stressful events and conditions that individuals experience throughout life. However, not all forms of strain do well in explaining crime and delinquency (Ellwanger 2007). Agnew (2001) outlined ten types of strain that are most influential for crime. These include parental rejection, erratic discipline, child abuse and neglect, negative school experiences, work in secondary labor markets, chronic unemployment, racial and ethnic discrimination, and peer abuse. Research within and outside GST has suggested that factors influencing the level of stress will vary for males and females (Morash & Moon 2007). Previous studies looking at the types of strain used within this analysis are outlined below.

### Family Strain

The family setting has drawn substantial attention recently (Hay 2003; Hollist 2007). The strain literature has indicated that formation of interpersonal relationships are especially important to female adolescents (Belle 1987; Block 1983; Huston 1983; Knox, Zusman, and Nieves 1997; Leadbeater, Blatt, and Blatt 1995). Specifically, Robbers (2004) states that loss of positively valued stimuli such as a parent or sibling may cause

considerable strain for females. Females also report higher levels of conflict and problems within family and friendship networks including parental fighting, parental separation, parental job loss, parental illness, and arguments with friends (DeCoster 2005). In a cross-sectional analysis, Mazerolle (1998) found that negative relationships with adults may be significant predictors of boys' delinquency.

### Peer Strain

The effect of peer strain on gender appears more important for males. Boys are more likely than are girls to experience strain because of negative peer relations that are marked by conflict, competition, jealousy, and imbalance (Campbell, 1993; Giordano, Cernkovich, & Pugh, 1986; Lempers & Clark-Lempers, 1992). However, DeCoster (2005) found that males and females reported equal amounts of strain regarding peer relationships.

### Parental Mental Health

Parental psychopathology, including depression and substance abuse, has been commonly identified in the literature as a significant stressor (Hoffman & Miller 1998). No studies have determined significant gender variations in the influence that parental mental health issues have on child delinquency.

### School Strain

Brezina et al. (2001) examined the relationship between measures of general strain and delinquency across school settings. They found that an angry, hostile dynamic in a school population increases an individual's likelihood to engage in fights and arguments with other schoolmates. With regard to gender variation, DeCoster (2005) found that males reported higher exposure to academic stress than females. However,

females were as likely to report poor academic achievement. She attributes this difference to vulnerability differences rather than exposure differences.

### Neighborhood Strain

Paternoster & Mazerolle (1994) tested GST's proposition that the longer the duration of strain exposure, the more the delinquency. They hypothesized that adolescents living in unpleasant neighborhoods for a prolonged period of time would be more stressed and involved more frequently in delinquency. The findings did not support this hypothesis. Rather, living in these types of neighborhoods increased delinquency regardless of the amount of time an individual resided there. Mazerolle (1998) did find gender differences. Neighborhood problems were a significant predictor of delinquency for males, but not females.

### Victimization

In 2002-2004, persons age 12 to 24 suffered about 49% (2 million) of the total number of criminal victimizations, although they made up less than a quarter of the U.S. population age 12 or older (Office of Justice Programs Online, 2005). Criminal victimizations are usually seen as unjust and high in magnitude, often occur in settings in which social control is low, and are often associated with the social learning of crime (Agnew 2002:604). Physical victimization, then, is one of the key types of strain in GST.

Physical and emotional abuse by peers may be the type of strain most predictive of delinquency (Agnew 2001). Males report higher levels of criminal victimization (Agnew 2002; DeCoster 2005). Cohen & Felson (1979) say that males may open themselves up to this type of victimization by frequenting public places more often than females. Harsh, physical abuse from family members was one of the most significant

predictors of delinquency determined by Hay (2003). Victimization rates for females are typically lower with the exception of sexual assault/abuse (Agnew 2002). However, victimization was significant predictors for age of first alcohol/marijuana use among females, but not among males (Neff & Waite 2007: 120).

Current research finds some support for Broidy & Agnew's (1997) proposition that males and females are vulnerable to different types of strain. It appears that females are more susceptible to interpersonal stressors whereas males show vulnerability to peer strain and victimization. This study attempts to utilize broader inventories of strain to determine other gender differences in strain vulnerability.

#### Emotional Responses to Strain

Broidy & Agnew (1997) hypothesized that males and females may have different emotional responses to strain. Potential emotions may include disappointment, depression, fear, guilt, and anger. But, anger is more influential for deviance (Agnew 1992:59). Anger becomes an externally directed emotion and the primary mediator between strain and delinquency (Aseltine, Gore, and Gordon 2000; Broidy, 2001; Capowich, Mazerolle, and Piquero 2001; Mazerolle and Piquero, 1998; Piquero and Sealock 2000). Agnew (1992:59-60) states that anger "energizes the individual for action, lowers inhibitions, and creates a desire for retaliation/venge." The anger and frustration associated with strain increase the likelihood that youths will lash out through physically harmful behavior (Hoffman & Miller 1998:98). Other types of negative emotions are considered self-directed emotions. Jang & Johnson (2005) found significant support for the hypothesis that strain largely affects other rather than self directed emotions. In addition, they also determined that negative emotions completely



mediate the effects of strain on deviant coping.

When examining gender variation in self- or other- directed emotions, Mirowsky and Ross (1995: 450) found that “women respond to stressors with somewhat different emotions than men... men get angry and hostile--- women get sad and depressed.” Virtually all studies find that regardless of national, cultural, and ethnic differences, females are more depressed and anxious (e.g. Nolen-Hoeksema, 1990, 2001; Wessman, Bland, Canno, Faravelli, Greenwald, Hwe 1996). In addition, females are more likely to respond to a given stressor with depression than are males (Broidy & Agnew 1997). When women do experience anger, it is typically accompanied by emotions such as fear, anxiety, guilt, and shame; the anger of men is characterized by moral outrage (Broidy 2001; Campbell 1993; Mirowsky and Ross 1995). So while both genders report anger in response to strain, the anger of women is often accompanied by other negative emotions. The presence of these other negative emotions has been linked to withdrawing behavior. In addition, these other negative emotional responses were associated with a lower likelihood of engaging in deviant behavior and appear to act as a restraint (Sharp, Brewster, and Love 2005; Jang 2007; Ellwanger 2007). Women have a greater propensity to experience these other negative emotions, which may act as a buffer between them and crime.

Internalizing emotions may actually decrease involvement in crime and delinquency; however, it may increase self-destructive forms of deviance including substance abuse, disordered eating, and mental health problems (Hay 2003). Although there was no significant difference, DeCoster (2005) found that females responded to family strain with depression whereas males did not. A similar finding was discovered

for peer stress and the results were significant. In terms of guilt, Hay (2003) found that females reported higher levels of guilt which is negatively associated with delinquency. These findings are consistent with the suggestion that females have a larger emotional component accompanying anger, while male anger is primarily outward directed. The basic argument therefore is that strain and gender should interact in the causation of anger: the effect of strain on anger should depend on whether the strain is experienced by a male or a female (Hay 2003:112).

The anger of males is often accompanied by a sense of moral righteousness that may propel him into serious violent and property crime (Broidy & Agnew 1997). Hay & Evan's (2006) found that victimization significantly increased an individual's level of anger, which was associated with a substantial increase in delinquency. GST posits that the anger of males is externalized through contempt, whereas it is internalized by women through shame, guilt, sadness, and self-hostility. Broidy (2001:18) finds support for gendered responses to strain, with females less likely to respond angrily to strain than males, and less likely to use delinquency as a coping mechanism. Most studies have found males typically showing higher rates of anger. Baron (2007) found strain's relationship with anger is virtually equivalent and is a significant predictor of violent crime for both males and females (see also Hay 2003). Therefore, results regarding gender variations in emotional responses are mixed; however, it appears that negative emotions influence self-directed behavioral responses.

#### Behavioral Responses to Strain

Broidy & Agnew's (1997) final proposition is that males and females have differential responses to strain. Similar to emotional responses, behavioral responses can

be externally or internally directed. They propose that males are more likely to respond to strain through external behaviors such as property or violent crime. Females may engage in more self-directed illegitimate behaviors such as substance abuse or disordered eating (Broidy & Agnew 1997: 285). Mental health statistics show that females are more likely than males to internalize problems in the form of psychological distress and depressive disorders (National Institute of Mental Health 2008). Criminological research, however, finds that males are more likely than females to externalize problems through antisocial and law-violating behaviors (Heimer 1996). It may be that both types of behavioral responses act as equivalent mechanisms for coping with strain, depending upon gender.

Research supports the notion that females utilize self-directed delinquency. According to Chesney-Lind (1973; 1997), it is well documented that girls run away from home to avoid physical punishment or sexual abuse. In addition, females have reported substance abuse as a mechanism for coping with the negative emotions associated with strain (Acoca 1998). Negative emotions other than anger were found to be strongly associated with disordered eating in women, but not in males (Sharp, Brewster, & Love 2005:154).

Other-directed delinquency is usually pursued by males. Sharp, Brewster, & Love (2005) found that anger was a significant predictor of property crime for males, but not females. This finding lends support to GST, describing the link between anger and other-directed deviance. Others have also found frequent responses of aggression and violence to strain (Leadbeater et al. 1995; Wagner and Compas 1990).

### Hypotheses

Research examining the hypotheses forwarded by Broidy & Agnew provides initial support for the notion that males are more externally based in their response to strain, while females are more internally based. This study attempts to expand the measures of strain, emotional response, and delinquency to explain gender variations through a test of three theoretically derived hypotheses:

H1: Males and females are vulnerable to different types of strain.

H2: Males and females differ in the type of emotional responses to strain.

- H2A Female responses are self-directed and include anxiety and depression.
- H2B Male responses are other-directed and include anger.

H3: Males and females differ in the type of behavioral responses to strain.

- H3A Female responses are self-directed and including substance abuse, truancy, and running away.
- H3B Male responses are other-direct and include property and violent crime.

## THE CURRENT STUDY

### Data

The data used in this analysis are taken from the first and second waves of the National Survey of Children conducted in 1976 and 1981 respectively. This national survey was a probability sample of household in the United States that included 1,725 respondents ages 11-17 at wave one and 1,655 respondents ranging from age 12-16 at wave two. African Americans were over sampled during the second wave. This data set attempted to assess the physical, social, and psychological well-being of different groups of American children; develop a profile of the way children live and the care they receive; permit analysis of the relationships between the condition of children's lives and measures of child development and well-being; replicate items from previous national studies of child and parents to permit analysis of trends over time; and determine the effects of marital conflict and disruption on children (Zill, Peterson, Moore, and Furstenberg 1976).

