

## **ABSTRACT**

**KORT-BUTLER, LISA ANN.** Boys Act Bad and Girls Get Sad: How Gender Structures Sex Differences in Adolescent Well-Being. (Under the supervision of Ronald Czaja.)

This project takes as its starting point research that indicates girls are more likely to be depressed, while boys are more likely to be delinquent. To explain these documented sex differences in well-being, I bring theories of gender to bear on how the processes described in general strain theory and the stress paradigm are modified by the processes and practices of gender. Building on past research that examines gender differences in the experience of stress, I consider how sex differences in general, agentic (intrapersonal) and communal (interpersonal) stress contribute to differences in well-being. Additionally, I further specify current approaches by examining how gender theoretically alters access to and employment of social/personal resources – social support, self-esteem, mastery, and coping styles. I hypothesize that these interact with the experience of stress in gendered ways to produce variance in well-being by sex. Data are from the National Longitudinal Study of Adolescent Health. Regression models are estimated separately for boys and girls, including interaction terms between each type of stress and social/personal resource. Analyses show boys report more delinquency, and girls report more depression. Boys report more exposure to agentic stress, but this does not translate into vulnerability. Girls, in terms of depression, are more vulnerable to general and communal stress. No social or personal resource completely accounts for their greater vulnerability to these stresses. Boys report higher levels of self-esteem, mastery, and risk-oriented coping; girls report higher levels of social support and avoidant coping. In terms of delinquency, social support and self-esteem protect girls from delinquent outcomes but are not significant for boys. Differences in coping styles provide some explanation for sex differences in well-being. For girls, avoidant coping exacerbates

the damaging effects of stress on depression, while approach-oriented coping buffers the effects of stress on delinquency. Risk-oriented coping puts boys and girls at risk for delinquency and depression, but puts girls at greater risk for delinquency if they use a risk-oriented coping style to manage stress.

**BOYS ACT BAD AND GIRLS GET SAD:  
HOW GENDER STRUCTURES SEX DIFFERENCES IN  
ADOLESCENT WELL-BEING**

by  
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## DEDICATION

This work is dedicated to the young people (and their families) whose struggles with well-being inspired me to know and do more. To quote Lewis Carroll:

“If everybody minded their own business,” the Duchess said, in a hoarse growl, “the world would go round a deal faster than it does.”

“Which would *not* be an advantage,” said Alice, who felt very glad to get an opportunity of showing off a little of her knowledge.

## BIOGRAPHY

Lisa A. Kort-Butler was born in Uniontown, Pennsylvania, adopted by a loving family, and spent her early years in the rural mountain region south of Pittsburgh. With her family, she moved to Ohio in the third grade. She was a 1993 graduate of Jackson High School in Massillon, Ohio. She earned her bachelor's degree in sociology and psychology from Bowling Green State University, Bowling Green, Ohio, graduating in 1996 *summa cum laude*. While at BGSU she was named outstanding junior and later senior student in the Department of Sociology. Before entering graduate school, she was employed as a juvenile diversion caseworker with the Jackson Township Police Department, Canton, Ohio. Her experiences working with juvenile offenders, their families, and the criminal justice system nagged her sociological imagination and led her to enter graduate school. She was awarded her Master's degree in sociology from the University of Akron in 1999, under the supervision of Dr. Mark Tausig. There, she was named Graduate Student of the Year in Sociology. Her thesis research investigated parents' responses to their children's diagnosis of attention deficit-hyperactivity disorder. In 1999, she entered the doctoral program in the Department of Sociology and Anthropology at North Carolina State University. Her areas of concentration in sociology include medical sociology, the sociology of mental health, and the sociology of crime/deviance/social control. From 1999 to 2001 she was the recipient of the Andrews' Fellowship. While a graduate student at NCSU, she worked as a research assistant to Dr. Margaret Zahn, then Dean of the College of Humanities and Social Sciences, as well as teaching courses in sociology, social deviance, and criminology. In addition to her graduate studies, she also worked as a full-time stay-at-home mother after her son, a "9/11

baby,” was born in 2002. She completed the requirements for the Ph.D. in 2006 under the supervision of Dr. Ronald Czaja.

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never lost hope, and never lost faith in me, even when I did all three. Jakob may be too young to understand, but he made the expanding time to degree worth every minute. Sociology may be what I do, but a mother is what I am. Finally, I thank God for the strength to make it through.

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## CHAPTER ONE

### INTRODUCTION<sup>1</sup>

Adolescence is an important developmental stage for processes of social stratification and mental health (Eaton and Muntaner 1999). Adolescence is the period during which sex differences in well-being emerge. Girls begin to demonstrate higher levels of depression than do boys, while boys begin to engage in more antisocial behavior than do girls (Kandel and Davis 1982; Kessler et al. 1994; Leadbeater, Blatt, and Quinlan 1995; Mirowsky 1996; Nolan-Hoeksema 1987; Petersen, Sarigiani, and Kennedy 1991; USDHHS 1999, 2000). This is also the period in which young people begin to try out adult statuses, rehearse culturally-appropriate gender definitions, and solidify gender identities (Hagan and Foster 2001; Hill and Lynch 1983; Huselid and Cooper 1994; Rosenfield 1999a). Considering this conjunction, adolescence is an ideal period to study the development of depression and delinquent behaviors, as well as sex differences in these problems (Allgood-Merten, Lewinsohn, and Hops 1990; Barrett and White 2002; Horwitz and White 1987).

In recent years, there has been growing interest in the possibility of a common etiology for adolescent misbehavior and emotional distress (De Coster and Heimer 2001; Hagan, McCarthy, and Foster 2002; Huselid and Cooper 1994; Rosenfield, Lennon, and White 2005). One line of this research focuses on how processes of strain and stress result in these outcomes (Broidy and Agnew 1997; Colten and Gore 1991; De Coster 2005; Kim et al. 2003). In the past, there was a tendency to compartmentalize adolescent problem behaviors,

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<sup>1</sup> This research uses data from Add Health, a project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by grant P01-HD31921 from the National Institute of Child Health and Human Development, with cooperative funding from 17 other agencies. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 (addhealth@unc.edu).

with crime researchers focusing on delinquency and other externalizing behaviors like substance use and violence, and mental health researchers focusing on what they term “distress” and other internalizing behaviors like depression and anxiety (Colton, Gore, and Aseltine 1991; Rosenfield, Phillips, and White 2006; Van Gundy 2002). Some researchers, however, have taken an integrative approach, studying the processes behind both types of behaviors simultaneously (e.g., Aneshensel and Sucoff 1996; De Coster 2003; De Coster and Heimer 2001; Ge et al. 1996; Hagan and Foster 2003; Loeber et al. 1998; Rosenfield et al. 2006; Van Gundy 2002). Why examine both together? In the first place, it may be that both delinquency and depression share antecedents and a common etiology (DeCoster and Heimer 2001; Hagan and Foster 2003; Hagan and Wheaton 1993). In the second place, there are sex differences in well-being, with boys tending towards externalizing problems like delinquency and drinking problems, and girls tending towards internalizing problems like depression, which is suggestive of different outcomes from a common stress process (Aarons et al. 2001; Garland et al. 2001; Huselid and Cooper 1994; Leadbeater et al. 1995; Rosenfield 1999a; Van Gundy 2002). Therefore, it may be preferable, when possible, to examine multiple well-being outcomes in the stress process to gain a fuller picture of adolescent problem behavior (Aneshensel, Rutter, and Lachenbruch 1991; Horwitz, White, and Howell-White 1996; Van Gundy 2002).

Taking this into consideration, in this project, I examine two different deleterious outcomes of the stress process, depression and delinquency. Pearlin (1999a) gives two reasons why it is essential to investigate multiple outcomes. First, investigating multiple outcomes allows researchers to detect potential differences in the ways in which socially differentiated demographic categories of individuals (like adolescent boys and girls) manifest

problems in well-being. Second, it allows researchers to discover the range and specificity of the consequences that stress might generate. If problems in adolescence, including delinquency and depression, share antecedents and an etiology, and are differentiated by sex, then it becomes necessary to move beyond documenting statistically similar models to outlining comparable theoretical processes. However, theoretical development encompassing these expressions of maladjustment has often followed only parallel paths. Medical sociologists, interested in depression, frequently invoke the stress paradigm or role theory. Criminologists studying delinquency appeal to any number of theories. Of theories in criminology, one that closely parallels the stress paradigm is general strain theory (GST) developed by Robert Agnew (1992; 2000). Both of these approaches can be used to provide insight into how the processes and practices associated with gender stratification may shape sex differences in well-being.

Following the sociological tradition, both the stress paradigm and general strain theory provide avenues for understanding how the contexts of adolescents' lives impinge on their well-being. This sociological tradition can be traced back to Margaret Mead's (1928) study of youth in Samoa. According to Cote (1994), Mead undertook her study during a period when it was widely thought that "adolescence" was associated with a period of turmoil caused by biological instabilities associated with puberty. Thus, adolescence was viewed an "affliction" that is inevitable, regardless of cultural or social context. It was argued at the time that it does not matter what experiences or opportunities are available to the young – all young people pass through a period of "storm and stress," an idea from Stanley Hall (Arnett 1999) and elaborated by Erick Erickson (1950).

Mead described the intellectual climate that predominated in the 1920s (which incidentally does not sound much different from today):

A great mass of theorizing about adolescence is flooding the book shops; so the psychologist in America tried to account for the restlessness of youth. The result was works like that of Stanley Hall of “Adolescence,” which ascribed to the period through which the children were passing, the cause of their own conflict and distress. Adolescence was characterized as the period in which idealism flowered and rebellion against authority waxed strong, a period during which difficulties and conflicts were absolutely inevitable. (Mead 1928: 2)

Mead was skeptical of this argument because of empirical variations in adolescent “turmoil,” even in Western societies (Cote 1994). Moreover, there was no scientific evidence to support the universal stress-and-storm position.

Mead herself set out to acquire scientific evidence by systematically comparing cultures in terms of how adolescence was structured and experienced, asking the question, “Are the disturbances which vex adolescents due to the nature of adolescence itself or to the civilization?” (Mead 1928: 11). Her study indicated that few of her Samoan informants showed signs of characterological differences or behavioral problems brought on by puberty.<sup>2</sup> She concluded, “Adolescence is not necessarily a time of stress and strain, but...cultural conditions make it so” (Mead 1928: 234). With evidence of dramatic cultural differences in the prevalence and nature of adolescent difficulties, Mead determined that storm-and-stress cannot be considered a biological inevitability, but that the storm-and-stress that adolescents experience is a product of the cultural and social conditions in which they live. Discussing modern research, Arnett (1999) draws similar conclusions.

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<sup>2</sup> It should be noted that Mead’s research in Samoa was subsequently challenged, notably by Freeman (1983). For the purposes of this project, I am more concerned with her thesis about cultural and social influences on well-being. According to Feinberg (1996), a detailed reading of Mead’s work reveals that Samoan adolescents experienced conflicting cultural demands and related stress.

Mead's thesis is one I consider in the current project. It is a sociologically-driven social psychological perspective, which does not assume that storm-and-stress is inevitable, but examines how adolescents interact with their daily environments (cf. Gibson-Cline 1996). Adolescents may be vulnerable to stress, but they also may be capable of participating in their own development, coping productively, and working toward solutions. The problems adolescents face may be largely determined by their social environment and their experiences in it, defined socially by their stage in the life-course. And because social and personal resources vary, strategies adolescents use to cope and their effectiveness may also vary, with consequences for well-being.

Mead's use of non-Western data underscores the power of social structural practices and cultural processes across cultures to shape the nature of stress and coping. My research focuses on social structural practices and cultural processes within American society. One way in which our society organizes these practices and processes is by gender, the definitions and expectations we attach to biological sex. Consequently, the patterns of storm-and-stress in our culture may differ by sex.<sup>3</sup> Adolescent girls and boys, like the adult women and men they are socialized to be and rehearse to become, can experience the social world differently. There may be structured variations in terms of their ideas about themselves, their exposure to stress-inducing conditions, their vulnerability to particular stressors, and the resources they can access to cope with stress. Although my hypotheses do not abandon the storm-and-stress notion, I argue that difficulties arising in adolescence may not be a simple product of disruption. Rather, mental health difficulties due to stress that arise in adolescence, and

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<sup>3</sup> This is not to imply that our notions of gender map neatly onto biological sex. Rather, our expectations for gender fall roughly along biological lines. I discuss this in greater detail below.

observed differences by sex, may reflect the social structure and context in which adolescents participate.

The project described here contributes to the literature by building on three current trends: First, I examine different outcomes of the stress process, depression and delinquency, to gain a fuller picture of adolescent well-being in general and sex differences in particular. Second, this project moves beyond observing sex differences in adolescent well-being and seeks potential theoretical explanations, focusing on literatures from two fields, medical sociology and criminology, particularly focusing on the stress paradigm and general strain theory. Third, this project brings theories of gender to bear on the processes described in these particular approaches, suggesting they may be modified by the processes and practices of gender (cf. De Coster 2005).

Why draw on the stress paradigm and general strain theory? Both describe similar processes leading from the experience of stress to problems in well-being. Both these approaches can be used to predict multiple outcomes, as opposed to *just* depression or *just* delinquency, although tests of both have tended to focus on these specific outcomes (for exceptions see Aneshensel and Sucoff 1996; Colten, Gore, and Aseltine 1991; Dornbusch et al. 1991; Kee et al. 2003). Both approaches have “space” for theorizing about the effects of gender on their processes, although, again, tests of both have tended to focus on explaining girls’ depression and boy’s delinquency (for exceptions see Cleary 2000; De Coster 2005; De Coster and Heimer 2001; Hoffman and Su 1997; Van Gundy 2002). Therefore, joining these perspectives eliminates this tendency for dichotomy and creates a more unified approach to examining gender differences in adolescent well-being. As I demonstrate later in this paper, these perspectives complement one another, leading to a more extensive

theoretical understanding of the relationship between gender and adolescent well-being. These perspectives share themes that are tied to broader areas of interest in both fields, opening the door to theoretically-based hypothesis testing of the relationship between sex and adolescent well-being. In particular, I hypothesize and test how the experience of stress and coping resources vary in gendered ways to explain the documented variance by sex in adolescent well-being.

Additionally, I take steps to further specify current approaches by hypothesizing and testing how concepts important across fields – social support, self-esteem, mastery, and coping styles – are gendered in ways that help explain the documented variance by sex in adolescent well-being. I view these social and personal resources as a critical link between stress and a particular outcome. Following Cullen’s (1983) structuring perspective, I argue gender shapes availability and deployment of social and personal resources in response to stress, linking stress to depression versus delinquency. Cullen makes the argument that many theories of deviance emphasize factors that cause people to deviate, but give less attention to describing what factors account for the specific form that deviance takes. According to Cullen’s perspective, there exists an indeterminate relationship between stress and any given outcome, so it is necessary to determine the conditions or circumstances by which the response to stress culminates in depression versus delinquency. In this project, I propose that the gendering of social and personal resources represent a structuring force between stress and a particular outcome.

Furthermore, using the stress paradigm and general strain theory as guides, this project examines how *gender*, as a feature of the social structure, generates *sex* differences in well-being. I contend that theories of gender must inform any theorizing about sex

differences in behavior. For example, I address Mirowsky and Ross's (1995) rebuff of gendered "response styles" as explicative of sex differences in distress. Based on their research, they determined that emotional expressiveness does not explain why women are more distressed than men, nor do differences in anger. They continued by arguing that other behavioral outcomes in which men predominate, like alcohol problems, are not alternative symptoms of distress, since other empirical evidence indicates that substance abuse increases distress. They concluded that females are genuinely more depressed than males, and that this is due to differences in exposure to structural strains that disadvantage women, and by implication, women's vulnerability to these strains (see also Gove and Tudor 1973).

Certainly, it is true that gender stratification structures the experience of stress across sex, with consequences for well-being, and that women are genuinely more distressed. However, Mirowsky and Ross (1995) overlook the processes by which stress leads to disorder; there is more to the stress story than exposure and vulnerability.<sup>4</sup> Stress is a relevant etiological factor in disorder, and it may be more important for females than males for some problems. However, this does not necessarily mean that women are more vulnerable to stress than men (Aneshensel et al. 1991; Dohrenwend and Dohrenwend 1976). Additionally, Mirowsky and Ross's (1995) argument overlooks that the processes and practices of gender may be more than just socialization to emotion; the gender structure may infiltrate at every stage of the process. If we rely only on exposure to structural strain, we are left to answer: Why are females apparently more vulnerable to stress when the outcome is

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<sup>4</sup> This is not to indict Mirowsky and Ross entirely. In fact, in an earlier publication (Mirowsky and Ross 1989) they go beyond the exposure issue and examine what it is about different social positions (e.g., personal control) that contribute to distress. I also do not intend to imply that exposure and vulnerability are the only explanations of sex differences in well-being. Both role theory and symbolic interactionism, to list two, address this topic.

depression? Why are males apparently more vulnerable to stress when the outcome is behavioral in nature? (cf. Dohrenwend and Dohrenwend 1976).

To address these questions, I propose that depression and behavior problems are not the same disorder, but different maladaptive responses to stressful circumstances (Nolan-Hoeksema 1987).<sup>5</sup> Cultural demands and restrictions result in sex differences in vulnerability to each disorder. As I argue below, the process and practices of gender, rooted in gender stratification, may influence not only socialization to masculinity and femininity, and not only exposure to structural strain, but also the entire process by which stress culminates in a particular disorder. The main proposition is that while the nature of the stress process is similar across sex, the differences within the process, created by a gendered social structure, result in different outcomes. As a particular contribution of this project, I hypothesize the gendering of social and personal resources represents a structuring force between stress and a particular outcome, thereby contributing to sex differences in well-being. Figure 1 displays the theoretical model I draw on as an organizing principal for this dissertation; Figure 2 specifies the role of psychosocial resources within the larger model.

The purpose of the dissertation is to attempt to explain sex differences in adolescent well-being, including depression and delinquency, and to provide empirical tests of these explanations. In the next chapter, I provide a review of key issues. First, I highlight how medical sociology and criminology have endeavored to understand sex differences in well-being within the stress and strain perspectives. Second, I summarize why theories of gender are relevant and necessary for theorizing about sex differences in well-being. Third, drawing

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<sup>5</sup> For example, in a community sample of adolescents, Hansell and White (1991) found that psychological distress did not predict substance use, although continued substance use had negative long-term effects on physical and psychological symptoms.

on theories of gender, as well as the stress paradigm and general strain theory, I discuss how the processes and practices of gender may lead to sex differences in adolescent well-being. This leads to a series of hypotheses regarding the effects of differences in stress exposure and vulnerability on outcomes, and the effects of differences in social and personal resources on outcomes for understanding differences in vulnerability. In Chapter 3, I describe the data set I employ to test these hypotheses, the National Longitudinal Study of Adolescent Health. I describe the particular measures constructed for the analyses and outline the analysis plan. In Chapter 4, after summarizing the missing variable analyses, I present the results from a series of ordinary least-squares regression models, in which I test my hypotheses. In particular, in separate models for boys and girls, I estimate the effects of stress, social and personal resources, and the interaction of each resource with stress on delinquency and depression. In Chapter 5, I discuss the results of the analyses. In short, my analysis indicates the stress process is not unequivocally gendered, the patterns that emerged are not as expected, yet the results provide interesting insight into the influence of stress on well-being and the role of social and personal resources in the lives of adolescents. In Chapter 6, I conclude the dissertation by discussing the implications of my analysis for the field, limitations of my analysis, and directions for future research.

## CHAPTER 2

### LITERATURE REVIEW

#### UNDERSTANDING SEX DIFFERENCES

Research demonstrates that females and males experience different types of problems with well-being. Whereas females predominate in internalizing disorders like depression and anxiety, males predominate in externalizing disorders like substance use/abuse and antisocial behavior, a pattern emerging in adolescence and continuing into adulthood (Leadbeater et al. 1995; Rosenfield 1999a; Rosenfield et al. 2005). Yet, there is no decisive explanation of why this is the case.

The effort of researchers in medical sociology and criminology to understand sex differences in well-being within the stress and strain paradigms have followed parallel paths. As Padgett (1997) outlines, explanations regarding sex differences in mental health (especially depression and anxiety) hold that these differences are the product of expressive differences in reporting about well-being that result from socialization (e.g., Kessler et al. 1993; Mirowsky and Ross 1995; Nolan-Hoeksema 1987), the product of differences in exposure and/or vulnerability to stress as a result of social position (e.g., Aneshensel et al. 1991; Mirowsky and Ross 1989; Turner and Avison 1989; Turner and Turner 1999), and/or the product of gender stratification (Rosenfield 1999b; Rosenfield et al. 2005; Rosenfield, Vertefuille, and McAlpine 2000).

As Lanctot and LeBlanc (2002) show (see also Steffensmeier and Allan 1996), explanations regarding the gender gap in delinquent behavior draw from mainstream criminological theories (e.g., Alarid, Burton, and Cullen 2000; Burton et al. 1998; Cernkovich and Giordano 1987; Liu and Kaplan 1999a; Mazerolle 1998; Smith and

Paternoster 1987), point to gender differences in socialization or acceptance of cultural gender definitions (e.g., Bottcher 2001; Heimer 1996; Heimer and De Coster 1999; Messerschmidt 1993; Simpson and Elis 1995), and/or tie the deviant behavior of males and females to their status in a gender stratified society (Chesney-Lind 1989; Daly and Chesney-Lind 1988; Messerschmidt 1986).

Similarities between the mental health and criminological fields coalesce on how gender socialization and stratification are at the root of gender gaps in depression and delinquency. There is emphasis on the influence of gendered socialization processes on the expression of problems. For instance, as an explanation for depressive differences in males and females, Nolan-Hoeksema (1987) points to parental reinforcement of gender stereotypes that females are more emotional but that such behavior among males is “sissy,” with emotionality linking females to depression. Examining delinquency, Bottcher (2001) describes how both boys and girls feel social pressure to fulfill gender stereotypes, with “macho” expectations for males linking them to delinquent activity.

Emphasis is also placed on the influence of social practices of gender stratification that organize males and females in differing positions of power and privilege. As an explanation for differences in distress between males and females, Mirowsky and Ross (1989) point to how females’ position in subordinate work and family roles affords them less personal power and control, producing alienation and stress, and therefore distress at higher levels than males (see also Gove and Tudor 1973). As an explanation for differences in delinquency between males and females, Jensen and Eve (1976) point to how males’ position of privilege is associated with more freedoms (less supervision) with fewer commitments,

giving them more opportunity to engage in delinquency (see also Hagan, Gillis, and Simpson 1985).

Heimer and De Coster (1999) outline “how culture and structure combine to create gendered experiences in adolescence” (p. 281). Structural positions shape the context in which cultural processes like social learning and gender socialization occur. The gender definitions to which a young person is exposed are tied to his or her location in the social structure, so Heimer and De Coster (1999) theorize that gender definitions vary by socioeconomic status, race, or residence in a female-headed household. For example, gender definitions may be less traditional in female-headed households because women are less subject to patriarchal relations in these situations (Heimer and De Coster 1999; see also McCarthy, Hagan, and Woodward 1999).

Following Heimer and De Coster (1999), as well as work by Sarah Rosenfield (1999a) and Hagan et al’s (1985) earlier power-control theory, Hagan and his colleagues (2002) argue that parental socialization practices vary based on the patriarchal structure of the home. These child-rearing practices reflect gendered rules about how children should behave and the parents’ roles in enforcing these “rules.” When parents assert these gendered schemas in socializing their children, they generate behavior differences between girls and boys, including, ultimately, differences in internalizing and externalizing behaviors (see also Hagan and Foster 2003). This is reflected, for example, in the process of non-normative adolescent role exits (Hagan and Foster 2001; Hagan and Wheaton 1993). The pathways to exits like suicidality and early pregnancy, particularly in the context of depressive affect, are linked to internalized processes, whereas the pathways to exits like running away and

dropping out of school are linked to externalized processes (Hagan and Foster 2001; Hagan and Wheaton 1993).

There are also similarities between two major theories in each perspective. The stress paradigm is among the major explanations for sex differences offered by researchers in mental health (e.g., Davis, Matthews, and Twamley 1999; Turner and Lloyd 1999).

Although several major theories of crime have been used to take into account sex differences, one that shares many ideas with the stress paradigm is Agnew's (1992) general strain theory (e.g., Broidy and Agnew 1997; Hoffman and Su 1997; Mazerolle 1998). Both of theoretical lines argue that the experiencing stress creates pressures on individuals, challenging well-being, a relationship potentially conditioned by social and personal factors. Both theoretical lines have been expanded to take into account how gendered stratification practices and socialization processes may bear on the nature of stress, vulnerability to stress, and the efficacy of social and personal factors.

Although it is beyond the scope of this project to address all possible connections among varying theoretical perspectives, I do address the potential connection between the stress paradigm and general strain theory. However, focusing explicitly on existing theories without acknowledging and incorporating what those scholars interested in the processes and practices of gender socialization and stratification contribute to our understanding – what Heimer, De Coster, and Unal (2006) call the “add gender and stir approach” – yields an incomplete picture (see also Chesney-Lind 1989; Daly 1997). What is necessary is to move beyond simply adding sex, as a variable, into the empirical mix, and consider how gender – as a social process, stratification system, and social structure – adds to our theoretical understanding of sex differences in adolescent well-being.

## THEORIZING SEX DIFFERENCES: WHY GENDER MATTERS

As traced above, scholars in the sociology of mental health and in criminology have taken steps to address how gender stratification influences the distribution of well-being by sex. Before discussing how specific theories regarding mental health and deviance assist our ability to explain sex differences, I briefly address why *gender* matters to theorizing regarding empirical *sex* differences. Judith Loerber (1994) views “gender” as a social institution and outlines how gender is a process, a system of stratification, and a structure, all of which have consequences for males’ and females’ personal and social experiences and expressions (e.g., Bem 1993).

In the first place, gender is a process (Loerber 1994). Through social interaction, we continually define what it means to be a “girl” or “boy” and “woman” or “man.” We behave and think in ways consistent with definitions we learn are appropriate for our gender, and we expect others to do likewise. In other words, we socially construct what it means to be masculine and feminine and attach these meanings to biological sex. This everyday process is built into our family lives, as well as other organizations like peer groups and institutions like school (Loerber 1994). Gender, then, can be viewed as a social process that is revealed in social action that conforms to (or deviates from) expectations about masculinity and femininity, what West and Zimmerman (1987) term “doing gender.” In this light, Daly advises that we cannot think about gender as a personal attribute, but rather think about how “situations and social practices produce qualities and identities” associated with social categories that are based on biological sex (Daly 1997, p. 37; see Howard and Hollinger [1997] for a similar argument). As I argue later, citing Rosenfield (1999a, 199b, Rosenfield et al. 2000), the social structuring of males and females into different positions contributes to

the development of gendered identities, which has consequences for well-being by shaping how individuals respond to stressful situations.

In the second place, gender is a system of social stratification, ranking males above females (Loerber 1994). This has at least two repercussions, one in terms of the distribution of resources and one in terms of ideological discourse (Risman 1998). For one, gender, as an ascribed characteristic associated with biological sex, is the basis for the continuance of a sexual division of labor and sex-based inequalities (Acker 1973). In ranking people by gender, society creates statuses with differences in access to resources, power, and prestige (Huber 1986; Loerber 1994). Walby (1990) describes how changes in patriarchal systems have shifted from private to public dimensions. While women are no longer confined in the household and controlled sexually by their fathers and husbands, they are still tied to the home by social expectations for care, and they are subordinated in sexual relationships. While women are no longer excluded from work, from education, and from positions in the state, they remain segregated and subordinated within the workplace, within education structures, and within the state. Although adolescent roles are not as clearly demarcated as adult roles, Walby's work emphasizes how inequality across social spheres creates differences in life experiences. One consequence of such divisions is sex differences in exposure to stressful events (e.g., Davis et al. 1999), which promote differences in well-being.

Additionally, gender affects how people and positions are evaluated (Acker 1973). In ranking people by gender, society creates ideological boundaries, placing males, especially those in structural positions of power, in the dominant category and subordinating females (Connell 1987; Loerber 1994). As such, the dominate category becomes the valued

“hegemonic ideal” and other categories of masculinity and femininity are essentially devalued (Connell 1987; Loerber 1994). In other words, in a patriarchal society, what powerful men do is considered more valuable because they do it. Although this hegemonic masculinity does not necessarily correspond to the personalities of most men, it is what sustains men’s positions of power and their subordination of women, so many men are motivated to support it (Connell 1987). Further, while many femininities are constructed in the patriarchal context, it is “emphasized femininity” that presently has cultural and ideological support (Connell 1987). Again, although this does not necessarily correspond to the personalities of most women, it represents a femininity in compliance with the hegemonic masculinity.

Connell (1987) argues that “femininity and masculinity are not essences: they are ways of living certain relationships” (p. 179). Accordingly, as Chow (1998) comments, the relationships created by the system of gender stratification are “structurally embedded and ideologically enforced in all aspects of social life” (Chow 1998: 252). Not only are males and females more embedded in certain statuses, but they also are more attentive to domains of life associated with these statuses. Later, I argue that such ideological divisions produce differences in males’ and females’ vulnerabilities to different stressful experiences, as well as differences in social psychological factors like social support, self-esteem, mastery, and coping styles, ultimately promoting differences in well-being (Leadbetter et al. 1995; Rosenfield 1999a, 1999b; Rosenfield et al. 2000; Rosenfield et al. 2005).

Chow’s argument points to a third aspect of gender as a social institution: gender is a structure, dividing labor activities, legitimating authority, and organizing emotional life (Loerber 1994). Risman (1998) portrays gender as a social structure, built into social life by

means of the processes and practices of gender. The structuring of gender is a basis for stratification, translated into *practices* of advantage and disadvantage across social spheres (Loerber 1994; Howard and Hollinger 1997; Risman 1998). Women occupy roles and positions that are accorded less power, prestige, and resources, whereas men occupy roles and positions afforded greater opportunities with fewer constraints. The structuring of gender is a basis for dominant ideals about masculinity and femininity, translated into *processes* of socialization and interaction to fulfill cultural expectations (Loerber 1994; Howard and Hollinger 1997; Risman 1998). Moreover, our notions of what it means to be male and female are wrapped into these ideals about masculinity and femininity in such a way that these divisions are seen as appropriate and natural (e.g., “women’s work” versus “men’s work”). Consequently, the social structure of gender that organizes processes of socialization and interaction effectively disappears as an explanation for such divisions. Instead, in daily life, the structural explanation is replaced by popular explanations like “boys will be boys,” and the forces of inequality never enter the discussion.

Yet it is the pervasiveness of differences and distinctions based on gender that demonstrate how it structures our lives. To quote Loerber, “Gender inequality...is produced and maintained by identifiable social processes and built into the general social structure and individual identities deliberately and purposefully” (Loerber 1994, p. 35). As a social structure, gender is realized in our personalities, in expectations for our behavior in social situations, in the organization of cultural ideologies and social institutions like work and family (Risman 1998). Thus, the social organization of gender shapes the possibilities of socialization and interaction at the microlevel and access to resources at the macrolevel, both

of which constrain and enable the everyday behavior of individuals as they negotiate the social world (Howard and Hollinger 1997; Risman 1998).

The interactional processes and institutional practices of gender are tied in specific and intimate ways to a social structure stratified by gender (Chow 1998). For the individual, gender attaches meaning to a person's biological sex, and socialization, within a stratified structure of gender, reinforces this meaning over a person's life course. Moreover, gender inequality shapes a person's social experiences and personal expressions. Gender is everywhere present: In the salience individuals give their experiences, in the ways in which individuals interpret then process experiences, in the cultural scripts that are available to make sense of their experiences and how to cope with them, and ultimately the route taken to some course of action or emotional response (cf. Bem 1993). The message for examining differences in well-being between males and females is that *gender* may be a theoretical key. Accordingly, the processes and practices of gender create different experiences for males and females, foster differences in attention and importance given those experiences, encourage differences in how those experiences are managed, and lead males and females down different paths of expressing problems of well-being. This suggests that theorizing about gender can contribute to understanding of sex differences in well-being in at least three areas consistent with the stress paradigm and general strain theory: gender as it relates to well-being outcome, gender as it relates to the experience of and vulnerability to stressful experiences, and gender as it relates to the buffering and amplifying effects of psychosocial resources.

## **GENDER AND ADOLESCENT WELL-BEING**

Studies indicate female adolescents report more internalizing and fewer externalizing symptoms than do male adolescents, while males report more externalizing and fewer internalizing symptoms (Aarons et al. 2001; Colten et al. 1991; Garland et al. 2001; Leadbeater et al. 1995; Rosenfield 1999a). For example, Aneshensel and Sucoff (1996) found that being a female teen predicted depression and anxiety, while being a male teen predicted conduct disorder. However, it is important to keep in mind that purported sex “differences” in mental health outcomes may reflect the “influence of gender stereotyping on the development and maintenance of psychopathology in adolescents” (Leadbeater et al. 1995, p. 19). Put differently, gender stratification and gendered socialization practices structure the development and/or expression of female and male adolescents’ well-being outcomes (cf. Loeber 1997; Rieker and Bird 2003).

Moreover, although researchers often discuss “gender differences” in outcome, statistically this generally means discussing sex differences (Rieker and Bird 2003). In other words, there is a relevant difference between including males and females in an analysis and projecting certain characteristics socially accorded to males and females into an interpretation of that analysis (Howard and Hollinger 1997). This has led some researchers to investigate the influence of the acceptance of gender definitions on behavior, regardless of the biological sex of the respondent (Heimer 1996; Heimer and De Coster 1999; Horwitz and White 1987; Huselid and Cooper 1992, 1994; Rosenfield et al. 2000; Schwartz 1991; Van Gundy 2002). Drawing from this point of view reminds us that males’ and females’ biological differences do not necessarily translate into social differences, but expectations for “doing gender” in our culture tend to fall roughly along these biological lines. For

individuals, the social accomplishment of gender is done with reference to normative conceptions of gender, as well as within a given social context (Messerschmidt 2002). Miller (2002) cautions that researchers should not over-rely on “doing gender” as a sole explanation for behavior, as doing so could obscure within- gender differences and across-gender similarities. Rather, researchers should be cognizant of both social practices and actions taken based on resources available in the social context (Miller 2002).

The major focus of the current project is how gender, as an aspect of social structure described by Loerber (1994) and others, *organizes* (i.e., structures) the experiences and expressions of males and females, as well as the development of identities as masculine or feminine. Thus, if it is the case that sex categories can serve as *approximations* for gender processes and practices, then in our research, these processes and practices of gender can *inform* our theorizing about empirically-demonstrated differences between females and males (cf. Jensen 2003).

In the following sections, I outline how gender, as an aspect of the social structure, may modify the processes described by stress paradigm and general strain theory to predict the etiology of problems in well-being. Lanctot and LeBlanc appropriately assert (2002) that “mainstream” theories are relevant to understanding the behavior of females and males. Mainstream approaches describe the social processes involved in the etiology and persistence of behavior, even as gender theories describe the forces behind gender differences and similarities in behavior (Giordano, Cernkovich, and Rudolph 2002; Miller 2001). Mainstream theories provide a frame of reference into which theories more concerned with gender stratification and socialization can, and should, be integrated, so that we can more fully account for the sex gaps in both illicit behavior and depression (e.g., Giordano et al.

2002; Miller 2001). But this is not an “add gender and stir approach” (Heimer et al. 2006). Rather, it is a theoretical approach that acknowledges and incorporates the presence of gender as social structure, which may have consequences for adolescents’ everyday lives, interactions, and self-perceptions. In understanding the position of gender stratification and how it ultimately influences the individual, we can gain a fuller comprehension of sex differences in well-being (Loerber 1997). In the following pages, I discuss the link between gender and well-being outcomes. Next, I discuss the link between gender and stress. Finally, I discuss the link between gender and several concepts believed to condition the effect of stress and strain on well-being.

### *Gender and Well-Being Outcomes*

As stated, research demonstrates variation by sex in the distribution of problems with well-being, such that adolescent girls have higher rates of depression and anxiety and adolescent boys have higher rates of conduct disorders (Aneshensel and Sucoff 1996; Colten et al. 1991; Leadbeater et al. 1995). While this sex difference could be attributed to biology, be it genetics or hormones, the evidence is quite inconclusive, the mechanisms are poorly understood, and many studies have been methodologically flawed (Bebbington 1996, 1998; Nolan-Hoeksema 1987; Padgett 1997). In short, biological approaches fail to account conclusively for sex differences in mental health (Bebbington 1996, 1998). Moreover, biological approaches do not recognize how gender processes and practices potentially structure the expression of problems (Nolan-Hoeksema 1987; Padgett 1997). For instance, these different responses may in part be linked to socialization, in which females learn to be more concerned with empathy and maintaining personal relationships, whereas males learn to be more concerned with independence and maintaining autonomy (Broidy and Agnew 1997;

Hoffman and Su 1997; Hoffman and Cerbone 1999). However, gender socialization as an explanation for differences must be understood as part of the broader gender structure.

