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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

RESILIENCY WITH PRE-ADJUDICATED FEMALES

A Dissertation Submitted in Partial Fulfillment
Of the Requirements for the Degree of
Doctor of Philosophy

Lori Ann Romont

College of Education and Behavioral Sciences
Department of Counseling Psychology

December 2012

This Dissertation by: Lori Ann Romont

Entitled: *Resiliency with Pre-Adjudicated Females*

has been approved as meeting the requirements for the Degree of Doctor of Philosophy in College of Education and Behavioral Sciences in the Department of Counseling Psychology

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ABSTRACT

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The purpose of this study was to determine if there were differences between selected protective factors as self-reported by pre-adjudicated female youth and their parents. The determinants were presence of a loving caregiver, connectedness to school, academic success, and religiosity; the dependent variables were resilience and externalizing behavior. The study used a correlational research design that examined the relationships between the protective factors as self-reported by pre-adjudicated female youth and their parents. This study relied exclusively on youth and parental perceptions and self-report of resiliency using two self-report surveys involving the Behavior Assessment System for Children-Second Edition (BASC-2; Reynolds & Kamphaus, 2004) and a religiosity measure. In total, 116 survey packets were considered usable for analysis. A multiple linear regression was conducted to determine if Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver could predict Resiliency. A second multiple linear regression was conducted to determine if Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver could inversely predict Externalizing Problems. Neither was found to be significant and less than 2% of the variance was explained by either model. This research could further the understanding of resiliency for at-risk females as well as assist in identifying and promoting resilient factors for those involved with the juvenile justice system using a

resiliency theory lens. While this research did not support findings from previous research, implementing strategies to improve or support protective factors evident in a youth's life could be useful in reducing recidivism rates.

Keywords: resiliency, externalizing behavior, religiosity, connection to school, success in school, presence of a loving caregiver, pre-adjudicated youth, BASC-2

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I give thanks to the willing participants of this study and agencies who allowed this project to take place, particularly the Department of Youth Corrections and all of the Senate Bill 94 Pre-Trial Case Managers who disseminated the surveys. The time and energy provided toward this study is greatly appreciated. I am excessively grateful for the participants' willingness and apparent openness throughout the surveys. May someone do something special for them in their lives as they did for me.

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I am very fortunate to have been granted access to use the BASC-2 instrument in this study. Use of this assessment tool and software greatly added to the validity of my research and added depth that otherwise could not have been attained.

Lastly, I dedicate this dissertation to my three girls, Anderson, Quinn, and Elliott. Without them, my life would have far less meaning. I have been blessed with these children and am eternally grateful for my family. May we have many wonderful days ahead filled with love and joy.

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CHAPTER I

INTRODUCTION

Juvenile delinquency continues to be a social problem in the United States. Throughout the nation, 12% of all violent crimes committed in 2004 involved an adolescent (Office of Research and Statistics, 2007). There are multiple implications regarding prevention and intervention programs concerning this issue (U.S. Department of Justice, 2009). Spanning from 1980 to 2006, juvenile arrests for violent crimes increased by nearly 3,000 and weapon law violations by 16,000 (U.S. Department of Justice, 2009). Illegal substance abuse related charges have increased by 59,000 arrests over the same time span. In addition, female delinquency has increased at a faster rate than has delinquency for males. Females are engaging in more violent types of crimes, such as assault and disorderly conduct, than previously reported (Mullis, Cornille, Mullis, & Huber, 2004; Snyder, 2008). Between 1990 and 2003, females arrested for violent crimes increased over 60%; during the same span of time, female arrests for aggravated assault increased by 64% (Office of Research and Statistics, 2007). Since 1985, the percentage of delinquency cases involving girls has grown by 8% (Puzzanchera & Kang, 2008). With this, juvenile courts are dispositioning an unprecedented number of cases. In 2004, females accounted for 30% of all juvenile offenders in Colorado (Office of Research and Statistics, 2007).