The researchers placed emphasis in the second wave of data collection on re-contacting individuals who reported having family problems in the first wave and a comparable group of individuals from well-functioning families to facilitate research on the link between the family environment and child and adolescent outcomes (Hollist 2007). The sample is disproportionate in terms of race-ethnicity, with 72.7% white and 27.3% non-white. The sample is comprised of 49.8% males (n=709) and 50.2% females (n=714). 282 individuals (19.8%) came from intact homes. Agnew et al. (1992) believes this data set to be the only nationally representative data set that contains measures of strain, personality traits, and delinquency.

## Measures

### Strains

*Family Conflict* is an eleven-item scale with high scorers relating frequent interpersonal arguments, disagreement over family rules, and the inability for family members to get along with one another ( $\alpha=.63$ ). Higher scores had arguments with parents “often;” parents who “never” agreed how to raise children; and “often” took “advantage of differences between parents.”

*Family Climate* is a seven item scale examining the child’s perception of his or her family environment over the last six months ( $\alpha=.72$ ). Higher scorers reported family life as “complicated and complex,” “tense and stressful,” and “disorganized and unpredictable.”

*Peer Strain*: Higher scorers on this single item measure reported “often” fighting or arguing with friends.

This single-item measure of *Neighborhood Strain* asks respondents to rate their neighborhood as a place to grow up. Higher scorers report their neighborhood as a “poor” place to grow up.

*School Strain* is a six-item variable examining academic achievement, fighting or disagreement with others, and expectations for school. Juveniles with high scores on this scale report being “near the bottom” in academic achievement; fighting at school “during the past week;” and getting in trouble with teachers or the principal. They also report “hate(ing)” school and wanting to “quit as soon as possible” ( $\alpha=.52$ ).

*Neighborhood Victimization* is a three-item scale asking about being picked on or bothered by “adults,” “kids older than you,” or “kids your own age or younger” in the

neighborhood setting (alpha=.96).

*Parental Victimization*: This four-item scale asks respondents about threats or completed incidents where their mother and father “slapped or spanked” them (alpha=.79).

The *Emotional Victimization* scale was measured by four items (alpha=.60). High scorers state that the mother or father “acts as if she/he doesn’t love you” or “makes fun of you.”

*Threat of Victimization* is a two item scale measuring the respondent’s perception of being hurt when going outside the home or fear that “somebody might break into your house” (alpha=.68).

#### Emotional Responses (Conditioning Factors for Delinquency)

An *Anxiety* scale comprised of six items was created by asking the child’s parents and teacher to rate from “not true” to “often true” statements regarding the child. These include being “high strung, tense, or nervous”; “fearful or anxious”; and “worrying too much” (alpha=.54).

*Depression* was a two-item scale determined by asking parents if their child “feels worthless or inferior” and “unhappy, sad, or depressed” (alpha=.60).

*Anger* was a three-item scale with high scorers reporting that very often the child “has a very strong temper and loses it easily;” “is stubborn, sullen, or irritable;” and “argues too much” (alpha=.72).

### Behavioral Responses to Strain-Delinquency

*Substance Use* was a five-item scale asking about alcohol and drug use ( $\alpha=.701$ ). Individuals with high scores stated that they had used “more than a sip of alcohol,” “cigarettes”, and “marijuana” in the past two weeks.

*Runaway* was a single-item measure that asked how many times a respondent had “run away from home.”

*Truancy* was also a one-item measure that asked how many times the individual had “skipped a day of school without permission.”

*Property Crimes*: High scorers on this two-item scale reported more instances of “taking something from a store without paying for it” and “damaging school property on purpose” within the last two years ( $\alpha=.504$ ).

*Violent Crime* was a single-item measure that asked respondents how many times he or she “has hurt someone badly enough to need bandages or a doctor.”

*Delinquency Not Otherwise Specified (DNOS)* was a six-item scale measuring other types of delinquency not defined in criminal code or statute. This includes being “stopped or questioned by the police”, dishonesty or disobedience to parents, cheating, and insubordination at school ( $\alpha=.664$ ).

### Control Variables

Elements of *social control* examined school commitment, parental attachment, and supervision management. *School Commitment* was created by scaling ten items that examine interest in school, academic performance, and a rating of the student compared to peers ( $\alpha=.724$ ). High scorers reported that “most of the time” they were interested in school; performed “pretty well” in “Math, “English,” “Social Studies,” “Music,” and



“Science”; and both parents and teachers ranked the child as “one of the best students.” *Parental Attachment* was sixteen-item scale that asked the child about attention received from the parent, parental encouragement, activities completed together, and whether or not the child wishes to be like the parent ( $\alpha=.86$ ). The six-item *Supervision Management* scale examined if: the mother and/or father “makes rules that are clear and consistent”; “trusts you to behavior when she isn’t around”; “is firm and gets you to do what she/he wants”; and “wants to know where you are and what you are doing” ( $\alpha=.74$ ).

*Low Self-Control* was comprised of seven parental items from wave-one ( $\alpha=.77$ ) High scorers reported the child has “a strong temper and loses it easily”; “fights too much and picks on other children”; “can’t concentrate or pay attention for a long period of time” and “acts too young for age, cries a lot, or has tantrums.”

*Delinquent Peers*: This single-item measure asks parents if their child “hangs out with kids who get into trouble.”

Other control variables from the wave one survey included *Age*, *Race*, *Parental Education*, *Broken Home*, and *Total Family Income*. Race was recoded into white or non-white categories. Parental marital status was recoded into “broken home” with either intact or broken family structure. Intact homes either were single or two-parent households that were not affected by divorce, separation, or death.

## ANALYSIS

### Logic of the Analysis

The following analysis combines ordinary least squares (OLS) regression, path analysis and a series of t-tests of the differences in averages and regression coefficients for males and females. All variables were standardized to compensate for differences in the response categories of items used in the scaled variables. The initial discussion will report bivariate tests to determine the relationship between the variables. The analysis then shifts to an evaluation of the three research hypothesis outlined previously. The hypotheses analyze group level gender differences for theoretically important predictor variables that are due to emotional and behavioral differences in response to strain.

T-tests, path analysis, and OLS regression are appropriate analytic tools in determining how males and females differ in regard to types of strain experienced, what strains are most conducive to negative emotion, and the likelihood that strain will produce delinquency. T-tests measure the magnitude of differences between gender coefficient weights and the degree to which strain impacts delinquency. OLS regression equations and path models indicate which strains are associated with delinquency, how the likelihood of strain-induced delinquency differs for males and females, and how negative emotion affects the strain-delinquency association.

The correlation matrix shows many significant, moderate correlations between delinquency and strain indicators, negative emotion variables, and the other theoretically important control variables (See Appendix A). These correlations show that there is a linear relationship between each of the independent variables and the dependent variables. An examination of the intercorrelation of the predictor variables (.00-.47)

suggests that colinearity is unlikely a concern at the bivariate level.

### Hypothesis One<sup>1</sup>

OLS regression was used to determine the types of strain significantly related to substance abuse, truancy, running away, property crime, violent crime and DNOS. The partial coefficients for the full sample (N=1423) are reported in below.

**Table 1. Regression results of strain, social control social learning and emotional response on Delinquency.**

	Substance Abuse	Truancy	Running Away	Property Crime	Violent Crime	DNOS
<i>Control Variables</i>						
Age	-.26** (.02)	-.19** (.02)	-.02 (.02)	-.04 (.02)	.04 (.02)	.04 (.01)
	-.16	-.12	-.01	-.03	.03	.02
Race	.12** (.06)	.09** (.06)	.08** (.07)	-.00 (.07)	-.00 (.07)	-.10** (.05)
	.27	.19	.18	-.01	-.01	-.22
Broken Home	-.07* (.06)	-.06* (.07)	-.06* (.07)	-.10** (.07)	-.01 (.07)	-.03 (.05)
	-.18	-.14	-.15	-.21	.02	-.08
Parental Education	-.01 (.01)	.03 (.01)	-.00 (.01)	-.00 (.01)	-.03 (.01)	.03 (.01)
	-.01	.01	.00	-.00	-.01	.01
Family Income	-.05 (.02)	-.04 (.02)	-.05 (.02)	-.07* (.02)	-.00 (.02)	-.04 (.01)
	-.03	-.02	-.02	-.04	-.00	-.02
Self-Control	.04 (.03)	.02 (.03)	.08** (.03)	-.00 (.03)	-.01 (.03)	-.03 (.02)
	.04	.02	.08	-.00	-.01	-.03
Prior Delinquency	.06* (.03)	.12** (.03)	.15** (.03)	.11** (.03)	.10** (.03)	.13** (.02)
	.06	.11	.15	.11	.10	.13
<i>Strain Variable</i>						
Family Conflict	.13** (.03)	.03 (.03)	-.01 (.04)	.05 (.04)	.04 (.04)	.16** (.03)
	.14	.04	-.01	.05	.04	.16
Family Climate	.02 (.03)	.12** (.03)	.08* (.03)	.00 (.03)	.02 (.03)	.05* (.02)
	.02	.12	.08	.00	.02	.05
Neighborhood Strain	.05 (.03)	.06* (.03)	.08** (.03)	.06* (.03)	.02 (.03)	.02 (.02)
	.05	.06	.08	.06	.02	.02
Peer Strain	.05 (.03)	.01 (.03)	.01 (.03)	.06* (.03)	.05 (.03)	.05* (.02)
	.05	.01	.01	.06	.05	.04
School Strain	.00 (.04)	.03 (.04)	-.03 (.04)	.03 (.04)	.02 (.04)	.04 (.03)
	.00	.03	-.03	.03	.02	.04
Parental Victimization	-.04 (.03)	-.04 (.03)	-.02 (.03)	.05 (.03)	.01 (.03)	.08** (.02)
	-.04	-.04	-.02	.05	.01	.08
Neighborhood Victimization	-.04 (.03)	-.00 (.03)	.01 (.03)	-.00 (.03)	-.02 (.03)	.02 (.02)
	-.04	-.00	.01	-.00	-.02	.02
Threat of Victimization	-.01 (.03)	.01 (.03)	.00 (.03)	-.00 (.03)	.00 (.03)	-.03 (.02)
	-.01	.01	.00	-.00	.00	-.03
Emotional Abuse	.00 (.03)	-.05 (.03)	.01 (.03)	-.03 (.03)	.02 (.03)	.02 (.02)
	.00	-.05	.01	-.03	.02	.02
<i>Social Control Variables</i>						
School Commitment	-.11** (.04)	-.11** (.04)	-.01 (.04)	-.04 (.04)	-.05 (.04)	-.11** (.03)
	-.12	-.11	-.01	-.05	-.05	-.11
Parent Attachment	.03 (.04)	.02 (.04)	-.06 (.04)	-.07 (.04)	-.01 (.04)	.07** (.03)
	.03	.02	-.06	-.07	-.01	.07
Parental Supervision	-.05 (.03)	-.03 (.03)	.03 (.03)	.03 (.03)	.04 (.03)	-.05* (.02)
	-.05	-.03	.03	.03	.04	-.05
<i>Social Learning Variables</i>						
Delinquent Peers	.11** (.03)	.17** (.03)	.04 (.03)	.07* (.03)	.12** (.03)	.27** (.02)
	.11	.17	.04	.07	.13	.26
<i>Emotional Response</i>						
Anxiety	.04 (.03)	.04 (.03)	.07* (.03)	.03 (.03)	.01 (.03)	.06** (.02)
	.04	.04	.07	.03	.01	.06
Depression	-.05 (.03)	-.05 (.03)	.03 (.03)	.02 (.03)	-.05 (.03)	.07** (.02)
	-.05	-.05	.03	.02	-.05	.06
Anger	-.01 (.03)	.02 (.03)	.06 (.03)	-.01 (.03)	.02 (.03)	.18** (.02)
	-.01	.02	.06	-.01	.02	.17
Adjusted R <sup>2</sup>	.17	.17	.07	.06	.04	.48