One approach to sex differences in the expression of problems focuses on adherence to gender definitions – traditional distinctions of masculinity and femininity – and identities associated with these definitions. These identities may be an important reference for individuals, predisposing them to certain pathways, such that aspects of masculinity can be linked to externalizing behaviors and aspects of femininity can be linked to internalizing behaviors (Horwitz and White 1987). In a broader theoretical development of these issues, Rosenfield (1999b; Rosenfield et al. 2005; Rosenfield et al. 2000) links social divisions created by gender stratification with dimensions of the self, and consequently with internalizing and externalizing disorders (see also De Coster 2003; Hagan et al. 2002; Hagan and Foster 2003).

According to this theoretical argument (Rosenfield 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000), the social divisions into public versus private, reason versus emotion, and mind versus body are associated with gender and color the social experiences of females and males throughout the life course. These experiences, rooted in the division of labor under patriarchal capitalism (Messerschmidt 1986), convey different messages that shape males' and females' basic assumptions about themselves and the world. Because our culture imposes this gender polarization on social reality, children learn to evaluate their behavior and that of others in terms of cultural definitions of what is appropriate for their sex (Bem 1993), what Heimer (1996) terms gender definitions (see also Heimer and De Coster 1999; Heimer et al. 2006). Gender definitions affirm the polarization of gender (Heimer 1996), so that masculinity requires characteristics like independence, self-confidence, aggressiveness,

and competitiveness (and thus paid labor), whereas femininity requires characteristics like dependence, sensitivity, passivity, and nurturance (and thus family work) (e.g. Burke and Tully 1977; Burke 1989; Jensen 2003). Internalizing these definitions about gender predisposes children and adults to build identities consistent with them; that is, identities that are consistent with dominant notions of masculinity and femininity (Bem 1993; Jensen 2003). Gender identity encourages gendered behavior. For example, a feminine identity compels one to engage in behavior associated with femininity but avoid behavior associated with masculinity (Heimer 1996). In this way, as a person develops, she or he becomes incorporated into the process of socially constructing gender and learns how to “do” gender, making cognitive and behavior decisions in everyday life that confirm her or his identity as a “real” girl/woman or boy/man.

It is these processes that may contribute to gender polarization in the expression of personal problems. In this sense, individuals may “do gender” even in the expression of problems: crime is something males do and mental illness is something females do (Dornfeld and Kruttschnitt 1992; Cloward and Piven 1979; Simpson and Elis 1995). Delinquency and crime are in line with traditional ideals of masculinity (Heimer 1996; Heimer and De Coster 1999; Messerschmidt 1993, 2000; Simpson and Elis 1995). Traditional ideals of femininity, however, are inconsistent with delinquency (Heimer 1996) but are more consistent with internalizing behaviors (De Coster 2003, 2005).

Not only do social divisions associated with gender sustain internalized notions about the self in terms of masculinity/femininity, these social divisions also lead to assumptions about the salience of the self of social relations (Rosenfield 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000). Bem (1993) argues that the sexual division of labor places males in

“no-contact” positions and places females in “contact” positions. Males are more typically in positions where they have power over others or at least control over their own work; females are more typically in positions where they have responsibilities to or for others but which are associated with little power. Certainly, these divisions contribute to notions of masculinity and femininity as described above, but such practices also contain cultural messages about the place of male and females in relation to others in the social world. Because of the social power and cultural value placed on males’ positions, the message is conveyed that men need others less than others need them; because of the low power (but high demands) and devaluation associated with females’ positions, the message is conveyed that women are less important than others (Rosenfield 1999b). Thus, males’ positions encourage higher levels of self-salience, based on assumptions that they should rank themselves above others and should maintain separateness or independence from others. Females’ positions encourage lower levels of self-salience, based on assumptions that they should emphasize the collectivity and should maintain a greater sense of connectedness to or emotional reliance on others (Rosenfield 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000).<sup>6</sup>

According to Rosenfield and colleagues (Rosenfield 1999a, 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000), these distinctions in self-salience in and of themselves do not result in specific problems, but they may predispose individuals to a particular path (see also Hagan and Foster 2001, 2003; Hagan et al. 2002; Horwitz and White 1987). For males, a strong sense of individuation and separateness from the feelings of others frees them to act out against others more easily. Conversely, for females, a sense of interconnectedness and

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<sup>6</sup> Chodorow (1978) and Gilligan (1982) have similar discussions, arguing that socialization and developmental processes lead females to place greater emphasis on social relationships with others and males to de-emphasize such relationships in favor of the self. As a result, concern for and connectedness to others become central for females, but dominance and independence become central for males (see also Jensen 2003).

concern for the feelings of others and the low priority placed on the self leads them to turn against the self.<sup>7</sup> These distinctions in self-salience that may predispose females and males to certain expressions may also block the development of the non-typical problem (Heimer 1996; Heimer and De Coster 1999; Horwitz and White 1987; Rosenfield 1999a, 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000). For females, identifying with others' interests, relying on others emotionally, or empathizing with what others might feel impedes antisocial behavior that might harm others. For males, a focus on personal interests and feelings to the exclusion of others' feelings impedes turning emotionally against themselves (in terms of depression).

Thus, the social structure impinges on the self, with different mental health consequences for males and females in the types of problems they may experience. Gender inequality structures socialization experiences and the field of cultural messages adolescents receive about gender. By adolescence, boys and girls have learned both the attitudes associated with dominant ideals of masculinity and femininity (i.e., gender definitions) and how to do gender in ways that are consistent with social expectations and personal identities. Gender inequality also structures the field of cultural messages adolescents receive about the place of males and females in relation to others in the social world, in turn fostering personal characteristics consistent with gender definitions.

Although this process is not directly assessed in this project, it is one reason to expect sex differences in well-being. This argument, which De Coster (2005) terms the differential responses hypothesis, suggests that males and females may be disposed to respond

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<sup>7</sup> Note that this is consistent with Hirschi's (1969) social control theory, which argues that bonds to others prevents delinquency, but lacking bonds leaves one free to deviate in antisocial ways. Lanctot and LeBlanc (2002) comment that the study of gender roles cannot be detached from the study of interaction and bonds.

differently to stressful situations, resulting in different distributions in reported problems of well-being. Males' positions in the social structure deemphasize their connection to others, foster individuation and independence, and support higher self-salience (Chodorow 1978; Gilligan 1982; Hagan and Foster 2003; Hagan et al. 2002; Horwitz and White 1987; Rosenfield 1999a, 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000; Van Gundy 2002). For males, a strong sense of independence from others and others' feelings may free them to act out against others more easily. Further, a focus on personal interests and feelings to the exclusion of others' feelings may make it difficult to turn negative emotions inward. Consequently, I expect boys in this study will report higher rates of delinquency compared to girls, particularly in response to stress (H1a).

In contrast, females' positions emphasize their connection to others, foster reliance and empathy, and lead to lower self-salience (Chodorow 1978; Gilligan 1982; Hagan and Foster 2003; Hagan et al. 2002; Horwitz and White 1987; Rosenfield 1999a, 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000; Van Gundy 2002). For females, a sense of interconnectedness and concern for others feelings and the low priority placed on the self may lead them to turn negative emotions inward. Further, empathizing with what others might feel may impede behavior that might harm others (see also Heimer et al. 2006). Therefore, I expect girls in this study will report higher rates of depression compared to boys, particularly in response to stress (H1b). In sum, expectations for and socialization to gender, which I assume are related to biological sex, appear to be a route by which structural and cultural processes may translate into individual behavior. This, in turn, may predispose adolescents to certain outcomes consistent with gender definitions for their sex.

## *Gender and Stress*

Problems with well-being clearly have antecedent causes that may or may not be related to gender. One such antecedent is the experience of stresses or strains. Stress is a consequence of social organization, as well as an individual's location in it. Importantly, stressful experiences are one way social structure is linked to well-being, and may be relevant for understanding sex differences in well-being (Aneshensel 1992; Mirowsky and Ross 1989; Pearlin 1989). For instance, Dornfeld and Kruttschnitt (1992) concluded from their research that some stresses, such as familial strains, appear to have effects that are sex-specific. Similarly, De Coster and Heimer (2001) suggest that exposure to strain bridges the gap between structural and individual processes leading to delinquency. De Coster (2005) extends this framework to illustrate how stresses may be sex-specific. Accordingly, both the stress paradigm and general strain theory predict that the occurrence of stress, itself rooted at least partly in social stratification, can activate sequences that result in problems like depression and delinquency, and can help us understand sex differences in these problems. But the processes and practices of gender do not disappear once stress happens; they can play an intricate role in males' and females' exposure and vulnerability to stress.

### **Differential Exposure**

One version of the differential exposure hypothesis posits that one sex experiences greater levels of stress, accounting for differences in well-being (Colten and Gore 1991; Davis et al. 1999; Mirowsky and Ross 1995; Turner and Avison 1989; Van Gundy 2002). On the one hand, males may be exposed to more stress stemming from gender definitions that emphasize achievement, competition, and competency, particularly as it relates to work and providing for a family (Davis et al. 1999; De Coster 2005). On the other hand, because

of the documented sex gap in depression, focus in mental health research has been on how females' roles may create greater and more persistent stress (Davis et al. 1999; Gove and Tudor 1973; Mirowsky 1996; Mirowsky and Ross 1995). Simon (1995) discovered that simultaneously occupying work and family roles was more stressful and demoralizing for women than men. She explained this finding by noting that these roles are incongruent with traditional gender definitions for women but congruent with traditional gender definitions for men.

Interestingly, as De Coster (2005) and Van Gundy (2002) both point out, researchers in mental health have used this version of the exposure argument to explain females' higher rates of depression (Simon 1995; Turner, Wheaton, and Lloyd 1995), while researchers in criminology have used this argument to explain males' higher rates of delinquency (Broidy 2001; Broidy and Agnew 1997; Mazerolle 1998). However, research that relies on counts of stressful life events to assess exposure to stress has been able to explain a small portion of the gender gap in either depression or delinquency (Dornbusch et al. 1991; Gore et al. 1992; Van Gundy 2002). In contrast, by specifying the nature of stressful life events, Turner and colleagues (1995) were able to demonstrate that observing life events happening to others, as well as personally experiencing recent and chronic stressful events, explained females' higher levels of depression. It is not simply a matter of who has more stress, but who experiences what kind of stress (Broidy and Agnew 1997; Compas and Wagner 1991; De Coster 2005; Kessler and McLeod 1984).

This suggests a second version of the differential exposure hypothesis: each sex experiences greater levels of certain types of stressors, accounting for sex differences in well-being (Broidy and Agnew 1997; Colten and Gore 1991; Davis et al. 1999; Mazerolle 1998;

Turner and Avison 1989; Van Gundy 2002). We may distinguish between those stressors oriented around relationships with others, and those oriented around the agency of the individual in term of competence, success and individuality (Compas and Wagner 1991; De Coster 2005, Eagly, Wood, and Diekman 2000). The former, *communal stressors*, are interpersonal in nature, involving another person (e.g., arguments with family or peers) or events that happen to another person in the individual's social network (e.g., something bad happens to a family member or friend). The latter, *agentic stressors*, are intrapersonal in nature, having personal relevance regarding an individual's goals or competence (e.g., poor grades) or events that happen primarily to the individual (e.g., victimization, physical condition).

This version of the differential exposure argument suggests that males and females experience greater exposure to different kinds of stressors, because their perceptions of stress are keyed to their locations in the social structure and socialization experiences (Davis et al. 1999; De Coster 2005). As a result, males and females may be attuned to different kinds of stressors or appraise different kinds of circumstances as stressful. As noted, males and females receive different social messages about the salience of the self in relation to others (Rosenfield et al. 2005; Rosenfield et al. 2000), so that dominance and independence become central for males, and concern for and connectedness to others become central for females (Chodorow 1978; Gilligan 1982; Jensen 2003). Consequently, males may be more focused on (and therefore more likely to indicate exposure to) agentic stressors, and females may be more focused on communal stressors (Davis et al. 1999; De Coster 2005; Eagly et al. 2000). Indeed, research demonstrates that adolescent boys report more exposure to agentic stressors, such as threats to autonomy, financial and life goals, ability, and personal achievement, as

well as physical victimization (Cleary 2000; Davis et al 1999; De Coster 2005; Moses 1999; Liu and Kaplan 1999a; Sweeting and West 1994). In contrast, adolescent girls report more exposure to communal stressors, like difficulties among those in their social networks and relational problems with family and friends (Compas and Wagner 1991; Davis et al 1999; De Coster 2005; Gore et al. 1992; Sweeting and West 1994).

To review, according to the exposure argument, there are differences in the level and/or the nature of the stress experienced by adolescents, accounting for sex differences well-being (Avison and McAlpine 1992; Broidy and Agnew 1997; Gore et al. 1992; Mazerolle 1998). Differences between males and females in exposure to stress are potentially linked to the processes and practices of gender. In a gender stratified society, social divisions place males and females in different social positions, and these social positions are associated with variations in exposure and attention to different types of stressors. Males may be more focused on stressors that are oriented around the individual in terms of competence and success. Accordingly, I hypothesize that adolescent boys report higher levels of agentic stressors, such as physical condition, victimization by violence, academic troubles, a disjunction between aspirations and expectations for attending college, and limitations on life chances (H2a). Females may be more focused on stressors that are oriented around relationships with others. Accordingly, I hypothesize that adolescent girls report higher levels of communal stressors, such as difficulties with family relationships, peer relationships, and teacher relationships (H2b). Figure 1 depicts the exposure hypotheses, where being male is positively related to agentic stress and being female is positively related to communal stress. In sum, stress exposure can vary by sex, and these variations are

theoretically rooted in the different positions of males and females in a gender stratified society.

### **Differential Vulnerability**

The differential vulnerability hypothesis posits that males and females may differ in their reactivity to stress; that is, the experience of stress may impact one sex differently or more severely than the other (Colten and Gore 1991; Kessler and McLeod 1984; Turner and Avison 1989). For example, some argue that even if males and females experience equal levels of stress, females are more likely to suffer negative consequences in the form of depression (Kessler and McLeod 1984; Thoits 1995). However, Aneshensel and her colleagues (1991) strongly caution that identifying stress as an important factor for females for *some* outcomes does not necessarily mean *only* females are more vulnerable to stress. Instead, they find that sex differences in stress-reactivity are disorder-specific and not indicative of general differences in vulnerability. Similarly, Thoits (1995) asserts that if depression and conduct problems are alternate ways of reacting to stress, then we need to identify what kinds of stressors lead to one response versus another, and if different reactions to stressors can be attributed to differences in socialization by social status.

In this light, it is important to consider the extent to which males and females are more vulnerable to differences in stressful experiences, leading to differences in mental health outcomes (Leadbeater et al. 1995; Thoits 1995). Given that males and females appear to be differentially exposed to certain types of stress, it may also be that they are differentially vulnerable to the types of stress to which they are more exposed (De Coster 2005; Kessler and McLeod 1984; Tuner and Avison 1989). For instance, in their study of adolescents, Siddique and D'Arcy (1984) found girls were more susceptible to family and

peer-group stressors, contributing to their greater levels of depression. Larson and Asmussen (1991) found similar vulnerabilities, noting that girls and boys reported negative emotions in response to different life domains.<sup>8</sup> Girls experienced more negative emotions in response to problems with family and friends in particular and in their social world more generally, but boys experienced more negative emotions in response to problems with activities like sports, leisure outings, and tasks. De Coster (2005) found that girls were more vulnerable to family and peer stressors, leading to depression, whereas boys were more vulnerable to victimization and achievement-related stressors, leading to delinquency.

The cost of caring hypothesis is one approach to understanding this difference in stress reactivity. According to the cost of caring hypothesis, females are more sensitive to stresses that happen to others in their social network (Kessler and McLeod 1984; Thoits 1995; Turner and Avison 1989). Given their relative responsibility in the private sphere (Rosenfeld 1999b) and socialization experiences that encourage them to be more nurturing and concerned for others (Gilligan 1982), females are more troubled by stressful events happening to others in their network (Kessler and McLeod 1984; Thoits 1995; Turner and Avison 1989). This partly explains females' higher rates of distress and depression (Kessler and McLeod 1984; Turner and Avison 1989).

The cost of caring hypothesis illustrates how gender definitions, which emphasize the relevance of particular domains to the lives of males and females, make males and females differentially vulnerable to stressors occurring in those domains. As noted, in addition to research that demonstrates females are more vulnerable to network events and relational

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<sup>8</sup> Larson and Asmussen (1991) included a broad array of negative emotions yet noted a sex difference. Girls were more likely to report feeling irritable or worried, but boys were more likely to report feeling angry or bored. However, they do not link particular emotions in response to particular domains.

problems, research also demonstrates males are more vulnerable to financial and material considerations, job-related stressors, and aggressive conflict (Broidy and Agnew 1997; Kessler and McLeod 1984; Mazerolle 1998; Thoits 1995; Turner et al. 1995). Perhaps for females, expectations for connectedness, nurturance, and emotional reliance are challenged the most by communal stressors such as network events or friendship and relational problems. Perhaps for males, expectations for achievement, success, and independence are challenged the most by agentic stressors such as criticism, victimization, and barriers to personal and material success. As such, stressful experiences occurring within these domains potentially impact males and females differently (see De Coster 2005).

Research indicates that females are more responsive to communal stressors, resulting in depression, whereas males are more responsive to agentic stressors, resulting in conduct problems (Compas et al. 1993; De Coster 2005; Leadbeater et al. 1995). Theorists in the general strain tradition offer one explanation for such findings (Broidy and Agnew 1997; Mazerolle 1998). Females' experience of communal strains may limit illegitimate coping opportunities because such behavior could further compromise relational ties, but communal strains may not be barriers to self-destructive behavior like depression. Conversely, males' experience of agentic strains may create no barrier to illegitimate responses like delinquency, and in fact such strains may provoke delinquent responses as a means of correcting or resisting the stressful situation.

In their theoretical account, Leadbeater and colleagues (1995) argue that there are gender-linked vulnerabilities to stress that result in gender differences in depressive symptoms and problem behaviors in adolescents. Individuals with heightened interpersonal depressive vulnerability are concerned with the affection of others and emotional closeness.

Stressful events involving relationships with others may result in internalizing behaviors in an attempt to maintain the involvement of others. On the other hand, individuals with high levels of self-critical vulnerability are concerned about competence and evaluations made by others regarding their abilities. Stressful life events that negatively affect feelings of adequacy may result in externalizing behaviors to demonstrate personal efficacy or deflect self-criticism. Moreover, the authors link these styles of vulnerability to gender stereotypes and gender definitions. What they term “interpersonal depressive vulnerability” mirrors feminine gender definitions and “self-critical vulnerability” mirrors masculine gender definitions. Leadbeater and associates (1995) concluded from the sum of the evidence that the occurrence of high levels of both interpersonal depressive vulnerability and internalizing disorders is more likely in teen girls, whereas the occurrence of high levels of both self-critical vulnerability and externalizing disorders is more likely in teen boys.

Reactivity to different domains of stressful events can be theoretically linked to the processes and practices of gender. Such divisions place different expectations on males and females in fulfilling and maintaining their gender roles. In this sense, males and females are ostensibly more vulnerable to the types of stressors to which they are more exposed (De Coster 2005). Internalization of gender definitions may lead males to be more in tune with events that are agentic in nature. Stressors like health problems, a disjunction between aspirations and expectations for attending college, and violent victimization may challenge expectations for achievement, competence, and independence. I expect that males (compared to females) are more reactive to these agentic stressors. Further, when masculine gender definitions are threatened by stressful experiences, males may react in ways consistent with those gender definitions (Broidy and Agnew 1997; Compas et al. 1993; De Coster 2005;

Leadbeater et al. 1995). Stressful events that negatively affect success or feelings of adequacy may result in externalizing behaviors to demonstrate personal competence, deflect self-criticism, or “correct” the situation (see Agnew 1992). Accordingly, I further hypothesize that males’ response to agentic stressors is more likely to take the form of delinquency. That is, comparing boys’ and girls’ models, agentic stressors will be more predictive of boys’ delinquency than girls’ delinquency (H3).

Internalization of gender definitions may lead females to be more in tune with events that are communal in nature. Stressors like difficulties with family relationships and relationships at school potentially challenge expectations for connectedness, nurturance, and emotional reliance. I expect that females (compared to males) are more reactive to these communal stressors. Further, when feminine gender definitions are threatened by stressful experiences, females may react in ways consistent with those gender definitions (Broidy and Agnew 1997; Compas et al. 1993; De Coster 2005; Leadbeater et al. 1995). Stressful events involving relationships with others may result in internalizing behaviors in an attempt to maintain the involvement of others, but may limit illegitimate responses because such behavior could further compromise relational ties. Accordingly, I further hypothesize that females’ response to communal stressors is more likely to take the form of depression. That is, comparing boys’ and girls’ models, communal stressors will be more predictive of girls’ depression than boys’ depression (H4).

In summary, vulnerability to different domains of stressful events is theoretically linked to the processes and practices of gender. De Coster (2005) describes this connection as “gendered responses to gendered stresses” (see also Van Gundy 2002). As depicted in Figure 1, boys’ exposure to agentic stress potentially increases vulnerability to delinquent

outcomes, whereas girls' exposure to communal stress potentially increases vulnerability to depression. Adolescent males and females may be more vulnerable to the types of stressors to which they are more exposed, which for boys appears to be agentic stressors and for girls appears to be communal stressors. Further, when these domains are threatened by stressful experiences, male and females may react in ways consistent with gender definitions, which can be a pathway to one type of problem and a barrier to another, leading boys to conduct problems and girls to depression.

#### *Gender and Social and Personal Resources*

Clearly, differential responses, differential exposure, and differential vulnerabilities are important concepts to consider and include in any argument about gender and adolescent well-being. Yet evidence suggests that neither stress exposure nor vulnerability completely account for sex differences among adolescents in delinquency and depression (e.g., Broidy 2001; Gore et al. 1992; Hoffman and Cerbone 1999; Kee et al. 2003). This is also the case even when stressors are divided into gendered domains (e.g., De Coster 2005; Van Gundy 2002). There is more to the story; the next step is increased specification. Thoits (1995) suggests that variations in social and personal resources may explain the observed sex differences in vulnerability to stress (see also Broidy and Agnew 1997).

Both the stress paradigm and general strain theory highlight the importance of social support, self-esteem, mastery, and coping styles in conditioning the process by which stress affects well-being (e.g., Agnew 1992; Broidy and Agnew 1997; Mirowsky and Ross 1989; Pearlin 1999b; Thoits 1995). The key is the availability of these resources to the individual to assist in coping with the experience of stress, and/or their ability to lessen the deleterious effects of stressors on well-being (Pearlin 1999a). These resources may act as buffers

between a stressful experience and deleterious outcomes, shielding mental health at high levels of stress; this is represented empirically as an interaction term between stress and the resource variable (Taylor and Aspinwall 1996; Wheaton 1983, 1985).

Researchers have indicated that variations in social/personal resources may further explain observed differences between adolescent boys' and girls' expressions of problems. For instance, Avison and McAlpine (1992) investigated how stressful experiences and social/personal resources were associated with sex differences in depressive symptoms among adolescents. Social/personal resources, including social support, mastery, and self-esteem, when introduced into the model, reduced the effect of sex on depression to non-significance. Avison and McAlpine's (1992) models suggest the importance of social/personal resources for understanding sex differences in adolescent well-being. In essence, there is potential for a three-way interaction: sex interacts with the conditioning effect social/personal resources place between stress and well-being. Beyond their empirical value, these concepts – including social support, self-esteem, mastery, and coping styles – are of theoretical import. The processes and practices of gender are implicated in the availability of these resources to boys and girls, and ultimately in how these resources are marshaled in the face of stress. As a result, boys and girls exhibit differences in outcomes (e.g., Liu and Kaplan 1999a, 1999b).

### **Social Support**

In general, social support is an important element of adolescent well-being. Low levels of social support from different sources, including family and friends, lead to impairments in mental health and social behavior (Coleman and Hendry 1999). Social support can protect adolescents from depression (Avison and McAlpine 1992; Bennet and Bates 1995; Eccles et al. 1997; Gore et al. 1992; Herman-Stahl and Peterson 1996; Holahan

et al. 1995; Plancherel and Bolognini 1995; Sim 2000; van Wel, Linssen, and Abma 2000; Wenz-Gross et al. 1997), problem behaviors (Bennet and Bates 1995; Eccles et al. 1997; Sim 2000), and delinquency (Johnson et al. 1997; Wright and Cullen 2001).

Cullen, Wright, and Chamlin (1999) describe social support as a process of transmitting of human, cultural, material, and social capital. Social support is commonly conceptualized as the social resources on which one can rely in dealing with life problems and stressors (Pearlin 1989; Thoits 1995; Turner and Lloyd 1999). These resources are drawn from significant others, like family members and friends, who can provide instrumental, informational, and/or emotional assistance to the individual (Thoits 1995). There is evidence that social support has both direct and buffering effects on well-being (Taylor and Aspinwall 1996; Thoits 1995). Also, the perception or belief that support is available, particularly emotional support, appears to have a much stronger influence on mental health than does actual receipt of support (Pearlin 1989; Thoits 1995; Turner and Lloyd 1999). Moreover, whether or not support is affective depends on the way its specialized source and form fit with the nature of the stressor at hand, and on the point in the stress process at which the support is received (Pearlin 1999a; Taylor and Aspinwall 1996).

Criminologists have also directed attention to the role of social support and cohesion in antisocial behavior (Colvin, Cullen, and VanderVen 2001; Cullen 1994). For example, Cullen (1994) argues social support is a key theoretical concept influencing the likelihood of delinquent behavior. Social support can create a context in which strong prosocial bonds form (Colvin et al. 2001; Cullen 1994), as well as create a context in which parental and other social controls are most efficacious (Cullen 1994; Wright and Cullen 2001). Certainly, comparisons can be drawn between Hirschi's (1969) notion of attachment and social support:

attachment can be characterized by time spent with family and others, involvement in relationships, as well as emotional closeness, concepts akin to social support (see also Wright and Cullen 2001).<sup>9</sup> Additionally, social support fosters resiliency in the face strain, promoting prosocial adaptations (Cullen 1994; Cullen et al. 1999).

Agnew (1992) in fact argues that a potential conditioning factor in the stress process is one's level of social support. More specifically, within the general strain tradition, Agnew (1992) theorizes that because conventional social support can facilitate legitimate coping responses in the face of strain, adolescents with conventional social support are in a better position to handle strain in a nondelinquent manner. As Capowich and his associates (2001) put it, "Social support networks provide a means to escape aversive effects of stressful life events either by acting as an escape route or by encouraging non-deviant coping mechanisms" (Capowich et al. 2001: 448). Yet, studies have failed to provide conclusive evidence of the conditioning effect between an aggregated measure of strain and criminal behavior (Capowich et al. 2001; Paternoster and Mazerolle 1994). However, in a study that disaggregated strain, Robbers (2004) found an interaction effect between social support and the strain associated with failure to achieve goals, illustrating that those with higher levels of social support are less likely to respond delinquently to the experience of strain.

*Sex Differences in Social Support.* Social support may account for observed sex differences in vulnerability to stress. There are sex differences in the quantitative and qualitative aspects of support, with females having larger, kin- and friendship-based

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<sup>9</sup> It should be noted that Agnew (2001; also Agnew and White 1992; Paternoster and Mazerolle 1994) draws a sharp distinction between negative relationships (a strain) and the absence of positive relationships prominent in social control theory. The absence of ties essentially frees a person to deviate. In this sense, one can argue that a lack of prosocial bonds is a conditioning factor in the strain-delinquency relationship: In the face of strain, someone who is not closely tied to others not only receives limited support but is also freed to seek deviant solutions (cf. Hoffman and Su 1997).

networks, providing females with both more support and higher levels of emotional exchange and intimacy (Turner 1994). However, females may have to take the bad with the good, as illustrated in the cost of caring hypothesis: although females may experience more social support from their social ties, such ties may also increase their chances of experiencing negative interactions that may be harmful to mental health (Turner 1994). In some cases, a positive relationship has been noted between social support and sex, with women experiencing both the most social support and the highest levels of psychological distress (Ross and Mirowsky 1989; Turner and Marino 1994; Turner and Lloyd 1999).

In an intriguing analysis of the effect of social relationships on women's and men's well-being, Umberson and her colleagues (1996) found women's greater involvement in positive relationships protected them from depression. Moreover, they discovered that if women's and men's positive relationships were made equal, the sex gap in depression would increase. In other words, if women did not have higher levels of support relative to men, they would have even higher levels of depression than do men. Similarly, while men do benefit psychologically from social support, men would benefit even more if they had higher levels of support, further reducing their depression, resulting in a larger sex gap in depression. Positive social relationships represent "a social alleviation of psychological distress" (Umberson et al. 1996, p. 284) for both sexes, but for women positive relationships appear more important to staving off depression.

Among adolescents, Avison and McAlpine (1992) noted that social support was associated with lower levels of depression only for girls. In contrast, Gore and associates (1992) presented findings indicating girls had higher levels of social support (particularly from friends) leading to lower depression, but this did not entirely explain the sex difference

in depression. Additionally, the emotional impact of supportive family and peer ties did not differ significantly by sex, indicating no sex difference in the effect of social support on depression. However, in examining the nuances of their results, Gore and her colleagues (1992) suggested girls' greater involvement in others' lives comes with costs and benefits: girls are more exposed to network stressors, but they also have more access to social support that can protect them from depression.

A parallel can be drawn between the role of social support in sex differences in depression and the role of social bonds in sex differences in delinquency (Piquero and Sealock 2004), and Agnew (1992) posits that prosocial bonds and supportive relationships may exert a buffering effect between strain and delinquency. Some research suggests that socially supportive relationships are more influential in preventing girls' delinquency. For example, examining general social support, Robbers (2004) noted that the buffering effect of general social support between strain and delinquency is more important for girls than boys. Examining familial relationships, Heimer and De Coster (1999) demonstrated that females' strong emotional bonds to their families are an important factor in prohibiting female violent delinquency.<sup>10</sup> In contrast, boys' emotional bonds were insignificant for their delinquency, but more direct forms of parental control did exert influence. Cernkovich and Giordano (1987) noted similar results, in which parental support for the adolescent's sense of identity was more relevant for girls' problem behaviors, and parental supervision was more relevant for boys' problem behaviors.

Examining friendships, research indicates that girls' friendships, compared to males, are characterized by more intimate and supportive interactions, whereas males' friendships

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<sup>10</sup> The measure of emotional bonds included statements akin to social support, e.g., feeling close to the family and feeling the family is willing to listen to problems.

are characterized more by peer pressures and conflicts (Giordano, Cernkovich, and Pugh 1986). Girls also place more emphasis and value on their friendships (McCarthy, Felmeé, and Hagan 2004). Female friendships, as a result, provide support for prosocial rather than delinquent reactions to strain (Giordano et al. 1986; McCarthy et al. 2004). Taken together, research on family and peer relationships suggests that social support, if taken to encompass the emotional side of social bonds, may have different effects for boys and girls when it comes to delinquent outcomes. In particular, social support may inhibit deviant behavior in girls but may be of less relevance to boys, because social relationships are more important to girls than boys.

An understanding of the processes and practices of gender may clarify why social support and its effects are distributed differentially by sex. Rosenfield (1999a; 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000) argues the boundaries created by the social divisions of gender stratification are intimately linked to assumptions about the self and social relationships. Whereas the boundaries between self and others are clearly demarcated for males, the boundaries between self and others are blurred for females. Thus, males' positions foster basic assumptions that emphasize the separateness of self from others, while females' positions foster basic assumptions that emphasize the connectedness of self to others. As a result, males' and females' positions in the social structure may create differences in the availability or use of social support as a resource to handle stress. Because of their position in the social structure that generates socialization processes emphasizing independence and self-reliance, males may have lower levels of support and may be less likely to rely on interpersonal relationships in times of stress. Because of their position in the social structure that generates socialization processes emphasizing interpersonal

relationships, females may be more likely to have higher levels of social support.

Furthermore, they may be more likely to draw on these interpersonal relationships in times of stress. Based on this distinction, I expect that adolescent girls have higher levels of social support than adolescent boys (H5) (e.g., Gore et al. 1992; Turner 1994).

There is a difference in degree that influences both what social control theorists might term “freedom to deviate,” as well as psychological well-being. In the first place, a lack of social support may create freedom to deviate. Theoretically, social support may have a buffering effect between stress and delinquency (Agnew 1992; Capowich et al. 2001), so I posit that for both girls and boys, high levels of social support in the face of stress protect them from delinquency. For girls, social support may act as a resource for managing stress *and* may bond girls more tightly to others (Cernkovich and Giordano 1987; Heimer and De Coster 1999). Responding to stress with deviant behavior might jeopardize relationships, which girls’ experiences encourage them to value and rely upon (Broidy and Agnew 1997; Rosenfield 1999a). For boys, relatively lower levels of social support, coupled with males’ experiences that encourage them to be less reliant on others and “do for themselves” in dealing with stressful conditions, may “free” them to deviate when confronted with stress. In this sense, lack of support from others may not only represents a lost resource for coping with stress legitimately, but may also distances males from others, freeing them to engage in illegitimate modes of coping, including delinquency (Broidy and Agnew 1997; Rosenfield 1999a). Accordingly, I hypothesize that social support is more salient for girls in buffering the negative effects of stress on delinquency (H6).

In the second place, generally speaking, social support may have a buffering effect between stress and depression (Taylor and Aspinwall 1996; Thoits 1995), so I posit that for

both girls and boys, high levels of social support in the face of stress protect them from depression. However, because girls have higher levels of social support, I hypothesize that social support is more salient for girls in buffering the negative effects of stress on depression (H7) (Avison and McAlpine 1992; Umberson et al. 1996).

To review, I hypothesize sex differences in adolescent well-being are partly attributable to differences in social support. In the face of stress, social support may protect both males and females from negative outcomes, but there may be sex differences in the effectiveness and directedness of this resource. As demonstrated in Figure 2, for both males and females, social support is hypothesized to buffer the effect of stress on depression and delinquency, but in all cases the effect is more powerful for females. In addition, social support may inhibit delinquency in both girls and boys, but girls' higher levels of support reinforce emotional, prosocial bonds, while boys' relatively lower levels of support allows them the freedom to respond deviantly to stress.

### **Self-Esteem**

One way to define self-esteem is an evaluation that a person makes of her or himself, expressing approval or disapproval of oneself (Turner and Roszell 1994). As a moderating influence, a positive and resilient self-image, as opposed to negative or mutable self-esteem, is considered a crucial resource for combating the negative implications for the self that are the frequent accompaniments of stressful experiences (Turner and Roszell 1994). Self-esteem significantly reduces psychological symptoms and buffers the emotional consequences of stressors (Thoits 1995). There is considerable evidence of a relationship between low self-esteem and problems like depression, substance abuse, suicidal behavior, and aggressive behavior. There is also evidence indicating that low self-esteem represents a

vulnerability factor that substantially increases risk for emotional troubles in the presence of stress (Turner and Lloyd 1999; Turner and Roszell 1994).

Criminological theorists also point to the role of self-esteem (also referred to as self-concept) in delinquency. Based in symbolic interactionism, Kaplan (1980) makes the argument that individuals are driven to maintain a positive sense of self. However, if social interaction is such that positive self-concept is undercut by negative self-evaluations, the individual may become distanced from conventional society. Yet, the individual searches for social experiences that foster positive self-evaluations, including non-conventional social networks. As a result, Kaplan theorizes that an individual may engage in deviance as a means of self-enhancement. From this view, low self-esteem in itself is a source of motivation for delinquent behavior (Kaplan and Johnson 1996; Rosenberg, Schooler, and Schoenbach 1989). Although research demonstrates a complex relationship, low self-esteem is associated with increased involvement in delinquency (Mason 2001; Owens 1994; Rosenberg et al. 1989; but see Jang and Thornberry 1998; Wells and Rankin 1983).