While research has attempted to keep pace, most studies have focused on risk factors that precipitate juvenile delinquency. This direction has provided large amounts of information; however, researchers are finding no specific characteristics that inevitably determine delinquency outcomes. Resilience studies have described protective factors in a juvenile's life that interfere with a youth's response to risk factors in his/her life. Of the few studies investigating gender differences and resiliency, it has been suggested by Hartman, Turner, Daigle, Exum, and Cullen (2009) and Taylor, Karcher, Kelly, and Valescu (2003) that the unique needs and experiences of girls have a significant impact on their responses to protective factors. A seminal article by the U.S. Department of Justice (2009) discussed the interaction of female juvenile offenders and resiliency. The researchers identified four protective areas: (a) support or the presence of a loving caretaker, (b) connectedness to school, (c) academic success, and (d) religiosity.

Purpose of the Study

The current study evaluated four protective factors as related to first time delinquents at the Juvenile Court District level who might be more apt to experiment with at-risk behaviors. From the caregiver perspective, it also examined issues of resilience and the presence of protective factors. The purpose of the current study was to further the understanding of resiliency for at-risk females as well as assist in identifying and promoting resilient factors. There is a need for doing so for the purpose of clinical treatment and the advancement of research (Kersting, 2003). It has been recommended that researchers begin studying strength-focused treatments as there are many therapeutic advantages to emphasizing wellness and resilience, e.g., protection from stress and improving psychological abilities (Lightsey, 2006). It is important for appropriate

interventions to occur when people are young to prevent routine behaviors from becoming customary and to assist adolescents in the development of healthy lifestyles (Stewart, 2001). Every person is impacted by female delinquency, both directly and indirectly. While only a small percentage of youth are responsible for the majority of crimes committed during adolescence (Mullis et al., 2004), it becomes imperative to have a greater understanding about this population to use the appropriate resources in the most effective manner.

While many of the resilience factors mentioned previously can be improved in a juvenile's life, these things cannot be done effectively while juveniles are in detention (Taylor et al., 2003). Promotion of protective factors is therefore most important upon release of the juvenile into the community. It is during this time that intervention is imperative and research should focus on this critical opportunity for encouraging resiliency.

Multiple studies have been conducted on risk and resiliency related to juvenile delinquency focusing on adolescent males. Of the few studies examining gender differences and resiliency, Hartman et al. (2009) and Taylor et al. (2003) indicated the needs and experiences of girls are unique and likely impact their responses to protective factors. They concluded that researchers must gain more understanding of the function and meaning of protective factors in the lives of female juvenile delinquents and when these factors are most significant in their development. Further information is needed to understand when protective factors are capable of prevailing over risks.

The unique contribution of this study was the combination of a parental and youth survey methodology that might answer the research questions differently than have been

found in previous studies. Two different surveys were distributed, each intended to elicit perceptions of the attitudes and behaviors of the female juvenile delinquent. The youth survey solicited self-reflective responses while the parental survey requested information from an adult perspective.

The results of this study were shared with the Senate Bill 94 Pre-Trial Release Program, which is a supervisory program affiliated with Juvenile District Courts throughout Colorado. The origins of this program resulted from an overcrowding of juvenile detention centers in1991 as a directive from the Department of Youth Corrections (Colorado Department of Youth Corrections, 2009). The program goal was to provide an alternative to detainment for juvenile delinquents. The philosophy of this program was to provide high quality supervision, assessment, and appropriate treatment referrals for pre-adjudicated juvenile offenders to reduce recidivism rates and reintegrate youth into their communities. Outcomes of this study will be used to improve the program case manager's assessment skills, assist case managers in effectively adapting their supportive services when working with females and their families, and promote policy change as indicated. As it cost Colorado tax payers approximately $143.36 to house a youth in detention and $178.78 to commit an adolescent to the Department of Youth Corrections per day in 2006, remediation of juvenile offenders and identification of factors that promote resiliency not only is ethically responsible but it also assists in the state becoming fiscally responsible (Office of Research and Statistics, 2007).