Note: The standardized coefficients are shown above with the standard errors in parentheses with unstandardized coefficients below. \*p<.05 (one-tailed) \*\*p<.01 (one-tailed)

<sup>1</sup> Data were screened for patterns of missingness, outliers, and data entry errors. Univariate and multivariate examinations of the data supported assumptions of normality, linearity, and homoscedasticity, and collinearity diagnostics, such as V.I.F and tolerance scores, showed no evidence of multicollinearity.

Family Conflict was the only strain variable that is a significant predictor of Substance Abuse ( $\beta=.13$ ). It was also significantly related to Delinquency Not Otherwise Specified ( $\beta=.16$ ). Other strain variables related to DNOS included: Parental Victimization ( $\beta=.08$ ), Peer Strain ( $\beta=.05$ ), and Family Climate ( $\beta=.5$ ). Strain variables related to Truancy included Family Climate ( $\beta=.12$ ) and Neighborhood Strain ( $\beta=.06$ ). Neighborhood Strain and Family Climate were significant predictors of strain for Running Away ( $\beta=.08$ ). For Property Crime, Neighborhood Strain and Peer Strain were both significantly related. There were no significant predictors of strain for Violent Crime. Delinquent Peers was significantly related to all types of delinquency with the exception of Running Away. School Commitment was influential for Substance Abuse ( $\beta=-.11$ ), Truancy ( $\beta=-.11$ ), and DNOS ( $\beta=-.11$ ). Parent Attachment and Parental Supervision were also significant for DNOS. These equations illustrate that the likelihood that strain will influence delinquency varies by both the type of strain and the type of delinquency.

In order to determine whether or not there are differences between males and females in the type of strain, levels of family-based social support, and the likelihood of associating with delinquent peers, a series of basic t-tests are reported below in Table 2. Results show that females are more likely to report Threat of Victimization, while males are more likely to report School Strain and Neighborhood Victimization. Family Climate, Family Conflict, Neighborhood Strain, and Peer Strain are important predictor variables of delinquency, but no significant group level mean differences for males and females were found. In terms of social control, males reported significantly lower levels of Parental Attachment and a greater likelihood of associating with delinquent peers. In

contrast, females report significantly higher levels of School Commitment. These differences may be important in providing insight into the disparity of male versus female involvement in delinquency.

**Table 2. T-test results of gender variations on strain, social control, and social learning.**

T-test Results		
	t	Sig. (2-tailed)
<i>Strain</i>		
Family Conflict	.62	.54
Family Climate	1.8	.07
Peer	-1.2	.22
Neighborhood	1.0	.31
School	-2.6	.01
Neighborhood Victimization	-2.7	.00
Parental Victimization	-1.3	.21
Threat of Victimization	6.4	.00
Emotional Abuse	1.4	.18
<i>Social Control</i>		
Parental Attachment	-3.3	.00
School Commitment	4.0	.00
Parental Supervision	-.45	.66
<i>Social Learning</i>		
Delinquent Peers	-5.8	.00

Detailed models of the estimates reported in Table 1 are located in Appendix B.

These models illustrate the effects of strain on delinquency separately for males and females. The results show that Family Conflict is a significant predictor for both males and females on Substance Abuse and DNOS. Family Conflict was also significantly related to female Violent Crime ( $\beta=.11$ ). Parental Victimization is also a significant predictor of Substance Abuse ( $\beta=-.08$ ) for males, Property Crime ( $\beta=.11$ ) for females, and DNOS for both genders. For males, Family Climate was significantly related to Truancy ( $\beta=.13$ ) and Running Away ( $\beta=.15$ ), and for females was significantly related to Truancy ( $\beta=.11$ ). Other significant predictors of strain for males included School Strain

( $\beta=-.13$ ) on Truancy, Neighborhood Victimization ( $\beta=-.10$ ) on Substance Abuse, and Threat of Victimization ( $\beta=.08$ ) on Property Crime. Females showed greater vulnerability to neighborhood strain ( $\beta=.11$ ).

Overall, Family Conflict, Parental Victimization and Family Climate play a significant role in delinquency for both males and females. Interpersonal strain within the family system seems to be an important predictor of delinquency for both genders. There does appear to be some gender variations in strain with females being more vulnerable to Neighborhood Strain and males to the Threat of Victimization and School Strain.

### Hypothesis Two

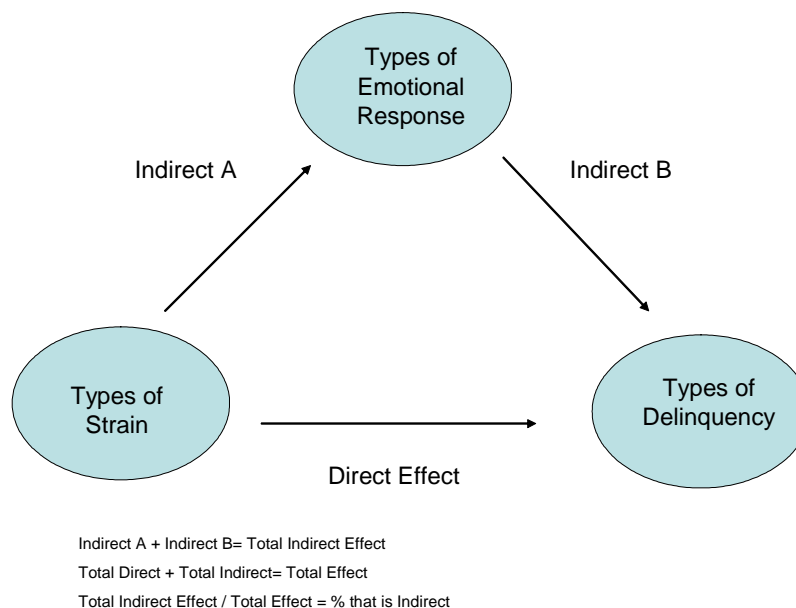
Independent samples t-test showed that males and females do not differ significantly in terms of the amount of negative emotion they experience (See Table 3 below). Ordinary least squares regression was used to determine if male emotional responses are more other-directed and females emotional responses are more self-directed. Anxiety and Depression are categorized as self-directed emotions, while Anger is other-directed. Anxiety was significantly related to Running Away ( $\beta=.10$ ) and DNOS ( $\beta=.06$ ) for males. In the initial model, Anxiety was significantly related to female Property Crime and male Running Away. The influence of Depression becomes insignificant for all types of delinquency in the full models. Anger was a significant predictor of DNOS for both males ( $\beta=.12$ ) and females ( $\beta=.27$ ) at the .01 level. Within the initial models, anger was predictive of violent crime for males. See Appendix B for full models.

**Table 3. T-test results of gender variations of emotional response.**

T-test Results		
<i>Emotional Response</i>	t	Sig. (2-tailed)
Anxiety	-1.5	.14
Depression	1.1	.26
Anger	-1.3	.21

Next, path analysis is used to estimate the individual direct, indirect (via anger, anxiety, and depression) and the total effects of strain on each type of delinquency. The results are reported in Table 4 below and the complete regression models are reported in Appendix B. Figure A illustrates the path model.

Figure A. Path Model Diagram



*Substance Use.* For males, two of the nine variables- Family Conflict and Neighborhood Strain- have standardized effects of .09 or higher on Substance Use. The remaining variable effects range from .00 to .06. Female Family Conflict and Family Climate have standardized effects of .12 and .11 respectively. Peer Strain has a

standardized effect of .07. Anger contributes the largest indirect effect on substance use for males as related to School Strain (100%) and Emotional Abuse (92.3%). For females, Anxiety has the largest indirect effect related to Emotional Abuse (82.4%) and Neighborhood Victimization (81.8%). Anger also plays a key role in female Substance Abuse with Emotional Abuse accounting for 81.3% of the total effect.

**Table 4 The Direct, Indirect, and Total Effects of Strain on Substance Abuse**

Measure of Strain	Direct		Indirect (via anxiety)		Total		% that is Indirect		Indirect (via depression)		% that is Indirect		Indirect (via anger)		Total		% that is Indirect			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Family Conflict	.12	.12	.15	.25	.27	.37	55.6	67.6	.24	.27	.36	.39	66.7	69.2	.37	.39	.49	.51	75.5	76.5
Family Climate	.02	.11	.10	.26	.12	.37	83.3	70.3	.09	.13	.11	.24	81.8	54.2	.07	.09	.09	.20	77.8	45
Neigh. Strain	.05	.04	.09	.10	.14	.14	64.3	71.4	.01	.10	.06	.14	16.7	71.4	.10	0	.15	.04	66.7	0
Peer Strain	.04	.07	.09	.10	.13	.17	69.2	58.8	.01	.04	.05	.11	20.0	36.3	.03	.11	.07	.18	42.9	61.1
School Strain	.00	.03	.15	.04	.15	.07	100	57.1	.09	.02	.09	.05	100	40	.04	.04	.04	.07	100	57.1
Parental Victim.	.06	.04	.05	.15	.11	.19	45.6	78.9	.01	.05	.07	.09	14.3	55.6	.16	.11	.22	.15	72.7	73.3
Neigh. Victim.	.09	.02	.09	.09	.18	.11	50.0	81.8	.02	.06	.11	.08	18.2	75	.04	.03	.13	.05	30.8	60
Threat of Victim.	.05	.05	.12	.15	.17	.20	70.6	75	.00	.11	.05	.16	0	68.8	.03	.02	.08	.07	37.5	28.6
Emotional Abuse	.01	.03	.13	.14	.14	.17	92.9	82.4	.03	.05	.04	.08	75.0	62.5	.12	.13	.13	.16	92.3	81.3

*Truancy.* Parental Victimization ( $\beta=.09$ ) and Family Climate ( $\beta=.12$ ) have the largest direct standardized effect on male truancy. For females, Family Climate shows the largest standardized effect ( $\beta=.13$ ). Neighborhood strain, School Strain, and Family Conflict each have effect sizes of .08. Large indirect effects were found for all of three negative emotions for males. Of the three negative emotions, the intervening effect of Anger on the relationship between Family Climate and Strain is largest (97.2%), followed closely by Anxiety (93.7%) and Depression (96.2%). Depression also has an indirect effect on male Truancy. For females, the largest indirect effect is found for Anxiety. The indirect effect is nearly 91 percent (90.9%) of the total effect of Neighborhood Victimization on truancy.