Early control theorists viewed a strong self-concept as an internal control against delinquency. For example, Reckless (1962) states that a primary element of internal containment is “a favorable image of self in relation to other persons, groups, and institutions” (p. 307). In combination with external containments, internal containment buffers against pressures and demoralizations that may lead to delinquency. Reckless (1962) also argues that a strong sense of self helps the individual cope with restlessness, disappointment and frustration. Along these lines, Agnew (1992) posits that self-esteem helps individuals resist strain, perhaps by making them less sensitive to its negative qualities and facilitating legitimate coping efforts (see also Hoffman and Cerbone 1999). Aseltine,

Gore, and Gordon (2000) found some degree of support for the buffering effect of self-esteem, noting that it interacted with family and peer conflict to reduce anger, which was related to aggression. They also noted that self-esteem interacted with anger to reduce aggression. Other studies of general strain theory find limited or no support for the conditioning influence of self-esteem, but rely on aggregate measures of life events (Hoffman and Cerbone 1999; Hoffman and Miller 1998) or aggregate measures of strain (Jang and Johnson 2003).<sup>11</sup>

Breznia (1996) adds insight into the complex relationship between strain, self-esteem, and delinquent behavior, arguing that delinquency may serve as a relief from the negative emotional states associated with strain (Agnew 1992), in addition to being a way to deal with problems of low self-esteem (Jang and Thornberry 1998). Like Agnew's work (1992), this points to the potential interaction between strain and self-esteem. Delinquent responses to strain may be more likely when an adolescent is suffering from low self-esteem.

*Sex Differences in Self-Esteem.* In their studies, Turner and Lloyd (1999) demonstrated that men have higher levels of self-esteem, and this partly explained why men have lower rates of depression (see also Turner, Lloyd, and Roszell 1999). Among adolescents, self-esteem has been shown to account for the sex difference in depressive symptoms, since females have substantially lower self-esteem (Avison and McAlpine 1992; Liu and Kaplan 1999b). Hoffman and Su (1998) discovered that, for girls, self-esteem conditioned the effects of stressful life events on depression.

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<sup>11</sup> Mazerolle and Maahs (2000) contend that this failure may be due to methodological issues rather than wholly due to substantive issues with the theory. They argue that statistical significance tests of multiple regression models incorporating interactive terms and of structural equation models may mask otherwise substantive relationships. Using a contingency table approach, they found important differences in the strain-delinquency relationship of the conditioning effects of several variables (none of which was a psychosocial resource).

Schwalbe and Staples (1991) posit that individuals give more attention to those sources of positive evaluations that are most easily accessed. The sources most readily available to males and females may differ due to gender socialization, cultural prescriptions for self-evaluation in males versus females, and gender divisions in social positions. Turner, Lloyd, and Roszell (Turner and Lloyd 1999; Turner et al. 1999; Turner and Roszell 1994) argue that females' positions in the social structure are associated with socialization experiences that result in females' reliance on the evaluations of others in making judgments about self-image (see also Bartusch and Matsueda 1996; Schwalbe and Staples 1991; Turner and Turner 1999). On the other hand, males' positions are associated with experiences that encourage reliance on both appraisals of others as well as self-assessments of, for example, achievement (Bartusch and Matsueda 1996; Schwalbe and Staples 1991; Turner and Lloyd 1999; Turner et al. 1999; Turner and Roszell 1994; Turner and Turner 1999). Consequently, boys' self-images are more impervious to the judgments of others. Consistent with this, Schwalbe and Staples (1991) found that reflected appraisals are more salient for young women's self-esteem but that social comparisons (of oneself to others), particularly those surrounding performance, are more salient for young men.

Research indicates that for girls, self-esteem is global in nature, deriving from several domains (Bolognini et al. 1996). A loss of self-esteem in one domain has negative consequences for the others. Additionally, research indicates that for boys, self-esteem is derived from specific domains, particularly personal behavior, academic performance, and social and athletic competence (Bolognini et al. 1996). A loss of self-esteem in one domain is compartmentalized away from other domains. Taken together, the source and nature of their self-esteem places females in a more vulnerable position to the loss of self-esteem

relative to boys.<sup>12</sup> Fluctuations in self-image and loss of self-esteem should place girls at greater risk for distress compared to boys (Liu and Kaplan 1999b), but may undermine girls' confidence (relative to boys) to take actions that result in delinquency (Broidy and Agnew 1997).

Furthermore, recalling Rosenfield's (1999a; 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000) argument, the boundaries created in a social structure divided by gender are intimately linked to assumptions about the self. Males' positions may encourage assumptions that privilege the self and autonomy from others, while females' positions may encourage assumptions that emphasize the collectivity and emotional reliance on others. These boundaries are also linked to greater valuation of males' activities and devaluation of females' activities. The social message is: males are of high personal worth, which is mostly independent of others; and females are of lower personal worth, which is highly dependent on others. Therefore, I hypothesize that adolescent boys have higher levels of self-esteem compared to adolescent girls (H8). Consequently, females are armed with comparatively lower levels of self-esteem in the face of stress.

The sex differences in the level of self-esteem and in the nature of self-esteem may have specific consequences for well-being. In the case of delinquency, the effects of self-esteem on vulnerability to stress may be sex-specific. Low self-esteem may reduce the likelihood that females would respond to strain with deviant behavior, because low self-esteem may undermine their confidence to challenge gender norms and take action (e.g., Broidy and Agnew 1997). In addition, females' reliance on others for validating self-esteem might mean that self-esteem could be further undermined by negative reactions for

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<sup>12</sup>Gore and Colten (1991) and Liu and Kaplan (1999b) make similar statements regarding the source and nature of self-esteem in adolescent girls and boys.

delinquent behavior. I hypothesize that, among girls, the conditioning effect between stress and self-esteem inhibits the positive effect of stress on delinquency, such that at high levels of stress, lower self-esteem decreases the likelihood of delinquency (H9a).

For males, however, the conditional effect of self-esteem may be different. Because of the nature of their self-esteem, boys tend to confine low self-esteem within particular domains (Bolognini et al. 1996). Compared to girls, boys are not at a general loss of confidence to react, nor concerned about undermining relationships (e.g., Broidy and Agnew 1997). Additionally, even when self-esteem is low, males' greater emphasis on individual resolution may lead to delinquent responses to restore self-worth (e.g., Kaplan 1980; see also Agnew 1992). Thus, I hypothesize that among boys, the conditioning effect between stress and self-esteem amplifies the positive effect of stress on delinquency, such that at high levels of stress, lower self-esteem increases the likelihood of delinquency (H9b).

In general, self-esteem appears to have a buffering effect between stress and depression (Thoits 1995; Turner and Lloyd 1999; Turner and Roszell 1994), so I expect that for both girls and boys, high levels of self-esteem in the face of stress protects them from depression. However, girls may be more sensitive to the deleterious effects of low self-esteem. Because low self-esteem reduces one's ability to effectively cope with stress and to act on one's own behalf, which ultimately contributes to hopelessness or helplessness, females may be at greater risk for depression (e.g., Rosenfield et. al 2000). Additionally, females' reliance on others for judgments about self-worth and the more global nature of their self-esteem makes damage to self-esteem more likely, further contributing to distress (e.g., Turner et al. 1999). Hence, I hypothesize that self-esteem is more salient for girls in buffering the negative effects of stress on depression (H10).

To review, theoretically social messages rooted in the gender structure tend convey to males that they are of high individual esteem, which is mostly independent of others, while conveying to females that they are of lower individual esteem, which is highly dependent on others. Both the nature of difference in girls' and boys' styles of self-esteem and the differences in the social messages they receive about self-worth may contribute to differences in levels of self-esteem and vulnerability to stress. I hypothesize that the conditioning effect of self-esteem involves a varying process based on sex and well-being outcome. When confronted by stress, girls' lower levels of self-esteem (relative to boys) makes them more likely to express vulnerability in the form of depression, but less likely to express it as delinquency. For boys, low self-esteem increases their likelihood of delinquency. As demonstrated in Figure 2, for both males and females, self-esteem buffers the effect of stress on depression, but the effect is more powerful for females. However, whereas low self-esteem reduces the likelihood of girls responding to stress with delinquent behavior, it amplifies the likelihood of boys reacting with delinquency.

### **Mastery**

According to Mirowsky and Ross (1989), the subjective feeling of powerlessness is the sense that important outcomes are beyond one's control and instead are due to chance, fate, or powerful others. Mastery, then, refers to an individual's understanding of his or her ability to control the forces that affect his or her life (Pearlin 1999a). A sense of powerlessness undermines an individual's desire to think about the causes of personal problems and seek solutions. In contrast, a sense of personal control leads a person to be attentive to problems, and active and more effective in solving them (Ross and Mirowsky 1989). People who have a high level of mastery may see stressors as less threatening and ominous (Pearlin 1999a;

Turner and Roszell 1994). A sense of control may also lift self-assurance, which counteracts discouragement in the face of stress (Ross and Mirowsky 1989). Further, it may serve as a self-fulfilling prophecy, where those who think they can exercise control over conditions in their lives act accordingly (Pearlin 1999a), and in fact may possess the skills and abilities required to resolve difficult circumstances (Turner and Roszell 1994). A sense of mastery may directly reduce psychological distress and buffer the harmful effects of stress exposure on mental health (Ross and Mirowsky 1989; Thoits 1995; Turner and Roszell 1994).

Compared to medical sociologists, criminologists have shown less theoretical interest in the concept of mastery. Interestingly, Reckless's (1962) containment theory does include an element akin to mastery. In addition to a positive self-image, an element of internal containment is "an awareness of being an inner-directed, goal-oriented person" (Reckless 1962: 307). Again, internal containment is thought to buffer against pressures toward delinquency. Agnew (1992) posits that mastery (or self-efficacy) facilitates legitimate coping efforts in the face of strain, as persons high with high levels of mastery are more likely to see their strain as manageable through nondelinquent coping efforts (see also Agnew and White 1992; Hoffman and Cerbone 1999). A sense of mastery may also make it less likely for individuals to externalize blame for stressful events, so they may seek personal solutions rather than acting out (Agnew and White 1992; Hoffman and Cerbone 1999). Finding initial support for this notion, Agnew and White (1992) found that self-efficacy buffered the impact of strain on delinquency. Other studies of general strain theory find limited or no support for the conditioning influence of mastery, but rely on aggregate measures of life events (Hoffman and Cerbone 1999; Hoffman and Miller 1998) or aggregate measures of strain (Jang and Johnson 2003; Paternoster and Mazerolle 1994).

*Sex Differences in Mastery.* Evidence suggests that mastery is distributed differently by sex. In their study, Turner and Lloyd (1999) found that men have higher levels of mastery compared to women, and this partly explained why men have lower rates of depression (see also Turner et al. 1999). In a study of adolescents, Avison and McAlpine (1992) found that high levels of mastery were associated with lower levels of depression only for girls. Siddique and D'Arcy's (1984) study showed a similar inverse relationship: girls were more likely to feel that events were uncontrollable by them personally and in the control of others or the environment, and this was linked to higher levels of distress. Oahnnessian and her colleagues (1999) initially observed higher levels of depression among girls, but controlling for self-competence reduced the relationship between sex and depression to non-significance.

Turner, Lloyd, and Roszell (Turner and Lloyd 1999; Turner, Lloyd, and Roszell 1999; Turner and Roszell 1994; see also Gore and Colten [1991] regarding adolescents) argue that females' position in the social structure is associated with developmental and contemporaneous circumstances in which the social environment is less responsive to their individual efforts, making it difficult to acquire and maintain a sense of mastery. Males' position, on the other hand is associated with positive responses to individual effort, which is conducive to a sense of mastery. Particularly during adolescence, pressure increases for girls to adapt to traditional notions of femininity, even if childhood experiences were more neutral (Siddique and D'Arcy 1984). Some female adolescents are then in a position of narrowing or ambiguous choice of gender definitions on which to build identity, a restriction that reduces their sense of control over their aspirations and behaviors.

Furthermore, recalling Rosenfield's argument (Rosenfield 1999a; 1999b; Rosenfield et al. 2005; Rosenfield et al. 2000), the boundaries created in a social structure divided by

gender are intimately linked to assumptions about the self, as well as the value of males' and females' activities. The social message is: males are in control of their world and need others less than others need them; and females have less control over their world and are dependent on others for survival. In addition, for females, there is little social reward for acting on one's own behalf, but males are rewarded for individual effort. Thus, I hypothesize that adolescent boys have higher levels of mastery compared to adolescent girls (H11). As a result, females are armed with comparatively lower levels of mastery in the face of stress.

Similar to self-esteem, this may have specific consequences for well-being, explaining sex differences in vulnerability to stress.<sup>13</sup> In terms of delinquency, the effects of mastery on vulnerability to stress may be sex-specific. Low mastery might reduce the likelihood that females would respond to stress with deviant behavior (e.g., Broidy and Agnew 1997), essentially because it may undermine their confidence to take action on their own behalf. In addition, even at higher levels of mastery, females may be unlikely to resort to deviant behavior, given their heightened reliance on others and limited reward for acting independently. As these points suggest, I hypothesize that, among girls, the conditioning effect between stress and mastery inhibits the positive effect of stress on delinquency, such that at high levels of stress, lower mastery decreases the likelihood of delinquency (H12a).

However, for males the conditional effect of mastery is likely to be different. Social messages encourage boys to take control of a situation, which will result in personal reward. Unlike girls, boys appear to have greater confidence to react and to be less concerned about undermining relationships (e.g., Broidy and Agnew 1997). As such, even when mastery is

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<sup>13</sup> Thoits (1999) points out that self-esteem and mastery are often correlated.

low, males' greater emphasis on individual resolution may lead to delinquent responses to restore control over a situation. Therefore, I hypothesize that, among boys, the conditioning effect between stress and mastery amplifies the positive effect of stress on delinquency, such that at high levels of stress, lower mastery increases the likelihood of delinquency (H12b).

In general, mastery appears to have a buffering effect between stress and depression (Ross and Mirowsky 1989; Thoits 1995; Turner and Roszell 1994), so I expect that for both girls and boys, high levels of mastery in the face of stress protects them from depression. However, girls may be more sensitive to the deleterious effects of low mastery. Low mastery reduces one's feeling that a situation is controllable by personal means. This limits the ability to effectively cope with stress and to act on one's own behalf, ultimately contributing to hopelessness or helplessness. This may place females at greater risk for depression (e.g., Rosenfield et. al 2000). I hypothesize that mastery is more important for girls in buffering the negative effects of stress on depression (H13).

In review, theoretically the social messages rooted in the gender structure convey to males that they are in control of their world and need others less than others need them, while conveying to females that they have less control over their world and are dependent on others for survival. The social rewards may also vary by social position, so that for males there are rewards for individual effort, but for females, there is little reward for acting on one's own behalf. As a result, sex differences in vulnerability to stress may be partly attributable to differences in mastery. I hypothesize that the conditioning effect of mastery involves a varying process based on sex and well-being outcome. When confronted by stress, girls' lower levels of mastery (relative to boys) makes them more likely to express vulnerability in the form of depression, but less likely to express it as delinquency. For boys, low mastery

increases their likelihood of delinquency. As depicted in Figure 2, for both males and females, mastery buffers the effect of stress on depression, but the effect is more powerful for females. However, whereas low mastery reduces the likelihood of girls reacting to stress with delinquent behavior, it amplifies the likelihood of boys responding with delinquency.

### **Coping Styles**

Coping can broadly be defined as the actions that people take on their own behalf in an attempt to avoid or lessen the impact of stress and its consequences (Pearlin 1989).

According to Pearlin (1989), coping functions to change the situation from which stressors arise, to manage the meaning of the situation in a way that reduces its threat, or to keep the symptoms of stress manageable. As a moderator in the stress process, coping functions to reduce or contain the intensity of the stressor, inhibit the emergence of secondary stressors, or cushion the effect of the stressors on outcomes (Pearlin 1999a). The functions of coping are basically the same in all situations, but the forms of coping may vary from one situation to another (Pearlin 1989).

More specifically, coping strategies are behavioral and/or cognitive attempts to manage specific situational demands that are appraised as taxing or exceeding one's ability to adapt (Thoits 1995). One strategy, active or problem-solving coping, is to attempt to do something to alleviate demanding circumstances; another strategy, emotion-focused coping, is to regulate the emotional consequences of demanding circumstances (Taylor and Aspinwall 1996; Thoits 1995). People tend to use both types of strategies, and the predominance of one type of strategy over another, as well as the efficacy of one strategy versus the other, depends on the nature of the stressor (Taylor and Aspinwall 1996; Thoits 1995). Situation-specific coping strategies are part of an individual's coping style, habitual

preferences for approaching problems, which are employed when facing stressors across a variety of situations (Thoits 1995). Stressful events can be managed using an avoidant or minimizing coping style or by using an approach-oriented or confronting style. While an avoidant coping style may be effective in the short-term, over time it is ineffective, so that an approach-oriented coping seems to most beneficial to mental health (Taylor and Aspinwall 1996).

Criminologists have given relatively less attention to the social psychological aspects of coping styles and strategies as described by medical sociologists. Agnew (1992) hypothesizes that variations in coping methods in response to strain may lead to deviance. Following Agnew, Aseltine and his colleagues (2000) recommend investigating the role of coping styles in the etiology of delinquent behaviors. In one such test, Broidy (2001) found that when stress led to legitimate coping efforts (a measure that combined problem-solving, emotional, and avoidant coping strategies), illegitimate responses like crime and substance use did not result.

*Sex Differences in Coping.* Adult males and females appear to differ in the coping techniques they are likely to employ (Rosenfield 1999a; Thoits 1995). The means by which adolescents cope with stressors also appear to be sex-specific (Byrne 2000). Research suggests that males tend to control their emotions, try to control the situation, ignore the situation, focus on positive aspects of the situation, and engage in individualized problem-solving efforts, whereas females tend to express their emotions, distract themselves, focus on negative aspects of the situation, and seek social support (Rosenfield 1999a; Thoits 1995; specifically for adolescents, see Allison, Adlaf, and Mates 1997; Compas, Orosan, and Grant 1993; Frydenberg and Lewis 1993; Seiffge-Krenke 1993).

Yet, some studies indicate that both sexes use an approach-oriented or problem-focused coping strategy to the same extent (Frydenberg and Lewis 1993; Thoits 1995), but may take advantage of such strategies in different domains. Women do so in interpersonal and family situations, whereas men do so in occupational situations (Rosenfield 1999a; Thoits 1995). Gonzales and her colleagues (2001) discovered similar relationships among adolescents, with girls reporting problem-focused coping in response to family stress and boys reporting problem-focused coping in response to conflicts with peers and at school. Interestingly, Griffith and colleagues (2000) found no differences on the problem-focused versus emotion-focused (sometimes termed approach and avoidance respectively) distinction. The differences among studies suggest that it remains an empirical question as to whether there are sex differences in coping style or use of coping, and how this might create differences in well-being.

Theoretical work suggests that the processes and practices of gender may be implicated in the scope of coping techniques that males and females access. For instance, females' selection of coping style is potentially linked to their lower status position relative to males (Liu and Kaplan 1999b). In light of their position, females may feel that active or approach-oriented coping will ultimately lead to a failed resolution of the situation, whereas emotional or avoidant coping will at least reduce the likelihood of a disappointing outcome. Elaborating on this notion, males may feel that emotional coping will reduce the likelihood of a resolution, whereas active coping may bring some change. Furthermore, consider again the boundaries between self and others created by the processes and practices of gender. Whereas the boundaries between self and others may be clearly demarcated for males, the boundaries between self and others may be blurred for females. Rosenfield (1999a) suggests

the coping style potentially employed by males may come to reflect the primacy of social distance (e.g., face the problem, deal with it yourself, ignore emotions), while the coping style potentially employed by females may come to reflect the primacy of social relationships (e.g., avoid confrontation, acceptable to display emotions). Compas and his associates (1993) describe how, through socialization practices, boys develop coping styles that rely on action or trying to ignore emotions, whereas girls develop coping styles that involve emotional attention or rumination. These styles are consistent with traditional definitions of masculinity and femininity (Leadbeater et al 1995).

Theoretical and empirical work suggests that girls tend to rely on emotion-based coping styles that include avoidance, whereas boys tend to rely on coping styles that approach the problem. Again, in the face of stress, these differences in coping potentially have consequences for well-being, explaining sex differences in vulnerability to stress. First, in terms of avoidant coping, I expect that girls, compared to boys, will report greater levels of avoidant coping style (H14). Because an avoidant coping style may inhibit instrumental behavior to manage stress, girls' reliance upon it may reduce their risk for delinquency. Therefore, I hypothesize that avoidant coping buffers the influence of stress on delinquency, and I expect that the conditional effects of avoidant coping will be more predictive of delinquency for girls compared to boys (H15a).

Employing an avoidant coping style may help maintain depressed affect, inhibiting problem-focused coping and instrumental behavior, undermining a sense of control, and leading to more depressive outcomes (Compas et al. 1993; Liu and Kaplan 1999b; Seiffge-Krenke and Klessinger 2000). If so, this places females at greater risk for depression. Because males are perhaps less likely to employ avoidant coping in the face of stress, they

are less likely to become depressed (Broidy and Agnew 1997). Therefore, I hypothesize that an avoidant coping style amplifies (rather than buffers) the negative consequences of stress on depression, and I expect that the conditional effects of avoidant coping will be more predictive of depression for girls compared to boys (H15b).

Second, turning to approach-oriented coping, I expect boys, compared to girls, will report greater levels of approach-oriented coping style (H16). Approach-oriented coping efforts that are intended to achieve some degree of control over the environment or some degree of autonomy can lead to aggression and conduct problems (Compas et al. 1993; Liu and Kaplan 1999; Seiffge-Krenke and Klessinger 2000). If so, this places males at greater risk for delinquency. Because females are perhaps less likely to employ an approach-oriented coping style in the face of stress, they are less likely to be delinquent (Broidy and Agnew 1997). In this vein, Broidy (2001) found that, under stress, females were more likely to choose legitimate coping responses, a measure incorporating a constellation of primarily cognitive and emotional strategies. But, males were more likely to forego these and take action, choosing illegitimate “coping” routes via crime and drugs. Hence, I hypothesize that approach-oriented coping amplifies the negative effects of stress on delinquency, and I expect that the conditional effects of approach-oriented coping will be more predictive of delinquency for boys compared to girls (H17a).

Employing an approach-oriented coping style potentially facilitates problem-solving and a sense of control, limiting depressive outcomes. Furthermore, because an approach-oriented coping style potentially promotes a sense of control and problem-solving to manage stress, boys’ reliance on an approach-oriented coping style may reduce their risk for depression. Therefore, I hypothesize that an approach-oriented coping style buffers the

influence of stress on depression, and I expect that the conditional effects of approach-oriented coping will be more predictive of depression for boys compared to girls (H17b).

To review, theoretically, the approach-oriented coping style employed by males ultimately reflects the primacy of social distance associated with masculine gender definitions, while the avoidant coping style employed by females ultimately reflects the primacy of social relationships associated with feminine gender definitions. As a result of this distribution of coping responses, sex differences in vulnerability to stress may be partly attributable to sex differences in coping style. I hypothesize that the conditioning effect of coping styles involves a varying process based on sex and well-being outcome. Adolescent girls endorse an avoidant coping style to a greater extent than boys, leading to depression in response to stress while inhibiting delinquent outcomes. Boys endorse an approach-oriented coping style more so than girls, leading to delinquent behavior in response to stress while inhibiting depression. This is pictured in Figure 2. For girls, avoidant coping buffers the effect of stress on delinquent behavior but amplifies the effect of stress on depression. For boys, approach-oriented coping buffers the effect of stress on depression but amplifies the effect of stress on delinquency. The effects on well-being of the interaction between avoidant coping and stress is more powerful for females, while the effect on well-being of the interaction between approach-oriented coping and stress is more powerful for males.

#### *Domains of Stress, Psychosocial Variables, and Sex-Specific Processes*

Turning again to the theoretical model depicted in Figure 1, I propose that gender as an aspect of social structure may bring about differences in the stress process for boys and

girls.<sup>14</sup> For boys, social divisions and associated gender definitions may promote boundaries between self and others that emphasize the self. This has several hypothesized consequences: Boys (compared to girls) are more concerned with stressors that affect them personally; they eschew social support, express feelings of self-esteem and mastery, and manage problems with an approach-oriented coping style. As a result, they are more likely to deal with stress, particularly agentic stress, by means of delinquency, and the conditioning effects of social and personal resources are more salient for agentic stress. That is, I posit that, for boys, the hypothesized effect of each social and personal resource in the model is more relevant for agentic stress versus communal stress (H18).

For girls, social divisions and associated gender definitions may promote boundaries between self and others that are blurred and tend to emphasize others. This has several hypothesized consequences: Girls (compared to boys) are more concerned with stressors that involve their relationships with others; they rely on social support, express feelings of low self-esteem and restricted mastery, and manage problems with an avoidant coping style. As a result, they are more likely to become depressed when dealing with stress, particularly communal stress, and the conditioning effects of psychosocial resources are more salient for communal stress. That is, I posit that, for girls, the hypothesized effect of each psychosocial factor in the model is more relevant for interpersonal stress versus intrapersonal stress (H19). All of the hypotheses derived from my discussion are listed in Table 1.

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<sup>14</sup> Let me note here that I am not trying to build a theory to explain all depression or all delinquency committed by either sex. Rather, I am attempting to build an explanation for documented differences in depression and delinquent behavior across sex by drawing on theories of gender, the stress paradigm, and general strain theory. Certainly, within sex categories, there are girls who are delinquent and boys who are depressed, but dealing with heterogeneity among males and heterogeneity among females is beyond the scope of the current project.

## CHAPTER 3

### METHODOLOGY

#### DATA

The data are from the first and second waves of the National Longitudinal Study of Adolescent Health (Add Health) (Udry 2003). Conducted between 1994 and 1996, this study is a nationally representative, probability-based survey of adolescents in grades seven through twelve (Bearman, Jones, and Udry 1997; Chantala and Tabor 1999). The study employed a stratified, random sample design of all high schools in the United States. High schools were stratified by region, urbanicity, school size and type, grade span, and percent white and black. In all, 80 high schools and 52 middle or “feeder” schools were selected with unequal probability of selection. The high schools became the cluster identifier, thus the primary sampling units (or recruiting points) for participants. For each school sampled, questionnaires were collected from students present on the day of administration. Then, a nationally representative sample of students (and their parents) from the school rosters and from those who completed the In-School Questionnaire were selected to participate in the in-home data collection phase on which the present study is based. The total sample size in Wave 1 is 20,745 adolescents. By Wave 2, the following year, the sample size is 14,738 adolescents. Non-participants, compared to those who were interviewed for Wave 2, were more often male and racial/ethnic minorities; were slightly older (16.96 compared to 15.80); their households made about \$1000 less on average per year (\$44,700 compared to \$45,600); and they had higher mean levels of delinquency (5.17 compared to 4.71) and depression (9.64 compared to 9.36).

Add Health employed a cluster sampling design in which the clusters were sampled with unequal probability. Therefore, observations are not independent and identically distributed, so point and variance estimates can be misspecified. To handle this design feature, and correctly analyze the data, Chantala and Tabor (1999) advise use of the statistical package STATA (or similar software), which has the capacity to incorporate survey design characteristics into the analyses. The Add Health data set includes variables indicating the region of the school on a sampling frame, a cluster variable representing the primary sampling unit (the school identifier), and a weighting variable for each adolescent. Once instructed to do so, STATA incorporates these variables into computational formulas. All analyses that involve estimates of the mean and regression estimates incorporate the weighting techniques.

## **MEASURES**

Table 2 provides a list of concepts to be tested paired with the variables from the Add Health data that measure these concepts. Udry (2004) states that many sources were consulted to develop and construct the survey, but that no one scale from the literature remained entirely intact in the final instrument. He suggests the use of alpha reliability of summed scales and factor analysis to validate items in research. I employ both approaches in constructing items.

### **Outcome Variables**

*Delinquency.* To measure delinquency, I use a 20-item scale covering a variety of activities, including status offenses (e.g., running away, truancy), minor delinquency (e.g., vandalism, shoplifting), and more serious forms of property and violent delinquency (e.g., burglary, fighting). Questions ask, “In the past 12 months, how often did you...”

- paint graffiti or signs on someone else's property or in a public place?
- sell marijuana or other drugs?
- take something from a store without paying for it?
- run away from home?
- drive a car without its owner's permission?
- go into a house or building to steal something?
- use or threaten to use a weapon to get something from someone?
- deliberately damage property that didn't belong to you?
- steal something worth less than \$50?
- get into a serious physical fight?
- steal something worth more than \$50?
- hurt someone badly enough to need bandages or care from a doctor or nurse?
- act loud, rowdy, or unruly in a public place?
- skipped school without an excuse (in past school year)?

For these items, response categories ranged from zero ("never") to three ("five or more times"). Some questions have slightly different response categories. The response categories for statements regarding frequency in the past 12 months of pulling knife/gun on someone and shooting/stabbing someone ranged from zero ("never") to two ("more than once"). The frequency of alcohol use in the past 12 months ranges from zero (never) to three (3-7 days a week). Items about trying marijuana since last interviewed, carrying a weapon to school since last interviewed, and spending the night away from home without permission in the past 12 months are coded zero ("no") and one ("yes").

Elliot and his colleagues (1989) advise that ordinal scales such as the one used here, which assesses rates of activity, is preferable to frequency counts because the former are more normally distributed. The scale is summed, so that higher values on the scale indicate a rate of delinquent activity. As with much delinquency research, the delinquency variable is skewed (skewness=2.624). To reduce skewness, the regression analyses use a logged value (skewness=0.150).<sup>15</sup>

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<sup>15</sup> Because of concerns regarding the overlapping nature of some of the items (e.g., shoplifting and stealing something less than \$50) and potential overcounting, I constructed two additional indices of general delinquency. The first includes 11 items: property damage, running away, joyriding, stealing items less than and more than \$50, threatening or use of a weapon, selling drugs, unruly behavior, serious physical fight,

*Depression.* To measure depression, I use a 16-item depression scale based around the CES-D scale (Radloff 1977). Add Health asked respondents, “How often was each of the following things true during the past week?” ranging on a scale from zero (“never”) to three (“most or all of the time”). Items include these statements:

- You were bothered by things that usually don’t bother you.
- You didn’t feel like eating, your appetite was poor.
- You felt that you could not shake off the blues, even with help from your family and your friends.
- You thought your life had been a failure
- It was hard to get started doing things.
- You had trouble keeping your mind on what you were doing.
- You felt that you were too tired to do things.
- You felt depressed.
- You felt hopeful about the future.
- You felt fearful.
- You were happy
- You talked less than usual.
- You felt lonely.
- You enjoyed life.
- You felt sad.
- You felt life was not worth living.

The items are added, so higher values on the scale indicate higher levels of depression. Two additional items were deleted from the scale because of their correspondence with stress constructs (see “people-related stress” below).

### **Stressors**

Gore and colleagues (1992) highlight the rationale for using separate event indices to distinguish different types of problems that affect people. Research in the field of child and adolescent development had emphasized the multiple environments in which youth functions as well as the salience of particular relationships at different stages of development (e.g., Gore et al. 1992). Thus, the various types of stress discussed in this section are intended to reflect the multidimensional character of adolescent stress.

To create composite stress measures, I first standardized the scores of each individual stress variable by subtracting the mean from the individual value and dividing by the

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truancy, and alcohol misuse. The second scale used these items to create a mean index. In both cases, the substantive results of the analyses are comparable to those using the full general delinquency measure.

standard deviation. I then added these z-scores to create composite measures. The *general stress* composite measure incorporates all of the stress variables. Divisions into categories of stress are derived from both groupings common in previous literature, as well as through factor analyses (e.g., Compas and Wagner 1991; De Coster 2005; Eagley et al. 2000). *Agentic stress* (also referred to as intrapersonal stress) refers to stressors oriented around the agency of the individual in terms of competence, success, and individuality. The agentic stress composite measure includes: poor physical condition, violent victimization, educational strain, academic trouble, chances of achieving the American dream, and chances of remaining HIV-free and living into adulthood. *Communal stress* (also referred to as interpersonal stress) refers to stressors oriented around relationships with others in one's social network. The *communal stress* composite measure includes: people-related stress, trouble relating with students, trouble relating with teachers, change in relationship with family, argument with mom, change in relationship with mom, change in activities with mom, argument with dad, change in relationship with dad, and change in activities with dad. Three variables did not load highly on either the agentic or communal stress factors. These variables are grouped as *ambient stress*, and include change in school satisfaction, change in neighborhood satisfaction, and change in neighborhood cohesion (cf. Aneshensel and Sucoff 1996). Although these items are included in the general stress measure, I exclude them from analyses by sex.

### **Agentic Stressors**

*Poor Physical Condition.* General physical condition is assessed with 6 items that address different self-assessments of health, indicated in factor analysis. These items are:

- In general, how is your health?
- You have lots of energy.

- You seldom get sick.
- When you do get sick, you get better quickly.
- You are well-coordinated.
- You are physical fit.

For the assessment of overall general health, response categories range from one (“excellent”) to five (“poor”).<sup>16</sup> For the other items, response categories range from one (“strongly agree”) to five (“strongly disagree”). The scale is additive, so a higher score denotes poorer health.

*Violent Victimization.* The victimization measure consists of four items assessing the extent to which the respondent was a victim of violence in the past 12 months.<sup>17</sup> Items include these statements:

- Someone pulled a knife or gun on you.
- Someone cut or stabbed you.
- Someone shot you.
- You were jumped.

Response categories range from zero (“never”) to two (“more than once”). The scale is additive; a higher score signifies more victimization.

*Educational Strain.* A measure of educational strain is based on two items. The first concerns adolescents’ educational aspirations on a scale of one to five where five is the highest: “How much do you want to go to college?” The second deals with adolescents’ educational expectations on the same scale: “How likely is it that you will go to college?” Aspirations are divided by expectations to obtain a ratio representing strain. The items are coded so that a higher score indicates greater strain.

*Academic Trouble.* This two-item variable assesses the respondent’s difficulty at school during the current or (if summer) preceding school year. On a scale of zero (“never”) to four (“everyday”), these two items ask respondents how often in the school year they had

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<sup>16</sup> Needham, Crosnoe, and Muller (2004) also utilize this item to capture general health. They do not, however, include the additional items.

<sup>17</sup> Other researches have constructed a similar scale from Add Health to measure violent victimization (e.g., Hagan and Foster 2001; Haynie and Piquero 2006).

trouble paying attention in school and trouble getting their homework done. The items are added, so that a higher score denotes greater difficulty with academic work.

*Life Chances.* Two variables measure the adolescent's outlook for the future, asking "What do you think are the chances that each of the following will happen to you?"

Response categories range from one (almost no chance) to five (almost certain).

- You will live to age 35. (Item reverse coded.)
- You will be killed by age 21.
- You will get HIV or AIDS.
- You will be married by age 25. (Item reverse coded.)
- You will have a middle-class income by age 30. (Item reverse coded.)

Principal components analysis indicated that these items loaded on two different factors. The first three items are added to create a scale that represents chances of living and staying HIV-free. The latter two items are added to create a scale that represents chance of achieving the "American dream" On both scales, a higher score indicates greater strain surrounding life chances.

### **Communal Stressors**

*People-Related Stress.* The two items comprising this measure consistently loaded together during factor analyses. Respondents were asked how often during the past week "people were unfriendly to you" and "you felt people disliked you." Responses ranged on a scale from zero ("never") to three ("most or all of the time"). These items are added, so that a higher score indicates greater peer-related stress.

*Trouble Relating with Students.* This variable consists of two items that loaded together in factor analysis. On a scale coded one ("never") to five ("everyday"), one item asks respondents how often in the school year they had trouble getting along with other students. The second item asks respondents how much they disagree or agree (on a five-

point Likert scale) that students at their school are prejudiced. The items are added, so that a higher score denotes more problematic relationships with other students.

*Trouble Relating with Teachers.* This variable consists of two items that loaded together in factor analysis. On a scale coded one (“never”) to five (“everyday”), one item asks respondents how often in the school year they had trouble getting along with teachers. The second item asks respondents how much they agree or disagree (on a five-point Likert scale) that teachers at their school treat students fairly. The items are added, so that a higher score denotes more problematic relationships with teachers.

*Change in Relationship with Family.* The family relationship measure is a four-item scale that assesses how adolescents feel about the quality of their family relationship. Factor analysis was used to delineate this scale. Questions comprising the scale are:

- How much do you feel that people in your family understand you?
- How much do you feel that you want to leave home? (reverse coded)
- How much do you feel that you and your family have fun together?
- How much do you feel that your family pays attention to you?