Rationale for the Study

While there has been a gradual rise in juvenile delinquency, the research base related to adolescent criminality has also increased. The primary focus has been on risk

variables that increase the likelihood of male adolescents experiencing negative consequences, which include individualist issues related to specific characteristics of each adolescent as well as more social/contextual issues including but not limited to school environment and relatives. Specific variables of particular interest in many studies included the occurrence of mental health issues (Tremblay & LeMarquand, 2001), onset of substance use experimentation (Kandel, 1998), parental/guardian involvement and parenting practices (Stewart, 2001), age during earliest arrest (Kjelsbert, 1999), relational violence (Adamson & Thompson, 1998), residing in dangerous neighborhoods (Schwartz & Gorman, 2003), socioeconomic status (Husler & Plancherel, 2007), enduring multiple changes in residence (Cherlin, 1999), prenatal and perinatal influences (McCord, Windom, & Crowell, 2001), and attachment (Kidd & Shahar, 2008).

Although there are theoretical models to describe the association between risk variables and delinquency outcomes, there are no single characteristics that inevitably result in delinquency outcomes. Researchers believe the presence of multiple factors that place a juvenile at risk typically increase the youth's likelihood of committing a crime (U.S. Department of Justice, 2009). In working toward prevention, the movement earlier this century was to identify risk factors and develop programs to overcome these variables. The definition of risk factors included "those characteristics, variables, or hazards that, if present, for a given individual, rather than someone selected from the general population, will develop a disorder" (Mrazek & Haggerty, 1994, p. 127).

Although risk factors are used in a predictive manner, many youth who are at risk do not engage in delinquent activities. Therefore, while the presence of certain variables in a juvenile's life might put him or her at greater risk, becoming an offender is not

certain. Researchers cannot explain the resilience for some children with regard to negative events in their lives when other children are more susceptible.

Historically, while the majority of literature regarding juvenile delinquency has focused on risks, attention has shifted to discussing protective factors and resilience (U.S. Department of Justice, 2009). Pollard, Hawkins, and Arthur (1999) stated that "protective factors are those factors that mediate or moderate the effect of exposure to risk factors, resulting in reduced incidence of problem behavior" (p. 146). Protective factors have been described in dichotomous terms, i.e., as either having or lacking risk factors or as variables that interact with risk factors resulting in the reduction of potential negative outcomes (Office of the Surgeon General, 2001).

In the recent past, conceptualizing and understanding resiliency has been challenging, leading to confusion within academia related to the definition and application of the term (Luthar, Ciccetti, & Becker, 2000). In general, the term is often defined by a person's ability to adapt or succeed despite negative life circumstances, e.g., being the victim of abuse or neglect, experiencing violence, or being impoverished, that have the propensity to lead to negative results such as juvenile delinquency (Kaplan, 2006).

The term resilience is generally interpreted as "an ability to mobilize personal and social resources to protect against risks" (Kidd & Shahar, 2008, p. 163). In particular, the term relates to a person's psychological ability to make adjustments when under extremely stressful circumstances and when involved with undesirable conditions (U.S. Department of Justice, 2009). Prevailing over unfortunate events in one's life by

adjusting and being successful is a concept that has gained a great deal of awareness in the juvenile justice system.

Successful treatment programs are being implemented related to this issue given the complexity that was found in trying to change risk behaviors, several of which are not acquiescent to being altered (McKnight & Loper, 2002). Due to the restrictions found when implementing risk-focused treatments, researchers have begun examining the concept of resilience with a focus on protective factors (U.S. Department of Justice, 2009). Smith (2006) stated that humans have an intrinsic longing to know their personal strengths and this information can alter the impact of stress in a person's life. Resnick, Ireland, and Borowsky (2004) acknowledged that for boys and girls, grade point average (GPA) was the most salient protective factor related to involvement in violent behaviors. Other factors that impacted resilience included connectedness to family and school and religiosity; however, those factors proved to be protective only for girls (Resnick et al., 2004).