**Table 5 The Direct, Indirect, and Total Effects of Strain on Truancy**

Measure of Strain	Direct		Indirect (via anxiety)		Total		% that is Indirect		Indirect (via depression)		Total		% that is Indirect		Indirect (via anger)		Total		% that is Indirect	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Emotional Abuse	.01	.03	.13	.14	.14	.17	92.9	82.4	.03	.05	.04	.08	75.0	62.5	.12	.13	.13	.16	92.3	81.3
Family Conflict	.01	.08	.15	.26	.16	.34	93.7	76.5	.25	.35	.26	.43	96.2	81.4	.35	.39	.36	.47	97.2	83.0
Family Climate	.12	.13	.10	.27	.22	.40	45.5	67.5	.12	.11	.24	.24	50	45.8	.05	.09	.17	.22	29.4	40.9
Neigh. Strain	.06	.08	.09	.11	.15	.19	60	57.9	.02	.08	.08	.16	25	50	.08	0	.14	.08	57.1	0
Peer Strain	.02	.03	.09	.11	.11	.14	81.8	78.6	.04	.02	.06	.05	66.7	40	.01	.11	.03	.14	33.3	78.6
School Strain	.12	.08	.15	.05	.27	.13	55.6	38.5	.12	.00	.24	.08	50	.00	.02	.04	.14	.12	14.3	33.3
Parental Victim.	.09	.04	.05	.16	.14	.20	35.7	80	.02	.03	.11	.07	18.2	42.6	.14	.11	.23	.15	60.9	73.3
Neigh. Victim.	.01	.01	.09	.10	.10	.11	90	90.9	.05	.04	.06	.05	83.3	80	.02	.03	.03	.04	66.7	75
Threat of Victim.	.07	.04	.12	.16	.19	.20	63.2	80	.03	.09	.10	.13	30	69.2	.01	.02	.08	.06	12.5	33.3
Emotional Abuse	.03	.03	.13	.15	.16	.18	81.3	83.3	.00	.03	.03	.06	.00	50	.10	.13	.13	.16	76.9	81.3

*Running Away.* Family Climate ( $\beta=.15$ ) and Neighborhood Strain ( $\beta=.09$ ) have the largest direct standardized effect for males on Running Away. Remaining effects ranged from .01 to .06. Neighborhood strain ( $\beta=.10$ ) and Emotional Abuse ( $\beta=.07$ ) show the largest direct standardized effect for females. Remaining effects range from .00 to .05. In terms of the indirect effects of negative emotion, Anxiety is the most consequential for males. The indirect effect is nearly all of the total effect for School Strain (95.8%) and Emotional Abuse (95.5%). However, consistent with GST, Anger is also a significant intervening influence accounting for (93.3%) of the total effect of Emotional Abuse on Running Away. For females, certain types of strain are only associated with delinquency due to the connection that they share with negative emotions. Total effects are entirely indirect for the connection between Threat of Victimization and Neighborhood Victimization through anxiety on Running Away. The same is true for depression. The total effect of Neighborhood Victimization and Threat of Victimization on Running Away is indirect. A large proportion of the total effect of Parental Victimization (95.2%), School Strain (92.9%), and Family Conflict (90.6%) is indirect through anger

for the females in the sample.

**Table 6 The Direct, Indirect, and Total Effects of Strain on Running Away**

Measure of Strain	Direct		Indirect (via anxiety)		Total		% that is Indirect		Indirect (via depression)		Total		% that is Indirect		Indirect (via anger)		Total		% that is Indirect	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Threat of Victim.	.07	.04	.12	.16	.19	.20	63.2	80	.03	.09	.10	.13	30	69.2	.01	.02	.08	.06	12.5	33.3
Emotional Abuse	.03	.03	.13	.15	.16	.18	81.3	83.3	.00	.03	.03	.06	.00	50	.10	.13	.13	.16	76.9	81.3
Family Conflict	.05	.05	.23	.31	.28	.36	82.1	86.1	.03	.38	.35	.43	85.7	88.4	.39	.48	.44	.53	88.6	90.6
Family Climate	.16	.04	.18	.32	.34	.36	52.9	88.9	.15	.24	.31	.28	48.4	85.7	.09	.18	.25	.22	36	81.8
Neigh Strain	.09	.10	.17	.16	.26	.26	65.4	61.5	.05	.21	.14	.31	35.7	67.7	.12	.21	.18	.19	57.1	47.4
Peer Strain	.03	.02	.17	.16	.20	.18	85	88.8	.07	.15	.10	.17	70	88.2	.05	.02	.08	.04	62.5	50
School Strain	.01	.01	.23	.10	.24	.11	95.8	90.9	.15	.13	.16	.14	93.75	92.9	.06	.13	.07	.14	85.7	92.9
Parental Victim.	.04	.01	.13	.21	.17	.22	76.5	95.5	.05	.16	.09	.17	55.6	94.1	.18	.20	.22	.21	81.8	95.2
Neigh. Victim.	.06	.00	.17	.15	.23	.15	73.9	100	.08	.17	.14	.17	57.1	100	.06	.12	.12	.12	50	100
Threat of Victim.	.03	.00	.20	.21	.23	.21	86.9	100	.06	.22	.09	.22	66.7	100	.05	.11	.08	.11	62.5	100

*Property Crime.* Family Conflict and Threat of Victimization represent the largest direct effects on property crime for males ( $\beta=.08$ ), with Peer Strain and Neighborhood Strain accounting for direct effects at .07 and .06 respectively. For females, School ( $\beta=.09$ ) and Neighborhood Strain ( $\beta=.09$ ) have the largest direct effects on female Property Crime with Family Climate, Family Conflict, and Peer Strain also as strong predictors with direct effects of .07. Anger had the largest indirect effect for males. The indirect effect of Parental Victimization on Property Crime through anger represents 94.1% of the total effect. Relatively large indirect effects connecting Family Climate to Property Crime were also seen for Depression (94.7%) and Anxiety (90%). In the case of female Property Crime, the largest indirect effect is found for the connection between Neighborhood Victimization and Anxiety (86.7%).

**Table 7 The Direct, Indirect, and Total Effects of Strain on Property Crime**

Measure of Strain	Direct		Indirect (via anxiety)		Total		% that is Indirect		Indirect (via depression)		Total		% that is Indirect		Indirect (via anger)		Total		% that is Indirect	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Family Conflict	.08	.07	.14	.29	.22	.36	63.6	80.6	.33	.03	.41	.37	80.5	81.1	.37	.40	.45	.47	82.2	85.1
Family Climate	.01	.07	.09	.30	.10	.37	90	81.1	.18	.16	.19	.23	94.7	69.6	.07	.10	.08	.17	87.5	58.8
Neigh. Strain	.06	.09	.08	.14	.14	.23	57.1	60.9	.08	.13	.14	.22	57.1	59.1	.10	.01	.16	.10	62.5	10
Peer Strain	.07	.07	.08	.14	.15	.21	53.3	66.7	.10	.07	.17	.14	58.8	50	.03	.12	.10	.19	30	63.2
School Strain	.03	.09	.14	.08	.17	.17	82.4	47.1	.18	.05	.21	.14	85.7	35.7	.04	.05	.07	.14	57.1	35.7
Parental Victim.	.01	.13	.14	.19	.05	.32	80	59.4	.08	.08	.09	.21	88.9	38.1	.16	.15	.17	.28	94.1	53.6
Neigh. Victim.	.02	.02	.08	.13	.10	.15	80	86.7	.11	.09	.13	.11	84.6	81.8	.04	.04	.06	.06	66.7	66.7
Threat of Victim.	.08	.03	.11	.19	.19	.22	57.9	86.4	.09	.14	.17	.17	52.9	82.4	.03	.03	.11	.06	27.3	50
Emotional Abuse	.02	.06	.12	.18	.14	.24	85.7	75	.06	.08	.08	.14	75	57.1	.12	.14	.14	.20	85.7	70

*Violent Crime.* Emotional Abuse is the only strain indicator with a direct effect as strong as .08 on Violent Crime for males. Family Climate and Peer Strain are also strong predictors of Violent Crime ( $\beta=.06$ ). The remaining effects were between .02 and .04. For females, Family Conflict had the highest standard effect at .09, followed closely by Family Climate and School Strain ( $\beta=.06$ ). The remaining direct effects ranged from .01 to .05. The indirect connection of Parental Victimization through Anger (88.9%) and School Strain through Anxiety (84.6%) accounted for a substantial percentage of the total effects on Violent Crime for males. The intervening roles of Neighborhood Strain through Anxiety (85.7%) and Family Conflict through Anger, (81.6%) accounted for the largest proportion of the total effects for females. These are followed closely by the indirect effect of Family Climate through Anxiety (82.3%) and Parental Victimization through Anger (80%).