Response categories range from one (“not at all”) to five (“very much”). With the exception of the second item, the items are reverse coded. These items are added, so that a higher score represents a poorer quality of family relationship (and thus greater stress).

To capture the kind of stress Agnew (1992) terms “the loss of positively valued stimuli,” in this case a positive family relationship, I divide the value of the scale at Wave 2 by the value at Wave 1. Using this ratio, “1” indicates no change in the relationship. Values less than one indicate an improvement in the relationship, and values greater than one indicate a decline in the adolescent’s relationship with the family.

*Arguments with Parents.* One item assesses whether or not the respondent had a “serious argument” with the resident mother and with the resident father in the four weeks prior to the interview. The response categories are “no” (coded zero) and “yes” (coded one). In cases where a parent is not in residence, the corresponding value for the non-resident parent is substituted. For example, if respondent lives with a single mother and the father lives elsewhere, rather consider the data for the respondent’s father “missing,” I substitute the value from the category “non-resident” father, if available.

*Change in Relationship with Parents.* This four-item scale measures the quality of the adolescent’s relationship with a parent or parent-figure (step-parent, adoptive parent, foster parent, etc.) with whom he or she resides.<sup>18</sup> Again, in cases where a second parent figure is not in residence, the corresponding value for the non-resident parent (if available) is substituted. Adolescents were asked about their relationships with both mothers and fathers. In principal components analysis, five items loaded onto the same factor for both mother and father. Items include these three questions, with response categories ranging from one (“strongly agree”) to five (“strongly disagree”).

- Most of the time, your mother [father] is warm and loving toward you.
- You are satisfied with the way your mother [father] and you communicate with each other.
- Overall, you are satisfied with your relationship with your mother [father].

The other question comprising the scale asks “How close do you feel to your mother [father]?” with response categories ranging from one (“not at all”) to five (“very much”).

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<sup>18</sup> Cornwell (2003) employed the same items from Add Health in his discussion of the change and staticity of parent-adolescent relationships and their effects on adolescent depression. In this study, he noted that decay in the relationship over time is more detrimental to well-being than positive growth in the relationship is helpful. Researchers have also pooled these items in a cross-sectional assessments of adolescents’ perceptions of the quality of their relationships with their parents (Heinrich, Brookmeyer, and Shahar 2005; Swahn and Donovan 2004).

The item is reverse coded. The scale is additive, and a higher score on this scale represents a more negative relationship. To create a change variable, I divide the value of the scale at Wave 2 by the value at Wave 1. Using this ratio, “1” indicates no change in the relationship. Values less than one indicate an improvement in the relationship, and values greater than one indicate a decline in the adolescent’s relationship with the parent.

*Change in Activities with Parents.* The five-item measure assesses how many activities the respondent and parent did together in the four weeks before the interview. The activities are: shopping, playing a sport, attending a religious service or event, and going to a movie, play, museum, or other event.<sup>19</sup> The response categories are “no” (coded one) and “yes” (coded zero). As above, in cases where a second parent is not in residence, the corresponding value for the non-resident parent is substituted. The scale is additive, and a higher score on this scale represents more limited involvement. To create a change variable, I divide the value of the scale at Wave 2 by the value at Wave 1. Using this ratio, “1” indicates no change in the number of activities. Values less than one indicate more activities in the relationship, and values greater than one indicate a decline in activities between the adolescent and the parent.

### **Ambient Stressors**

*Change in School Satisfaction.* Four items ask students about their school experience.<sup>20</sup> These are:

- You feel close to people at your school.
- You are happy to be at your school.
- You feel like you are part of your school.
- You feel safe at your school

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<sup>19</sup> Demuth and Brown (2004) also use these items from Add Health to gauge adolescents and their parents take part in activities together (see also Sieving, Beuhring, and Resnick 2001; Swahn and Donovan 2004).

<sup>20</sup> Galliher, Rostosky, and Hughes (2004) use these items from Add Health as a cross-sectional operationalization of school belonging.

Response categories range from one (“strongly agree”) to five (“strongly disagree”). The items are summed, so a higher score represents a greater level of dissatisfaction with school. To create a change variable, I divide the value of the scale at Wave 2 by the value at Wave 1. Using this ratio, “1” indicates no change in the relationship. Values less than one indicate less dissatisfaction with school, and values greater than one indicate more dissatisfaction with school.

*Change in Neighborhood Satisfaction.* This measure assesses the respondent’s satisfaction with his or her neighborhood environment. The two items on the scale ask respondents:

- On the whole, how happy are you with living in your neighborhood?
- If, for any reason, you had to move from here to some other neighborhood, how happy or unhappy would you be?

Response categories for the first are coded from one (“very much”) to five (“not at all”). Responses for the second range from one (“very unhappy to move”) to five (“very happy to move”). The scale is additive, so a higher score signifies greater dissatisfaction. To create a change variable, I divide the value of the scale at Wave 2 by the value at Wave 1. Using this ratio, “1” indicates no change in neighborhood satisfaction. Values less than one indicate less dissatisfaction with the neighborhood, and values greater than one indicate more dissatisfaction with the neighborhood.

*Change in Neighborhood Cohesion.* This measure assesses the respondent’s perception that his or her neighborhood has a cohesive environment. In factor analysis, these four items loaded separately from the other two neighborhood items. Four items ask respondents to answer true (coded 0) or false (coded 1) to the statements:

- People in this neighborhood look out for each other.

- You know most of the people in your neighborhood.
- In the past month, you have stopped on the street to talk with someone who lives in your neighborhood.
- You feel safe in your neighborhood.

These items are summed so that zero represents a strong perception of cohesion, but three represents a lack of cohesion. To create a change variable, I divide the value of the scale at Wave 2 by the value at Wave 1. Using this ratio, “1” indicates no change in perceptions that one’s neighborhood is cohesive. Values less than one indicate an improvement in cohesiveness, and values greater than one indicate declining cohesiveness within the neighborhood.

### **Social and Personal Resources**

*Social Support.* This general social support measure is a four-item scale that assesses the degree to which adolescents feel people in their lives care about them. Principal components analysis identified the items as a distinct factor from the other resource variables. Questions comprising the scale are:

- How much do you feel that adults care about you?
- How much do you feel that your teachers care about you?
- How much do you feel that your parents care about you?
- How much do you feel that your friends care about you?

Response categories range from one (“not at all”) to five (“very much”). The scale is additive, so that higher score represents greater social support.

*Self-Esteem.* Self-esteem is assessed with a six-item scale identified in factor analysis as distinct from the other resource variables.<sup>21</sup> Respondents were asked the extent to which they agreed with a series of statements:

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<sup>21</sup> Galliher et al. (2004) use the same six items from Add Health to construct a self-esteem scale. These items are also similar to Rosenberg’s (1989) self-esteem scale.

- You have a lot of good qualities.
- You feel like you are doing everything just about right.
- You have a lot to be proud of.
- You feel socially accepted.
- You like yourself just the way you are.
- You feel loved and wanted.

Response categories range from one (“strongly disagree”) to five (“strongly agree”). The scale is additive; higher values on this scale indicate higher self-esteem.

*Mastery.* Mastery is assessed with one item that did not load strongly onto any other factor associated with the personal resources. This item asks respondents how much they disagree or agree (on a five-point Likert scale) with the statement: “You can pretty much determine what will happen in your life.” A higher score indicates greater feelings of mastery.

*Coping Styles.* I divided coping styles into two categories indicated in the previous literature and confirmed through factor analysis, avoidant coping and approach-oriented coping. For instance, Moos (2002) discusses the dimensions of the youth form of the Coping Responses Inventory. On this inventory, avoidant coping is characterized by cognitive avoidance and resignation, whereas approach-oriented coping is characterized by logical analysis and positive reappraisal. Additionally, the items I employ to construct these measures are similar to items found on the Children’s Coping Strategies Checklist developed by Ayers and colleagues (1996). Gonzales et al. (2001) used this checklist in their research, dividing it into avoidant and active coping categories, in the same fashion as I separate avoidant and approach-oriented coping. From my factor analysis of the Add Health data, the four items representing these two coping styles loaded on the same factor, but while the first two listed below loaded higher (greater than 0.69), the latter two loaded relatively low (less

than 0.40). Therefore, I separated the items into two categories. The avoidant coping measure consists of two items:

- You usually go out of your way to avoid having to deal with problems in your life.
- Difficult problems make you very upset.

The approach-oriented coping consists of two items:

- After carrying out a solution to a problem, you usually try to think about what went right and what went wrong.
- When you get what you want, it's usually because you worked hard for it.

The factor analysis indicated a third category of coping style, one that loaded onto a different factor altogether. The measure bears similarities to Gottfredson and Hirschi's (1990) concept of low self-control, characterized in part as impulsiveness, present-orientation, and risk-taking.<sup>22,23</sup> This style, which I term risk-oriented coping, also seems in direct contrast to approach-oriented coping and a sense of mastery. These three items are:

- When making decisions, you usually go with your "gut feeling" without thinking too much about the consequences of each alternative.
- You live your life without much thought for the future.
- You like to take risks.

For all items in the coping styles scales, response categories range from one ("strongly disagree") to five ("strongly agree"). Each scale is additive, so that a higher score on each scale denotes a greater use or endorsement of that coping style.

### **Demographic Characteristics and Controls**

*Time 1 Measures of Well-Being.* Time 1 measures of depression and delinquency are included in their respective models as statistical controls against potential selection effects.

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<sup>22</sup> LaGrange and Silverman (1999), among others, have suggested that these may be the most salient components of the low self-control concept.

<sup>23</sup> Nagin and Pogarsky (2004) include the first of these items – following a gut feeling – as part of their low impulse control index.

*Biological Sex.* Sex is a dummy variable, coded zero for males and one for females. The Wave 2 sample is 51% female and 49% male.

*Age.* The respondent's age is calculated by subtracting the respondent's birth year from the interview year. The average age is 15.8 years.

*Race.* The Add Health survey allows respondents to select as many racial/ethnic categories as they feel apply to them. To make this more manageable for data analysis, I took the following approach. First, any respondent who indicated they were of Hispanic origin was coded as Hispanic. Anyone who reported only one racial category was coded as that race. For those who marked more than one category, they were coded according to the group with which they most identified. Race is thus a dummy variable where zero represents white, and the categories are Hispanic, black, and other races (Asian/Pacific Islander, Native American, and other). With this approach, the racial/ethnic distribution of the sample is 53.5% white, 21.7% black, 15.7% Hispanic origin, and 8.9% Asian-Pacific Islander, Native American, and other origin.

*Household Income.* The parent portion of the Add Health survey asked the responding parent to report annual household income. As with much survey research, there is a large number of missing cases on the income variable. I used a multiple regression imputation approach to handle missing cases, substituting them with a predicted value (Zimmer 2002). I used a regression equation that takes into consideration the interview parent's marital status, highest level of education of the interviewed parent, the highest level of education of that parent's partner (if there was one), respondent's race, reported ability to pay bills, and receipt of food stamps. After confirming the equation for cases not missing income by regressing income on these variables, I replaced missing income cases with the

value predicted by the equation. To determine if those respondents who did not report income (i.e., missing before replacement) were systematically different than those who did, a dummy variable for those who did not report income was included in a preliminary regression analysis of both delinquency and depression. The coefficient was not significant, indicating no difference, so I exclude the dummy variable from further analyses. Using this approach the average income of the sample is \$45,600.

*Family Structure.* The family structure variable is constructed based on the adolescent's reported household roster. Add Health prompted students to report with whom they currently lived and those persons relation to the adolescent. From this roster, I created two dummy variables. Two-parent household serves as the reference group. These households included those with both biological parents, those with a biological parent and a step-parent, and those with adoptive/foster parents. One dummy variable consists of single parent households, and the other category consists of households where there is no "parent" figure (e.g., adolescent lives with older sibling). In this sample, 69.6% of respondents live in two-parent families, 28.4% live in single-parent families, and 1.9% live in households without a parent figure.

#### **ANALYTICAL PLAN**

The design of the conceptual model yields itself to ordinary least squares multiple regression analyses involving a series of interaction terms. The bulk of the cross-sectional analyses are based on data from Wave 2 of the National Longitudinal Study of Adolescent Health. Measures of demographic characteristics, baseline levels of delinquency and depression, and Time 1 measures of family relationships, school, and neighborhood ratings are drawn from Wave 1. The analytical plan is as follows: **First**, I estimate t-tests of

differences in means to compare boys' and girls' mean levels on the dependent variables, stress variables, and social and personal resources. These tests address Hypotheses 1a and 1b regarding the dependent variables, Hypotheses 2a and 2b regarding agentic and communal stressors, and Hypotheses 5, 8, 11, 14, and 16 regarding social and personal resources.

**Second**, I estimate regression models that incorporate the stress variables. By estimating the models for boys and girls separately, I use z-scores to determine if the slope coefficients for stress demonstrate a stronger relationship to the outcome measure for boys or girls. This would indicate vulnerability to stress, providing tests of Hypotheses 3 and 4.

**Third**, I estimate a series of regression models for each type of stress with each type of social and personal resource. For example, I estimate regression models that incorporate general stress, social support, and the interaction term general stress X social support, then do the same for agentic and communal stress. Again, by estimating the models for boys and girls separately, I use z-scores to determine if the coefficients demonstrate a stronger relationship to the outcome measure for boys or girls. These tests would indicate if vulnerability to stress is conditioned by a particular resource, providing tests of: Hypotheses 6 and 7 regarding social support; Hypotheses 9a, 9b, and 10 regarding self-esteem; Hypotheses 12a, 12b, and 13 regarding mastery; Hypotheses 15a and 15b regarding avoidant coping; and Hypotheses 17a and 17b regarding approach-oriented coping. These regression models also inform the Hypotheses 18 and 19, which suggest social and personal resources are more salient for boys in dealing with agentic stress but more salient for girls in dealing with communal stress.

## CHAPTER 4

### RESULTS

To carry out analyses, I selected cases that are not missing the Wave 2 weighting variables and that are not missing the biological sex variable. I further selected those not married and those still in middle or high school. The final sample size for analysis is 12,449, divided into 6,041 males and 6,408 females. For missing cases, unless otherwise noted above, a mean substitution is employed. For female respondents, I use the mean calculated for only female respondents; the same process is used for male respondents.

#### MISSING DATA ANALYSIS

Overall, analyses indicate that this method for managing missing data did not alter the substantive results. Of the total sample, 3.7% respondents had missing values for delinquency and 0.5% respondents had missing values for depression. Deleting these cases from regression analyses did not change the results.

Turning to the stress measures, of the total sample, 22.4% respondents had missing values for the general stress measure; 71.7% of these cases only required substitution for one element of the 19-element composite measure (e.g., required substitution of the “general health” element, but the rest of the elements were reported values). Of the total sample, 6.9% respondents had missing values for the agentic stress measure; 88.6% of these cases only required substitution for one element of the 6-element composite measure. Of the total sample, 16.2% respondents had missing values for the communal stress measure; 84.7% of these only required substitution for one element of the 10-element composite. The majority of these were missing the “argument with father” variable. Finally, of the total sample, 6.8%

respondents had missing values for the ambient stress measure; 86.4% of these cases only required substitution for one element of the 3-element composite.

To determine if those respondents for whom the mean was substituted were systematically different than those whose reported value was used, a dummy variable for those who had means substituted on the stress variables was included in a preliminary regression analysis of both delinquency and depression. None of the dummy variable coefficients was significant in the delinquency analyses, indicating no difference. Also, deleting the missing cases from regression analyses did not change the results. In the regression analyses for depression that included general and agentic stress, the dummy variables were not significant, indicating no difference. In the regression analysis for depression that included communal stress, the dummy variable was significant, such that those who had means substituted were more likely to be depressed. A secondary analysis showed that this was mostly the case for those respondents who had means substituted for the “argument with dad” and “change in relationship with father” component variables; these variables had the largest percentage of missing cases. However, deleting the missing cases did not change the overall results of the analysis.<sup>24</sup>

Turning to the social and personal resource variables, of the total sample, only 2.7% had missing values on any of the measures: 2% had missing values for social support, and less than 0.6% had missing values on each of the other resource variables. Of those cases that required mean substitution, 82.2% had only one value missing (e.g., missing on social support but none of the others). Again, I conducted analyses using dummy variables for

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<sup>24</sup> Because of concern about the number of missing cases on the individual parent variables, I also performed analyses using general and communal stress measures that include family variables but do not include any of the mother/father variables. The substantive results of these analyses are comparable to those using the full general and communal stress measures.

those who had means substituted. In two models, the dummy variables were significant. Those who had means substituted for social support were more likely to be depressed, and those who had means substituted for risk-oriented coping were less likely to be delinquent. Deleting the missing cases in models including social support and risk-oriented coping from regression analyses did not change the substantive results. In an additional set of analyses, I excluded any respondent who had at least one resource missing; again, this did not alter the regression results. Based on these analyses, I am confident that the mean substitution method does not impact the overall results of the analyses described below (cf. Hawkins, Amato, and King 2006, who also employed a mean substitution method in their analysis of Add Health data.).

#### **OUTCOME VARIABLES**

Consistent with previous research, there is support for Hypotheses 1a and 1b, which predict higher levels of delinquency for boys and higher rates of depression for girls. T-tests confirm that boys report more delinquent involvement than girls, while girls report higher levels of depression than boys. Table 3 shows that for boys the mean of delinquency is 4.421, but for girls the mean is 3.330. For boys the mean of depression is 7.984, whereas for girls the mean is 9.689.

#### **CONTROL VARIABLES**

As noted, age, race, household income, family structure, and time one indicators of well-being serve as control variables in each regression analysis. Table 4a shows the regression of the control and stress variables on delinquency. Prior delinquency is positively

related to current delinquency for both boys and girls.<sup>25</sup> In every model, African-American boys and girls are less likely to be delinquent than their white peers.<sup>26</sup> Additionally, girls of other racial groups (mostly Asian-American and Native American) are less likely to be delinquent than their white peers. Only in the models for boys are age and living in a single parent household consistently, positively related to delinquency. In the model for boys that includes agentic stress, boys who live without a parent figure less likely to be delinquent than boys in two-parent households.<sup>27</sup>

Table 4b shows the regression of the control and stress variables on depression. Prior depression is positively related to current depression for both boys and girls.<sup>28</sup> For boys, age is consistently, positively related to depression. For girls, household income is consistently, negatively related to depression. Beyond these relationships, the effect of the control variables differ based on the stress measure included in the model. In the models that include general stress, Hispanic boys and girls, African-American boys, and girls of other races are more likely to be depressed than their white peers. Also, age is positively related to depression for girls. In the communal stress models, all boys and girls of minority groups are

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<sup>25</sup> The effects of prior delinquency do not appear to “mask” the effect of stress or social/personal resources. See page 139 for discussion.

<sup>26</sup> This finding appears counterintuitive, but other research using self-report data indicates similar patterns for general delinquency. Racial differences in criminal behavior and alcohol and drug use are often minimized in self-report data (e.g., Huizinga and Elliott 1987; Elliott, Huizinga, and Morse 1986; Johnston et al. 2004). Evidence tends to indicate that differences for less serious crimes are minimal but that African-Americans report more involvement in serious delinquent behavior (Elliott 1994; Elliott and Ageton 1980; Elliott et al. 1989; Hindelang, Hischi, and Weis 1979; Hindelang 1981). The measure I employ incorporates minor and more serious forms of delinquency.

<sup>27</sup> This finding is difficult to explain. Correlational analysis (see Appendix 1) indicates that boys are more likely to live without a parent-figure, and there is a significant and positive association between agentic stress and living in a “no parent” household. For one, the number of cases within the “no parent” category is less than 200, so the relationship in the regression may be anomalous. Or, controlling for age, the individuals in this group may be in situations where they take on more “adult” responsibilities, including stress and the means to manage it. Interestingly, none of the resources I examine control for this particular finding.

<sup>28</sup> The effects of prior depression do not appear to “mask” the effect of stress or social/personal resources. See page 139 for discussion.

more likely to be depressed than their white peers. Age is positively related to depression for girls. Additionally, boys and girls living in a single parent household are more likely to be depressed than those in a two-parent household. However, all of these relationships (with the exception of age for boys and income for girls) are reduced to non-significance in the model including agentic stress. Correlation analyses show a strong correlation between all minority groups and agentic stress. But, in examining communal stress, there is no correlation for African-American and other races, and a negative correlation for Hispanics. These findings indicate that the effects of race and single parent household, and age for girls, on depression are largely mediated by the experience of agentic stress but are relatively independent of communal stress. The variations in the effects of the control variables in general stress models reflect the differing relationships they have with agentic and communal stresses.<sup>29</sup>

#### **STRESS EXPOSURE AND VULNERABILITY**

The next series of hypotheses concerns the effects of stress on delinquency and depression. Hypothesis 2a suggests that boys have higher levels of agentic stress than girls. Depicted in Table 3, t-tests indicate no significant difference between boys' and girls' means for the composite agentic stress measure. But, with the exception of poor health, boys do report higher mean levels of the individual stress measures.<sup>30</sup> Boys report higher mean levels of violent victimization, educational strain, academic troubles, stress about achieving the American Dream, and stress about chances of staying HIV-free or living to middle-age. This is consistent with Hypothesis 2a. Hypothesis 2b suggests that girls have higher levels of

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<sup>29</sup> The effects of the control variables in both the delinquency and depression models remain relatively consistent regardless of the social/personal resource entered into the model. The most interesting change occurs in the model for girls' depression that includes communal stress. In this case, social support controls for the effects of being African-American or another racial group and of living in a single parent family.

<sup>30</sup> Removing this item from the scale would make the composite significantly different for boys and girls.

communal stress than boys. As shown in Table 3, t-tests indicate no significant difference between boys' and girls' means for the composite communal stress measure. Also, no clear pattern emerges for the individual stress measures. Girls are more likely to report having a serious argument with their mothers, but boys are more likely to report trouble with their teachers, as well as a decline in activities with their mothers and their fathers. Thus, there is no support for Hypothesis 2b.

Hypotheses 3 and 4 delineate expectations for vulnerability to stress. Table 4a shows the regression of the control and stress variables on delinquency. In Table 4a, all of the stress composite measures are positively related to delinquency for both boys and girls. Hypothesis 3 posits that agentic stress is more salient in predicting delinquency for boys. But, comparing the coefficients for agentic stress across models indicates no significant difference between males and females. Males demonstrate no greater vulnerability to agentic stress in the form of delinquency than do females; Hypothesis 3 is not supported. Additionally, comparing the other stress coefficients across models indicate no significant difference between boys and girls

Table 4b shows the regression of the control and stress variables on depression. Hypothesis 4 posits that communal stress is more salient in predicting depression for girls. In Table 4b, all of the stress composite measures are positively related to depression for both boys and girls. Comparing the coefficients for general stress across models indicates that it is a more salient predictor of depression for girls. Also, comparing the coefficients for communal stress across models reveals that communal stress is more salient predictor of depression for females. Girls' greater vulnerability to communal stress in the form of

depression is consistent with Hypothesis 4. There is no significant difference between boys and girls for the agentic stress coefficients.

*Summary.* The results regarding stress exposure and vulnerability are somewhat consistent with the hypotheses. In terms of exposure to stress, the evidence demonstrates that boys report experiencing more agentic stressors, consistent with Hypothesis 2a. There is no difference between boys and girls in their exposure to general stress or communal stress, or ambient stress, which fails to support Hypothesis 2b. Regression analyses demonstrate that general stress, as well as agentic stress and communal stress, increase vulnerability in the form of delinquency and depression. In terms of sex differences in vulnerability to stress, when it comes to delinquency, there is no difference between boys and girls in their vulnerability to general stress or to the two specific types of stress. Thus, there is no support for Hypothesis 3. When it comes to depression, girls are more vulnerable to boys to the effects of general stress and communal stress, which supports Hypothesis 4. The pattern is intriguing: While boys report experiencing more agentic stressors, they are no more vulnerable to them than girls. While girls do not appear to be more exposed to general or communal stress, they are more vulnerable to them in the form of depression.

## **SOCIAL AND PERSONAL RESOURCES**

### **Social Support**

Hypothesis 5 posits that girls, compared to boys, have higher levels of social support. Hypothesis 6 suggests that stress and social support interact to predict delinquency, and that this is more salient for girls. Hypothesis 7 suggests that stress and social support interact to predict depression, and that this is more salient for girls.

As displayed in Table 3, t-tests confirm that girls report greater mean levels of social support (17.360) than do boys (16.811). This supports Hypothesis 5. Tables 5a through 5c show the regression models that include social support as a direct effect and in interaction with stress. *Table 5a* depicts the models in which general stress, social support, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, general stress is positively related to delinquency for both boys and girls. Social support has a negative effect for girls only, and the coefficients for social support are significantly different between males and females. Greater social support reduces girls' delinquency. Model II introduces the interaction term to test Hypothesis 6. However, the interaction term between general stress and social support is not significantly related to delinquency for males or females, so there is no support for Hypothesis 6.

In Model III, general stress is positively related to depression for both boys and girls. Comparing these coefficients shows this effect is more salient for girls. Social support has a negative effect for both males and females, but there is no significant difference between their coefficients for social support. Greater social support reduces depression for both boys and girls, but this does not account for girls' greater vulnerability to general stress. Social support is equally important for boys and girls in reducing depression. Model IV introduces the interaction term to test Hypothesis 7. However, the interaction term between general stress and social support is not significantly related to depression for males or females; there is no support for Hypothesis 7.

*Table 5b* depicts the models in which agentic stress, social support, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). The patterns are similar to the models with general stress. In Model I, agentic stress is

positively related to delinquency for both boys and girls. Social support has a negative effect for girls only, and the coefficients for social support are significantly different between males and females. Again, social support reduces delinquency only for girls. Model II introduces the interaction term to test Hypothesis 6. However, the interaction term between agentic stress and social support is not significantly related to delinquency for males or females.

In Model III, agentic stress is positively related to depression for both boys and girls. Social support has a negative effect for both males and females, but there is no significant difference between their coefficients for social support. Social support is equally important for boys and girls in reducing depression. Model IV introduces the interaction term to test Hypothesis 8. However, the interaction term between general stress and social support is not significantly related to depression for males or females. Again, there is no support in these models for Hypotheses 6 and 7.

*Table 5c* shows the models in which communal stress, social support, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). Communal stress is positively related to delinquency for males and females. Social support is negatively related to delinquency for males and females, and the difference between coefficients approaches significance. In this case, social support appears somewhat more important for girls than boys in limiting delinquency. Model II introduces the interaction term to test Hypothesis 6. However, the interaction term between communal stress and social support is not significantly related to delinquency for males or females, so there is no support for Hypothesis 6.

In Model III, communal stress is positively related to depression for both boys and girls. Comparing these coefficients shows this effect is more salient for girls. Social support

has a negative effect for both males and females, but there is no significant difference between their coefficients for social support. Greater social support reduces depression for both boys and girls, but this does not account for girls' greater vulnerability to communal stress. Again, social support is equally important for boys and girls in reducing depression. Model IV introduces the interaction term to test Hypothesis 7. However, the interaction term between communal stress and social support is not significantly related to depression for boys or girls. Again, Hypothesis 7 is not supported.

*Summary.* Girls report greater levels of social support than do boys, supporting Hypothesis 5. However, Hypotheses 6 and 7 are not supported. In no model does social support act to buffer the effect of stress on well-being. Rather, it has a direct effect in limiting delinquency. In all models for delinquency, girls benefit from social support. When it comes to delinquency, boys also benefit from support in the communal stress model. For the models including general stress and agentic stress, social support is more relevant for limiting girls' delinquency than for boys; this also appears to be the case for the model including communal stress. Taken together, these findings are theoretically consistent with the notion that social support is more salient for girls, reducing delinquent outcomes. In all models for depression, girls and boys benefit from social support. For general and communal stress models, social support is equally important for limiting depression, yet does not appear to account for girls' greater vulnerability to these forms of stress.

### **Self-Esteem**

Hypothesis 8 posits that boys, compared to girls, have higher levels of self-esteem. Hypotheses 9a and 9b suggest that stress and self-esteem interact to predict delinquency, but that this takes different forms for boys versus girls. In the boys' model, the interaction

between stress and self-esteem is predicted to amplify the positive effect of stress on delinquency (H9a). In the girls' model, the interaction between stress and self-esteem is predicted to inhibit the positive effect of stress on delinquency (H9b). Hypothesis 10 suggests that stress and self-esteem interact to predict depression and that this is more salient for girls.

As displayed in Table 3, t-tests confirm that boys report greater mean levels of self-esteem (25.598) than do girls (24.740). This supports Hypothesis 8. Tables 6a through 6c show the regression models that include self-esteem as a direct effect and in interaction with stress. *Table 6a* depicts the models in which general stress, self-esteem, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, general stress is positively related to delinquency for both boys and girls. Self-esteem has a negative effect for girls only, and the coefficients for self-esteem are significantly different between boys and girls. Self-esteem is important for reducing girls' delinquency. Model II introduces the interaction term to test Hypotheses 9a and 9b. However, the interaction term between general stress and self-esteem is not significantly related to delinquency for males or females, so there is no support for Hypotheses 9a and 9b.

In Model III, general stress is positively related to depression for both boys and girls, and comparing coefficients shows this effect is more salient for girls. Self-esteem has a negative effect for both males and females, but there is no significant difference between their coefficients for self-esteem. Greater self-esteem reduces depression for both boys and girls, but this does not account for girls' greater vulnerability to general stress. Model IV introduces the interaction term between general stress and self-esteem to test Hypothesis 10. The interaction term is significant for males and females: as self-esteem increases, the effect

of general stress on depression decreases. However, comparing the interaction coefficients shows that there is no significant difference between boys and girls. Greater levels of self-esteem buffer the impact of general stress on depression for both boys and girls, but the buffering effect does not account for girls' greater vulnerability to general stress. Thus, Hypothesis 10 is not supported.

*Table 6b* shows the models in which agentic stress, self-esteem, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, agentic stress is positively related to delinquency for both boys and girls. Self-esteem has a negative effect for girls only, and the coefficients for self-esteem are significantly different between males and females. Again, self-esteem is important for reducing girls' delinquency. Model II introduces the interaction term to test Hypotheses 9a and 9b. However, the interaction term between agentic stress and self-esteem is not significantly related to delinquency for males or females. Again, there is no support for Hypotheses 9a and 9b.

In Model III, agentic stress is positively related to depression for boys and girls. Self-esteem has a negative effect for both males and females, and comparing coefficients shows this effect is more salient for girls. Compared to boys, self-esteem is more helpful for girls in limiting depression. Model IV introduces the interaction term between agentic stress and self-esteem to test Hypothesis 10. The interaction term is significant for males and females: as self-esteem increases, the effect of agentic stress on depression decreases. Comparing the interaction coefficients shows that there is no significant difference between boys and girls. Yet, comparing the self-esteem coefficients in Model IV shows a significant difference between boys and girls, suggesting that the buffering effect of self-esteem may be more

relevant for girls. Even with their lower mean levels of self-esteem, it appears to benefit them more in coping with agentic stress. Therefore, the Hypothesis 10 receives some, albeit limited, support.

*Table 6c* depicts the models in which communal stress, self-esteem, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, communal stress is positively related to delinquency for both boys and girls. Self-esteem has a negative effect for girls only, and the coefficients for self-esteem are significantly different between males and females. In this case, self-esteem reduces delinquency for boys and girls. Model II introduces the interaction term to test Hypotheses 9a and 9b. However, the interaction term between communal stress and self-esteem is not significantly related to delinquency for males or females. There is no support for Hypotheses 9a and 9b.

In Model III, communal stress is positively related to depression for both boys and girls, and comparing coefficients shows this effect is more salient for girls. Self-esteem has a negative effect for both males and females, but there is no significant difference between their coefficients for self-esteem. Greater self-esteem reduces depression for both boys and girls, but this does not account for girls' greater vulnerability to communal stress. Model IV introduces the interaction term between communal stress and self-esteem to test Hypothesis 10. The interaction term is significant for males and females: as self-esteem increases, the effect of communal stress on depression decreases. However, comparing the interaction coefficients shows that there is no significant difference between boys and girls. Greater levels of self-esteem buffer the impact of communal stress on depression for both boys and

girls, but the buffering effect does not account for girls' greater vulnerability to communal stress. Thus, Hypothesis 10 is not supported.

*Summary.* Boys report greater levels of self-esteem than do girls, consistent with Hypothesis 8. However, Hypotheses 9a and 9b are not supported. In no model does self-esteem act to condition the effect of stress on delinquency. Rather, it has a direct effect in limiting delinquency. In all models for delinquency, girls benefit from self-esteem. Boys also benefit from self-esteem, but only in the communal stress models. For the models including general and agentic stress models, self-esteem is more relevant for limiting girls' delinquency than for boys. The direction of this effect is inconsistent with Hypothesis 9a, which suggests lower self-esteem (when interacting with stress) limits girls' delinquency. Instead, as hypothesized for boys, lower self-esteem in girls promotes delinquency. Hypothesis 10 is also not supported. Although self-esteem buffers the relationship between stress and depression, self-esteem is equally relevant for boys and girls in warding off the damaging effects of stress. Although the model that includes agentic stress hints that the buffering effect of self-esteem may be more salient for girls, the buffering effect of self-esteem does not appear to account for girls' greater vulnerability to general stress and communal stress.

### **Mastery**

Hypothesis 11 posits that boys, compared to girls, have higher levels of mastery. Hypotheses 12a and 12b suggests that stress and mastery interact to predict delinquency, but that this takes different form for boys versus girls. In the boys' model, the interaction between stress and mastery is predicted to amplify the positive effect of stress on delinquency (H12a). In the girls' model, the interaction between stress and mastery is

predicted to inhibit the positive effect of stress on delinquency (H12b). Hypothesis 13 suggests that stress and mastery interact to predict depression and that this is more salient for girls.

As displayed in Table 3, t-tests confirm that boys report greater mean levels of mastery (3.501) than do girls (3.444). This supports Hypothesis 11. Tables 7a through 7c show the regression models that include mastery as a direct effect and in interaction with stress. *Table 7a* depicts the models in which general stress, mastery, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, general stress is positively related to delinquency for both boys and girls. Mastery has a negative effect for males and females, but there is no significant difference between their coefficients for mastery. A sense of mastery reduces delinquency for boys and girls. Model II introduces the interaction term to test Hypotheses 12a and 12b. However, the interaction term between general stress and mastery is not significantly related to delinquency for males or females. There is no support for Hypotheses 12a and 12b.

In Model III, general stress is positively related to depression for both boys and girls, and comparing coefficients shows this effect is more salient for girls. Mastery is not significant for males or females. Model IV introduces the interaction term to test Hypothesis 13. However, the interaction terms are not significant for males or females. Mastery does not account for girls' greater vulnerability to general stress. Hypothesis 13 is not supported.

*Table 7b* shows the models in which agentic stress, mastery, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, agentic stress is positively related to delinquency for boys and girls. Mastery is significantly and negatively related to delinquency only for females, but there is no significant difference

between the coefficients for mastery. Model II introduces the interaction term to test Hypotheses 12a and 12b. However, the interaction term between agentic stress and mastery is not significantly related to delinquency for males or females. Again, there is no support for Hypotheses 12a and 12b.

In Model III, agentic stress is positively related to depression for males and females. The direct effect of mastery is not significant for males or females. Model IV introduces the interaction term between agentic stress and mastery to test Hypothesis 13. The interaction term is significant only for males: as mastery increases, the effect of agentic stress on depression decreases. However, comparing the interaction coefficients shows that there is no significant difference between boys and girls. Hypothesis 13, which predicted the interaction between stress and mastery for depression would be more salient for girls, is not supported. There is tentative evidence that for boys, a sense of mastery buffers the effect of agentic stress on depression.

*Table 7c* depicts the models in which communal stress, mastery, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, communal stress is positively related to delinquency for males and females. Mastery has a negative effect for males and females, but there is no significant difference between the coefficients. Model II introduces the interaction term to test Hypotheses 12a and 12b. However, the interaction term between communal stress and mastery is not significantly related to delinquency for males or females. Hypotheses 12a and 12b are not supported.

In Model III, communal stress is positively related to depression for both boys and girls, and comparing coefficients shows this effect is more salient for girls. Mastery is

negatively related to depression for females, but their coefficient for mastery is not significantly different from boys. Greater mastery reduces depression for girls, but this does not account for girls' greater vulnerability to communal stress. Model IV introduces the interaction term to test Hypothesis 13. However, the interaction term between communal stress and mastery is not significant for males or females. Again, Hypothesis 13 is not supported.