Resiliency might be experienced differently for males and females (Taylor et al., 2003; U.S. Department of Justice, 2009). Girls have unique needs and experiences that differ significantly from boys, which alter the way they interact with their world. This has resulted in hypotheses about the processes that operate regarding protective factors for girls who are at risk for delinquency (U.S. Department of Justice, 2009). Research on the causes of delinquency involving female offenders has been limited (Mullis et al., 2004), and there is even less involving protective variables.

A protective factor for adolescents has been the presence in their lives of a supportive and caring adult (U.S. Department of Justice, 2009). Researchers have found

the existence of this factor minimized the probability juveniles would engage in delinquent activities (Dishion & Kavanagh, 2003; Romer, 2003). Feeling connected to parental figures was also found to be protective (Stewart, 2001). More specifically, adolescents with involved caregivers and adults, not just their parents who were informed about the youth's daily actions and associations, were not as likely to participate in unlawful activities (Dishion & Kavanagh, 2003; Luthar, 2006; Luthar & Zelazo, 2003). The U.S. Department of Justice completed a study that found having caring adults involved in a young woman's life served to protect her from various types of felonious activities, which included lessening the probability of her being involved in status, property, and assaultive crimes, dispensing illegal drugs, becoming associated with gangs and engaging in assaultive behaviors into their early adulthood. Also found by researchers was an interactive relationship with the presence of caring adults and the tendency of a youth selling illegal drugs; the protective result was undermined for individuals who resided in significantly underprivileged areas (U.S. Department of Justice, 2009). Related to females who were the injured party of a physically assaultive act, the protective result of having caring adults involved in the adolescent's life was enhanced, predominantly as related to property and assaultive crimes and affiliation with gangs. There was also an inverse relationship involving the protective outcomes of having caring adults when the juvenile was the victim of neglect in response to becoming associated with a gang.

Another protective variable for adolescents was connection to school, which was particularly helpful for individuals who had problems within the home (Perkins & Jones, 2004). Academic institutions served as another environment where adolescents'

accomplishments and successes were encouraged and acknowledged. Ripple and Luthar (2000) stated that early success in school was protective for a child and diminished the probability of that child becoming involved in unconstructive activities such as criminal behavior. However, in the U.S. Department of Justice (2009) study, researchers did not find school connectedness as a noteworthy protective variable; alternatively, they found those individuals who were connected to their academic institutions were more apt to have engaged in assaultive behaviors into early adulthood. Although school connectedness was not found to be a protective variable, school success was; yet those youth were more likely to engage in property crimes (U.S. Department of Justice, 2009).

The significance of religion in a person's life, or religiosity, is a protective factor that insulates against adverse outcomes (Ball, Armistead, & Austin, 2003; Bridges & Moore, 2002; McKnight & Loper, 2002). Benda and Toombs (2000) recommended that religion had partial protective capabilities and merely protected against minor indiscretions. Researchers have accepted that religiosity has some influence on lessening the probability of a juvenile participating in criminal behaviors (Baier &Wright, 2001; Benda & Toombs, 2000; Regnerus, 2003). In the U.S. Department of Justice (2009) study, religiosity was negatively associated with the occurrence of a youth being involved with distribution of illegal drugs but was not established as a protective variable for additional criminal behaviors. Nevertheless, if the juvenile lived in an underprivileged neighborhood, he or she was not as likely to engage in assaultive behaviors (U.S. Department of Justice, 2009).

The largest percentage of delinquency cases takes place for females when they are 15 years of age (Snyder & Sickmund, 2006). By this age, adverse childhood experiences

related to victimization and living in poverty have become embedded in their lives. In addition, protective variables can only be exposed when examining the typical juvenile female who has not participated in extensive illegal activities. Thus, this group does not present a precise view of the interaction between risk and protection (Taylor et al., 2003; U.S. Department of Justice, 2009). Research must focus on gaining an understanding of how protective variables function in the lives of females and how they are pertinent to their growth and decision-making (U.S. Department of Justice, 2009). This study examined protective variables and assessed which variables mitigated risks associated with the lives of girls. Protection for females from criminal involvement is an area that necessitates more encouraging evidence to direct successful treatment and programming.