**Table 8 The Direct, Indirect, and Total Effects of Strain on Violent Crime**

Measure of Strain	Direct		Indirect (via anxiety)		Total		% that is Indirect		Indirect (via depression)		Total		% that is Indirect		Indirect (via anger)		Total		% that is Indirect	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Family Conflict	.06	.09	.11	.27	.27	.17	64.7	75	.24	.27	.30	.36	80	75	.37	.40	.43	.49	86	81.6
Family Climate	.03	.06	.06	.28	.28	.09	66.7	82.3	.09	.13	.12	.19	75	68.4	.07	.10	.10	.16	70	62.5
Neigh. Strain	.04	.02	.05	.12	.12	.09	55.6	85.7	.01	.10	.05	.12	20	83.3	.10	.01	.14	.03	71.4	33.3
Peer Strain	.06	.05	.05	.12	.12	.11	45.5	70.6	.01	.04	.07	.09	14.3	44.403	.12	.09	.18	.17	33.3	70.6
School Strain	.02	.06	.11	.06	.06	.13	84.6	50	.09	.02	.11	.08	81.8	25	.04	.05	.06	.11	66.7	45.5
Parental Victim.	.02	.03	.01	.17	.17	.03	33.3	85	.01	.05	.03	.08	33.3	62.5	.16	.15	.18	.15	88.9	80
Neigh. Victim.	.02	.03	.05	.11	.11	.07	71.4	78.6	.02	.06	.04	.09	50	66.7	.04	.04	.06	.07	66.7	57.1
Threat of Victim.	.03	.03	.08	.17	.17	.11	72.7	85	.00	.11	.03	.14	0	78.6	.03	.03	.06	.06	50	50
Emotional Abuse	.08	.01	.09	.16	.16	.17	52.9	94.1	.03	.05	.11	.06	27.3	83.3	.12	.14	.20	.15	60	93.3

*Delinquency Not Otherwise Specified.* Strong direct effects for males are found for Family Conflict ( $\beta=.23$ ), Parental Victimization ( $\beta=.12$ ), and Family Climate ( $\beta=.11$ ) on DNOS. Peer Strain ( $\beta=.08$ ), Emotional Abuse ( $\beta=.07$ ), and Neighborhood Strain ( $\beta=.06$ ) also have strong direct effects. The remaining direct effects on DNOS range from .00-.04. For females, the largest direct effects are found for Family Conflict ( $\beta=.32$ ), Emotional Abuse ( $\beta=.19$ ), Family Climate ( $\beta=.13$ ), and Peer Strain ( $\beta=.09$ ). The remaining direct effects ranged from .00 (School Strain) to .07 (Neighborhood Victimization). The Threat of Victimization on DNOS for males is entirely indirect through Anxiety, Depression, and Anger. The same is true for the relationship between school strain and DNOS for females. The effect is indirect through each of the three sources of negative emotion.

**Table 9 The Direct, Indirect, and Total Effects of Strain on DNOS**

Measure of Strain	Direct		Indirect (via anxiety)		Total		% that is Indirect		Indirect (via depression)		% that is Indirect		Indirect (via anger)		Total		% that is Indirect			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Family Conflict	.23	.32	.27	.43	.50	.75	54	57.3	.47	.49	.70	.81	67.1	60.5	.57	.75	.80	.107	71.3	70.1
Family Climate	.11	.13	.22	.44	.33	.57	66.7	77.2	.32	.35	.43	.48	74.4	72.9	.27	.45	.38	.58	71.1	77.6
Neigh. Strain	.06	.05	.21	.28	.27	.33	77.8	84.8	.22	.32	.28	.37	78.6	86.5	.03	.36	.36	.41	83.3	84.8
Peer Strain	.08	.09	.21	.28	.29	.37	72.4	75.7	.24	.26	.32	.35	75	74.3	.23	.47	.31	.56	74.2	83.9
School Strain	.04	.00	.27	.22	.31	.22	87.1	100	.32	.24	.36	.24	88.9	100	.24	.40	.28	.40	85.7	100
Parental Victim.	.12	.12	.17	.33	.29	.45	58.6	73.3	.22	.27	.34	.39	64.7	69.2	.36	.47	.48	.59	75	79.7
Neigh. Victim.	.03	.07	.21	.27	.24	.34	87.5	79.4	.25	.28	.28	.35	89.3	80	.24	.39	.27	.46	88.9	84.8
Threat of Victim.	.00	.02	.24	.33	.24	.35	100	94.3	.23	.33	.23	.35	100	94.3	.23	.38	.23	.40	100	95
Emotional Abuse	.07	.19	.25	.32	.32	.51	78.1	62.7	.20	.27	.27	.46	27.3	58.7	.32	.49	.39	.68	82.1	72.1

When examining the relationship between strain and delinquency, the path analysis demonstrates the significant mediating role negative emotions play for both males and females. The indirect effects through negative emotions on delinquency typically account for a higher percentage of the total effects among males than females. In particular, the intervening effects associated with Anger are highest for males on other directed types of delinquency including Property Crime, Violent Crime, and DNOS. Anger is significant for both male and female Violent Crime, while Anxiety is the only form of negative emotion consequential for females. The self-directed emotions have stronger indirect effects for females on Truancy and Running Away than for males.

### Hypothesis Three.

Initial group level differences obtained through t-test showed similar levels of substance abuse, truancy, and running away for males and females. Table 10 shows that males were significantly more likely to engage in Property Crime, Violent Crime, and DNOS. Males report significantly higher types of other-directed delinquency. In the only instance where delinquency is more prevalent for females--- running away--- the

difference is not statistically significant.

**Table 10. T-test results of gender variations in delinquency.**

T-test Results		
	t	Sig. (2-tailed)
<i>Delinquency</i>		
Substance Abuse	-.14	.89
Truancy	1.8	.07
Runaway	.65	.79
Property Crime	-3.0	.00
Violent Crime	-6.5	.00
DNOS	-6.8	.00

The regression models presented earlier show support for the hypothesis that the strains examined are significant predictors of delinquency for both males and females. However, these models do not test for significant differences in the ability of these strains to account for differing levels of male versus female delinquency. T-tests of the differences between regression coefficients for males and females are reported below for those types of delinquency where the effects of strain on delinquency are statistically different.

There was a significant difference between males and females in the strength of the relationship between various measures of strain and the difference forms of delinquency. Parental Victimization made more of a difference in Substance Abuse for Females, as did Neighborhood Victimization. For Truancy, Parental Victimization and School Strain had a greater impact for females while Family Climate was a stronger predictor for males. Family Climate was the only predictor of Running Away and was stronger for males. For males, Family Conflict and Threat of Victimization were most influential for Property Crime. Emotional Abuse was the only significantly stronger predictor of Violent Crime for males. Family Conflict, Family Climate, and School

Strain made more a difference on DNOS for males.

**Table 11. Comparison of Strain Regression Coefficients between Males and Females on Delinquency.**

	T-test Results	
	t	Sig. (2-tailed)
<u>Substance Abuse</u>		
Parental Victimization	2.1	.04
Neighborhood Victimization	2.2	.03
<u>Truancy</u>		
Family Climate	-2.0	.04
Parental Victimization	2.6	.01
School Strain	2.2	.03
<u>Runaway</u>		
Family Climate	-2.5	.01
<u>Property Crime</u>		
Family Conflict	-2.1	.03
Threat of Victimization	-2.3	.02
<u>Violent Crime</u>		
Emotional Abuse	-2.6	.01
<u>DNOS</u>		
Family Conflict	-2.8	.01
Family Climate	-2.8	.01
School Strain	-2.0	.04

These comparisons illustrate that while males and females are subject to the same overall levels of strain, there are differences between genders associated with the intervening role of negative emotion and the impact that the types of strain have on delinquency. Overall, the findings support Hypothesis 3B, showing that males engage in more other-directed types of delinquency than females. However, this was not uniformly the case as the results show self-directed delinquency to be more consequential for males in the models examining substance abuse and truancy.

## DISCUSSION AND CONCLUSIONS

Sociological theories have had limited success in explaining the gender variations in delinquency. Despite predictions that this phenomenon would decrease with women's liberation, gender remains one of the most significant predictors of crime. Proponents of Agnew's GST have attempted to identify the types of strain and emotional responses most relevant to differences in male and female crime and delinquency. This thesis has evaluated propositions from GST relating to gender variations in strain, emotional reactions, and behavioral responses.

While an individual may be subjected to many types of strain, there are vulnerability variations that are more influential for delinquency. This study shows certain types of strain influence which type of delinquency males and females will pursue. The bivariate results of this study show males have higher levels of School Strain. This is consistent with DeCosters (2005) study that found males reported higher exposure to academic stress than females. The results also supported Hay's (2003) findings that harsh punishment from family members was a significant predictor of male delinquency.

Multivariate regression found that Family Conflict is a significant predictor of male and female substance use. This supports Compas & Wagner's (1991) study claiming females are more vulnerable to communal, interpersonal stresses. It also is consistent with Mazerolle's (1998) findings that negative relationships with adults predicts male delinquency. School Strain remained a significant predictor of male delinquency, especially for Truancy. For females, Neighborhood Strain was a significant predictor of Running Away. Previous studies have not looked at this relationship, but the



findings seem intuitive. In terms of Property Crime, Threat of Victimization was the only significant source of strain for males and Parental Victimization the only source for females. This supports Agnew's (2002) assertion that victimization is seen as unjust and high in magnitude. There were no significant sources of strain for Violent Crime, which support previous GST claims that strains are most consequential for more minor types of crime and delinquency.

The findings regarding variations in strain generally are consistent with the previous GST studies examining male and female differences. The study has expanded the scope to focus on the influence of strain on multiple types of delinquency. While some types of strain seem to directly influence delinquent behaviors, it is also important to look at the intervening role negative emotions play. In hypothesis two, women were expected to experience more self-directed emotions, including anxiety and depression; while males were purported to experience higher rates of anger. At the bivariate level, no gender differences for emotion were significant. Broidy & Agnew (1997) explained that there may be differences in strains that provoke negative emotions that are gender dependent. They relate, "Adolescent girls often experience anger in affiliative interactions, where boys most often experience anger in situations in which performance is evaluated, such as in sports or school (Broidy and Agnew 1997:283). So while males and females may experience similar levels of negative emotion, there are specific instances where strain is more predictive of delinquency. When holding constant the effects of strain in the OLS regression analysis, the direct effect of negative emotions was minimal. Anxiety was only a significant predictor of male Running Away. Anger did remain significant on DNOS for both males and females.

If negative emotions play an intervening role, it is important to look at the indirect effects on delinquency. While all three negative emotions were influential, males generally showed higher indirect effects of negative emotions than females. This difference was specifically true for anger. In five of the six types of delinquency, Anger showed the strongest effect for males. The role of anger was also instrumental for female offending, however the effect of Anxiety and Depression on delinquency was found typically at higher rates. This is consistent with the notion that other negative emotional responses are associated with a lower likelihood of engaging in deviant behavior and appear to act as a restraint (Sharp, Brewster, and Love 2005; Jang 2007; Ellwanger 2007). Running away was the only type of male delinquency where Anger did not have the strongest indirect effect.

Internal emotional responses may increase self-destructive or self-directed coping, such as Running Away or Substance Use. Hypothesis three attempted to identify gender variations in delinquency related to types of strain and emotional response. While both genders engaged in all types of delinquency, the decision to pursue one type of delinquency over another was contingent upon a vulnerability to strain and the emotional response specific to males and females.