*Summary.* Boys report greater levels of mastery than do girls, consistent with Hypothesis 11. However, Hypotheses 12a and 12b are not supported. In no model does mastery act to condition the effect of stress on delinquency. Rather, it has a direct effect in limiting delinquency. In all models for delinquency, girls benefit from a sense of mastery. Boys also benefit from a sense of mastery in all models except the model including agentic strain. Hypothesis 13 is also not supported. Of six interaction terms predicting depression, only one was significant – for boys, mastery buffers the effect of agentic strain on depression. This is theoretically consistent with the notion that boys' greater levels of mastery protect them from depression, particularly when it comes to agentic stress. Nonetheless, there is no significant difference between boys and girls. As a direct effect, mastery generally has little impact on depression, and also fails to account for girls' greater vulnerability to general and communal stressors. Mastery is not significant in the model that includes general stress, and although significant for girls in the model that includes communal stress, the coefficient is not significantly different than that for boys.

### **Avoidant Coping**

Hypothesis 14 posits that girls, compared to boys, have significantly higher levels of avoidant coping. Hypothesis 15a suggests that stress and avoidant coping interact to predict

delinquency, buffering the positive effect of stress on delinquency, and that this is more salient for girls. Hypothesis 15b suggests that stress and avoidant coping interact to predict depression, amplifying the positive effect of stress on depression, and that this is more salient for girls.

As displayed in Table 3, t-tests confirm that girls report greater mean levels of avoidant coping (7.137) than do boys (6.853). This supports Hypothesis 14. Tables 8a through 8c show the regression models that include avoidant coping as a direct effect and in interaction with stress. *Table 8a* depicts the models in which general stress, avoidant coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, general stress is positively related to delinquency for both boys and girls, but avoidant coping is not significant for either. Model II introduces the interaction term between general stress and avoidant coping to test Hypothesis 15a. As Model II shows, the interaction term is significant only for males: as avoidant coping increases, the effect of general stress on delinquency decreases. Also, the coefficients for the interaction terms are significantly different between males and females. For boys in particular, avoidant coping buffers the effect of general stress on delinquency. The significance of the interaction term supports Hypothesis 15a, but the unexpected salience of the buffering effect for boys is not anticipated in Hypothesis 15a.

In Model III, general stress is positively related to depression for males and females, and the effect is more salient for girls. An avoidant coping style increases depression for both boys and girls, but there is no significant difference between these coefficients. The direct effect of avoidant coping does not account for girls' greater vulnerability to general stress. Model IV introduces the interaction term between general stress and avoidant coping

to test Hypothesis 15b. The interaction term is significant only for girls: as avoidant coping increases, the effect of general stress on depression increases. However, comparing the interaction term coefficients shows no significant difference between boys and girls. For girls in particular avoidant coping amplifies the effect of general stress on depression, but this effect does not account for girls' greater vulnerability to general stress. Thus, Hypothesis 15b receives partial support.

*Table 8b* shows the models in which agentic stress, avoidant coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, agentic stress is positively related to delinquency for both boys and girls. Avoidant coping is significantly positively related to delinquency for girls, and the coefficient is significantly different from boys. Avoidant coping, as a direct effect, leads to delinquency for girls. Model II introduces the interaction term between agentic stress and avoidant coping to test Hypothesis 15a. The interaction term is significant only for males, indicating a stress buffering effect: as avoidant coping increases, the effect of agentic stress on delinquency decreases. However, the coefficients for the interaction terms are not significantly different between males and females. Again, the significance of the interaction term supports Hypothesis 15a, but the interaction with stress is not more important for girls as expected. Further, this model indicates that avoidant coping may actually promote delinquency in girls, in contrast to the direction specified in Hypothesis 15a.

In Model III, agentic stress is positively related to depression for males and females. An avoidant coping style increases depression for both boys and girls. The difference between the coefficients for avoidant coping approaches significance. In this case, avoidant coping appears somewhat more important for girls than boys in promoting depression.

Model IV introduces the interaction term between agentic stress and avoidant coping to test Hypothesis 15b. The interaction term is significant only for girls: as avoidant coping increases, the effect of agentic stress on depression increases. Comparing the interaction coefficients shows avoidant coping coefficients in Model IV shows (as in Model III) that the difference approaches significance. This suggests that the amplifying effect of avoidant coping on the relationship between agentic stress and depression may be more relevant for girls. Therefore, Hypothesis 15b receives some support.

*Table 8c* depicts the models in which communal stress, avoidant coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, communal stress is positively related to delinquency for both boys and girls, but avoidant coping is not significant for either. Model II introduces the interaction term between general stress and avoidant coping to test Hypothesis 15a. As Model II shows, the interaction term is significant only for males, indicating a stress buffering process: as avoidant coping increases, the effect of communal stress on delinquency decreases. However, the coefficients for the interaction terms are not significantly different between males and females. Again, the significance of the interaction term supports Hypothesis 15a, but the interaction with stress is not more important for girls as expected.

In Model III, communal stress is positively related to depression for males and females, and the effect is more salient for girls. An avoidant coping style increases depression for both boys and girls, but this does not account for girls' greater vulnerability to communal stress. Model IV introduces the interaction term between general stress and avoidant coping to test Hypothesis 15b. The interaction term is not significant for boys or girls. Avoidant coping does not amplify the effect of communal stress on depression, nor

does this relationship explain girls' greater vulnerability to communal stress. Thus, Hypothesis 15b is not supported.

*Summary.* Girls report greater mean levels of avoidant coping than do boys, supporting Hypothesis 14. Hypothesis 15a is not supported as phrased, but an interesting pattern emerged. For boys, avoidant coping does buffer the relationship between general stress, agentic stress, and communal stress and delinquency. Hypothesis 15a did anticipate this buffering effect, but it did not anticipate that this effect is significantly more salient for boys, as in the general stress model. In contrast to Hypothesis 15a, for girls, in no model does avoidant coping condition the relationship between stress and delinquency. It has a direct and positive effect on delinquency in the models including agentic stress, suggesting that avoidant coping may increase delinquent outcomes for girls. Hypothesis 15b receives partial support. In all models, avoidant coping has a direct and positive effect on depression for boys and girls. As expected, for girls, avoidant coping amplifies the effect of general stress and agentic stress on depression. Yet, females' coefficients are not significantly different from males' coefficients, either for the direct effects in the models including general and communal stress, or for the interaction effect in the model including general stress. Although the model that includes agentic stress hints that the amplifying effect of avoidant coping may be more salient for girls' depression, the amplifying effect of avoidant coping does not readily account for girls' greater vulnerability to general stress and communal stress.

### **Approach-Oriented Coping**

Hypothesis 16 posits that boys, compared to girls, have significantly higher levels of approach-oriented coping. Hypothesis 17a posits that stress and approach-oriented coping interact to predict delinquency, amplifying the positive effect of stress on delinquency, and

that this is more salient for boys. Hypothesis 17b posits that stress and approach-oriented coping interact to predict depression, buffering the positive effect of stress on depression, and that this is more salient for boys.

As displayed in Table 3, t-tests demonstrate that girls' and boys' mean levels of approach-oriented coping are not significantly different, failing to support Hypothesis 16. Tables 9a through 9c show the regression models that include approach-oriented coping as a direct effect and in interaction with stress. *Table 9a* depicts the models in which general stress, approach-oriented coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, general stress is positively related to delinquency for both boys and girls. An approach-oriented coping has a negative effect on delinquency for both, but there is no significant difference between the coefficients for approach-oriented coping. Model II introduces the interaction term between general stress and approach-oriented coping to test Hypothesis 17a. As Model II shows, the interaction term is significant only for females, indicating a stress buffering effect: as approach-oriented coping increases, the effect of general stress on delinquency decreases. However, the coefficients for the interaction terms are not significantly different between males and females. The buffering effect indicated by the interaction term is in contrast to Hypothesis 17a, which anticipated an amplifying effect, as is the significance of the effect for girls but not boys. While intriguing, these findings are not consistent with Hypothesis 17a.

In Model III, general stress is positively related to depression for male and females, and comparing coefficients show that this effect is more salient for girls. An approach-oriented coping style is not significantly related to depression for boys or girls. Model IV introduces the interaction term between general stress and approach-oriented coping to test

Hypothesis 17b. However, the interaction terms are not significant. Hypothesis 17b is not supported, and approach-oriented coping does not account for girls' greater vulnerability to general stress.

*Table 9b* depicts the models in which agentic stress, approach-oriented coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, agentic stress is positively related to delinquency for both boys and girls. An approach-oriented coping style is negatively related to delinquency for boys and girls, but there is no significant difference between the coefficients for approach-oriented coping. Model II introduces the interaction term between agentic stress and approach-oriented coping to test Hypothesis 17a. The interaction term is significant only for females, indicating a stress buffering effect: as approach-oriented coping increases, the effect of agentic stress on delinquency decreases. However, the coefficients for the interaction terms are not significantly different between males and females. The buffering effect indicated by the interaction term is in contrast to Hypothesis 17a, which anticipated an amplifying effect, as is the significance of the effect for girls but not boys. Again, while intriguing, these findings are not consistent with Hypothesis 17a.

In Model III, agentic stress is positively related to delinquency for both boys and girls. Approach-oriented coping style is not significantly related to depression for boys or girls. Model IV introduces the interaction term between agentic stress and approach-oriented coping to test Hypothesis 17b. However, the interaction terms are not significant.

Hypothesis 17b is not supported.

*Table 9c* shows the models in which communal stress, approach-oriented coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III

and IV). In Model I, communal stress is positively related to delinquency for both girls and boys. Approach-oriented coping has a negative effect for both males and females, but there is no significant difference between the coefficients for approach-oriented coping. Model II introduces the interaction term between communal stress and approach-oriented coping to test Hypothesis 17a. The interaction term is significant only for females, indicating a stress buffering effect: as approach-oriented coping increases, the effect of communal stress on delinquency decreases. However, the coefficients for the interaction terms are not significantly different between males and females. Again, these findings are not consistent with Hypothesis 17a.

In Model III, communal stress is positively related to depression for male and females, and comparing coefficients show that this effect is more salient for girls. An approach-oriented coping style is negatively related to depression only for girls, but this does not account for girls' greater vulnerability to communal stress. Additionally, the coefficients for approach-oriented coping are not significantly different for males and females. Model IV introduces the interaction term between communal stress and approach-oriented coping to test Hypothesis 17b. However, the interaction terms are not significant. Hypothesis 17b is not supported.

*Summary.* Girls and boys report similar levels of approach-oriented coping, so Hypothesis 16 is not supported. Hypothesis 17a, which suggests an amplifying effect of approach-oriented coping between stress and delinquency that is more salient for boys, is not supported. Nonetheless, approach-oriented coping appears to be an important resource in limiting delinquency, but does so differently by sex. For boys, in no model does approach-oriented coping condition the relationship between stress and delinquency. Instead, it has a

direct and negative effect on delinquency in all stress models, suggesting that approach-oriented coping limits delinquent outcomes for boys. An interesting pattern emerges for girls. Approach-oriented coping buffers the relationship between general stress, agentic stress, and communal stress and delinquency. Hypothesis 17b, which suggests a buffering effect of approach-oriented coping between stress and depression that is more salient for boys, fails to receive support. Approach-oriented coping does not condition the relationship between stress and depression in any model. In the models for general and agentic stress, direct effects are not significant for boys or girls. In the model for communal stress, there is a direct effect for girls, such that approach-oriented coping reduces depression. However, this does not account for girls' greater vulnerability communal stress. Unlike its utility in limiting delinquency, approach-oriented coping appears largely ineffective in managing depression.

### **Risk-Oriented Coping**

I developed no specific hypotheses regarding risk-oriented coping, but the contrast it provides to both mastery and approach-oriented coping as variables warrants its consideration as a possible explanation for sex differences in well-being. The risk-oriented coping measure suggests that the adolescent follows a “gut feeling” when dealing with a problem without thought for the long-term implications, has little concern for the future, and is willing to take risks. In contrast the approach-oriented coping measure suggests the adolescent thinks over problems and works toward solutions, and the mastery measure suggests the adolescent feels control over his or her future.

As displayed in Table 3, t-tests demonstrate that boys mean levels of risk-oriented coping (9.378) are significantly greater than girls (8.531). Tables 10a through 10c show the

regression models that include risk-oriented coping as a direct effect and in interaction with stress. *Table 10a* depicts the models in which general stress, risk-oriented coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, general stress is positively related to delinquency for both boys and girls. Risk-oriented coping has a positive effect for both males and females, increasing delinquent outcomes. Comparing coefficients for risk-oriented coping shows that this direct effect is significantly more salient for girls. Model II introduces the interaction term between general stress and risk-oriented coping. The interaction term is significant only for females: as risk-oriented coping increases, the effect of general stress on delinquency increases. Comparing the interaction coefficients for boys and girls shows the relationship has greater salience for girls. For girls, risk-oriented coping amplifies the effect of general stress on delinquency.

In Model III, general stress is positively related to depression for male and females, and comparing coefficients show that this effect is more salient for girls. Risk-oriented coping is positively related to depression for boys and girls, such that greater risk-oriented coping increases depression. Comparing coefficients for risk-oriented coping shows no significant difference between males and females. Risk-oriented coping does not account for girls' greater vulnerability to general stress. Model IV introduces the interaction term between general stress and risk-oriented coping. The interaction terms are not significant.

Compare these findings to the models including general stress, mastery, and approach-oriented coping. Whereas mastery and approach-oriented coping have direct and negative effects on delinquency for boys and girls, risk-oriented coping has a direct but positive effect on delinquency. Whereas, for girls, approach-oriented coping buffers the effect of general stress on delinquency, risk-oriented coping amplifies the effect of general

stress. Unlike mastery and approach-oriented coping, risk oriented-coping has a direct, positive effect on depression for both sexes.

*Table 10b* depicts the models in which agentic stress, risk-oriented coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, agentic stress is positively related to delinquency for both boys and girls. A risk-oriented coping style is positively related to delinquency for boys and girls, and comparing coefficients shows this effect is significantly more salient for girls. Model II introduces the interaction term between general stress and risk-oriented coping. The interaction terms are not significant. In Model III, agentic stress is positively related to depression for both males and females. Risk-oriented coping is positively related to depression for boys and girls; the coefficients for risk-oriented coping are not significantly different. Model IV introduces the interaction term between general stress and risk-oriented coping. The interaction terms are not significant.

Compare these findings to the models including agentic stress, mastery, and approach-oriented coping. Whereas mastery (for girls) and approach-oriented coping (for both sexes) have direct and negative effects on delinquency, risk-oriented coping has a direct but positive effect on delinquency. Whereas, for girls, approach-oriented coping buffers the effect of agentic stress on delinquency, risk-oriented does not interact with agentic stress to predict delinquency. Unlike mastery and approach-oriented coping, risk oriented-coping has a direct, positive effect on depression for both sexes. Although mastery interacts with agentic stress for boys, there is no interaction between agentic stress and risk-oriented coping to predict depression.

*Table 10c* depicts the models in which communal stress, risk-oriented coping, and their interaction are regressed on delinquency (Models I and II) and depression (Models III and IV). In Model I, communal stress is positively related to delinquency for both boys and girls. Risk-oriented coping has a positive effect for both males and females, and this effect is more salient for girls. Model II introduces the interaction term between communal stress and risk-oriented coping. The interaction term is significant only for females: as risk-oriented coping increases, the effect of communal stress on delinquency increases. Comparing the interaction coefficients show a significant difference between males and females, indicating the interaction has greater salience for girls. For girls, risk-oriented coping amplifies the effect of communal stress on delinquency.

In Model III, communal stress is positively related to depression for males and females, and comparing coefficients show that this effect is more salient for girls. Risk-oriented coping is positively related to depression for boys and girls. However, the coefficients are not significantly different, thereby failing to account for girls' greater vulnerability to communal stress. Model IV introduces the interaction term between communal stress and risk-oriented coping. The interaction terms are not significant.

Compare these findings to the models including communal stress, mastery, and approach-oriented coping. Whereas mastery and approach-oriented coping have direct and negative effects on delinquency for boys and girls, risk-oriented coping has a direct but positive effect on delinquency. Whereas, for girls, approach-oriented coping buffers the effect of communal stress on delinquency, risk-oriented coping amplifies the effect of communal stress. Whereas mastery and approach-oriented coping are only significant in

predicting girls' depression, risk oriented-coping has a direct effect on depression for both sexes.

*Summary.* Boys report greater levels of risk-oriented coping than do girls, but employing this style to manage stress is more deleterious for girls when it comes to delinquency. In direct contrast to the pattern for approach-oriented coping, risk-oriented coping appears to be an important resource in promoting delinquency, but does so differently by sex. For boys, in no model does risk-oriented coping condition the relationship between stress and delinquency. Instead, it has a direct and positive effect on delinquency in all stress models, demonstrating that risk-oriented coping increases delinquent outcomes for boys. An interesting pattern emerges for girls. Risk-oriented coping amplifies the relationship between general stress and communal stress and delinquency. Comparing coefficients for both the direct effects and the interaction effects demonstrates that the impact of risk-oriented is consistently more salient for girls. In all depression models, the direct effects of risk-oriented coping are significant for boys and girls, such that risk-oriented coping increases depression. However, this does not account for girls' greater vulnerability general or communal stress. Risk-oriented coping does not condition the relationship between stress and depression in any model. Like its relationship with delinquency, risk-oriented coping appears to foster depression.

In contrast to the approach-oriented coping measure, which suggests the adolescent thinks over problems and works toward solutions, and the mastery measure, which suggests the adolescent feels control over his or her future, the risk-oriented coping measure suggests that the adolescent follows a "gut feeling" when dealing with a problem, has little concern for the future, and takes risks. The findings indicate that high levels of approach-oriented coping

and mastery limit delinquency, whereas high levels of risk-oriented coping increase delinquency. Furthermore for girls, approach-oriented coping buffers the effect of stress, whereas risk-oriented coping amplifies the effect of stress. Examining the findings for depression indicates that risk-oriented coping is robustly related to depression across sex and type of stress, whereas the effect of approach-oriented coping and mastery depend on sex and type of stress.

### **SUMMARY OF KEY FINDINGS**

Table 3 presents a summary of the results of the hypothesis testing. T-tests confirm that boys report higher levels of delinquency, while girls report higher levels of depression. There is no sex difference in exposure to stress on any of the composite measures. Consistent with Hypothesis 3a, items that comprise the agentic stress composite (excepting poor health) are more likely to be reported by boys. However, items comprising the communal stress model are not as convincing, showing no clear pattern of difference between boys and girls. There are also key differences in vulnerability to stress. Stress is a consistent predictor of delinquency, but there are no sex differences in the slope coefficients. Stress is also a consistent predictor of depression. In this case, although there is no difference in exposure, girls are more vulnerable to general stress and communal stress, consistent with Hypothesis 4. Boys' greater exposure to agentic stress does not translate into greater vulnerability in the form of delinquency or depression.

There are sex differences in levels of social and personal resources consistent with the hypotheses. Girls report higher levels of social support and avoidant coping, as predicted in Hypotheses 6 and 14, respectively. Boys report higher levels of self-esteem and mastery, as predicted in Hypotheses 9 and 12, respectively. Boys also report higher levels of risk-

oriented coping. There is no sex difference in approach-oriented coping. In general, the regression models fail to support hypotheses (at least as initially crafted) about sex differences in conditioning effects of personal and social resources on the relationship between stress and well-being.

Social support has direct effects on both outcome measures, but it does not interact with any type of stress to predict well-being. Social support is an important resource in reducing girls' delinquency, and to lesser extent for reducing boys' delinquency. This is theoretically consistent with the notion that social support is more salient for limiting delinquent outcomes for girls. Social support is important for both boys and girls in reducing depression, but does not appear to account for girls' greater vulnerability to general and communal stress.

Like social support, self-esteem has a direct effect in limiting delinquency. Self-esteem is an important resource in reducing girls' delinquency, and to lesser extent for reducing boys' delinquency. The direction of this effect is inconsistent with Hypothesis 10a, which suggests self-esteem may lead to delinquent outcomes for girls. Self-esteem is important for both boys and girls in buffering the deleterious effects of stress on depression. The buffering effect of self-esteem in the face of agentic stress may be more salient for girls, yet the buffering effect of self-esteem does not appear to account for their greater vulnerability to general and communal stress.

Mastery has a direct effect in limiting delinquency for both boys and girls. As a direct effect, mastery generally has little impact on depression, and also fails to account for girls' greater vulnerability to general and communal stressors. Mastery is not significant in the general stress model, but it does limit depression for girls' in the communal stress model.

For boys, mastery buffers the deleterious effect of agentic strain on depression. This is theoretically consistent with the notion that boys' greater levels of mastery protect them from depression, particularly when it comes to agentic stress. However, in none of the depression models are the coefficients for the direct or interaction effects of mastery significantly different between boys and girls.

The effects of avoidant coping take different forms for females and males. For girls, avoidant coping has a direct and positive effect on delinquency in the model including agentic stress, suggesting that avoidant coping may increase delinquent outcomes for girls. Moreover, in the model including agentic stress the direct effect is more salient for girls. In contrast, for boys, avoidant coping buffers the relationship between stress and delinquency. This effect is significantly more salient for boys in the general stress model, such that employing an avoidant coping style to deal with stress limits delinquent outcomes. When it comes to depression, avoidant coping has a direct and positive effect for both boys and girls. Again, in the model including agentic stress the direct effect appears to be more salient for girls. As expected in Hypothesis 15b, for girls avoidant coping amplifies the effect of general stress and agentic stress on depression; yet, coefficients for the interactions terms are not significantly different from males' coefficients. Additionally, avoidant coping does not account for girls' greater vulnerability to general and communal stress.

The effects of approach-oriented coping also take different forms for males and females, keeping in mind that in no model are the coefficients significantly different. For boys, approach-oriented coping has a direct and negative effect on delinquency in all stress models, suggesting that approach-oriented coping limits delinquent outcomes for boys. For girls, in the model including agentic stress, similar to boys, approach-oriented coping directly

limits delinquency. However, in the models for general and communal stress, approach-oriented coping buffers the relationship between stress and delinquency. When it comes to depression, in the models including general and agentic stress, direct effects are not significant for boys or girls. In the girls' model including communal stress, approach-oriented coping reduces depression. However, this does not account for girls' greater vulnerability communal stress, as there is no significant difference from the boys' coefficient for approach-oriented coping. Approach-oriented coping does not condition the relationship between stress and depression in any model.

The effects of risk-oriented coping also take different forms for males and females. Even though boys report greater levels of risk-oriented coping, in the models for delinquency, its influence is more salient for girls. For boys, it has a direct and positive effect on delinquency in all stress models. For girls, risk-oriented coping also has a direct effect in the model including agentic stress. Furthermore, risk-oriented coping interacts with general and communal stress to amplify the effect of stress on delinquency. Both the direct effects and the interaction effects are consistently more salient for increasing girls' delinquency. In terms of depression, the direct effects of risk-oriented coping are significant for boys and girls, such that risk-oriented coping increases depression. Risk-oriented coping does not condition the relationship between strain and depression in any model. Additionally, risk-oriented coping does not account for girls' greater vulnerability general or communal stress.

In regard to coping styles, several intriguing patterns emerge. Overall, the patterning of the direct effects suggests that an avoidant coping style puts girls at risk for delinquency and boys at risk for depression. An approach-oriented coping style reduces boys' and girls'

risk of delinquency, and to a lesser extent, depression. A risk-oriented coping style has a negative effect on both boys' and girls' well-being. The patterning of the interaction terms suggests that avoidant coping amplifies the damaging effect of stress on girls' depression but buffers the damaging effect of stress on boy's delinquency. In terms of general and communal stress, for girls, approach-oriented coping buffers the deleterious effect of stress on delinquency, while risk-oriented coping amplifies the effect of stress

In general, girls' models for both delinquency and depression explained a greater proportion of variance than did boys' models. The majority of the hypotheses – those that predict a certain patterning of interaction terms – are not supported by the analyses.

Although boys are more exposed to agentic stress and girls are more vulnerable to communal stress, the analyses do not consistently support the hypotheses that the use of resources in the face of stress is more important for boys in dealing with agentic stress and for girls in dealing with communal stress (Hypotheses 18 and 19 respectively). The conditional effects of social and personal resources on the relationship between stress and well-being is not clearly “gendered” when it comes to general stress nor when it comes to the more specific types of stress, perhaps with the exception of avoidant and risk-oriented coping. Direct effects do indicate some sex differences in the salience of social support and self-esteem as well as coping styles in understanding why girls are less delinquent than boys, but no model accounts for girls' greater susceptibility to depression.

## CHAPTER 5

### DISCUSSION

Like other social processes, adolescent well-being is dynamic, unfolding over time as young people try to negotiate the social world, a world in which they encounter stress and a world significantly structured by gender. In the past, the large body of sometimes unconnected literature could give one the impression that there are sex differences in well-being, period. This neglects an understanding of the social and cultural origins of apparent differences between the sexes, namely the process and practices of gender. Adopting a stance of incorporating complimentary theoretical perspectives in research can lead to a more thorough understanding of sex differences in depression and delinquency. To this end, the model proposed here seeks to account for sex differences in these indicators of well-being by offering an account regarding the social and cultural nature of those differences.

As noted in the introduction, the purpose of this project is to advance the literature by building on three current trends. First, this project examines two different outcomes of the stress process, depression and delinquency, to gain a fuller picture of adolescent well-being in general and sex differences in particular. It is important to note that stress acts in an indeterminate manner, such that its impact is not limited to a single disorder but may be manifested across a spectrum of impaired functioning (Aneshensel 1999; Cullen 1984; Pearlin 1999a). Such outcomes, shown to be robust in other research, include symptoms of emotional distress, notably symptoms of depression, as well as antisocial behavior (Aneshensel 1999). The harmful mental health effects of exposure to stress and maladjustment to stressful experiences are not inherent to a particular stressor or category of stressors; rather, problems of well-being result from an interaction with attributes and

resources of the individual and his or her social circumstances (Aneshensel 1999). Thus, to detect possible differences in the ways in which social groups manifest problems with well-being, and to observe the range and specificity of outcomes that strain might generate, it is necessary to bring together information about different outcomes (Pearlin 1999a).

Following a second trend, this project moves beyond observing sex differences in adolescent well-being and seeks potential theoretical explanations by focusing on literatures from two fields, medical sociology and criminology, specifically the stress paradigm and general strain theory. Joining these perspectives eliminates the tendency for compartmentalizing outcomes to one field or the other, as both of these approaches can be used to predict multiple outcomes. Furthermore, because both of these approaches share common concepts, an avenue is created for theorizing about the effects of gender on their processes. The result is a more unified approach to examining sex differences in adolescent well-being, bridging the gap between observing sex differences, and offering a more extensive theoretical understanding of the relationship between gender as a social structure and adolescent well-being. In this project, I continue past research that tests how the experience of stress varies in gendered ways to explain the documented variance by sex in adolescent well-being. Additionally, I take steps to further specify current approaches by hypothesizing and testing how concepts important across the stress paradigm and general strain theory – social support, self-esteem, mastery, and coping styles – interact with the experience of stress in gendered ways to explain the documented variance by sex in adolescent well-being.

A third trend involves consideration of how the stress process is gendered. This project brings theories of gender to bear on how the processes described in the stress

paradigm and general strain theory are modified by the processes and practices of gender to produce sex differences in well-being. This has been addressed in medical sociology in terms of sex differences in depression (e.g., Aneshensel 1992; Nolan-Hoeksema 1987; Padgett 1997) and criminology in terms of sex differences in delinquent behavior (e.g., Lanctot and LeBlanc 2002; Steffensmeier and Allan 1996). The approach I forward in this project compliments these developments but asks why one type of problem appears in one sex more so than the other. Following Cullen's (1983) structuring perspective, the answer has to do with how gender structures adolescents' lives. Through interactional processes of socialization, gender attaches meaning to a person's biological sex, and structural practices within a gender stratified society reinforce this meaning over a person's life course. As such, gender as an aspect of social structure shapes a young person's social experiences and personal expressions. Through social experiences, differences are created in identities that form around gender definitions, in the nature of the stressors to which young people are exposed and vulnerable, and in the social and personal resources young people access in times of stress. The theoretical result is differences in personal expressions of problems with well-being.

Thusly, theorizing about gender can contribute to understanding sex differences in well-being in three areas consistent with the stress paradigm and general strain theory. The first two areas, gender as it relates to outcomes of the stress process and gender as it relates to the experience of and vulnerability to stressful experiences, have been given attention in the literature. The third area, gender as it relates to the conditioning effects of social and personal resources, is the more specific contribution I make in this dissertation. I argue that variability in access to and use of social support, self-esteem, mastery, and coping styles – in

concert with differences in exposure and vulnerability to agentic and communal stressors – in effect sorts adolescents into different well-being outcomes when efforts to manage stress fail. Furthermore, I contend that the gendering of social and personal resources represent a structuring force between stress and a particular outcome, thereby contributing to sex differences in well-being.

In short, to borrow from De Coster (2005), I propose that gendered responses to gendered stressors are conditioned by gendered psychosocial resources. My effort fills in the picture of the stress process. If the stress process is gendered in terms of direction of outcome and the nature of stress, it may be further modified when incorporating social and personal resources, with the understanding that these too are gendered. Although there is theory and research to suggest that these resources may be gendered, modeling of the entire picture is lacking in the literature. Providing information to this end is my goal.

Consistent with previous literature on adolescent well-being, this analysis demonstrates that adolescent boys and girls express problems differently: boys are more likely to be delinquent, whereas girls are more likely to be depressed. Both the stress paradigm and general strain theory predict that the occurrence of stress, itself rooted at least partly in social stratification, can activate sequences that result in problems like depression and delinquency. Further, the processes and practices of gender can play an intricate role in males' and females' exposure and vulnerability to stress. Theoretical development initially targeting adult experiences, then applied to adolescent experiences, seems to suggest that the gendering of the stress process should map from one stage-of-life to another. The results of the current study illustrate that the reality is very complex. The process is not unequivocally gendered, the patterns that emerged are not as initially hypothesized, but the results provide

interesting insight into the influence of stress and the role of social and personal resources in the lives of adolescents.

First of all, general stress, as well as agentic and communal stress, leads to delinquency and depression for boys and girls. Yet, across sex, exposure to stress does not translate into vulnerability to stress. Boys are more exposed to agentic stressors. Even in adolescence, boys' positions in a gender structured society are associated with stressors stemming from gender definitions that emphasize achievement, competition, and competency (Cleary 2000; Davies et al 1999; Moses 1999; Liu and Kaplan 1999a; Sweeting and West 1994). However, boys' greater exposure to agentic stress does not make them more vulnerable to this type of stress, either in the form of delinquency or depression. In contrast, there is no sex difference in levels of exposure to communal stressors or stress in general. Yet, when it comes to depression, girls are more vulnerable to the deleterious effects of general and communal stress. In line with the cost of caring hypothesis, expectations for connectedness, nurturance, and emotional reliance are challenged by communal stressors (Gilligan 1982; Kessler and McLeod 1984; Rosenfeld 1999b; Thoits 1995; Turner and Avison 1989), but gender norms support internalizing, rather than externalizing, negative feelings (Broidy and Agnew 1997; Compas et al. 1993; Leadbeater et al. 1995).

The stress paradigm and general strain theory suggest that the reason exposure does not necessarily translate into vulnerability may be due to access to and use of social and personal resources. These resources are theorized to moderate the effect of stress; further, these resources are theoretically gendered. In this project, I expected that the gendering of these resources would contribute to sex differences in well-being. Again, the current analyses reveal a complicated, but not necessarily gendered process. Resources matter for

well-being, but do not readily account for why boys are more delinquent and girls are more depressed.

Consistent with the idea that males' and females' positions in the social structure may create differences in the availability or use of social support as a resource to handle stress, girls report higher levels of social support. Moreover, social support is a particularly salient resource in curbing delinquency in girls. When girls feel that people around them care about them, it inhibits delinquent behavior. Although there is no buffering effect, this finding is consistent with the notion that for girls, social support may act as a resource for managing stress.<sup>31</sup> Additionally, social support can bond girls more tightly to others, so that engaging delinquent behavior might jeopardize the relationships that girls' experiences encourage them to value and rely upon (Broidy and Agnew 1997; Cernkovich and Giordano 1987; Heimer and De Coster 1999; Rosenfield 1999a). Social support, in part, explains why girls are less delinquent than boys.

The results of this study show that social support is equally important for both boys and girls in reducing depression. Contrary to the notion that differences in social support may explain girls' greater vulnerability to stress, social support does not mitigate their greater vulnerability to general or communal stress. Given that girls are not more exposed to general or communal stress, it does not appear there are cost and benefits to their relationships with others, as some have suggested (Gore et al. 1992; Turner 1994). Rather, as demonstrated among adult samples, social support is equally useful for males and females. But, there are quantitative differences in the level of support, and this can influence comparative levels of depression. Females gain greater psychological benefit because they have more support

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<sup>31</sup> Other analyses indicate that social support partially mediates the effect of stress on delinquency.

(Umberson et al. 1996). To put it a different way, if adolescent females did not have higher mean levels of support relative to males, they could have even higher levels of depression (Turner and Marino 1994; Umberson et al. 1996). Although this does not account per se for sex differences in depression, it does suggest the particular relevance of social support for girls' well-being.

Consistent with the idea that males' and females' positions in the social structure may create differences in social messages regarding self-worth, boys report higher levels of self-esteem. Yet, when it comes to restricting delinquency, girls benefit more from self-esteem than do boys. Contrary to the notion that girls' lower levels of self-esteem relative to boys would make them less likely to respond to stress with delinquent behavior, low self-esteem contributes more powerfully to delinquency for girls than boys. Males do not seem to gain greater benefit because they have higher self esteem. Instead, similar to the situation for social support and depression, if girls' self-esteem were as high as boys' self-esteem, girls would be even less delinquent compared to boys.

Self-esteem is an important factor in understanding delinquency in girls, but these findings do not explain why girls are less delinquent than boys. Theoretical reasons offered by Broidy and Agnew (1997) suggest that girls' lower self-esteem would make them less likely to react with illegitimate behavior. The results here show that their lower self-esteem does not necessarily make it difficult to take actions on their own behalf, but represents a lost resource for legitimate coping. One explanation holds that girls may engage in delinquent behavior to restore self-worth (Kaplan 1980), particularly if it is eroded by stress. Liu (2004) notes that when girls act in defiance of conventional gender norms, it may bring some status and a sense of power, culminating in improved self-esteem.

A more elaborate explanation considers the role of peers. Girls may engage in this route of self-enhancement, not because they have something to “prove” as boys might, but because they want to “fit in” (see Giordano et al. 1986). Females’ self-esteem relies more heavily on input from others (Schwalbe and Staples 1991), even if those others are potentially delinquent peers (Jang and Thornberry 1998; Kaplan 1980; Rosenberg, Schooler, and Schoenberg 1989). Individuals low in self-esteem tend to have lower levels of conventional social support (Thoits 1995). Distanced from conventional others, a person low in self-esteem may turn to a delinquent reference group, which may provide a more favorable environment for positive self-evaluation and social comparison based in part on delinquent activity (Kaplan 1980; Rosenberg et al. 1989). Delinquent peers assist adolescents in overcoming the internal or moral inhibitions that otherwise prevent delinquent behavior (Piquero 2005). This could be especially important for girls, whose socialization experiences strongly discourage antisocial behavior (Mears, Ploeger, and Warr 1998). My own analysis (not shown) demonstrates that delinquent peers are significant predictors of delinquency for girls, as is conventional social support. Taken together, this suggests that when conventional input and self-esteem are high, girls are better able to resist delinquency, but when conventional input and self-esteem are low, and unconventional input high, girls are more likely to be delinquent. Although this does not clearly explain the divergence in well-being, it is consistent with the idea that girls’ greater connectedness to and reliance on conventional others results in lower levels of delinquency.

Despite the expectation that girls’ lower self-esteem should put them at greater risk for depression compared to boys, the results of this study also show that a global measure of self-esteem buffers the damaging effect of stress on depression similarly for males and

females. Mean differences in global self-esteem do not clearly explain sex differences in depression. Again, if girls' levels of self-esteem were similar to boys, the gap in depression could be reduced but not closed. Nonetheless, the buffering influence of global self-esteem on stress does not explain girls' greater vulnerability to general and communal stress. Instead, global self-esteem appears to have a generalized buffering effect between stress and depression (Thoits 1995; Turner and Lloyd 1999; Turner and Roszell 1994).