In summary, the investigation of resiliency among female juvenile delinquents is in its formative years. Various studies have provided confirmation that there are gender disparities with regard to resiliency, which is expected to extend into the juvenile justice system. Research must begin to focus on the understanding of the way protective variables function in the lives of females who are involved in the juvenile justice system and how they are pertinent to their growth and development (U.S. Department of Justice, 2009).

As the percentage of juvenile delinquency involves more females, it is foreseen that there will be a greater need for a better understanding of their lived experiences, ways to reduce recidivism, and make available effective interventions. Shielding females from involvement in delinquent activity is an area that necessitates increased empirical evidence to direct successful programming. Given the limited research related to the resiliency of female juvenile delinquents, an examination of protective variables related

to an understanding about which factors lessen risks connected with females will considerably add to the literature.

Research Questions

The following research questions guided this study:

Q1 To what extent do Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver positively predict Resiliency?

Q2 To what extent do Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver inversely predict Externalizing Behavior?

Purpose Statement

The purpose of this study was to determine differences between selected protective factors as self-reported by pre-adjudicated female youth and their parents. The selected determinants would be presence of a loving caregiver, connectedness to school, academic success, and religiosity.

Delimitations

Delimitations of this study included working with pre-adjudicated females, ages 15 to 17, involved with the Senate Bill 94 program in Colorado. Due to the nature of self-reported inventories, there was a risk for potential bias and social desirability. Given the overrepresentation of minorities within the justice system, it was expected there would be imbalances in the representation of individuals from various cultures and socioeconomic status. This overrepresentation limited the generalizability of the findings related to this research.

Definitions

Academic success. A student's capacity to perform to her best academic ability.

Externalizing behavior. Disruptive, rule-breaking behaviors that are outwardly expressed onto the external environment.

Pre-adjudicated youth. Adolescents not previously been found guilty of a juvenile crime at the District Court level.

Presence of a supportive and caring adult. Having active and on-going interactions with an adult who is supportive of the adolescent and cares about her accomplishments.

Religiosity. The importance of religion in a person's life.

Resiliency. A person's psychological abilities to adjust to extreme stress and unfortunate circumstances (U.S. Department of Justice, 2009).

School connectedness. Having a positive view of the environment and having positive connections with others at school.

CHAPTER II

REVIEW OF LITERATURE

The following review of literature provides a basis for the importance of understanding the concept of resilience as related to the experiences of female delinquent youth. Four specific protective factors were identified as having significant impact on resiliency for members of the identified group. The following sections reviews the literature concerning the general concept of resiliency, resiliency in adolescence, resiliency with juvenile offenders, and lastly, resiliency with delinquent females, which is discussed in terms of four protective factors: presence of a supportive and caring adult, school connectedness, school success, and religiosity.

Resiliency

Understanding why 25-50% of individuals who have developed in high-risk communities and family situations do not involve themselves in criminal behaviors is a widely studied facet of resilience (Hartman et al., 2009; Werner, 1989). Conceptualizing resilience has been difficult and has led to confusion about what the term actually means (Luthar et al., 2000). The construct has been widely researched and plays a vital role with informing policy and in the implementation of prevention and intervention programs for those in our society who are described as being at risk for a myriad of issues. Norman Garmezy's study regarding children's risk for psychopathology in 1973 was the first generation of studies on resiliency that began the search for understanding competency as

related to risk factors among children. Despite the concept having been widely studied for the past 40 years, researchers continue to struggle with explaining why some people are capable of being resilient to harmful life events while others are more susceptible (U.S. Department of Justice, 2009).