This study has expanded on the current literature by attempting to identify how variations in vulnerability to strain and negative emotion differ for males and females on six types of delinquency. Previous studies have typically looked at delinquency as a composite measure, which limits the ability of the theory to explain female offending. While the findings in this study have showed significant differences for men and women related to GST, it is important to recognize that these variations may differ across

cultures and societies.

While Agnew says the National Survey of Children provides the most comprehensive test of GST, future studies should utilize multi-item scales for more variables. Peer Strain, Neighborhood Strain, Violent Crime, Truancy, and Running Away were all single item measures that would benefit from multi-item measurement. In addition, more types of self-directed deviance females should be included (e.g. disordered eating, suicide attempts, and compulsive exercising).

Future studies would do well to analyze other types of negative emotions that may play a mediating role. Only three types of emotional states were tested within this research. In addition, the emotional response variables were parental interpretations of the child's mental state. While parents typically are accurate in inferring emotional states, it may be beneficial to utilize individualized self-report data for these types of measures. Harry (1992) says that parents are in a position to view their children within an ecological framework and with cultural awareness and sensitivity that professionals may not possess. A final suggestion is to determine significant indirect effects for males and females within the path model. This would provide a better understanding of the intervening role that negative emotion plays within the strain-delinquency relationship.

The findings of this study have important practical implications for juvenile delinquency prevention and treatment programs. Recognizing variations in vulnerability to strain for males and females provides an opportunity for families, schools, and communities to recognize and reduce strain before delinquency is pursued. In terms of treatment programs, it is important for the juvenile court systems to recognize the types of strains and negative emotions experienced by an individual that influenced

delinquency. Efforts should then be made to decrease the strain or remove the individual from the negative stimulus. Additionally, anger management classes or counseling may be beneficial to teach the individual more effective coping strategies to manage strain.

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Appendix A. Means, Standard Deviations, and Intercorrelations.

Variables	Means (s.d.)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
1. Age	8.97 (1.6)	.04	-.04	.03	.00	-.06*	-.01	-.30**	-.23**	-.02	-.04	.03	.03	-.05	-.08	.12**	-.03	-.06*	.23**	.24**	.12**	-.03	.22**	.11**	.03	-.01	.02	-.01	.03
2. Race	.27 (.45)	—	.18**	-.24**	-.40**	-.02	.02	.11**	.03	.06*	-.02	-.01	-.12**	.06*	-.04	-.02	-.19**	-.05	-.02	-.09**	-.09**	.01	.04	.06*	.02	-.07*	.02	.05	
3. Broken Home	.20 (.40)	—	—	-.09**	-.40**	.07*	.04	-.04	-.07*	-.06*	-.08**	-.03	-.10**	-.04	-.08**	.01	-.12**	-.10**	.01	-.05	-.08**	.01	.09**	.04	.03	-.06*	-.04	-.04	
4. Parent Ed.	11.95 (2.82)	—	—	—	.47**	-.14**	-.03	-.03	.06*	-.02	.02	-.00	.14**	-.04	.03	-.03	.17**	.35**	.13**	.09**	.13**	-.02	-.24**	-.13**	-.06*	.09**	.06*	-.01	
5. Ttl. Fam Income	4.27(2.05)	—	—	—	—	-.12**	-.03	-.05	.03	-.02	.01	.02	.14**	-.01	.09**	.00	.22**	.24**	.07**	.08**	.11**	-.04	-.14**	-.11**	-.07**	.12**	.09**	.06*	
6. Sif Control	.00 (1.0)	—	—	—	—	—	.36**	-.05	-.11**	-.05	-.11**	-.10**	-.34**	-.28**	-.12**	-.09**	.11**	-.25**	-.10**	.12**	-.04	-.10**	.24**	.12**	.08**	-.21**	-.34**	-.27**	
7. Prior Delinq.	.00 (1.0)	—	—	—	—	—	—	.11**	.17**	.17**	.17**	.15**	.34**	.22**	.13**	.07**	.10**	-.12**	.11**	.11**	.05	-.11**	.12**	.10**	.10**	-.21**	-.19**	-.17	
8. Substance Abuse.	.00 (1.0)	—	—	—	—	—	—	—	.44**	.08**	.30**	.18**	.22**	.22**	.13**	.04	.07**	.12**	-.06*	-.09**	-.05*	.08**	-.22**	-.13**	-.11**	.17**	.11**	.07**	
9. Truancy	.00 (1.0)	—	—	—	—	—	—	—	—	.15**	.29**	.22**	.33**	.17**	.19**	.02	.12**	.19**	-.04	-.02	-.01	.04	-.25**	-.14**	-.11**	.24**	.14**	.10**	
10. Running Away	.00 (1.0)	—	—	—	—	—	—	—	—	—	.07*	.03	.17**	.14**	.16**	.04	.11**	.04	.03	.03	.00	.09**	-.06*	-.12**	-.05*	.11**	.15**	.13**	
11. Prop. Crime	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	.31**	.33**	.16**	.10**	.08**	.11**	.13**	.08**	.03	.01	.08**	-.15**	-.12**	-.05	.14**	.13**	.11**	
12. Violent Crime	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	.29**	.13**	.08**	.08**	.06*	.09**	.07*	.03	.00	.09**	-.10**	-.06*	-.02	.17**	.08**	.05	
13. DNOS	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	.47**	.22**	.15**	.18**	.27**	.22**	.14**	.02	.22**	-.33**	-.19**	-.14**	.51**	.39**	.36**	
14. Fam. Conflict	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	.35**	.14**	.10**	.08**	.18**	.04	-.00	.37**	-.23**	-.37**	-.18**	.32**	.38**	.50**	
15. Fam. Climate	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.06*	.19**	.16**	.11**	.01	.01	.31**	-.19**	-.52**	-.27**	.10**	.21**	.20**	
16. Peer Strain	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.05	.07*	.12**	.14**	.09**	.09**	-.05	-.04	-.08**	.06*	.10**	.06*	
17. Neigh. Strain	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.17**	.09**	.17**	.10**	.12**	-.15**	-.20**	-.13**	.12**	.12**	.11**	
18. School Strain	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.08**	.08*	.06*	.11**	-.63**	-.23**	-.14**	.20**	.20**	.17**	
19. Parent. Vict.	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.17**	.06*	.34**	-.07**	-.06*	.05*	.09**	.11**	.07**	
20. Neigh Vic.	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.16**	.09**	-.07**	.00	.00	.04	.10**	.08**	
21. Threat Vic.	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.06*	-.04	.00	.00	-.02	.11**	.08**	
22. Emot. Abuse	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.15**	.26**	-.07**	.11**	.17**	.12**	
23. School Commit.	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.26**	.15**	-.23**	-.20**	-.17**	
24. Parent Attach.	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.52**	-.13**	-.14**	-.16**	
25. Parent Sup.	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	-.09**	-.10**	-.09**	
26. Delinq. Peer	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.27**	.23**	
27. Anxiety	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.48**	
28. Depress.	.00 (1.0)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

\*p<.05 (one-tailed) \*\*p<.01 (one-tailed)

## Appendix B. Full Regression Models for Males and Females on Each Type of Delinquency.

### Regression results of strain, social control social learning and emotional response on substance use.

	M	F	M	F	M	F	M	F	M	F	M-Full	F-Full
<i>Control Variables</i>												
Age	<u>-.33** (.02)</u>	<u>-.30** (.02)</u>									<u>-.25** (.03)</u>	<u>-.27** (.02)</u>
Race	<u>-.21</u>	<u>-.19</u>									<u>-.16</u>	<u>-.17</u>
Broken Home	<u>.12** (.09)</u>	<u>.12** (.08)</u>									<u>.10* (.10)</u>	<u>.14** (.09)</u>
Parental Education	<u>.28</u>	<u>.26</u>									<u>.23</u>	<u>.29</u>
Family Income	<u>-.06 (.10)</u>	<u>-.11** (.09)</u>									<u>-.04 (.10)</u>	<u>-.09* (.09)</u>
Self-Control	<u>-.15</u>	<u>-.27</u>									<u>-.10</u>	<u>-.22</u>
Prior Delinquency	<u>-.01 (.02)</u>	<u>-.00 (.01)</u>									<u>-.03 (.02)</u>	<u>-.01 (.02)</u>
	<u>.00</u>	<u>-.00</u>									<u>.01</u>	<u>-.03</u>
	<u>-.02 (.02)</u>	<u>-.05 (.02)</u>									<u>-.03 (.02)</u>	<u>-.06 (.02)</u>
	<u>-.01</u>	<u>-.03</u>									<u>-.02</u>	<u>-.04</u>
	<u>-.03 (.04)</u>	<u>-.04 (.04)</u>									<u>.05 (.04)</u>	<u>.03 (.04)</u>
	<u>-.02</u>	<u>-.04</u>									<u>.05</u>	<u>.02</u>
	<u>.10* (.04)</u>	<u>.11** (.05)</u>									<u>.06 (.04)</u>	<u>.06 (.05)</u>
	<u>.09</u>	<u>.13</u>									<u>.05</u>	<u>.08</u>
<i>Strain Variables</i>												
Family Conflict			<u>.20** (.04)</u>	<u>.14** (.04)</u>							<u>.16** (.05)</u>	<u>.12* (.05)</u>
Family Climate			<u>.21</u>	<u>.14</u>							<u>.17</u>	<u>.19</u>
Neighborhood Strain			<u>-.02 (.04)</u>	<u>.06 (.04)</u>							<u>-.02 (.05)</u>	<u>.09 (.04)</u>
Peer Strain			<u>.08* (.04)</u>	<u>.04 (.04)</u>							<u>.06 (.04)</u>	<u>.04 (.04)</u>
School Strain			<u>.08</u>	<u>.04</u>							<u>.06</u>	<u>.04</u>
Parental Victimization			<u>.03 (.04)</u>	<u>.07 (.04)</u>							<u>.03 (.04)</u>	<u>.06 (.04)</u>
Neighborhood Victimization			<u>.03</u>	<u>.06</u>							<u>.03</u>	<u>.06</u>
Threat of Victimization			<u>.10* (.04)</u>	<u>.07 (.04)</u>							<u>.02 (.05)</u>	<u>-.01 (.05)</u>
Emotional Abuse			<u>.10</u>	<u>.08</u>							<u>.02</u>	<u>-.10</u>
			<u>-.09* (.04)</u>	<u>.01 (.04)</u>							<u>-.08* (.04)</u>	<u>.02 (.04)</u>
			<u>-.09</u>	<u>.01</u>							<u>-.08</u>	<u>.02</u>
			<u>-.10** (.04)</u>	<u>.03 (.04)</u>							<u>-.10* (.04)</u>	<u>.02 (.04)</u>
			<u>-.10</u>	<u>.03</u>							<u>-.10</u>	<u>.02</u>
			<u>.07 (.04)</u>	<u>-.06 (.03)</u>							<u>.07 (.04)</u>	<u>-.06 (.03)</u>
			<u>.08</u>	<u>-.04</u>							<u>.08</u>	<u>-.06</u>
			<u>.02 (.04)</u>	<u>-.03 (.04)</u>							<u>.00 (.05)</u>	<u>-.01 (.04)</u>
			<u>.02</u>	<u>-.02</u>							<u>-.00</u>	<u>-.01</u>
<i>Social Control Variables</i>												
School Commitment					<u>-.13** (.04)</u>	<u>-.16** (.04)</u>					<u>-.10* (.05)</u>	<u>-.13** (.05)</u>
Parent Attachment					<u>-.13</u>	<u>-.16</u>					<u>-.11</u>	<u>-.13</u>
Parental Supervision					<u>-.05 (.05)</u>	<u>-.01 (.04)</u>					<u>-.02 (.05)</u>	<u>.09 (.05)</u>
Delinquent Peers					<u>-.06</u>	<u>-.01</u>					<u>-.02</u>	<u>.09</u>
					<u>-.08 (.04)</u>	<u>-.04 (.04)</u>					<u>-.06 (.04)</u>	<u>-.04 (.04)</u>
					<u>-.08</u>	<u>-.04</u>					<u>-.06</u>	<u>-.04</u>
<i>Social Learning Variables</i>												
Delinquent Peers							<u>.16** (.03)</u>	<u>.17** (.04)</u>			<u>.09* (.04)</u>	<u>.12** (.05)</u>
							<u>.14</u>	<u>.21</u>			<u>.08</u>	<u>.16</u>
<i>Emotional Response</i>												
Anxiety									<u>.08 (.04)</u>	<u>.08 (.05)</u>	<u>.05 (.04)</u>	<u>.02 (.05)</u>
Depression									<u>.08</u>	<u>.08</u>	<u>.05</u>	<u>.02</u>
Anger									<u>-.04 (.05)</u>	<u>.01 (.04)</u>	<u>-.08 (.05)</u>	<u>-.02 (.04)</u>
									<u>-.04</u>	<u>.01</u>	<u>-.08</u>	<u>-.02</u>
									<u>.08 (.05)</u>	<u>.03 (.04)</u>	<u>.01 (.05)</u>	<u>-.03 (.04)</u>
Adjusted R^2	.12	.11	.17	.14	.15	.13	.14	.14	.13	.12	.19	.16