The analyses here also indicate that global self-esteem may be more relevant for girls compared to boys when coping with agentic stress. Females' self-esteem is thought to be more global in nature, derived primarily from input from others, while boys' self-esteem is thought to be more compartmentalized, linked to specific domains surrounding performance and competence (Bolognini et al. 1996; Turner et al. 1999). Interestingly, the source and nature of their self-esteem is thought to place females in a more vulnerable position to the loss of self-esteem and therefore depression (Gore and Colten 1991; Liu and Kaplan 1999b), at least when it comes to general and communal stressors; this study did not support this idea. Instead, girls' self-esteem appears to be helpful in buffering the effect of agentic stress on depression.

However, the source and nature of boys' self-esteem may be undermined by agentic stressors (to which they are more exposed), as reflected in the relative less benefit their self-esteem provides in these situations. Furthermore, the analyses also show that mastery, a sense that one determines his own future, buffers the deleterious effect of agentic stress on depression for boys. Recalling that self-esteem and mastery are often correlated (Thoits 1995), this finding is consistent with the notion that boys' sense of self is tied to issues of

personal competence and control over situations and when threatened by agentic stressors, results in depression.

This finding is also consistent with the notion that resources may need to be “matched” to stressors in order to be effective (Pearlin 1999b), and the matching process may vary by sex. In this case, for girls, self-esteem is important for girls in managing agentic stress, in terms of both outcomes. For boys, the measure of mastery, a sense of one’s control over the future, is relevant for agentic stress, components of which measure concerns for the future, including attending college, achieving the American dream, and staying healthy and alive into young adulthood and middle age. While self-esteem and mastery are both relevant in helping boys resist depression, it seems that mastery is essential when boys try to cope with stressors that challenge a sense of personal competence and control over the future.

Perhaps the most intriguing results to emerge from the current project are the patterns for coping styles. Consistent with previous work, girls and boys did report differences in the coping styles they employ, with girls reporting higher levels of avoidant coping and boys reporting higher levels of risk-oriented coping (Byrne 2000; Compas et al. 1993; Rosenfield 1999a; Thoits 1995). There is no difference in mean levels of approach-oriented coping, as noted in other research, although females appear to take advantage of this resource (Frydenberg and Lewis 1993; Gonzales et al. 2001; Thoits 1995; Washburn-Ormachea, Hillman, and Sawilowsky 2004). For example, in this study, when girls take a thoughtful approach to deal with problems, it buffers the deleterious effect of communal stresses on delinquency and limits depression in the model that includes communal stress. I discuss this in further detail below.

As predicted, for both boys and girls, desiring to avoid a problem leads to depression. For girls in particular, attempting to avoid a problem exacerbates the deleterious effect of general and agentic stress on depression. The finding explains, in part, girls' greater vulnerability to general stress when it comes to depression.<sup>32</sup> The finding also supports the hypothesis that the processes and practices of gender encourage girls to avoid confrontation but engage in emotional attentiveness or rumination, in order to maintain social relationships (Compas et al. 1993; Leadbetter et al. 1995; Rosenfield 1999a). Because employing an avoidant coping style inhibits problem-focused coping and instrumental behavior, undermines a sense of control, and facilitates depressed affect, girls' emphasis on avoidant coping places them at greater risk for depression compared to boys (Compas et al. 1993; Liu and Kaplan 1999b; Seiffge-Krenke and Klessinger 2000).

Avoiding problems may lead boys to become depressed, but it also has the effect of buffering the damaging effect of stress on delinquency. Gonzales and her colleagues (2001) also noted that avoidant coping, at high levels of stress, may promote prosocial behavior. General strain theory forwards the idea that delinquency can be viewed as retaliation against the source of the strain (Agnew 1992). When boys avoid the source of a problem, it potentially limits contact with a person or situation that otherwise might provoke a delinquent reaction. However, Taylor and Aspinwall (1996) argue an avoidant coping style may be effective in the short-term, but over time it is ineffective, so that an approach-oriented coping seems to most beneficial to well-being.

For both boys and girls, thinking through a problem limits delinquency. For girls in particular, taking a thoughtful approach buffers the harmful effects of stress on delinquency,

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<sup>32</sup> Recall that the interaction term in the girls' model is significant, but it is not significantly different from the interaction term for boys.

similar to findings of Gonzales et al. (2001). Boys may avoid a problem, reducing delinquency in the short-term, but over the long-term girls' more thoughtful approach in dealing with stress limits their delinquency relative to boys. Thus, the pattern for avoidant and approach-oriented coping presents a potential explanation for variation in well-being by sex. Avoiding a stressful situation or relationship is one reason why girls are more depressed, thinking problems through with concern for long-term implications is why they are less delinquent.

Although I developed no specific hypotheses related to the concept of a risk-oriented coping style, factor analyses indicated such a category, separate from both avoidant and approach-oriented coping. The risk-oriented coping measure suggests that the adolescent follows a "gut feeling" when dealing with a problem, without thought for the long-term implications, and a willingness to take risks. This style also seems in direct contrast to approach-oriented coping, which describes thinking through a problem, and a sense of mastery, which describes concern for the future. Risk-oriented coping is a consistent predictor of depression for boys and girls: a risk orientation increases feelings of depression. This creates a compelling comparison with the findings for mastery and approach-oriented coping. Whereas risk-oriented coping is relevant regardless of the type of stress included in the model, the effects of mastery and approach-oriented coping are more specific. As Gonzales and her colleagues (2001) discovered, it could be that boys and girls take advantage of these resources in different domains, with boys doing so in academic situations and girls in family situations. As discussed above, for boys, mastery buffers the damaging effect of agentic stress on depression. For girls, both mastery and approach-oriented coping protect them from depression only in the communal stress models. The stress vulnerability argument

posits that boys are more threatened by agentic stress and girls by communal stress. In this study, boys are more exposed to agentic stress and girls more vulnerable to communal stress when it comes to depression. The application of a coping resource may be “gendered” accordingly: a sense of control over and concern for the future is particular helpful in resisting depression when confronted with those types of stress that challenge the life domains to which boys and girls are differently attuned.

Risk-oriented coping, as measured here, appears to be connected more broadly to depression for both boys and girls. Perhaps a risk-orientation coincides with a defeatist or fatalistic outlook on life. Fatalism refers to the belief that one is relatively powerless over what happens in life, leading to a withdrawal of effort, because attempts at problem solving are viewed by the individual as likely to be unsuccessful (Wheaton 1983; see also Aneshensel 1999; Scheid and Horowitz 1999).<sup>33</sup> A fatalistic outlook, a “let the chips fall where they may” attitude that overrides active and productive problem-solving, promotes depression (Wheaton 1983).

In view of the findings for delinquency, risk-oriented coping may be indicative of a general attitude or trait that negatively impacts well-being. For instance, the measure of risk-oriented coping bears similarities to aspects of Gottfredson and Hirschi’s (1990) concept of low self-control, characterized in part as impulsiveness, short-sightedness, and risk-taking. Gottfredson and Hirschi (1990), in their general theory of crime, theoretically link the concept of low self-control to a range of deviant and, one could argue, self-destructive, behaviors. Grasmick and his colleagues (1993) developed a cognitive measure of self-

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<sup>33</sup> Scheid and Horowitz (1999) assert that fatalism, like learned helplessness, may be greater in females, given that their social positions (and related socialization practices) are characterized by high levels of external regulation over individual choices and actions.

control that includes elements of risk-taking, impulsivity, self-centeredness, temper, and preferences for simple tasks and physical activities, which they assert is a one-dimensional measure. Others argue for a multidimensional approach that assesses the relationship between each element and deviance, finding that risk-seeking and, to a lesser extent, impulsiveness tend to be the strongest predictive components of the self-control concept (Arneklev et al. 1993; LaGrange and Silverman 1999; Longshore, Turner, and Stein 1996; Nakhaie et al. 2000; Wood, Pfefferbaum, and Arneklev 1993). Consistent with other research on low self-control measured cognitively, boys in this study report higher levels of risk-oriented coping (LaGrange and Silverman 1999; Nakhaie et al. 2000). A risk-oriented coping style is a strong predictor of delinquency for boys and girls, consistent with prior research on low self-control (Burton et al. 1998; Keane, Maxim, and Teevan 1993; Tittle, Ward, and Grasmick 2003). However, in contrast with both theory and prior research on low self-control, in the current study risk-orienting coping is particularly more powerful for girls, as both a direct effect and in interaction with stress. For girls, a willingness to take risks and follow a gut feeling without considering the implications of that response amplifies the negative consequences of general and communal stress on delinquency.<sup>34</sup> To put this particular finding in context, in the following paragraphs, I provide a brief discussion of self-control as it relates to differences between males and females. I then turn to a discussion of self-control as it relates to general strain theory.

In their general theory of crime, Gottfredson and Hirschi (1990) argue that variations in self-control can account for males' higher rates of deviant and criminal behavior. They

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<sup>34</sup> Gonzales et al. (2001) report similar results. Their measure of approach-oriented coping was scaled such that one end represented concepts similar to my approach coping measure and one end represented concepts similar to my risk-oriented measure.

propose that self-control (or lack of it) results when, during childhood, a child is cared for and supervised, deviant behavior is recognized when it occurs, and steps are taken to correct that behavior. When it comes to the impact of socialization on self-control, gender socialization may be key (Heimer 1996; Lanctot and LeBlanc 2002; Messerschmidt 1993). Presumably, parents have greater interest in supervising and managing their daughters' behavior, resulting in greater self-control among girls and lower self-control among boys (Gottfredson and Hirschi 1990).

In a parallel and more elaborate explanation for sex differences in preferences for risk (Grasmick et al. 1996), Hagan and his colleagues (Hagan, Simpson, and Gillis 1985, 1987; Hagan, Gillis, and Simpson 1990) forward power-control theory, arguing that parents' positions of power and authority in the workplace translate into power relationships in the household. This in turn influences how male and female children are controlled and socialized for risk-taking. The theory predicts that the more patriarchal a family structure, the more intense the parental control over girls and the greater socialization toward risk-taking for boys. This results in a sex gap in "taste for risk" and therefore larger differences in delinquency between sons and daughters. Blackwell and Piquero (2005), in their investigation of power-control theory and self-control, noted that the impact of parenting on the development of self-control in boys and girls from homes of differing patriarchal structure is made more complex because of gender variations. But, they also found that the relationship between low self-control and delinquency was invariant across sex and household structure. In other words, differences in socialization practices resulted in differences in self-control, as predicted by power-control theory, yet the effect of self-control on delinquency was similar for males and females.

According to the tenets of Gottfredson and Hirschi's theory, low self-control should similarly predict delinquency for males and females, and should also explain the sex gap in delinquency. In this regard, research is inconclusive. Burton and his co-authors (1998) offer evidence that self-control contributes to the sex gap in criminal behavior, yet has a different impact for males and females. Pratt and Cullen's (2000) meta-analysis indicated self-control predicted deviant behavior in male and female samples, but tended to be a more robust predictor among males. Other studies indicate that a cognitive measure of self-control is a significant predictor of delinquency for males and females; however, it reduces but does not account for sex differences in various measures of deviant behavior (LaGrange and Silverman 1999; Nakhaie et al. 2000). Tittle and his colleagues (2003) examined this issue in greater detail, using the cognitive measure of self-control developed by Grasmick et al. (1993), as well as behavioral indicators (as favored by Gottfredson and Hirschi). They found that when measured cognitively, there were no sex difference in mean levels of self-control, nor did self-control eliminate the effect of sex on delinquency. However, when measured behaviorally, boys had lower self-control than females, and self-control explained the effect of sex on deviance. For males and females, the behavioral measure of self-control predicted various indices of deviant behavior, yet for the most part there was no significant difference in the coefficients for males and females. Thus, it appears self-control theory may provide a useful mechanism for understanding sex differences in delinquency and deviance, but the results are heavily dependent on the way in which self-control and deviance are measured (Tittle et al. 2003).

Indeed, the results of the current study do not conform to certain aspects of self-control theory as it relates to sex differences in delinquency. Although boys report greater

levels of risk-oriented coping and risk-orientation leads to general delinquency for boys and girls, it is a more powerful predictor for girls rather than boys, in contrast to what might be expected theoretically. Along these lines, LaGrange and Silverman (1999) argue that the elements of self-control, as measured by a inclusive scale like Grasmick et al.'s (1993), may not be equally reflective of the concept, nor may they be the same for males and females. LaGrange and Silverman (1999) analyses of these constituent elements returned intriguing results. First, males reported significantly higher levels of impulsivity, risk-seeking, and present orientation (i.e., short-sightedness) although there were no differences on the other elements. Second, in spite of mean differences, the impact of these elements varied by sex. Impulsivity was the strongest predictor of general delinquency for males but not significant for females. Risk-seeking was the strongest of general delinquency for females, but not significant for males. Present-orientation predicted delinquency for both. Third, preference for risk-seeking was the most salient variable for explaining sex differences in delinquency. In other words, knowing about differences in preferences in risk-seeking (as well as impulsivity), rather than self-control broadly measured, contributes to a more thorough understanding of sex differences. The finding that different elements of the construct impact males and females differently implies "different patterns of causality" for male and female delinquency (LaGrange and Silverman 1999: 63).

One such pattern may involve differing responses to strain. Turning to the relationship between strain and self-control, Peter, LaGrange, and Silverman (2003) hypothesize that self-control could be viewed as one of the resources that mitigates the relationship between strain and delinquency as outlined by general strain theory. In this case, a sense of self-control or restraint may inhibit delinquent responses to stress and promote

legitimate responses. Peter et al. (2003) elaborate on the theoretical issues related to “integrating” Gottfredson and Hirschi’s (1990) theory and Agnew’s (1992) theory, namely the difference in understanding why people engage in deviant behavior. Whereas Gottfredson and Hirschi attribute this to a latent character feature (low self-control) coupled with opportunity, Agnew attributes this to variations in stressful situations that affect one’s motivation to engage in deviance. Some argue that this difference in the basic assumptions of the theories precludes integration (e.g., Kornhauser’s [1978] comments on control versus strain theories). Gottfredson and Hirschi (1990) themselves argue that because low self-control is likely to be temporally prior to all other potential sources of learning, strain, or social control, this concept subsumes all other explanations or motivations for deviance. On the other hand, Agnew (2005) incorporates all of these elements into his recent general theory. For example, strains, derived from various life domains including peers, family, school, living environment, may increase motivations for criminal behavior whereas self-control represents a constraint on criminal behavior. Motivations and constraints interact: so, strain combined with low self-control could lead to crime.

In a prior discussion, Agnew and his colleagues (2001) outline personality “traits” that hypothetically influence the relationship between strain and delinquency, in particular the traits of negative emotionality and low constraint, drawing on Caspi et al. (1994). The former is characterized by ill-temper, ease to anger, intense emotional reactions, with the potential for aggression. The latter is characterized by impulsiveness, risk-taking, and little concern for others and social norms. People low in constraint are theorized to be less aware of and/or concerned with negative consequences and less able to employ legitimate coping mechanisms while being more prone to illegitimate reactions. In an effort to distance

themselves from the obvious comparison to the low self-control position, Agnew et al. (2001) prefer the “trait” concept because it is not imbued with the same control-based theoretical assumptions as Gottfredson and Hirschi’s (1990) approach. Instead, the notion of a personality trait can be expanded into theoretical approaches with different sets of basic assumptions, like strain theories. Viewed in this light, negative emotionality/low constraint may be useful to understanding how people respond differently to stress. That is, people with these traits may be more emotionally responsive to stress, may be less able to determine legitimate reactions, and more likely to resort to delinquency.

However, perhaps due to the theoretical debate, few studies examine the potential for interaction between stress and concepts akin to self-control. Peter et al.’s (2003) analysis of an adolescent sample did not support their hypothesis, showing little evidence of an interaction between stress and self-control as measured on a cognitive scale based on Grasmick et al. (1993). Instead, stress and self-control had independent, additive effects on delinquency. On the other hand, Agnew and his colleagues (2001) found that their measure of “negative emotionality/low constraint,” characterized in part by impulsiveness, acting without thinking and ill-temper, conditioned the effect of strain on delinquency. Those high in negative emotionality/low constraint were more likely to respond strain with delinquency. When it comes to sex differences in delinquency, the interaction hypothesis coupled with the purported sex differences in self-control, suggests that boys are more delinquent in response to stress because they have lower levels of self-control, whereas girls’ relatively higher levels of self-control buffer the effects of stress (Agnew 2005). Research appears limited on the topic. Agnew et al. (2001) noted that their results regarding the interaction between strain

and negative emotionality/low constraint applied to males and females but did not provide additional detail.

In sum, my results parallel theoretical and empirical work related to the concept of low self-control, but they diverge in important ways. First, theoretical/empirical work implies boys should have less self-control, particularly on components of risk-seeking, impulsivity, and short-sightedness. My results also indicate that boys report greater levels of risk-oriented coping. Second, theoretical/empirical work implies self-control should be related to delinquency for boys and girls, and in this study risk-oriented coping directly relates to delinquency for both. Third, theoretical work implies that self-control should explain sex differences in delinquency, such that boys' lower levels of self-control make them more delinquent. However, in this study risk-oriented coping is a more powerful predictor of delinquency for girls. Fourth, a small amount of theoretical and empirical work implies that self-control (or similar concepts) conditions the impact of strain on delinquency, and that this effect could be more salient for boys than girls. In this study, risk-oriented coping amplifies the damaging effect of stress on delinquency, but this interaction is only significant for girls, and particularly more salient in girls' response to communal stress.

Burton and his colleagues (1998) report a parallel result. In their study, low self-control had a direct effect on criminal behavior for males, but interacted with opportunity to predict crime only for females. Essentially they posited that females may need an extra "push" for self-control to matter. In the case of Burton et al.'s study, this push is access to illegitimate opportunities, which they presume are less available to females. Perhaps strain operates in a similar manner, providing a push for girls to get involved in delinquency. This is particularly intriguing, given that communal stressors interact with risk-oriented coping.

The deterioration of relationships may place girls in situations that offer greater opportunity for but less constraint against delinquency.

The results of the current study suggest that criminologists may have underestimated the importance of concepts akin to self-control in girls' lives, particularly their ability to cope with stress, at least when it comes to dimensions of risk-taking, impulsivity, and lack of concern for the future. One reason girls are less delinquent boys could be their relatively lower levels of risk-oriented coping. If girls' levels of risk-oriented coping were made comparable to boys, they would gain on the "gap" in delinquency, especially since it is a more powerful predictor for girls. Moreover, when girls are inclined to take risks and do not consider the ramifications of a course of action when dealing with a problem, especially in dealing with stress rooted in their social networks, there can be potentially dangerous consequences. To girls' benefit, as illustrated by the findings for approach-oriented coping, taking a thoughtful approach to dealing with stress does help them steer clear of delinquent behavior.

The results also suggest that mental health researchers may have overlooked a coping style distinct from, but conceptually similar to, approach-oriented coping. Other researchers place these items on the same scale using reverse coding (e.g., Gonzales et al. 2001); my analyses indicate separate factors, wherein mastery, approach-oriented, and risk-oriented coping have overlapping yet independent components. Risk-oriented coping is a robust predictor of depression. Perhaps what is optimal for well-being is achieving a balance between approach-oriented and risk-oriented coping: a willingness to think through a problem combined with a willingness to take a measured risk to resolve stress. Additional

research is necessary to specify the direction of risk-oriented coping and how it is tied to depression, as well as how it is tied in particular to girls' delinquency (see Robbers 2004).

In sum, consistent with general strain theory and the stress paradigm, each of the coping styles tested in this study condition the relationship between stress and well-being, particularly for delinquency. The conditioning effects also vary by sex, although not necessarily in ways anticipated by theories of gender. As expected, avoiding a stressful situation or relationship is one reason why girls are more depressed. Also, as anticipated, the “matching” of a coping resource to a type of stress may be gendered. Thinking through a problem and a sense of control over and concern for the future are particularly helpful in resisting depression when boys and girls are confronted with those types of stress that challenge the life domains to which they are differently attuned (agentic and communal stress, respectively). When it comes to delinquency, avoiding a stressful situation limits delinquency in boys. On the other hand, thinking problems through with concern for long-term implications is one explanation for why girls are less delinquent. As further evidence, when girls go to the opposite coping extreme, one characterized by impulsive responses to problems, short-sightedness, and risk-seeking, it amplifies the effect of stress on delinquency. Coping styles play an important and complex role in conditioning the effect of stress on delinquency, contributing to sex differences in well-being. Further research is warranted to determine more precisely just how coping styles operate to explain the relationship between stress and adolescent well-being in general and sex differences in particular.

## CHAPTER 6

### CONCLUSION

At the outset, the overarching goal of this dissertation was to go beyond approaches that examine just sex differences in depression or sex differences in delinquency, and examine why girls are more likely to experience the former and boys more likely to experience the latter. To do so, I drew on theories of gender and described how these informed our understanding of the stress paradigm and general strain theory. Recognizing that our categories of biological sex imperfectly resemble our expectations for and experiences of gender, I hypothesized that there should be variations in the stress process, particularly in social and personal resources, that result in the divergence of well-being by sex. As expected the stress process operates similarly for boys and girls, yet there are sex differences in exposure and vulnerability to stress, in mean levels of social and personal resources, and in the role of these resources in well-being. I also discovered that although the process is not overtly “gendered,” the patterns provide partial explanation for sex differences in depression and delinquency.

The analyses reported here contribute to our understanding of sex differences in depression. One explanation for why girls are more depressed than boys is their greater vulnerability to general and communal stressors, which is consistent with the notion that girls are socialized to be more responsive to those stressors that involve family, peers, and others in their social networks. None of the social and personal resources tested here statistically explains girls’ greater vulnerability to these stressors. My analyses demonstrate the general utility of social support in limiting depression and of self-esteem in buffering the deleterious effect of stress on depression, regardless of sex. Additionally, a reduction in risk-oriented

coping would limit depression for both boys and girls. My analyses also show the utility of mastery and approach-oriented coping for limiting depression is more sex-specific. For boys, mastery buffers the damaging effect of agentic stressors on depression. For girls, mastery and an approach-oriented coping style are relevant for limiting depression only in the models with communal stressors. In this case, boys and girls put their resources to use in a similar manner, albeit in stressful situations to which boys and girls are socialized to be attentive. Lastly, my analyses illustrate a key difference between girls and boys is the role played by avoidant coping. Avoidant coping promotes depression for both, but girls' greater level of avoidant coping places them more at risk for depression. Furthermore, girls, unlike boys, rely on avoidant coping in response to stress, which exacerbates the problem and leads to depression.

The results reported here contribute to our understanding of sex differences in delinquency. My analyses provide a picture of why girls are less delinquent than boys. In the case of delinquency, girls benefit from a resource repertoire that includes social support, self-esteem, and an approach-oriented coping style. Greater levels of social support protect girls from delinquent outcomes, consistent with the notion that girls are socialized to establish closer ties with others, place value on those relationships, and take care not to disrupt them. Although they have lower levels of global self-esteem, girls marshal self-esteem to resist delinquency, and when confronted by stress, think a problem through and work towards a solution. This is also reflected in the "opposite" effect of risk-oriented coping, which amplifies the effect of stress on delinquency; the less girls rely on this form of coping in the face of stress, the less they engage in delinquency. To a greater extent than

boys, social support and self-esteem protect girls from delinquency, and taking a thoughtful, paced approach to stress limits their delinquent outcomes in response to stress.

My analyses also illustrate why boys are more delinquent. First of all, they have higher levels of risk-oriented coping, which puts them at risk for delinquency. Secondly, when confronted with stress, boys tend to avoid the problem, which has the effect of limiting delinquency. However, previous research indicates avoidant coping is a “quick fix,” a resource useful for dealing with stress in the short-term but offering no long-term solution for the problem. When this is the case, and boys do not fall back on an approach-oriented solution (or resort to a risk-oriented solution), delinquency could result.

The results reported here, to some extent, contribute to our understanding why girls are more depressed and boys more delinquent. Based on my analyses, one explanation for the divergence in adolescent well-being lies in differences in the availability, use, and efficacy of coping styles. Boys’ greater levels of risk-oriented coping put them at risk for delinquency, while girls’ greater levels of avoidant coping put them at risk for depression. When it comes to managing stress, avoiding a stressful situation or relationship is one reason why girls are more depressed, but thinking problems through with concern for long-term implications is why they are less delinquent. My analyses support Rosenfield’s (1999b) assertion that a complexity of social forces converge to push males and females toward different troubles in well-being.

My research also indicates social forces converge to protect them from different troubles as well. However, additional factors not considered here may also be relevant for understanding how processes and practices of gender produce sex differences in well-being, such as gender identity (e.g, Horwitz and White 1987), social learning (e.g., Piquero 2005),

social bonding (e.g., Heimer and De Coster 1999), power-control (e.g., Hagan et al. 1985), and negative emotional states (e.g., Broidy and Agnew 1997). These factors may operate independently of or in concert with stress and resources. Whatever the eventual explanation, it is evident that there are sex differences in well-being in ways that should be linked to the process and practices of gender, and that stress and social and personal resources play an important role, given the explanatory power of my statistical models, especially for girls.

### **LIMITATIONS OF THE CURRENT PROJECT**

Several hypotheses derived for this study are not supported by the analyses. One explanation may have to do with the age differences within the sample. Some research has suggested that younger adolescents may not have solidified their gender identities, or that younger respondents may not have fully garnered adequate or distinct coping resources (Bolognini et al. 1996; Seiffge-Krenke 1993). Analyses on the sample divided by age (15 and younger and 16 and older) showed that overall patterns for males and females remained the same. A second explanation could have to do with “interference” from the time one controls for delinquency and depression. If problems with well-being bring on secondary stress, erode support networks, and/or undermine resources, then conditioning relationships at a later measurement point may be suppressed (Pearlin 1999a; Wheaton 1985).<sup>35</sup> Analyses with time one depression and delinquency controls removed showed that overall patterns remained the same.

Measurement issues also require consideration. First, regarding the dependent variables, the measure of general delinquency covers the past 12 months, while depression

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<sup>35</sup> Mediation analyses (not shown) indicated that time 1 depression and delinquency generally undermined “positive” coping resources (social support, self-esteem, mastery, approach-oriented coping style) and bolstered “negative” coping resources (avoidant and risk-oriented coping).

covers only past two weeks. There is a potential time-order issue, particularly with delinquency, that may impede comparison across models. The delinquent behaviors could be concurrent to the different stressors measured, but depression could be better construed as a result of the stressors.<sup>36</sup> Another issue with the delinquency measure is its breadth. In particular, some criminologists argue that it is more informative to divide delinquency measures into categories representing violent crimes, property crimes, status offenses, and drug/alcohol offenses. For example, Chesney-Lind (1989) argues that girls and boys predominate on different kinds of delinquency, e.g., status offenses for the former and violent offenses for the latter, so a general measure may mask sex differences. However, the general measure here seems to capture how various factors link girls to delinquent behaviors. Future research should determine how a more specified measure may be informative in discerning delinquency outcomes, as well as delinquency versus depression outcomes.

Second, regarding the stress variables, Add Health provides few event-type stressors that mark discrete occurrences commonly tested in other stress research. As a result, the stress measures I constructed rely mostly on personal struggles and changes in relationships and environments, which are more akin to chronic stressors, broadly defined as enduring or ongoing life difficulties (Aneshensel 1992; Pearlin 1989; Wheaton 1994). They also reflect the various sources of strain described by Agnew (1992). Certainly, to the extent that the measures I employ intertwine with the use and availability of social and personal resources, then the statistical effects may be complicated. However, these measures capture stressful aspects of adolescents lives, representing stresses not always considered together, and are robust predictors in every model.

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<sup>36</sup> However, both general strain theory and self-control theory posit that delinquency is contemporaneous with strain and low self-control/opportunity, respectively.

More central to the current analyses, it may be that the use of “general” stress measures and “gendered” stress measures are artificial. As to the former, counting the number of stressors assumes that the individual ascribes them equal weight, but attribution theory argues that individuals likely judge the perceived importance of each situation differently (Sweeny et al. 1986). As to the latter, previous work provides a reason to believe that males and females experience the world of stress differently. Indeed, in the current project boys report more agentic stress and girls are more vulnerable to general and communal stress. However, the preliminary analyses I performed also pointed to a possible factor solution that categorizes stress by domains, namely family, peers, the self (academics and the future), and ambient-environmental (neighborhood and school). Following the work of Colten and her associates (1991), future research should consider how males and females respond differently to stresses within these domains, which may better capture the reality of people’s lives.

Third, the measures of social and personal resources available in Add Health are limited. Social support and self-esteem are multi-itemed variables, but risk-oriented coping is based on three items, avoidant and approach-oriented coping on two, and mastery on one. The measures of resources I employ reflect the core concept of each variable (e.g., for avoidant coping, the statement “You usually go out of your way to avoid having to deal with problems in your life.”). Nevertheless, adolescents report on a restricted range of resources they may marshal to manage stress, and this impedes a fuller understanding of the role of resources. In short, the measures of resources I employ may only hint at how resources may be implicated in the stress process and sex-differences in well-being. An emphasis on coping strategies in specific situations may be more meaningful, such as asking respondents what

steps they take when they have a problem with a friend. Future research should consider more detailed accounts of the marshalling of social and personal resources in adolescents.

For instance, Rosenberg et al. (1995) highlight the importance of distinguishing between global and specific self-esteem. Their research indicated that global self-esteem may be more related to psychological well-being, whereas specific self-esteem may be more related to behavioral outcomes. Other researchers emphasize a large scope of coping styles and skills that involve cognitive, emotional, and behavioral orientations and techniques (e.g., Broidy 2001; Frydenberg and Lewis 1993; Gonzales et al. 2001). Frydenberg et al. (2003) point out that stress may lead to a variety of coping responses, some of which may be conflicting, both within and across individuals. Even the simple measures of coping styles I used show this contrast, but additional research is necessary to understand the direction of coping, if there is a balance optimal for well-being, and how this varies within and across individuals.

Fourth, Add Health does not include a thorough measure of gendered socialization practices by parents, nor are there measures assessing adolescents' adherence to traditional gender ideologies or notions of masculinity or femininity. All have been theorized to influence well-being and the processes that differentiate males and females. Further, gender ideologies may affect the individual's interpretation of stress and how the individual employs resources to deal with stress. As I noted earlier, there is a relevant difference between including males and females in an analysis and projecting certain characteristics socially accorded to males and females into an interpretation of that analysis (Howard and Hollinger 1997). This has led some researchers to investigate the influence of masculinity versus femininity on behavior or adherence to traditional gender ideologies, regardless of the

biological sex of the respondent (e.g., Heimer and De Coster 1999; Horwitz and White 1987). For example, Washburn-Ormachea and her co-authors (2004) found that gender-role orientation, rather than the respondent's sex, predicted differences in the coping styles used by adolescents. Research should continue in this vein, examining how characteristics associated with masculinity and femininity influence the stress process, and how gender-traditional individuals may differ from gender non-traditional individuals in this regard.

### **KEY ISSUES FOR CONTINUING RESEARCH**

In several places in this dissertation, I have indicated directions for future research. Here, I discuss in greater detail three issues I consider key for continuing research on sex differences in adolescent well-being. In each case, I am concerned with two overriding questions presented by my research: How can we account for the difficulties in establishing a clear picture of the hypothesized interactions between stress and social and personal resources? How can we more fully account for sex differences in adolescent well-being? To answer these questions, we need to discern the processes whereby adolescent males and females may become more attentive to certain kinds of stressors, namely what kinds of stress bother them and the extent to which it does so. In addition, we need to discern how adolescent males and females build a repertoire of resources and learn to utilize those resources to help them manage stress.

One direction for research is to examine just how social and personal resources operate and how this process may contribute to understanding sex differences in well-being. The current project relies on interaction effects because of the emphasis placed on conditioning variables in general strain theory. Like other studies of general strain theory, I find limited or no support for the interaction effects of variables like self-esteem and mastery

on delinquency (Hoffman and Cerbone 1999; Hoffman and Miller 1998; Jang and Johnson 2003; Paternoster and Mazerolle 1994; but see Mazerolle and Maahs 2000). I did find conditioning effects for the coping style variables, so the interaction interpretation remains relevant. Nonetheless, as research progresses, the challenge for studies of general strain theory is to determine just what is meant by “conditioning” effects. Buffering or moderating models are the most common interpretation, but Wheaton (1985) describes other interpretations that are additive rather than multiplicative. Social and personal resources may be involved in suppressing relationships, in which stress mobilizes resources, limiting the overall effect of stress on well-being. Resources may also be involved in mediating or intervening relationships, in which stress depletes resources, which results in a net negative effect on well-being.

Rather than interaction effects, additive effects may be more viable interpretation of general strain theory, yet still consistent with the notion that various factors encourage legitimate rather than illegitimate coping. For example, this interpretation is relevant for sex differences in well-being if we think about gendered stresses and the gendering of resources. The current analyses demonstrate that boys are more exposed to agentic stress, but girls are better equipped to manage it, at least when it comes to curbing delinquency. Consider a “suppressor” scenario: When girls experience agentic stressors, they turn to others around them for support, which alleviates the deleterious effects of stress while reinforcing social bonds, thus limiting delinquency. Now consider an “intervening” scenario: When boys experience agentic stressors, they eschew supportive others, which does little for the harmful effects of stress while creating social distance, thus increasing delinquency. Following this approach, a key issue for future research is first working to respecify general strain theory,

then working to understanding how differing processes may contribute to sex differences in well-being.<sup>37</sup>

A second key issue for continuing research involves examining stress domains and the potential need for “matching” resources to deal with stress in those domains. Wheaton (1983) posits that the efficacy of social and personal resources may vary with type of stress involved. A strategy that is effective for one problem may not work at all for another. Seiffge-Krenke (1993) advises that coping processes cannot simply be labeled as inherently good or bad; rather, the specific context has to be considered. Taylor and Aspinwall (1996), among others (Frydenberg et al. 2003; Griffith et al. 2000), emphasize the importance of matching stressors to resources; that is, a successful outcome of the stress process may depend on an appropriate matching of available personal and social resources to the features of the stressful circumstance. For example, general social support may be useful for dealing with a stress related to the self, like turning to others when victimized or goals seem out of reach. Social support may need to be more specific when dealing with stress in other domains, like turning to supportive parents when peers are unkind. Research is necessary to determine whether social and personal resources are more effective when they are general or domain-specific, as well as whether the use of resources is “gendered” within and/or across domains. For example, in my research, global self-esteem protects both boys and girls from depression regardless of the stress measure, but the effects of approach-oriented coping and mastery vary by sex of the respondent, stress, and outcome measured, suggesting both a domain-specific process and a gendered process.

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<sup>37</sup> As Agnew (1992) draws largely from the stress literature in making his arguments, the stress literature may also prove helpful in further specifying general strain theory. On the other hand Hoffman and Miller (1998) suggest that arguments made from the stress literature regarding depression do not map readily onto delinquency. This empirical question also deserves further attention.

A related issue is how a combination of factors, rather than one particular resource, may account for differences. According to Pearlin (1999b: 171), “resources tend to come in packages.” For example, a sense of personal control is an important mediator of adverse events on well-being outcomes because of its implications for the initiation and persistence of other coping efforts to resolve problematic situations (Turner and Roszell 1994). In their discussion of coping efforts, Mirowsky and Ross (1989) distinguish between what they term fatalists and instrumentalists. Fatalists take a reactive/passive orientation to life, whereas instrumentalists take a proactive orientation. The former tend to ignore potential problems, so that when they eventually happen, fatalists are ill-prepared to deal with them. In trying to ignore or avoid a problem, they do not act to limit the consequences of the problems. The latter tend to take preventative steps to steer clear of problems in the first place while building resources, skills, and habits to manage problems when they arise. When stressful situations do arise, they feel less threatened and are better prepared. “Thus, the instrumentalist is constantly getting ahead of problems whereas the fatalist is constantly falling behind. The theoretical result is a magnification of differences, with the fatalists suffering more and more problems that simply reinforce the sense of powerless and lack of control and thus produce greater passivity in the face of difficulties” (Mirowsky and Ross 1989: 135).