It is important to conceptualize the juvenile delinquent as being involved in a complex open system who is mutually influenced by internal and external elements and processes as is conceptualized in systems theory (Magnavita, 2012). There is a "simultaneous and mutually interdependent interaction among many components" (Capra, 1983, p.267). While much cannot be understood in a complex system such as the human experience by isolating parts, essential information can be gained when examining each part out of the broader systems context (Magnavita, 2012).

Over the past 20 years, there has been an increase in the study of resilience. A sense of urgency has accelerated the need to study the concept (Goldstein & Brooks, 2006). Two reasons for this phenomenon are that youth are facing more adversities as technology advances in our society and there has been increased desire to determine if information gained about resiliency could be used in clinical interventions and other applied settings (Goldstein & Brooks, 2006; Werner & Smith, 2001).

Resilience is defined in the sciences as a material's ability to return to its natural form after being expanded or condensed (Goldstein & Brooks, 2006). In this context, resilience is described by the properties that allow the material to resume its form in terms of speed and percentage of recovery after it was manipulated. In clinical terms, resiliency is often defined by a person's ability to adapt, succeed, and avert diagnostic symptoms despite negative life circumstances such as being the victim of abuse or

neglect, experiencing violence, or being impoverished (Kaplan, 2006). Thus, resiliency appears to be in direct opposition to vulnerability but does not necessarily exist in its absence; the opposite is also true (Kaplan, 2006). Resilience is broadly viewed as "an ability to mobilize personal and social resources to protect against risks" (Kidd & Shahar, 2008, p. 163). More specifically, the term refers to a person's psychological abilities to adjust to extreme stress and unfortunate circumstances (U.S. Department of Justice, 2009).

Overcoming negative events in one's life by adapting and achieving success is a concept that has received much attention in the field of juvenile justice. However, only recently has resiliency research come to the attention of those involved with adolescent delinquency (Hartman et al., 2009). Effective intervention programs are being developed around this issue given the difficulty that was found in trying to alter risk behaviors, e.g., use of illegal substances, previous history of abuse and neglect, low socioeconomic status, many of which are not amenable to change (McKnight & Loper, 2002). Given the limitations found when using risk-focused interventions, research has begun focusing on resilience and protective factors (U.S. Department of Justice, 2009). Smith (2006) stated that people have an inherent desire to know their individual strengths and that this knowledge can moderate the effects of stress in a person's life.

Resiliency in Adolescence

Researchers have identified three general areas related to protective factors for adolescents: the nature of the individual, environmental factors within the family, and the presence of external support mechanisms (Hartman et al., 2009). Lewis and Looney (1983) conducted a study regarding resiliency among adolescents and social maturity,

finding that those who scored higher on sociability were more resilient than those who scored lower. Werner's (1993) research supported these findings; his study on resiliency and ability to cope with stressful life events was directly related to using active problem solving skills. Werner also found that if these abilities were present by age 10, they were a highly successful predictor of resiliency in early adulthood.

Environmental factors within the family have been identified as playing an important role in mediating risk for adolescents. Studies have illustrated the protective nature of having a supportive and caring relationship within the family, particularly between the parent and child (Egeland, Carlson, & Strouge, 1993; Werner, 1993). These findings have been supported despite high levels of conflict within the family. Ozer (2005) suggested discussions with a supportive person reduced distress and helped with the mental and emotional processing of the events taking place in the adolescent's life. Ozer and Weinstein (2004) found support of a relative rather than a peer or educator was directly related to an adolescent's expression of symptoms related to posttraumatic stress disorder or depression.

Researchers have documented that adolescents who demonstrate resiliency have the presence of external support mechanisms to assist in navigating the risks they experience in their high-stress lives (Grossman & Garry, 1997; Smith, Lizotte, Thornberry, & Krohn, 1995). Educational institutions have been regarded as an important external support mechanism given the setting's importance during adolescence. Resnick et al. (2004) indicated that for both boys and girls, grade point average (GPA) had the most salience as a protective factor related to participation in violent acts. Herrenkohl, Herrenkohl, and Egolf (1994) found resilient adolescents demonstrated a

higher amount of self-efficacy as related to the quality and effectiveness of the school they were attending, supporting the notion that success in school was protective. Active engagement with a religious institution has been found to be another external support mechanism for high-risk adolescents (Werner & Smith, 1992). It has been suggested that religious environment helps protect youth by offering them a sense of consistency and meaning. The literature has shown that there are important protective factors associated with adolescent resiliency.