\*p<.05 (one-tailed)  
\*\*p<.01 (one-tailed)

**Regression results of strain, social control social learning and emotional response on truancy.**

	M	F	M	F	M	F	M	F	M	F	M-Full	F-Full
<i>Control Variables</i>												
Age	<u>-.26** (.02)</u>	<u>-.21** (.02)</u>									<u>-.22** (.03)</u>	<u>-.16** (.03)</u>
Race	<u>.09* (.10)</u>	<u>.06 (.09)</u>									<u>.09* (.09)</u>	<u>.11** (.09)</u>
Broken Home	<u>-.05 (.10)</u>	<u>-.11* (.10)</u>									<u>-.03 (.10)</u>	<u>-.08 (.10)</u>
Parental Education	<u>.04 (.02)</u>	<u>.08* (.01)</u>									<u>-.01 (.02)</u>	<u>.06 (.01)</u>
Family Income	<u>.05 (.02)</u>	<u>-.06 (.02)</u>									<u>.01 (.02)</u>	<u>-.07 (.02)</u>
Self-Control	<u>-.04 (.04)</u>	<u>-.06 (.04)</u>									<u>.04 (.04)</u>	<u>.00 (.04)</u>
Prior Delinquency	<u>.21** (.04)</u>	<u>.06 (.05)</u>									<u>.14** (.04)</u>	<u>.04 (.04)</u>
	.20	.07									.13	.05
<i>Strain Variables</i>												
Family Conflict			<u>.09* (.04)</u>	<u>.11* (.04)</u>							<u>.01 (.05)</u>	<u>.07 (.05)</u>
			.10	.11							.01	.07
Family Climate			<u>.13** (.04)</u>	<u>.09* (.04)</u>							<u>.13** (.05)</u>	<u>.11* (.04)</u>
			.14	.08							.01	.10
Neighborhood Strain			<u>.06 (.04)</u>	<u>.09* (.04)</u>							<u>.04 (.04)</u>	<u>.02 (.04)</u>
			.06	.09							.04	.02
Peer Strain			<u>.01 (.04)</u>	<u>.03 (.04)</u>							<u>.01 (.04)</u>	<u>.06 (.04)</u>
			.01	.03							.01	.06
School Strain			<u>.17** (.04)</u>	<u>.06 (.04)</u>							<u>.13* (.05)</u>	<u>-.08 (.05)</u>
			.16	.06							.13	-.08
Parental Victimization			<u>-.11** (.04)</u>	<u>.04 (.04)</u>							<u>-.10* (.04)</u>	<u>.04 (.04)</u>
			-.12	.04							-.10	.04
Neighborhood Victimization			<u>-.02 (.04)</u>	<u>.02 (.04)</u>							<u>-.01 (.04)</u>	<u>.01 (.04)</u>
			-.02	.02							.01	.01
Threat of Victimization			<u>.06 (.04)</u>	<u>-.04 (.03)</u>							<u>.07 (.04)</u>	<u>-.05 (.03)</u>
			.07	-.03							.08	-.04
Emotional Abuse			<u>-.02 (.04)</u>	<u>-.09* (.04)</u>							<u>-.04 (.05)</u>	<u>-.01 (.04)</u>
			-.03	-.08							-.05	-.01
<i>Social Control Variables</i>												
School Commitment					<u>-.12** (.04)</u>	<u>-.21** (.04)</u>					<u>-.02 (.05)</u>	<u>-.22** (.05)</u>
					-.12	-.22					-.02	-.22
Parent Attachment					<u>-.09* (.05)</u>	<u>-.00 (.04)</u>					<u>-.04 (.05)</u>	<u>.08 (.05)</u>
					-.10	-.00					-.04	.08
Parental Supervision					<u>-.05 (.04)</u>	<u>-.03 (.04)</u>					<u>-.03 (.04)</u>	<u>-.03 (.04)</u>
					-.06	-.03					-.03	-.03
<i>Social Learning Variables</i>												
Delinquent Peers							<u>.21** (.03)</u>	<u>-.20** (.05)</u>			<u>.18** (.04)</u>	<u>.17** (.05)</u>
							.19	-.24			.16	.21
<i>Emotional Response</i>												
Anxiety									<u>.07 (.04)</u>	<u>.60 (.05)</u>	<u>.03 (.04)</u>	<u>.04 (.05)</u>
									.07	.10	.03	.04
Depression									<u>.01 (.05)</u>	<u>.08 (.04)</u>	<u>-.05 (.05)</u>	<u>-.05 (.04)</u>
									.01	.08	-.06	-.05
Anger									<u>.07 (.04)</u>	<u>.08 (.05)</u>	<u>.04 (.05)</u>	<u>.01 (.04)</u>
									.07	.08	.04	.01
Adjusted R <sup>2</sup>	.12	.06	.18	.08	.15	.09	.16	.09	.13	.05	.20	.14

\*p&lt;.05 (one-tailed)

\*\*p&lt;.01 (one-tailed)