Mirowsky and Ross (1989) are particularly concerned with psychological distress, making the argument that women, because of their social positions, are more prone to be fatalists and therefore more likely to be distressed. The results here seem to support the notion that females’ package of resources tends toward fatalism: lower levels of self-esteem and mastery and higher levels of avoidant coping. On the other hand, boys’ package of

resources consists of fatalist (risk-oriented coping) and instrumentalist (self-esteem and mastery) elements. Females are also more vulnerable to depression, although their “resource package” does not account for this relationship. At the same time, girls can deploy a more instrumentalist set of resources – social support, self-esteem, approach-oriented coping – to avoid delinquency, whereas boys assert a combination of fatalist and instrumentalist resources. This suggests that the efficacy of a resource package may depend on type of outcome (Wheaton 1983), and what comprises this package may be defined both by gender and by the situation at hand. In other words, we cannot say that girls manage stress and use resources a certain way because of the gender structure and that boys do so another way, then treat these descriptions as invariant (see Miller 2002). Differences in stress and social and personal resources yield a piece of the puzzle, but how these resources are utilized is a dynamic and complex process. In sum, in assessing stress domains and the matching of resources to manage stress, researchers need to consider how the efficacy of social and personal resources may vary with type of stress and type of outcome, when and how a generalized resource is more helpful than a specialized resource and vice-versa, and how resource packages are deployed differently by sex and situation.

Finally, a third direction has to do with the applicability of theoretical arguments made about adult processes to adolescent experiences. What we understand for adults may not map neatly onto adolescents’ lives. Take, for example, the gender gap in depression. On the one hand, Mirowsky (1996) emphasizes how gender stratification at work and in the home is the primary source of the gender gap in adult depression. On the other hand, Brooks-Gunn (1991) emphasizes how puberty brings on physical, self-identity, and social changes that may be especially detrimental to girls. These different processes, though both

tied to the gender structure, yield similar results, and serve as a reminder that the challenges of adolescence are not the same as the challenges of adulthood. There are several reasons to attend to the distinctness of adolescence (Aneshensel and Gore 1990; Gore and Colten 1991; Gottlieb 1991). Differences in the social roles of adolescents and adults expose them to different sorts of stressors. Furthermore, stressful events, in the context of developmental transitions, influence adolescents' psychosocial development and psychological functioning. Adults and youth are also likely to differ in the coping resources they can draw together to manage their emotions and the stressors they experience. Differences in the cognitive, social, and emotional development of youngsters affect what they see as stressful and how they respond to perceived problems.

The gendering of social and personal resources that emerges in adulthood has its roots in adolescence (Peterson, Kennedy, and Sullivan 1991). This is not the same, however, as saying that the gendering of resources is solidified in adolescence. Rice and his co-authors (1993) propose that stressors are challenges to adolescents' maturing social and personal resources and their eventual responses to stress. Some challenges can be threats to adolescent well-being if they overwhelm coping resources, but other challenges, if mastered, can be opportunities for further growth and development. Within (and perhaps in spite of) gendered socialization and stratification processes, adolescents are actively constructing a repertoire of resources with which to manage stress. Social support, self-esteem, mastery, and coping styles are important factors in boys' and girls' well-being, but their relative importance and efficacy may vacillate as part of the growing process. In studying adolescents as individuals we should be mindful that we are studying adolescence as a developmental period, a particular stage in the life course, as well as a particular position in

the social structure (Gore and Colten 1991; Hagan et al. 2002). The transitions that take place in adolescence are important not just for the physical and cognitive changes, but particularly for the changes these transitions bring in one's social relationships (Hagan and Wheaton 1993). Throughout adolescence, young people experience "an expanding domain of things that matter," which had consequences for how they view themselves, other people, and how to negotiate the social world (Larson and Asmussen 1991: 36). Future research should reflect on the convergence of adolescent development, processes of gender, stress, and the garnering of social and personal resources. In doing so, researchers can discern what it is about adolescence that contributes to divergences in the well-being of adolescent girls and boys.

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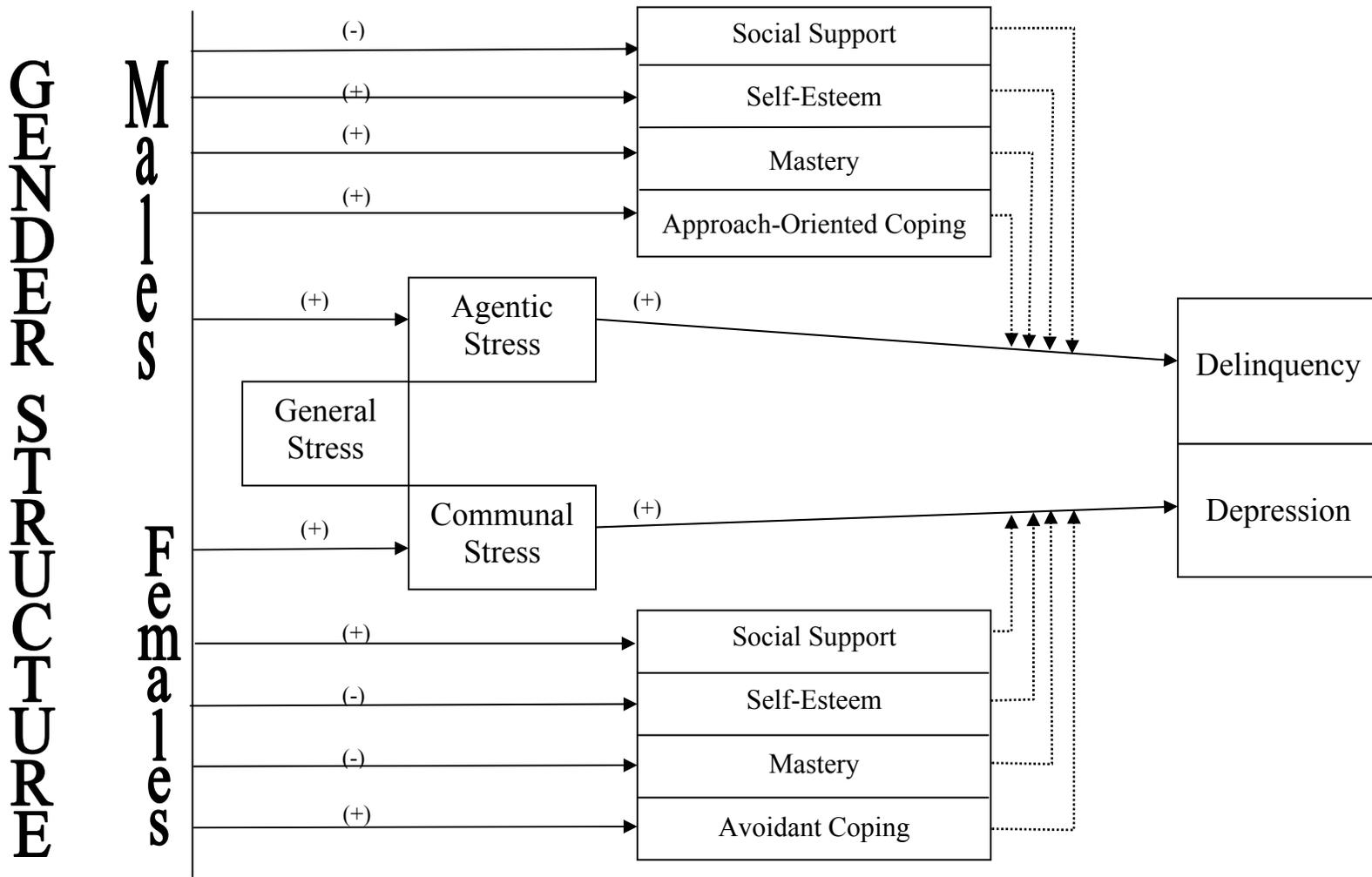
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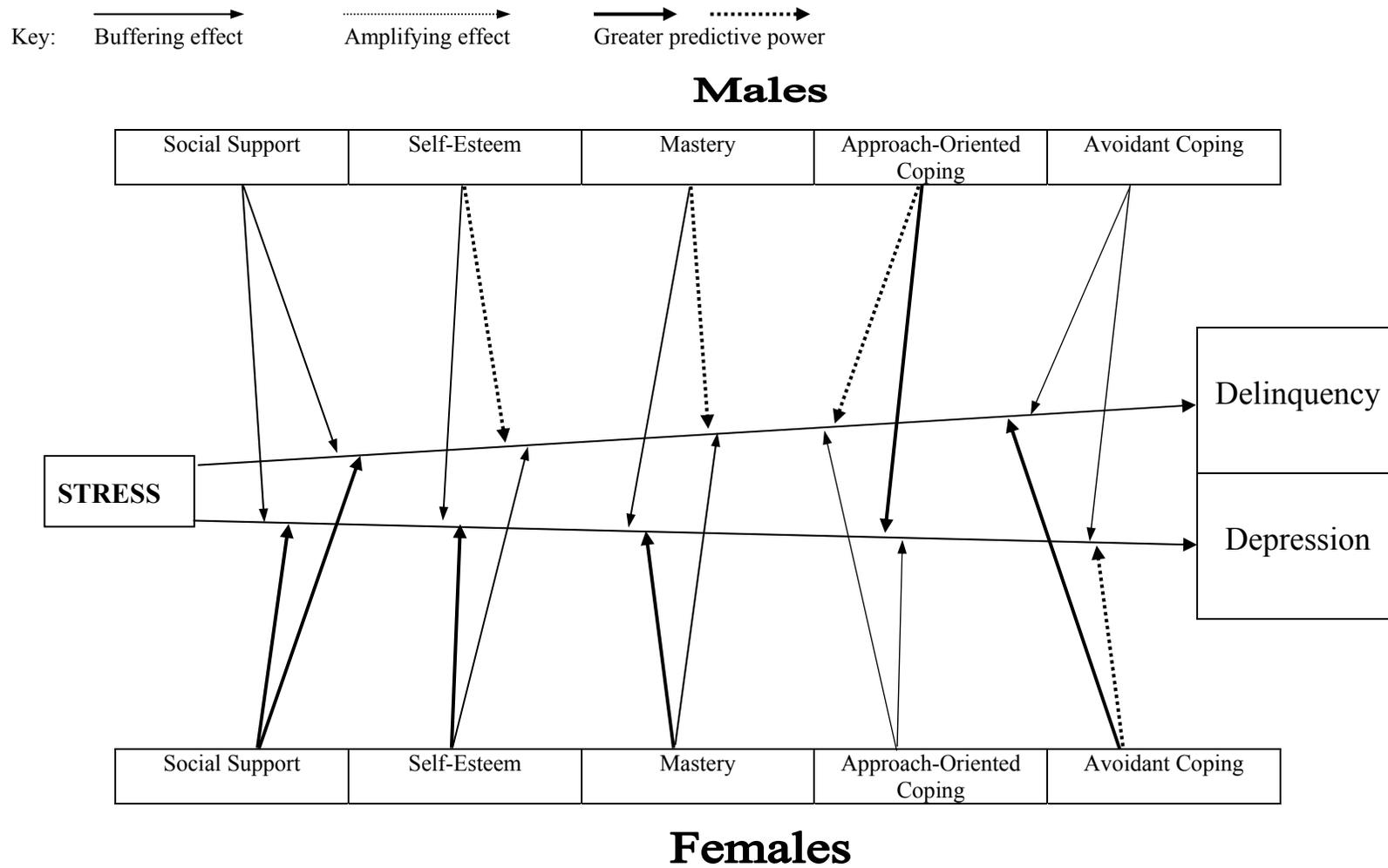
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## FIGURES



**Figure 1. Proposed Theoretical Model for Sex Differences in Well-Being**



**Figure 2. Stress\*Social/Personal Resources Model for Sex Differences in Well-Being**

## TABLES

**Table 1. Summary of Hypotheses**

<b>Well-Being Outcomes</b>	
H1a (p. 27)	Boys, compared to girls, will report more delinquency.
H1b (p. 27 )	Girls, compared to boys, will report more depression.
<b>Stress</b>	
H2a (p. 31)	Boys, compared to girls, will report significantly higher levels of agentic stress.
H2b (p. 31)	Girls, compared to boys, will report significantly higher levels of communal stress.
H3 (p. 36)	Comparing coefficients from boys' and girls' models, agentic stress will be significantly more predictive of delinquency for boys.
H4 (p. 36)	Comparing coefficients from boys' and girls' models, communal stress will be significantly more predictive of depression for girls.
<b>Social/Personal Resources</b>	
<i>Social Support</i>	
H5 (p. 44)	Girls, compared to boys, will have higher levels of social support.
H6 (p. 44)	Comparing coefficients from boys' and girls' models, the interaction between stress and social support will be significantly more predictive of delinquency for girls.
H7 (p. 45)	Comparing coefficients from boys' and girls' models, the interaction between stress and social support will be significantly more predictive of depression for girls.
<i>Self-Esteem</i>	
H8 (p. 49)	Boys, compared to girls, will have significantly higher levels of self-esteem.
H9a (p. 50)	In the girls' model, the interaction between stress and self-esteem will inhibit the positive effect of stress on delinquency; i.e., as self-esteem decreases, the effect of stress on delinquency decreases.
H9b (p. 50)	In the boys' model, the interaction between stress and self-esteem will amplify the positive effect of stress on delinquency; i.e., as self-esteem decreases, the effect of stress on delinquency increases.
H10 (p. 50)	Comparing coefficients from boys' and girls' models, the interaction between stress and self-esteem will be significantly more predictive of depression for girls.

**Table 1, cont.**

<i>Mastery</i>	
H11 (p. 54)	Boys, compared to girls, will have significantly higher levels of mastery.
H12a (p. 54)	In the girls' model, the interaction between stress and mastery will inhibit the positive effect of stress on delinquency; i.e., as mastery decreases, the effect of stress on delinquency decreases.
H12b (p. 55)	In the boys' model, the interaction between stress and mastery will amplify the positive effect of stress on delinquency; i.e., as mastery decreases, the effect of stress on delinquency increases.
H13 (p. 55)	Comparing coefficients from boys' and girls' models, the interaction between stress and mastery will be significantly more predictive of depression for girls.
<i>Coping Styles</i>	
H14 (p. 59)	Girls, compared to boys, will report significantly higher levels of avoidant coping.
H15a (p. 59)	Avoidant coping will interact with stress, buffering the positive effect of stress on delinquency; i.e., as avoidant coping increases, the effect of stress on delinquency decreases. This effect will be more significantly more predictive for girls.
H15b (p. 60)	Avoidant coping will interact with stress, amplifying the positive effect of stress on depression; i.e., as avoidant coping increases, the effect of stress on depression increases. This effect will be more significantly more predictive for girls.
H16 (p. 60)	Boys, compared to girls, will report significantly higher levels of approach-oriented coping.
H17a (p. 60)	Approach-oriented coping will interact with stress, amplifying the positive effect of stress on delinquency; i.e., as approach-oriented coping increases, the effect of stress on delinquency increases. This effect will be more significantly more predictive for boys.
H17b (p. 61)	Approach-oriented coping will interact with stress, buffering the positive effect of stress on depression; i.e., as approach-oriented increases, the effect of stress on depression decreases. This effect will be more significantly more predictive for boys.
<i>Additional Effects</i>	
H18 (p. 62)	For boys, the conditional effect of each social/personal resource is more pronounced for agentic stress.
H19 (p. 62)	For girls, the conditional effect of each social/personal resource is more pronounced for communal stress.

**Table 2. Concepts and Variables**

CONCEPT	MEASURES
<i>OUTCOMES</i>	
Delinquency	Frequency of delinquent acts (20 items) $\alpha = .813$
Depression	CES-D scale for depression (16 items) $\alpha = .861$
<i>STRESS MEASURES</i>	
<i>General Stress Composite</i>	$\alpha = .554$
<i>Agentic Stress Composite</i>	$\alpha = .424$
- Poor physical conditions	Rating of physical health (6 items) $\alpha = .729$
- Violent victimization	Frequency that the respondent was a victim of violence (4 items) $\alpha = .680$
- Educational strain	Degree respondent aspires to attend college divided by degree expects to attend
- Academic trouble	Frequency of problems with school work (2 items) $\alpha = .701$
- Chances of achieving Amer. dream	Respondent's expectation of achieving American dream (2 items) $\alpha = .544$
- Chances of living/getting HIV	Respondent's expectation of living or acquiring HIV (3 items) $\alpha = .596$
<i>Communal Stress Composite</i>	$\alpha = .468$
- People-related stress	Degree respondent feels people are unfriendly (2 items) $\alpha = .667$
- Trouble relating with students	Frequency of problems getting along with students $\alpha = .181$
- Trouble relating with teachers	Frequency of problems getting along with teachers students $\alpha = .538$
- Change in relationship with family	Respondent's evaluation of family relationship, Wave 2/Wave 1 (4 items) $\alpha = .716$
- Serious argument w/ mom	(1 item)
- Change in relationship w/ mom	Respondent's evaluation of maternal relationship, Wave 2/Wave 1 (4 items) $\alpha = .859$
- Change in activities w/ mom	Frequency of doing activities with mother, Wave 2/Wave 1 (4 items)
- Serious argument w/ dad	(1 item)
- Change in relationship w/ dad	Respondent's evaluation of paternal relationship, Wave 2/Wave 1 (4 items) $\alpha = .890$
- Change in activities w/ dad	Frequency of doing activities with father, Wave 2/Wave 1 (4 items)
<i>Ambient Stress Composite</i>	$\alpha = .238$
- Change in school satisfaction	Degree respondent is satisfied with school, Wave 2/Wave 1 (4 items) $\alpha = .766$
- Change in neighborhood satisfaction	Degree respondent is satisfied with neighborhood, Wave 2/Wave 1 (3 items) $\alpha = .552$
- Change in neighborhood cohesion	Degree to which respondent perceives his/her n'hood is cohesive, Wave 2/Wave 1 (3 items) $\alpha = .613$
<i>SOCIAL/PERSONAL RESOURCES</i>	
Social support	Degree respondent feels others care about him/her (4 items) $\alpha = .645$

**Table 2, cont.**

Self-esteem	Self-esteem scale (6 items) $\alpha = .856$
Mastery	Degree respondent feels in control of the direction of his/her life. (1 item)
Avoidant coping	Degree respondent endorses an avoidant coping/response style (2 items) $\alpha = .479$
Approach-oriented coping	Degree respondent endorses an approach-oriented coping/response style $\alpha = .213$
Risk-oriented coping	Degree respondent endorses a risk-oriented coping/response style $\alpha = .492$
<i>DEMOGRAPHICS &amp; CONTROLS</i>	
Biological Sex	Male coded 0, Female coded 1
Age	Birth year subtracted from interview year
Race	White (reference group), Black, Hispanic, and other
Income	Annual household income, with multiple imputation for missing cases
Family structure	Two-parent (reference group), single parent, no parent-figure

**Table 3. Variables and T-Tests for Differences in Means**

	<b>Males</b> (n=6041)	<b>Females</b> (n=6408)	<b>t</b>
<b>OUTCOMES</b>			
Delinquency Time 2	4.421	3.330	9.63**
Depression Time 2	7.984	9.689	12.08**
<b>STRESS MEASURES</b>			
<i>General Stress Composite</i>	<b>0.003</b>	<b>-0.003</b>	<b>0.04</b>
<i>Agentic Stress Composite</i>	<b>0.001</b>	<b>-0.001</b>	<b>0.02</b>
- Poor health	11.300	12.811	15.38**
- Victimization	0.587	0.216	12.63**
- Educational strain	1.140	1.104	3.43**
- Academic trouble	2.448	2.150	6.64**
- Chances of achieving “American Dream”	5.559	5.310	6.56**
- Chance of living & staying HIV-free	4.868	4.759	2.65**
<i>Communal Stress Composite</i>	<b>0.004</b>	<b>-0.002</b>	<b>0.06</b>
- People unfriendly	0.760	0.799	1.47
- Trouble relating with other students	4.001	3.987	0.37
- Trouble relating with teachers	3.419	3.279	3.15**
- Change in relationship with family	1.097	1.099	0.22
- Serious argument w/ mom	0.302	0.354	4.87**
- Change in relationship w/ mom	1.143	1.130	1.21
- Change in activities w/ mom	1.138	1.114	2.23*
- Serious argument w/ dad	0.219	0.229	1.11
- Change in relationship w/ dad	1.198	1.194	0.26
- Change in activities w/ dad	1.181	1.113	5.45**
<b>SOCIAL &amp; PERSONAL RESOURCES</b>			
Social support	16.811	17.360	9.45**
Self-esteem	25.598	24.740	10.08**
Mastery	3.501	3.444	2.33*
Avoidant coping	6.853	7.137	5.47**
Approach-oriented coping	7.963	7.960	0.12
Risk-oriented coping	9.378	8.531	16.52**

Note: All change variables are Time 2/Time 1.

\*\*p<0.01

\*p<0.05

**Table 4a. Regression of Stress Variables on Delinquency**

	General Stress			Agentic Stress			Communal Stress		
	Males	Females	t	Males	Females	t	Males	Females	t
Age	.015** (.001)	.001 (.003)		.010* (.004)	-.004 (.003)		.017** (.004)	.002 (.003)	
Income	.0001 (.000)	.0002 (.0001)		.0002* (.0001)	.0002 (.0001)		.0001 (.0000)	.0002 (.0001)	
Hispanic	.017 (.018)	-.022 (.018)		.003 (.019)	-.032 (.018)		.030 (.018)	-.013 (.018)	
Black	-.066** (.016)	-.070** (.016)		-.073** (.015)	-.079** (.016)		-.059** (.016)	-.065** (.017)	
Other race	-.024 (.019)	-.040* (.017)		-.033 (.0001)	-.048** (.017)		-.013 (.020)	-.036* (.017)	
Single parent	.035** (.012)	.009 (.010)		.029* (.012)	.007 (.011)		.045** (.012)	.018 (.010)	
No parent	-.096 (.050)	-.031 (.039)		-.110* (.051)	-.029 (.037)		-.096 (.051)	-.017 (.039)	
Delinquency T1	.509** (.014)	.564** (.014)		.505** (.015)	.558** (.014)		.537** (.013)	.592** (.014)	
General stress	.012** (.012)	.012** (.001)	.00	---	---		---	---	
Agentic stress	---	---		.025** (.002)	.024** (.002)	.35	---	---	
Communal stress	---	---		---	---		.013** (.001)	.014** (.001)	.71
F	272.20**	381.28**		301.68**	288.82**		247.63**	362.42**	
R <sup>2</sup>	.395	.440		.391	.431		.378	.422	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01      \*p<0.05

**Table 4b. Regression of Stress Variables on Depression**

	General Stress			Agentic Stress			Communal Stress		
	Males	Females	t	Males	Females	t	Males	Females	t
Age	.301** (.051)	.126* (.058)		.183** (.054)	-.001 (.054)		.353** (.054)	.150* (.060)	
Income	-.001 (.001)	-.004* (.002)		.0001 (.001)	-.004* (.002)		-.001 (.001)	-.004* (.002)	
Hispanic	.699** (.217)	.947** (.340)		.394 (.224)	.691 (.351)		.964** (.230)	1.227** (.349)	
Black	.471* (.236)	.370 (.236)		.309 (.238)	.138 (.247)		.568* (.243)	.512* (.238)	
Other race	.522 (.322)	.799* (.398)		.343 (.338)	.611 (.396)		.721* (.355)	.874* (.413)	
Single parent	.199 (.174)	.118 (.206)		.091 (.184)	.126 (.216)		.478** (.181)	.414* (.205)	
No parent	-.399 (.663)	-.180 (.940)		-.744 (.684)	-.035 (.894)		-.378 (.722)	.286 (.953)	
Depression T1	.465** (.019)	.458** (.015)		.458** (.018)	.448** (.014)		.516** (.020)	.510** (.015)	
General stress	.309** (.016)	.380** (.018)	2.95**	---	---		---	---	
Agentic stress	---	---		.577** (.036)	.660** (.035)	1.65	---	---	
Communal stress	---	---		---	---		.346** (.024)	.450** (.028)	2.82**
F	139.20**	233.99**		136.28**	246.46**		116.76**	190.82**	
R <sup>2</sup>	.438	.445		.409	.401		.393	.406	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01      \*p<0.05