**Regression results of strain, social control social learning and emotional response on running away.**

	M	F	M	F	M	F	M	F	M	F	M-Full	F-Full
<i>Control Variables</i>												
Age	<u>-.02 (.02)</u>	<u>-.04 (.02)</u>									<u>-.04 (.03)</u>	<u>.02 (.03)</u>
Race	<u>-.01</u>	<u>-.02</u>									<u>-.03</u>	<u>.01</u>
Broken Home	<u>.06 (.01)</u>	<u>.06 (.09)</u>									<u>.08 (.10)</u>	<u>.09* (.09)</u>
Parental Education	<u>.15</u>	<u>.14</u>									<u>.18</u>	<u>.19</u>
Family Income	<u>-.02 (.12)</u>	<u>-.13** (.10)</u>									<u>.00 (.12)</u>	<u>-.12** (.10)</u>
Self-Control	<u>-.04</u>	<u>-.32</u>									<u>-.00</u>	<u>-.30</u>
Prior Delinquency	<u>-.02 (.02)</u>	<u>.03 (.02)</u>									<u>-.03 (.02)</u>	<u>.02 (.02)</u>
	<u>-.01</u>	<u>.01</u>									<u>-.01</u>	<u>.01</u>
	<u>.02 (.03)</u>	<u>-.07 (.02)</u>									<u>-.01 (.02)</u>	<u>-.08 (.02)</u>
	<u>.01</u>	<u>-.04</u>									<u>-.00</u>	<u>-.04</u>
	<u>.04 (.04)</u>	<u>-.01 (.04)</u>									<u>.10* (.03)</u>	<u>.07 (.05)</u>
	<u>.03</u>	<u>-.01</u>									<u>.10</u>	<u>.08</u>
	<u>-.23** (.04)</u>	<u>-.12** (.05)</u>									<u>.18** (.04)</u>	<u>.10* (.05)</u>
	<u>-.21</u>	<u>-.15</u>									<u>.16</u>	<u>.12</u>
<i>Strain Variables</i>												
Family Conflict			<u>.06 (.04)</u>	<u>.05 (.05)</u>							<u>.01 (.05)</u>	<u>-.02 (.05)</u>
Family Climate			<u>.06</u>	<u>.05</u>							<u>.01</u>	<u>-.03</u>
Neighborhood Strain			<u>.16** (.04)</u>	<u>.04 (.04)</u>							<u>.15** (.05)</u>	<u>.01 (.04)</u>
Peer Strain			<u>.17</u>	<u>.04</u>							<u>.17</u>	<u>.01</u>
School Strain			<u>.07 (.04)</u>	<u>.12** (.04)</u>							<u>.06 (.04)</u>	<u>.11** (.04)</u>
Parental Victimization			<u>.07</u>	<u>.12</u>							<u>.06</u>	<u>.11</u>
Neighborhood Victimization			<u>.01 (.04)</u>	<u>.02 (.04)</u>							<u>.01 (.04)</u>	<u>.01 (.04)</u>
Threat of Victimization			<u>.01</u>	<u>.02</u>							<u>.01</u>	<u>.01</u>
Emotional Abuse			<u>-.02 (.04)</u>	<u>.03 (.05)</u>							<u>-.02 (.05)</u>	<u>-.02 (.06)</u>
			<u>-.02</u>	<u>.03</u>							<u>-.02</u>	<u>-.03</u>
			<u>.02 (.04)</u>	<u>-.05 (.04)</u>							<u>.03 (.04)</u>	<u>-.05 (.04)</u>
			<u>.02</u>	<u>-.05</u>							<u>.03</u>	<u>-.06</u>
			<u>.04 (.04)</u>	<u>-.02 (.04)</u>							<u>.05 (.04)</u>	<u>-.03 (.04)</u>
			<u>.04</u>	<u>-.02</u>							<u>.05</u>	<u>-.03</u>
			<u>.01 (.05)</u>	<u>-.01 (.04)</u>							<u>.01 (.05)</u>	<u>-.02 (.04)</u>
			<u>.01</u>	<u>-.01</u>							<u>.01</u>	<u>-.02</u>
			<u>-.05 (.05)</u>	<u>.08 (.04)</u>							<u>-.07 (.05)</u>	<u>.08 (.04)</u>
			<u>-.05</u>	<u>.08</u>							<u>-.08</u>	<u>.07</u>
<i>Social Control Variables</i>												
School Commitment					<u>.01 (.04)</u>	<u>-.07 (.05)</u>					<u>.04 (.05)</u>	<u>-.05 (.05)</u>
Parent Attachment					<u>.01</u>	<u>-.07</u>					<u>.04</u>	<u>-.06</u>
Parental Supervision					<u>-.12* (.05)</u>	<u>-.13** (.04)</u>					<u>-.07 (.05)</u>	<u>-.07 (.05)</u>
					<u>-.12</u>	<u>-.00</u>					<u>-.07</u>	<u>-.07</u>
					<u>.00 (.04)</u>	<u>.06 (.05)</u>					<u>.01 (.04)</u>	<u>.06 (.05)</u>
					<u>.00</u>	<u>.06</u>					<u>-.01</u>	<u>.05</u>
<i>Social Learning Variables</i>												
Delinquent Peers							<u>.08* (.03)</u>	<u>.09* (.05)</u>			<u>.05 (.04)</u>	<u>.05 (.05)</u>
							<u>.07</u>	<u>.09</u>			<u>.04</u>	<u>.07</u>
<i>Emotional Response</i>												
Anxiety									<u>.12** (.04)</u>	<u>.06 (.05)</u>	<u>.10* (.05)</u>	<u>.05 (.05)</u>
Depression									<u>.12</u>	<u>.07</u>	<u>.11</u>	<u>.05</u>
Anger									<u>.01 (.05)</u>	<u>.08 (.04)</u>	<u>-.04 (.05)</u>	<u>.07 (.05)</u>
									<u>.01</u>	<u>.08</u>	<u>-.04</u>	<u>.07</u>
									<u>.04 (.05)</u>	<u>.08 (.05)</u>	<u>.04 (.05)</u>	<u>.08 (.05)</u>
									<u>.04</u>	<u>.08</u>	<u>.04</u>	<u>.08</u>
Adjusted R <sup>2</sup>	.04	.03	.07	.04	.06	.04	.05	.03	.06	.05	.08	.06

\*p<.05 (one-tailed)  
\*\*p<.01 (one-tailed)



**Regression results of strain, social control social learning and emotional response on violent crime.**

	M	F	M	F	M	F	M	F	M	F	M-Full	F-Full
<i>Control Variables</i>												
Age	.03 (.03)	.03 (.03)									.04 (.03)	.04 (.02)
	.02	.01									.03	.02
Race	-.06 (.12)	.06 (.06)									-.05 (.12)	.06 (.07)
	-.15	.09									-.13	.08
Broken Home	-.01 (.13)	-.04 (.07)									.00 (.13)	-.03 (.07)
	-.02	-.07									-.00	-.05
Parental Education	-.01 (.02)	-.03 (.01)									-.01 (.02)	-.06 (.01)
	-.00	-.01									-.00	-.01
Family Income	.00 (.03)	.02 (.02)									-.02 (.03)	.01 (.01)
	.00	.01									-.01	.00
Self-Control	-.03 (.05)	-.06 (.03)									.01 (.05)	-.00 (.03)
	-.04	-.04									-.01	-.00
Prior Delinquency	-.14** (.04)	-.02 (.03)									-.10* (.05)	.00 (.04)
	-.15	-.01									-.11	.00
<i>Strain Variables</i>												
Family Conflict			.09* (.06)	.10* (.03)							.03 (.06)	.11* (.04)
			.11	.07							.04	.08
Family Climate			.00 (.06)	.03 (.03)							.01 (.06)	.04 (.03)
			.00	.02							.01	.02
Neighborhood Strain			.05 (.05)	.01 (.03)							.04 (.05)	.01 (.03)
			.06	.01							.05	.01
Peer Strain			.05 (.05)	.04 (.03)							.06 (.05)	.04 (.03)
			.06	.02							.07	.03
School Strain			.02 (.05)	.10* (.03)							-.01 (.06)	.08 (.04)
			.03	.08							-.02	.06
Parental Victimization			.00 (.05)	.02 (.03)							-.01 (.05)	.02 (.03)
			.00	.02							-.01	.01
Neighborhood Victimization			-.05 (.05)	.03 (.03)							-.05 (.05)	.03 (.03)
			-.07	.02							-.06	.02
Threat of Victimization			.02 (.06)	.02 (.02)							.03 (.06)	.02 (.03)
			.03	.01							.04	.01
Emotional Abuse			.08 (.06)	-.03 (.03)							.07 (.06)	-.03 (.03)
			.11	-.02							.04	-.02
<i>Social Control Variables</i>												
School Commitment					-.05 (.05)	-.11** (.03)					-.03 (.06)	-.05 (.04)
					-.06	-.08					-.04	-.04
Parent Attachment					-.11* (.06)	-.04 (.03)					-.07 (.06)	.01 (.04)
					-.14	-.03					-.09	.01
Parental Supervision					.05 (.05)	.03 (.03)					.05 (.05)	.03 (.03)
					.06	.02					.06	.02
<i>Social Learning Variables</i>												
Delinquent Peers							.17** (.04)	.03 (.03)			.14* (.05)	.00 (.04)
							.18	.03			.15	.00
<i>Emotional Response</i>												
Anxiety									.02 (.05)	.08 (.03)	-.01 (.06)	.05 (.04)
									.02	.06	-.01	.04
Depression									-.02 (.06)	-.01 (.03)	-.04 (.06)	-.03 (.03)
									.02	-.01	-.05	-.02
Anger									.11* (.06)	.01 (.03)	.04 (.06)	-.02 (.03)
									.13	.01	.05	-.02
Adjusted R <sup>2</sup>	.02	.00	.03	.01	.03	.01	.04	.00	.02	.00	.05	.01

\*p<.05 (one-tailed)  
\*\*p<.01 (one-tailed)



**Regression results of strain, social control social learning and emotional response on Delinquency- DNOS.**

	M	F	M	F	M	F	M	F	M	F	M-Full	F-Full
<i>Control Variables</i>												
Age	.06 (.02)	-.03 (.02)									.08** (.02)	-.01 (.02)
	.04	-.02									.05	-.01
Race	-.05 (.09)	-.13 (.08)									-.12** (.07)	-.09* (.06)
	-.13	-.26									-.27	-.16
Broken Home	-.03 (.10)	-.05 (.09)									-.03 (.08)	-.04 (.07)
	-.09	-.12									-.09	-.09
Parental Education	.05 (.02)	.07 (.01)									.03 (.01)	.03 (.01)
	.02	.02									.01	.01
Family Income	.09* (.02)	-.04 (.02)									.00 (.02)	-.07* (.02)
	.05	-.02									.01	-.03
Self-Control	-.23** (.04)	-.25** (.04)									-.01 (.03)	-.01 (.03)
	-.23	-.25									-.01	-.01
Prior Delinquency	.28** (.03)	.14** (.04)									.15** (.05)	.06 (.03)
	.23	.15									.11	.07
<i>Strain Variable</i>												
Family Conflict			.39** (.04)	.34** (.03)							.19** (.04)	.16** (.03)
			.40	.31							.20	.15
Family Climate			.04 (.04)	.01 (.03)							.05 (.04)	.04 (.03)
			.04	.01							.06	.03
Neighborhood Strain			.06 (.03)	.03 (.03)							.03 (.08)	.02 (.03)
			.06	.03							.05	.02
Peer Strain			.03 (.03)	.06 (.03)							.06 (.05)	.04 (.03)
			.04	.05							.07	.04
School Strain			.16** (.03)	.13** (.04)							.03 (.04)	.02 (.04)
			.16	.13							.03	.02
Parental Victimization			.07* (.03)	.10** (.03)							.07* (.03)	.10** (.03)
			.07	.09							.07	.09
Neighborhood Victimization			-.00 (.03)	.07* (.03)							.00 (.03)	.05 (.03)
			-.00	.06							.00	.04
Threat of Victimization			-.01 (.04)	.00 (.03)							-.01 (.03)	-.01 (.02)
			-.02	.00							.04	-.01
Emotional Abuse			-.02 (.04)	.04 (.03)							-.02 (.04)	.07 (.0)
			-.02	.04							-.02	.05
<i>Social Control Variables</i>												
School Commitment					-.23** (.04)	-.21** (.04)					-.11** (.04)	-.11** (.04)
					-.23	-.19					.04	-.10
Parent Attachment					-.10* (.04)	-.07 (.04)					.03 (.04)	.10* (.04)
					-.11	-.06					.03	.09
Parental Supervision					-.03 (.04)	-.02 (.04)					-.05 (.03)	-.05 (.03)
					-.03	.02					-.05	-.04
<i>Social Learning Variables</i>												
Delinquent Peers							.45** (.03)	.36** (.04)			.27** (.03)	.23** (.03)
							.41	.41			.24	.25
<i>Emotional Response</i>												
Anxiety									.13** (.04)	.13** (.04)	.08* (.03)	.04 (.03)
									.14	.12	.08	.04
Depression									.13** (.04)	.11** (.03)	.07 (.04)	.06 (.03)
									.14	.10	.07	-.06
Anger									.29** (.04)	.35** (.04)	.12** (.04)	.27** (.03)
									.30	.31	.12	.23
Adjusted R <sup>2</sup>	.22	.12	.40	.28	.28	.15	.41	.24	.38	.31	.51	.42

\*p<.05 (one-tailed)  
\*\*p<.01 (one-tailed)