**Table 5a. Regression Models: General Stress and Social Support**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.015** (.004)	.0004 (.003)		.015** (.004)	.0003 (.003)		.305** (.051)	.123* (.057)		.306** (.051)	.124* (.057)	
Income	.0002 (.000)	.0002 (.0001)		.0001 (.0000)	.0002 (.0001)		-.001 (.001)	-.004* (.002)		-.001 (.001)	-.004* (.002)	
Hispanic	.018 (.018)	-.024 (.018)		.017 (.018)	-.025 (.018)		.719** (.211)	.873** (.336)		.727** (.210)	.880* (.337)	
Black	-.065** (.016)	-.071** (.016)		-.065** (.016)	-.072** (.016)		.517* (.237)	.337 (.235)		.522* (.237)	.341 (.236)	
Other	-.024 (.019)	-.042* (.017)		-.024 (.019)	-.041* (.017)		.543 (.317)	.777 (.406)		.554 (.316)	.773 (.407)	
Single Parent	.035** (.012)	.008 (.010)		.035** (.012)	.008 (.010)		.174 (.174)	.111 (.199)		.172 (.174)	.112 (.199)	
No Parent	-.098 (.050)	-.044 (.040)		-.097 (.050)	-.041 (.039)		-.575 (.668)	-.572 (.983)		-.576 (.666)	-.637 (.986)	
Delinquency T1	.508** (.015)	.559** (.014)		.508** (.015)	.558** (.014)		---	---	---	---	---	
Depression T1	---	---	---	---	---	---	.454** (.019)	.448** (.015)		.454** (.019)	.448** (.015)	
General stress	.012** (.001)	.011** (.001)	.71	.007 (.006)	-.005 (.006)	1.41	.288** (.016)	.354** (.019)	2.66**	.394** (.121)	.491** (.140)	.52
Social support	-.002 (.002)	-.008** (.002)	2.12*	-.002 (.002)	-.009** (.002)	2.47*	-.175** (.037)	-.241** (.056)	.99	-.164** (.035)	-.224** (.056)	.91
Stress*Soc. support	---	---		.0003 (.0003)	.0004 (.0003)	.24	---	---		-.006 (.007)	-.008 (.008)	.19
F	254.46**	360.94**		236.80**	337.52**		121.72**	214.12**		118.32**	237.04**	
R <sup>2</sup>	.395	.442		.395	.442		.442	.450		.442	.451	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 5b. Regression Models: Agentic Stress and Social Support**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.010*	-.004		.010*	-.004		.200**	.007		.204**	.008	
	(.004)	(.003)		(.004)	(.003)		(.054)	(.053)		(.054)	(.053)	
Income	.0002*	.0002		.0002*	.0002		.0002	-.004*		-.0001	-.004*	
	(.0001)	(.0001)		(.0001)	(.0001)		(.001)	(.002)		(.001)	(.002)	
Hispanic	.004	-.034		.003	-.034		.453*	.606		.474*	.606	
	(.019)	(.018)		(.019)	(.018)		(.215)	(.341)		(.210)	(.341)	
Black	-.072**	-.080**		-.072**	-.080**		.390	.112		.410	.114	
	(.015)	(.016)		(.015)	(.016)		(.239)	(.239)		(.238)	(.240)	
Other	-.032	-.049**		-.032	-.049**		.391	.598		.402	.599	
	(.017)	(.017)		(.017)	(.017)		(.329)	(.405)		(.328)	(.405)	
Single Parent	.029*	.007		.029*	.007		.071	.116		.057	.117	
	(.012)	(.011)		(.012)	(.011)		(.182)	(.204)		(.182)	(.204)	
No Parent	-.112*	-.046		-.113*	-.045		-.957	-.645		-.957	-.665	
	(.051)	(.039)		(.051)	(.038)		(.686)	(.798)		(.687)	(.975)	
Delinquency T1	.503**	.552**		.503**	.551**		---	---	---	---	---	
	(.015)	(.015)		(.015)	(.015)							
Depression T1	---	---	---	---	---		.445**	.433**		.444**	.433**	
							(.019)	(.014)		(.019)	(.014)	
Agentic Stress	.024**	.022**	.71	.017	.016	.06	.518**	.589**	1.43	.879**	.678**	.55
	(.002)	(.002)		(.012)	(.011)		(.036)	(.034)		(.257)	(.257)	
Social support	-.003	-.011**	2.83**	-.003	-.011**	2.82**	-.245**	-.367**	1.74	-.231**	-.363**	1.98*
	(.002)	(.002)		(.002)	(.002)		(.039)	(.058)		(.036)	(.056)	
Agen.*Soc. support	---	---		.0004	.0003	.70	---	---		-.022	-.005	.80
				(.001)	(.001)					(.015)	(.015)	
F	281.07**	290.53**		258.98**	264.97**		119.54**	231.27**		108.40**	225.04**	
R <sup>2</sup>	.392	.434		.392	.435		.417	.413		.418	.413	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 5c. Regression Models: Communal Stress and Social Support**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females		Males	Females	t	Males	Females	t
Age	.017** (.004)	.001 (.003)		.017** (.004)	.001 (.003)		.353** (.054)	.143* (.058)		.353** (.054)	.144* (.058)	
Income	.0001 (.0001)	.0002 (.0001)		.0001 (.0001)	.0002 (.0001)		-.001 (.001)	-.005* (.002)		-.001 (.001)	-.005** (.002)	
Hispanic	.029 (.018)	-.018 (.018)		.029 (.018)	-.019 (.018)		.966** (.221)	1.088** (.343)		.966** (.220)	1.097** (.345)	
Black	-.058** (.016)	-.067** (.017)		-.058** (.016)	-.067** (.017)		.636** (.244)	.448 (.235)		.636** (.245)	.448 (.237)	
Other	-.013 (.020)	-.038* (.017)		-.014 (.020)	-.037* (.017)		.734* (.340)	.834 (.424)		.734* (.339)	.824 (.425)	
Single Parent	.044** (.013)	.017 (.010)		.044** (.013)	.017 (.010)		.403* (.180)	.374 (.195)		.403* (.180)	.375 (.194)	
No Parent	-.103* (.050)	-.038 (.041)		-.102* (.051)	-.037 (.041)		-.681 (.717)	-.344 (1.005)		-.681 (.717)	-.363 (1.007)	
Delinquency T1	.531** (.014)	.581** (.014)		.531** (.015)	.580** (.014)		---	---	---	---	---	
Depression T1	---	---	---	---	---		.493** (.020)	.489** (.015)		.493** (.020)	.490** (.015)	
Communal Stress	.012** (.001)	.012** (.001)	.00	.004 (.009)	.001 (.008)	.25	.306** (.023)	.404** (.029)	2.67**	.304 (.198)	.586** (.218)	.96
Social support	-.007** (.003)	-.012** (.002)	1.79	-.007** (.003)	-.013** (.002)	1.66	-.301** (.041)	-.359** (.054)	.86	-.301** (.039)	-.346** (.054)	.68
Comm.*Soc. support	---	---		.0005 (.001)	.001 (.0004)	.46	---	---		.0001 (.011)	-.011 (.012)	.68
F	246.03**	351.03**		229.48**	331.43**		103.69**	179.51**		106.53**	181.78**	
R <sup>2</sup>	.380	.427		.380	.427		.405	.417		.405	.418	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 6a. Regression Models: General Stress and Self-Esteem**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.015** (.004)	.0002 (.003)		.015** (.004)	.0000 (.003)		.261** (.051)	.111 (.058)		.278** (.049)	.124* (.058)	
Income	.0002 (.0001)	.0002 (.0001)		.0001 (.0001)	.0002 (.0001)		-.001 (.001)	-.005* (.002)		-.001 (.001)	-.005* (.002)	
Hispanic	.017 (.018)	-.024 (.018)		.017 (.018)	-.024 (.018)		.657** (.213)	.778* (.345)		.694** (.214)	.779* (.342)	
Black	-.065** (.016)	-.064** (.016)		-.065** (.016)	-.065** (.016)		.697** (.225)	.883** (.229)		.721** (.229)	.906** (.230)	
Other	-.024 (.018)	-.042* (.017)		-.025 (.018)	-.042* (.017)		.352 (.323)	.732* (.363)		.473 (.311)	.754* (.365)	
Single Parent	.035** (.012)	.009 (.010)		.035** (.012)	.008 (.010)		.181 (.173)	.119 (.203)		.186 (.173)	.123 (.201)	
No Parent	-.096 (.050)	-.032 (.039)		-.097 (.050)	-.031 (.039)		-.696 (.657)	-.251 (.950)		-.565 (.646)	-.328 (.957)	
Delinquency T1	.509** (.014)	.558** (.014)		.509** (.014)	.558** (.014)		---	---	---	---	---	---
Depression T1	---	---	---	---	---		.419** (.019)	.406** (.016)		.412** (.019)	.405** (.016)	
General stress	.012** (.001)	.011** (.001)	.71	.007 (.006)	.007 (.004)	.00	.254** (.016)	.309** (.018)	2.28*	.707** (.135)	.654** (.121)	.29
Self-esteem	-.001 (.002)	-.005** (.001)	2.01*	-.001 (.002)	-.005** (.001)	1.79	-.331** (.028)	-.394** (.033)	1.46	-.297** (.026)	-.374** (.033)	1.83
Stress*Self-esteem	---	---		.0002 (.0002)	.0001 (.0001)	.45	---	---		-.018** (.005)	-.014** (.005)	.57
F	243.37**	351.31**		221.77**	322.80**		146.82**	294.04**		161.14**	309.16**	
R <sup>2</sup>	.395	.442		.395	.442		.466	.477		.472	.480	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 6b. Regression Models: Agentic Stress and Self-Esteem**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.010*	-.004		.010*	-.004		.170**	.011		.178**	.019	
	(.004)	(.003)		(.004)	(.003)		(.055)	(.056)		(.053)	(.055)	
Income	.0002*	.0002		.0002*	.0002		.0002	-.005**		-.000	-.005**	
	(.0001)	(.0001)		(.0001)	(.0001)		(.001)	(.002)		(.001)	(.002)	
Hispanic	.003	-.033		.003	-.033		.437	.574		.460*	.554	
	(.019)	(.018)		(.019)	(.018)		(.223)	(.357)		(.221)	(.352)	
Black	-.074**	-.072**		-.074**	-.072**		.581**	.789**		.641**	.829**	
	(.015)	(.016)		(.015)	(.016)		(.227)	(.242)		(.230)	(.245)	
Other	-.032	-.049**		-.033*	-.049**		.216	.583		.233	.603	
	(.017)	(.018)		(.017)	(.018)		(.343)	(.355)		(.336)	(.356)	
Single Parent	.029*	.007		.029*	.007		.133	.153		.112	.151	
	(.012)	(.011)		(.012)	(.011)		(.181)	(.209)		(.182)	(.207)	
No Parent	-.109*	-.030		-.110*	-.030		-.989	-.118		-.913	-.152	
	(.052)	(.037)		(.052)	(.037)		(.672)	(.902)		(.673)	(.897)	
Delinquency T1	.505**	.554**		.505**	.554**		---	---	---	---	---	---
	(.015)	(.015)		(.015)	(.015)							
Depression T1	---	---	---	---	---		.421**	.398**		.415**	.396**	
							(.019)	(.015)		(.019)	(.015)	
Agentic Stress	.025**	.021**	1.41	.011	.016	.30	.424**	.474**	1.01	1.324**	1.130**	.55
	(.002)	(.002)		(.013)	(.010)		(.035)	(.035)		(.274)	(.222)	
Self-esteem	.001	-.005**	2.68**	.001	-.005*	2.68**	-.344**	-.451**	2.35*	-.319**	-.436**	2.66**
	(.002)	(.001)		(.002)	(.001)		(.029)	(.035)		(.028)	(.034)	
Agen.*Self-esteem	---	---		.001	.0002	1.41	---	---		-.036**	-.027**	.67
				(.0004)	(.0004)					(.010)	(.009)	
F	275.38**	291.65**		252.83**	265.31**		146.71**	299.72**		151.19**	292.16**	
R <sup>2</sup>	.391	.433		.392	.433		.438	.442		.443	.444	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 6c. Regression Models: Communal Stress and Self-Esteem**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.016** (.004)	.001 (.003)		.016** (.004)	.001 (.003)		.295** (.054)	.131* (.060)		.309** (.053)	.140* (.062)	
Income	.0001 (.0001)	.0001 (.0001)		.0001 (.0001)	.0002 (.0001)		-.0001 (.001)	-.005** (.002)		-.001 (.001)	-.005** (.002)	
Hispanic	.027 (.018)	-.019 (.017)		.027 (.018)	-.019 (.018)		.859** (.221)	.964** (.350)		.899** (.221)	.973** (.349)	
Black	-.057** (.016)	-.055** (.017)		-.057** (.016)	-.055** (.017)		.841** (.228)	1.115** (.238)		.837** (.232)	1.118** (.238)	
Other	-.017 (.020)	-.039* (.018)		-.019 (.020)	-.040* (.018)		.468 (.352)	.780* (.373)		.546 (.344)	.791** (.373)	
Single Parent	.044** (.012)	.017 (.010)		.044** (.012)	.017 (.010)		.388* (.178)	.342 (.198)		.401* (.179)	.351 (.196)	
No Parent	-.101* (.051)	-.021 (.039)		-.102* (.051)	-.020 (.039)		-.741 (.695)	.088 (.969)		-.686 (.679)	.039 (.987)	
Delinquency T1	.532** (.014)	.578** (.014)		.531** (.014)	.577** (.014)		---	---	---	---	---	
Depression T1	---	----	---	---	---		.444** (.020)	.432** (.016)		.439** (.019)	.433** (.016)	
Communal Stress	.012** (.001)	.012** (.001)	.00	.003 (.008)	.009 (.007)	.56	.285** (.023)	.363** (.027)	2.20*	.765** (.204)	.803** (.212)	.13
Self-esteem	-.005** (.002)	-.008** (.001)	1.34	-.005** (.002)	-.009** (.001)	1.78	-.421** (.028)	-.483** (.031)	1.48	-.404** (.026)	-.468** (.031)	1.58
Comm.*Self-esteem	---	---		.0003 (.0003)	.0001 (.0003)	.47	---	---		-.019** (.008)	-.018** (.008)	.09
F	220.34**	337.11**		200.96**	306.07**		135.65**	251.41**		146.21**	275.54**	
R <sup>2</sup>	.380	.428		.380	.428		.442	.456		.444	.458	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 7a. Regression Models: General Stress and Mastery**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.015** (.004)	.001 (.003)		.015** (.004)	.001 (.003)		.302** (.051)	.128* (.057)		.302** (.051)	.130* (.058)	
Income	.0001 (.0001)	.0002 (.0001)		.0001 (.0001)	.0002 (.0001)		-.0001 (.001)	-.004* (.002)		-.001 (.001)	-.004* (.002)	
Hispanic	.017 (.018)	-.023 (.018)		.017 (.018)	-.023 (.018)		.695** (.218)	.944** (.340)		.698** (.218)	.936** (.339)	
Black	-.065** (.016)	-.067** (.016)		-.065** (.016)	-.067** (.016)		.475* (.236)	.390 (.236)		.473* (.236)	.391 (.236)	
Other	-.023 (.018)	-.039* (.017)		-.022 (.018)	-.039* (.017)		.529 (.320)	.810* (.396)		.538 (.319)	.822* (.398)	
Single Parent	.036** (.036)	.009 (.010)		.036** (.012)	.009 (.010)		.203 (.174)	.124 (.205)		.202 (.174)	.124 (.205)	
No Parent	-.097 (.051)	-.031 (.039)		-.097 (.051)	-.031 (.039)		-.406 (.662)	-.177 (.944)		-.409 (.663)	-.148 (.945)	
Delinquency T1	.508** (.014)	.561** (.014)		.508** (.014)	.562** (.014)		---	---	---	---	---	
Depression T1	---	----	---	---	---		.464** (.019)	.457** (.015)		.464** (.019)	.456** (.015)	
General stress	.012** (.001)	.012** (.001)	.00	.014** (.003)	.012** (.002)	.55	.308** (.016)	.378** (.017)	3.00**	.343** (.054)	.464** (.054)	1.58
Mastery	-.013* (.005)	-.017** (.005)	.71	-.012* (.005)	-.017** (.005)	.71	-.074 (.099)	-.120 (.097)	.33	-.069 (.096)	-.108 (.096)	.29
Stress*Mastery	---	---		-.0001 (.0001)	.0001 (.0009)	.22	---	---		-.010 (.014)	-.025 (.014)	.76
F	244.98**	365.00**		226.28**	331.98**		126.13**	213.07**		122.01**	196.02**	
R <sup>2</sup>	.396	.442		.396	.442		.438	.446		.439	.446	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 7b. Regression Models: Agentic Stress and Mastery**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.010** (.004)	-.004 (.003)		.010* (.004)	-.004 (.003)		.183** (.054)	.001 (.054)		.183** (.054)	.002 (.054)	
Income	.0002 (.0001)	.0002 (.0001)		.0002 (.0001)	.0002 (.0001)		.0001 (.001)	-.004* (.002)		.0002 (.001)	-.004* (.002)	
Hispanic	.003 (.019)	-.032 (.018)		.003 (.019)	-.032 (.018)		.393 (.224)	.691 (.350)		.387 (.054)	.689 (.351)	
Black	-.072** (.015)	-.077** (.016)		-.072** (.015)	-.076** (.016)		.310 (.238)	.159 (.249)		.297 (.238)	.160 (.250)	
Other	-.032 (.017)	-.046** (.017)		-.032 (.017)	-.046** (.017)		.344 (.337)	.623 (.395)		.367 (.334)	.624 (.395)	
Single Parent	.030* (.012)	.008 (.011)		.030* (.012)	.008 (.011)		.092 (.183)	.133 (.215)		.090 (.182)	.132 (.215)	
No Parent	-.111* (.052)	-.028 (.037)		-.111* (.052)	-.029 (.037)		-.745 (.684)	-.031 (.897)		-.749 (.683)	-.024 (.901)	
Delinquency T1	.505** (.015)	.557** (.014)		.505** (.015)	.557** (.014)		---	---	---	---	---	---
Depression T1	---	---	---	---	---		.457** (.018)	.447** (.014)		.457** (.018)	.447** (.014)	
Agentic Stress	.024** (.002)	.023** (.002)	.35	.022** (.008)	.021** (.005)	.11	.577** (.035)	.654** (.035)	1.56	.791** (.116)	.682** (.110)	.68
Mastery	-.009 (.005)	-.015** (.005)	.85	-.009 (.005)	-.016** (.005)	.99	-.011 (.101)	-.112 (.107)	.01	-.009 (.101)	-.111 (.106)	.70
Agentic*Mastery	---	---		.001 (.002)	.001 (.001)	.00	---	---		-.061* (.030)	-.008 (.029)	1.27
F	266.71**	294.86**		253.35**	280.67**		123.02**	221.05**		108.83**	201.51**	
R <sup>2</sup>	.392	.433		.392	.433		.409	.401		.410	.401	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 7c. Regression Models: Communal Stress and Mastery**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.017** (.004)	.002 (.003)		.017** (.004)	.002 (.003)		.354** (.054)	.155* (.060)		.355** (.054)	.158** (.060)	
Income	.0001 (.0001)	.0002 (.0001)		.0001 (.0001)	.0002 (.0001)		-.002 (.001)	-.005** (.002)		-.002 (.001)	-.005* (.002)	
Hispanic	.028 (.017)	-.014 (.018)		.029 (.018)	-.015 (.018)		.950** (.232)	1.236** (.347)		.945** (.233)	1.209** (.345)	
Black	-.059** (.016)	-.061** (.017)		-.059** (.016)	-.061** (.017)		.579* (.244)	.558* (.236)		.579* (.244)	.556* (.235)	
Other	-.012 (.020)	-.035* (.017)		-.011 (.019)	-.034* (.017)		.738* (.352)	.899* (.410)		.732* (.350)	.909* (.413)	
Single Parent	.046** (.013)	.019 (.010)		.046** (.013)	.019 (.010)		.487** (.181)	.423* (.203)		.487** (.181)	.429* (.202)	
No Parent	-.097 (.052)	-.017 (.039)		-.098 (.052)	-.017 (.039)		-.394 (.721)	.289 (.963)		-.391 (.720)	.294 (.957)	
Delinquency T1	.535** (.014)	.588** (.014)		.535** (.014)	.588** (.014)		---	---	---	---	---	
Depression T1	---	----	---	---	---		.513** (.020)	.506** (.015)		.513** (.020)	.505** (.015)	
Communal Stress	.013** (.001)	.013** (.001)	.00	.018** (.004)	.016** (.004)	.35	.344** (.024)	.445** (.028)	2.74**	.303** (.094)	.579** (.100)	2.01*
Mastery	-.018** (.005)	-.023** (.005)	.71	-.017** (.005)	-.023** (.005)	.85	-.196 (.103)	-.279** (.101)	.58	-.200** (.100)	-.267** (.100)	.47
Communal*Mastery	---	---		-.001 (.001)	-.001 (.001)	.00	---	---		.011 (.025)	-.039 (.026)	1.39
F	227.79**	334.58**		205.54**	301.69**		103.42**	176.48**		100.88**	160.37**	
R <sup>2</sup>	.380	.426		.380	.426		.394	.407		.394	.408	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 8a. Regression Models: General Stress and Avoidant Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.015** (.004)	.001 (.003)		.016** (.004)	.001 (.003)		.316** (.050)	.163** (.055)		.313** (.050)	.162** (.055)	
Income	.0001 (.0001)	.0002 (.0001)		.0002 (.0001)	.0002 (.0001)		-.0004 (.001)	-.003 (.001)		-.001 (.001)	-.002 (.002)	
Hispanic	.019 (.018)	-.023 (.018)		.020 (.018)	-.023 (.018)		.493* (.219)	.870* (.335)		.491** (.217)	.870** (.330)	
Black	-.063** (.016)	-.072** (.016)		-.064** (.015)	-.072** (.016)		.197 (.243)	.093 (.237)		.206 (.241)	.094 (.238)	
Other	-.023 (.018)	-.041* (.017)		-.021 (.018)	-.041* (.017)		.428 (.320)	.645 (.394)		.420 (.324)	.622 (.395)	
Single Parent	.035** (.012)	.009 (.010)		.036** (.012)	.009 (.010)		.248 (.175)	.205 (.200)		.244 (.176)	.219 (.197)	
No Parent	-.096 (.050)	-.030 (.039)		-.097 (.050)	-.031 (.039)		-.274 (.643)	.084 (.921)		-.268 (.643)	.158 (.910)	
Delinquency T1	.510** (.014)	.563** (.014)		.509** (.014)	.563** (.014)		---	---	---	---	---	---
Depression T1	---	----	---	---	---	---	.451** (.019)	.439** (.015)		.450** (.019)	.440** (.016)	
General stress	.012** (.001)	.012** (.001)	.00	.024** (.003)	.014** (.003)	2.36*	.308** (.016)	.374** (.017)	2.83**	.232** (.057)	.196** (.067)	.42
Avoidant coping	-.003 (.003)	.003 (.003)	1.41	-.004 (.003)	.003 (.003)	1.65	.411** (.056)	.474** (.047)	.86	.414** (.058)	.485** (.047)	.95
Stress*Avoidant	---	---		-.002** (.0004)	-.0003 (.0004)	3.01**	---	---		.011 (.009)	.025* (.010)	1.04
F	261.43**	346.62**		251.90**	315.67**		131.31**	202.99**		119.40**	185.67**	
R <sup>2</sup>	.395	.440		.398	.440		.453	.459		.453	.461	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 8b. Regression Models: Agentic Stress and Avoidant Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.010*	-.004		.010*	-.004		.198**	.046		.198**	.042	
	(.004)	(.003)		(.004)	(.003)		(.053)	(.052)		(.053)	(.052)	
Income	.0002	.0002		.0002*	.0002		.001	-.002		.0004	-.002	
	(.0001)	(.0001)		(.0001)	(.0001)		(.001)	(.002)		(.001)	(.002)	
Hispanic	.005	-.033		.005	-.033		.180	.591		.175	.604	
	(.019)	(.018)		(.019)	(.018)		(.053)	(.340)		(.228)	(.340)	
Black	-.071**	-.082**		-.071**	-.082**		.026	-.199		.029	-.214	
	(.015)	(.016)		(.015)	(.016)		(.247)	(.247)		(.246)	(.247)	
Other	-.032	-.050**		-.032	-.050**		.246	.424		.253	.406	
	(.017)	(.018)		(.017)	(.018)		(.328)	(.389)		(.327)	(.389)	
Single Parent	.029*	.008		.029*	.008		.140	.215		.135	.229	
	(.012)	(.011)		(.012)	(.011)		(.185)	(.209)		(.185)	(.207)	
No Parent	-.111*	-.026		-.111*	-.027		-.612	.266		-.605	.338	
	(.051)	(.037)		(.051)	(.037)		(.671)	(.863)		(.673)	(.848)	
Delinquency T1	.505**	.557**		.504**	.556**		---	---	---	---	---	---
	(.015)	(.014)		(.015)	(.014)							
Depression T1	---	---	---	---	---	---	.443**	.422**		.442**	.422**	
							(.019)	(.014)		(.019)	(.014)	
Agentic Stress	.025**	.024**	.35	.039**	.028**	1.19	.577**	.670**	1.83	.405**	.315*	.47
	(.002)	(.002)		(.007)	(.006)		(.036)	(.036)		(.133)	(.137)	
Avoidant coping	-.003	.006*	2.12*	-.003	.006*	2.12*	.424**	.574**	1.94	.432**	.585**	1.91
	(.003)	(.003)		(.003)	(.003)		(.059)	(.050)		(.062)	(.051)	
Agen.*Avoidant	---	---		-.002*	-.001	.71	---	---		.025	.049*	.89
				(.001)	(.001)					(.019)	(.019)	
F	308.24**	261.56**		283.70**	241.39**		131.43**	215.31**		120.00**	200.31**	
R <sup>2</sup>	.391	.432		.392	.432		.424	.421		.425	.422	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 8c. Regression Models: Communal Stress and Avoidant Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.017** (.004)	.002 (.003)		.018** (.004)	.002 (.003)		.368** (.053)	.184** (.057)		.364** (.053)	.184** (.058)	
Income	.0001 (.0001)	.0002 (.0001)		.0001 (.0001)	.0002 (.0001)		-.001 (.001)	-.003 (.002)		-.001 (.001)	-.003 (.002)	
Hispanic	.031 (.018)	-.014 (.018)		.031 (.178)	-.014 (.018)		.751** (.233)	1.144** (.343)		.754** (.231)	1.142** (.339)	
Black	-.058** (.016)	-.067** (.017)		-.059** (.016)	-.067** (.017)		.287 (.254)	.238 (.241)		.297 (.251)	.247 (.243)	
Other	-.012 (.020)	-.037* (.018)		-.010 (.020)	-.037** (.018)		.624 (.353)	.722 (.403)		.615 (.358)	.710 (.402)	
Single Parent	.045** (.012)	.019 (.010)		.045** (.013)	.019 (.010)		.527** (.181)	.495* (.199)		.526** (.181)	.505* (.196)	
No Parent	-.096 (.051)	-.015 (.039)		-.096 (.052)	-.016 (.039)		-.249 (.696)	.536 (.934)		-.245 (.698)	.558 (.928)	
Delinquency T1	.537** (.014)	.591** (.014)		.538** (.014)	.591** (.014)		---	---	---	---	---	
Depression T1	---	----	---	---	---	---	.502** (.020)	.491** (.016)		.500** (.050)	.491** (.016)	
Communal Stress	.013** (.001)	.014** (.001)	.71	.030** (.005)	.015** (.005)	2.12*	.345** (.023)	.435** (.027)	2.54*	.226** (.081)	.263** (.093)	.30
Avoidant coping	-.002 (.003)	.003 (.003)	1.18	-.002 (.003)	.003 (.003)	1.18	.420** (.058)	.459** (.049)	.51	.420** (.059)	.463** (.049)	.56
Comm.*Avoidant	---	---		-.002** (.001)	-.0002 (.001)	1.27	---	---		.017 (.012)	.024 (.014)	.38
F	235.31**	320.19**		214.56**	300.09**		111.92**	169.30**		101.93**	151.46**	
R <sup>2</sup>	.378	.422		.381	.422		.408	.418		.408	.419	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 9a. Regression Models: General Stress and Approach-Oriented Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.016** (.004)	.002 (.003)		.016** (.004)	.002 (.003)		.301** (.052)	.128** (.058)		.301** (.052)	.129* (.059)	
Income	.0001 (.0001)	.0002 (.0001)		.0001 (.0001)	.0002 (.0001)		-.001 (.001)	-.004** (.002)		-.001 (.001)	-.004* (.002)	
Hispanic	.019 (.018)	-.020 (.018)		.019 (.018)	-.020 (.018)		.698** (.218)	.950** (.341)		.698** (.217)	.950** (.340)	
Black	-.065** (.016)	-.066** (.015)		-.065** (.016)	-.065** (.015)		.470* (.237)	.378 (.253)		.473* (.237)	.378 (.236)	
Other	-.023 (.018)	-.033 (.017)		-.022 (.018)	-.033 (.017)		.521 (.323)	.810* (.398)		.509 (.324)	.811* (.398)	
Single Parent	.033** (.013)	.007 (.010)		.033** (.013)	.007 (.010)		.201 (.174)	.115 (.205)		.199 (.175)	.114 (.206)	
No Parent	-.097 (.050)	-.042 (.038)		-.096 (.050)	-.047 (.038)		-.398 (.664)	-.198 (.935)		-.415 (.662)	-.213 (.932)	
Delinquency T1	.506** (.014)	.553** (.014)		.506** (.014)	.553** (.014)		---	---	---	---	---	
Depression T1	---	----	---	---	---	---	.465** (.019)	.458** (.015)		.466** (.019)	.458** (.015)	
General stress	.011** (.001)	.012** (.001)	.71	.017** (.005)	.025** (.005)	1.13	.310** (.017)	.379** (.018)	2.79**	.237* (.095)	.415** (.114)	1.20
Approach coping	-.013** (.005)	-.022** (.004)	1.41	-.012** (.005)	-.021** (.004)	1.41	.012 (.075)	-.035 (.069)	.46	.004 (.072)	-.032 (.066)	.37
Stress*Approach	---	---		-.001 (.001)	-.002** (.001)	.71	---	---		.009 (.012)	-.005 (.014)	.92
F	245.09**	369.97**		224.66**	316.03**		124.31**	210.17**		117.58**	206.97**	
R <sup>2</sup>	.396	.446		.396	.447		.438	.445		.438	.445	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 9b. Regression Models: Agentic Stress and Approach-Oriented Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.011** (.004)	-.002 (.003)		.011** (.004)	-.002 (.003)		.184** (.056)	.005 (.055)		.184** (.056)	.004 (.055)	
Income	.0002 (.0001)	.0002 (.0001)		.0002 (.0001)	.0002 (.0001)		.0001 (.001)	-.004* (.002)		.0001 (.001)	-.004* (.001)	
Hispanic	.005 (.019)	-.029 (.017)		.005 (.019)	-.029 (.017)		.396 (.226)	.703* (.352)		.393 (.226)	.708* (.354)	
Black	-.072** (.015)	-.074** (.015)		-.072** (.015)	-.073** (.015)		.310 (.239)	.160 (.249)		.312 (.239)	.156 (.249)	
Other	-.031 (.017)	-.040* (.017)		-.031 (.017)	-.038* (.018)		.345 (.339)	.643 (.396)		.340 (.339)	.629 (.395)	
Single Parent	.027* (.012)	.006 (.010)		.027* (.012)	.005 (.010)		.089 (.184)	.119 (.216)		.085 (.184)	.124 (.216)	
No Parent	-.111* (.051)	-.040 (.036)		-.110* (.051)	-.042 (.036)		-.745 (.685)	-.081 (.888)		-.772 (.680)	-.060 (.893)	
Delinquency T1	.502** (.015)	.549** (.015)		.502** (.015)	.549** (.015)		---	---	---	---	---	
Depression T1	---	---	---	---	---	---	.457** (.018)	.448** (.014)		.458** (.018)	.448** (.014)	
Agentic Stress	.023** (.002)	.022** (.002)	.35	.029* (.011)	.042** (.010)	.87	.576** (.037)	.651** (.035)	1.47	.431* (.170)	.478* (.185)	.19
Approach coping	-.013** (.004)	-.023** (.004)	1.77	-.012** (.004)	-.022** (.004)	1.77	-.014 (.080)	-.091 (.075)	.70	-.018 (.078)	-.097 (.073)	.74
Agen.*Approach	---	---		-.001 (.001)	-.003* (.001)	1.41	---	---		.019 (.022)	.022 (.024)	.09
F	261.60**	283.85**		239.41**	245.53**		121.59**	222.58**		126.24**	200.94**	
R <sup>2</sup>	.393	.437		.393	.438		.409	.401		.409	.401	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 9c. Regression Models: Communal Stress and Approach-Oriented Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.018** (.004)	.003 (.003)		.018** (.004)	.004 (.003)		.360** (.055)	.162** (.060)		.358** (.055)	.164** (.061)	
Income	.0001 (.0001)	.0002 (.0001)		.0001 (.0001)	.0002 (.0001)		-.001 (.001)	-.005** (.002)		-.002 (.001)	-.004* (.002)	
Hispanic	.030 (.018)	-.011 (.017)		.030 (.018)	-.011 (.017)		.973** (.228)	1.239** (.349)		.971** (.227)	1.241** (.347)	
Black	-.059** (.016)	-.059** (.016)		-.059** (.016)	-.059** (.016)		.575* (.273)	.552* (.238)		.575* (.242)	.557* (.240)	
Other	-.012 (.019)	-.028 (.018)		-.012 (.019)	-.029 (.018)		.731* (.356)	.941* (.416)		.716* (.358)	.934* (.414)	
Single Parent	.041** (.013)	.015 (.010)		.041** (.013)	.015 (.010)		.445* (.180)	.387 (.205)		.442* (.180)	.384 (.205)	
No Parent	-.098 (.051)	-.031 (.038)		-.098 (.051)	-.036 (.039)		-.396 (.728)	.170 (.937)		-.414 (.728)	.121 (.942)	
Delinquency T1	.531** (.014)	.576** (.014)		.531** (.014)	.576** (.014)		---	---	---	---	---	
Depression T1	---	----	---	---	---	---	.513** (.020)	.507** (.015)		.513** (.020)	.507** (.015)	
Communal Stress	.012** (.001)	.013** (.001)	.71	.015* (.007)	.032** (.007)	1.72	.340** (.024)	.441** (.028)	2.74**	.153 (.146)	.613** (.182)	1.97*
Approach Coping	-.019** (.005)	-.027** (.004)	1.25	-.018* (.005)	-.026** (.004)	1.25	-.136 (.078)	-.208** (.071)	.68	-.149 (.076)	-.201** (.068)	.51
Comm.*Approach	---	---		-.0004 (.001)	-.002** (.001)	1.13	---	---		.023 (.018)	-.022 (.021)	1.63
F	226.25**	371.54**		209.65**	323.74**		104.90**	176.43**		98.86**	168.25**	
R <sup>2</sup>	.382	.431		.382	.432		.394	.407		.394	.408	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 10a. Regression Models: General Stress and Risk-Oriented Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.016** (.004)	.003 (.003)		.016** (.004)	.003 (.003)		.321** (.050)	.161** (.057)		.322** (.051)	.160** (.058)	
Income	.0002 (.0001)	.0002* (.0001)		.0002 (.0001)	.0002* (.0001)		-.001 (.001)	-.003 (.002)		-.001 (.001)	-.003 (.002)	
Hispanic	.017 (.018)	-.027 (.018)		.017 (.018)	-.027 (.018)		.706** (.213)	.860* (.334)		.698** (.213)	.860* (.334)	
Black	-.062** (.016)	-.068** (.016)		-.063** (.016)	-.068** (.016)		.552* (.234)	.411 (.239)		.546* (.233)	.410 (.239)	
Other	-.021 (.018)	-.041* (.017)		-.022 (.018)	-.039** (.017)		.593 (.307)	.802* (.398)		.586 (.308)	.799* (.399)	
Single Parent	.035** (.012)	.010 (.010)		.035** (.012)	.010 (.010)		.190 (.173)	.134 (.200)		.187 (.173)	.134 (.200)	
No Parent	-.095 (.049)	-.026 (.010)		-.095 (.049)	-.029 (.040)		-.383 (.643)	-.099 (.939)		-.391 (.644)	-.095 (.939)	
Delinquency T1	.503** (.014)	.544** (.015)		.503** (.014)	.545** (.015)		---	---	---	---	---	
Depression T1	---	----	---	---	---	---	.455** (.019)	.446** (.015)		.455** (.019)	.446** (.015)	
General Stress	.011** (.001)	.011** (.001)	.00	.015** (.003)	.002 (.003)	3.06**	.294** (.016)	.361** (.018)	2.78**	.357** (.069)	.373** (.075)	.16
Risk Coping	.008** (.002)	.016** (.002)	2.83**	.008** (.002)	.016** (.002)	2.83**	.182** (.039)	.272** (.044)	1.53	.183** (.039)	.273** (.044)	1.53
Stress*Risk Coping	---	---		-.0004 (.0003)	.001** (.0002)	3.88**	---	---		-.006 (.007)	-.001 (.010)	.41
F	247.12**	377.57**		231.87**	320.81**		127.73**	214.95**		140.54**	317.18**	
R <sup>2</sup>	.396	.449		.397	.451		.443	.453		.443	.453	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 10b. Regression Models: Agentic Stress and Risk-Oriented Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.011** (.004)	-.001 (.003)		.011** (.004)	-.001 (.003)		.217** (.052)	.051 (.054)		.215** (.052)	.048 (.054)	
Income	.0002* (.0001)	.0003* (.0001)		.0002* (.0001)	.0002* (.0001)		.0004 (.001)	-.003 (.002)		.001 (.001)	-.003 (.002)	
Hispanic	.004 (.019)	-.036* (.018)		.003 (.019)	-.036* (.018)		.421 (.219)	.599 (.342)		.407 (.221)	.600 (.341)	
Black	-.069** (.015)	-.076** (.016)		-.070** (.015)	-.076** (.016)		.431 (.233)	.205 (.252)		.406 (.234)	.201 (.252)	
Other	-.029 (.017)	-.047** (.018)		-.030 (.017)	-.047** (.018)		.449 (.320)	.628 (.407)		.445 (.322)	.619 (.407)	
Single Parent	.029* (.012)	.009 (.010)		.029* (.012)	.009 (.011)		.084 (.184)	.146 (.207)		.086 (.184)	.145 (.206)	
No Parent	-.108* (.050)	-.023 (.038)		-.108* (.050)	-.024 (.038)		-.698 (.659)	.059 (.889)		-.704 (.660)	.069 (.893)	
Delinquency T1	.497** (.014)	.537** (.015)		.496** (.014)	.538** (.015)		---	---	---	---	---	
Depression T1	---	---	---	---	---		.444** (.018)	.433** (.014)		.444** (.018)	.433** (.014)	
Agentic stress	.023** (.002)	.022** (.002)	.35	.030** (.007)	.012* (.006)	1.95	.543** (.035)	.616** (.036)	1.45	.775** (.135)	.725** (.149)	.25
Risk Coping	.009** (.002)	.018** (.002)	3.18**	.009** (.002)	.018** (.002)	3.18**	.248** (.043)	.343** (.046)	1.51	.244** (.044)	.342** (.046)	1.53
Agent.*Risk Coping	---	---		-.001 (.001)	.001 (.001)	1.41	---	---		-.023 (.014)	-.012 (.017)	.50
F	279.84**	307.90**		256.16**	266.92**		131.51**	230.86**		146.70**	238.92**	
R <sup>2</sup>	.394	.442		.394	.443		.418	.413		.418	.413	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 10c. Regression Models: Communal Stress and Risk-Oriented Coping**

	DELINQUENCY						DEPRESSION					
	Model I			Model II			Model III			Model IV		
	Males	Females	t	Males	Females	t	Males	Females	t	Males	Females	t
Age	.018** (.004)	.004 (.003)		.018** (.004)	.004 (.003)		.377** (.053)	.193** (.060)		.378** (.054)	.194** (.060)	
Income	.0001 (.0001)	.0002* (.0001)		.0001 (.0001)	.0002* (.0001)		-.001 (.001)	-.003* (.002)		-.001 (.001)	-.003* (.002)	
Hispanic	.029 (.017)	-.020 (.018)		.028 (.018)	-.019 (.017)		.954** (.223)	1.100** (.341)		.947** (.223)	1.104** (.341)	
Black	-.056** (.016)	-.063** (.017)		-.056** (.016)	-.062** (.017)		.674** (.237)	.554* (.241)		.672** (.236)	.555* (.242)	
Other	-.010 (.019)	-.037* (.017)		-.011 (.019)	-.036* (.017)		.805* (.331)	.874* (.414)		.801** (.331)	.881* (.416)	
Single Parent	.045** (.012)	.019 (.010)		.044** (.012)	.019 (.010)		.448* (.178)	.415* (.197)		.444* (.178)	.414* (.198)	
No Parent	-.095 (.050)	-.012 (.040)		-.095 (.050)	-.016 (.041)		-.357 (.686)	.359 (.949)		-.363 (.687)	.337 (.951)	
Delinquency T1	.527** (.014)	.567** (.015)		.526** (.014)	.567** (.014)		---	---	---	---	---	
Depression T1	---	----	---	---	---	---	.499** (.020)	.490** (.016)		.499** (.020)	.491** (.016)	
Communal stress	.012** (.001)	.012** (.001)	.00	.019** (.005)	-.001 (.004)	3.11**	.320** (.023)	.422** (.028)	2.81**	.388** (.102)	.356** (.109)	.21
Risk Coping	.011** (.002)	.019** (.002)	2.83**	.011** (.002)	.018** (.002)	2.47*	.255** (.040)	.343** (.047)	1.43	.257** (.040)	.341** (.046)	1.38
Comm.*Risk Coping	---	---		-.001 (.001)	.002** (.0004)	2.79**	---	---		-.007 (.011)	.008 (.014)	.82
F	225.68**	361.10**		213.59**	329.14**		114.07**	193.66**		112.00**	239.50**	
R <sup>2</sup>	.382	.435		.382	.436		.402	.418		.402	.418	

Unstandardized coefficients with standard errors in parentheses

\*\*p<0.01 \*p<0.05

**Table 11. Results of Hypothesis Testing**

<b>Well-Being Outcomes</b>	
H1a = Supported	Boys, compared to girls, will report more delinquency.
H1b = Supported	Girls, compared to boys, will report more depression.
<b>Stress</b>	
H2a = Partially supported	Boys, compared to girls, will report significantly higher levels of agentic stress.
H2b = Not supported	Girls, compared to boys, will report significantly higher levels of communal stress.
H3 = Not supported	Comparing coefficients from boys' and girls' models, agentic stress will be significantly more predictive of delinquency for boys.
H4 = Supported	Comparing coefficients from boys' and girls' models, communal stress will be significantly more predictive of depression for girls.
<b>Social/Personal Resources</b>	
<i>Social Support</i>	
H5 = Supported	Girls, compared to boys, will have higher levels of social support.
H6 = Not supported	Comparing coefficients from boys' and girls' models, the interaction between stress and social support will be significantly more predictive of delinquency for girls.
H7 = Not supported	Comparing coefficients from boys' and girls' models, the interaction between stress and social support will be significantly more predictive of depression for girls.
<i>Self-Esteem</i>	
H8 = Supported	Boys, compared to girls, will have significantly higher levels of self-esteem.
H9a = Not supported	In the girls' model, the interaction between stress and self-esteem will inhibit the positive effect of stress on delinquency; i.e., as self-esteem decreases, the effect of stress on delinquency decreases.
H9b = Not supported	In the boys' model, the interaction between stress and self-esteem will amplify the positive effect of stress on delinquency; i.e., as self-esteem decreases, the effect of stress on delinquency increases.
H10 = Not supported	Comparing coefficients from boys' and girls' models, the interaction between stress and self-esteem will be significantly more predictive of depression for girls.

**Table 3, cont.**

<i>Mastery</i>	
H11 = Supported	Boys, compared to girls, will have significantly higher levels of mastery.
H12a = Not supported	In the girls' model, the interaction between stress and mastery will inhibit the positive effect of stress on delinquency; i.e., as mastery decreases, the effect of stress on delinquency decreases.
H12b = Not supported	In the boys' model, the interaction between stress and mastery will amplify the positive effect of stress on delinquency; i.e., as mastery decreases, the effect of stress on delinquency increases.
H13 = Not supported	Comparing coefficients from boys' and girls' models, the interaction between stress and mastery will be significantly more predictive of depression for girls.
<i>Coping Styles</i>	
H14 = Supported	Girls, compared to boys, will report significantly higher levels of avoidant coping.
H15a = Not supported	Avoidant coping will interact with stress, buffering the positive effect of stress on delinquency; i.e., as avoidant coping increases, the effect of stress on delinquency decreases. This effect will be more significantly more predictive for girls.
H15b = Supported	Avoidant coping will interact with stress, amplifying the positive effect of stress on depression; i.e., as avoidant coping increases, the effect of stress on depression increases. This effect will be more significantly more predictive for girls.
H16 = Not supported	Boys, compared to girls, will report significantly higher levels of approach-oriented coping.
H17a = Not supported	Approach-oriented coping will interact with stress, amplifying the positive effect of stress on delinquency; i.e., as approach-oriented coping increases, the effect of stress on delinquency increases. This effect will be more significantly more predictive for boys.
H17b = Not supported	Approach-oriented coping will interact with stress, buffering the positive effect of stress on depression; i.e., as approach-oriented increases, the effect of stress on depression decreases. This effect will be more significantly more predictive for boys.
<i>Additional Effects</i>	
H18 = Not clearly supported	For boys, the conditional effect of each social/personal resource is more pronounced for agentic stress.
H19 = Not clearly supported	For girls, the conditional effect of each social/personal resource is more pronounced for communal stress.

## **APPENDIX**

## Appendix 1. Correlation Table

	Sex	Delinquency	Depression	Age	Hispanic	Black	Other Race	Income	Single parent	No parent
Sex <sup>a</sup>	1.00									
Delinquency	.126*	1.00								
Depression	-.121*	.270*	1.00							
Age	.046*	.111*	.118*	1.00						
Hispanic <sup>b</sup>	.005	.049*	.065*	.080*	1.00					
Black	-.029	-.066*	.036*	-.014	--	1.00				
Other Race	.027	.000	.077*	.066*	--	--	1.00			
Income	.005	.002	-.067*	.011	-.097*	-.100*	.005	1.00		
Single Parent <sup>c</sup>	-.022 <sup>+</sup>	.061*	.080*	-.006	-.006	.236*	-.045*	-.185*	1.00	
No Parent	-.006	.025*	.060*	.129*	.024	.038*	.018 <sup>+</sup>	-.031*	--	1.00
Gen. Stress	.010	.362*	.466*	-.000	.025*	.014	.016	-.054*	.097*	.017 <sup>+</sup>
Agen. Stress	.015	.383*	.462*	.100*	.083*	.038*	.045*	-.075*	.119*	.039*
Comm. Stress	.009	.252*	.331*	-.070*	-.031*	-.012	-.007	-.021 <sup>+</sup>	.046*	-.009
Soc. Supp.	-.115*	-.219*	-.284*	-.030*	-.026*	-.015	-.021 <sup>+</sup>	.038*	-.061*	-.077*
Self-Esteem	.111*	-.198*	-.460*	-.080*	-.075*	.113*	-.077*	.027*	-.024*	-.050*
Mastery	.017 <sup>+</sup>	-.098*	-.103*	.002	-.017	.072*	.001	-.046*	.017	-.011
Avoid. Coping	-.073*	.027*	.217*	-.015	.047*	.105*	.035*	-.067*	.027*	-.025*
Apprch. Coping	-.005	-.180*	-.118*	.048*	.011	.021 <sup>+</sup>	.023*	-.007	-.057*	-.016
Risk Coping	.166*	.254*	.206*	-.039*	.047*	-.055*	.023 <sup>+</sup>	-.062*	.021 <sup>+</sup>	.005

<sup>a</sup>Sex is coded so that males=1 and females=0.

<sup>b</sup>For race/ethnic categories, white is the reference group.

<sup>c</sup>For family type, two-parent household is the reference group.

\*p<.01    <sup>+</sup>p<.05

	Gen. Stress	Agen. Stress	Comm. Stress	Soc. Supp.	Self-Esteem	Mastery	Avoid. Coping	Apprch. Coping	Risk Coping
Gen. Stress	1.00								
Agen. Stress	--	1.00							
Comm. Stress	--	.266*	1.00						
Soc. Supp.	-.362*	-.330*	-.267*	1.00					
Self-Esteem	-.379*	-.431*	-.232*	.328*	1.00				
Mastery	-.122*	-.175*	-.055*	.084*	.244*	1.00			
Avoid. Cop.	.079*	.057*	.068*	-.033*	-.001	.066*	1.00		
Apprch. Cop.	-.216*	-.231*	-.145*	.170*	.306*	.180*	.165*	1.00	
Risk Cop.	.225*	.200*	.176*	-.168*	-.010	.047*	.171*	-.090*	1.00

\*p<.01    <sup>+</sup>p<.05