Resiliency with Juvenile Offenders

Along with a steady increase in juvenile delinquency, research in the area of adolescent criminality also expanded incrementally. The focus has been primarily related to risk factors that place adolescents in danger of negative consequences, which include issues involving specific characteristics of the adolescent and more contextual issues such as his or her school environment and family. More specific variables included the presence of mental health issues (Tremblay & LeMarquand, 2001), age of substance use experimentation (Kandel, 1998), caregiver involvement and parenting practices (Stewart, 2001), age during first arrest (Kjelsbert, 1999), family violence (Adamson & Thompson, 1998), living in unsafe neighborhoods (Schwartz & Gorman, 2003), socioeconomic status (Husler & Plancherel, 2007), enduring frequent moves (Cherlin, 1999), prenatal and perinatal factors (McCord et al., 2001), and attachment (Kidd & Shahar, 2008).

Current theoretical models describe the connection between risk and delinquency; no isolated variables inescapably predict delinquency outcomes. Theorists have supported the notion that multiple factors place a juvenile at risk and increase the youth's propensity of committing a crime (U.S. Department of Justice, 2009). With prevention

becoming more the focus earlier this century, researchers have begun to identify risk factors and develop programs to assist youth in rising above these issues. Risk factors are defined as "those characteristics, variables, or hazards that, if present, for a given individual, rather than someone selected from the general population, will develop a disorder" (Mrazek & Haggerty, 1994, p. 127). Although predictive in nature, many individuals who are in the "at risk" category fail to engage in delinquent behaviors. Therefore, the presence of these identified variables in a youth's life may put him or her at an increased risk; becoming a juvenile delinquent is not an inevitable outcome. Researchers have not been able to explain the resilience of some children when others are more vulnerable.

The majority of research conducted on juvenile delinquency has historically focused on risks; recent attention has shifted to examining protective factors and resilience (U.S. Department of Justice, 2009). Pollard et al. (1999) stated that "protective factors are those factors that mediate or moderate the effect of exposure to risk factors, resulting in reduced incidence of problem behavior" (p. 146). Protective variables have been explained in dichotomous terms, i.e., as either experiencing the various risk factors or not, or in terms of the interaction of various characteristics or experiences that somehow interact with risk factors, which result in reducing the likelihood of the person experiencing negative outcomes (Office of the Surgeon General, 2001).

Resiliency with Delinquent Females

Although there has been much research pertaining to the concept of resiliency, there is a lack of literature with regard to the interaction of gender and protective variables (Hartman et al., 2009). It is likely that resiliency is experienced differently for

males and females (Taylor et al., 2003; U.S. Department of Justice, 2009). Although several risk factors are similar for boys and girls, recent studies have indicated that gender might impact responses to questions related to resiliency as well as explain the unique psychological and sociological experiences associated with protective variables (Fraser, Kirby, & Smokowski, 2004; Hartman et al., 2009; Resnick et al., 2004; U.S. Department of Justice, 2009). Girls have differing needs and experiences from boys, which likely influences the way each interacts with their world. These varied experiences have driven research that specifically investigated the underlying processes regarding protective factors for girls who are at risk for engaging in delinquent activities (U.S. Department of Justice, 2009). Research regarding the origins of criminal behavior involving female offenders has been inadequate and there are even fewer studies investigating protective variables (Mullis et al., 2004). Research identifying resiliency factors for adolescent female offenders appears to be needed.

Presence of a Supportive and Caring Adult

One identified protective factor for adolescent females is the presence of a supportive and caring adult in her life (U.S. Department of Justice, 2009). Researchers found the existence of this variable reduced the likelihood of involvement in illegal activities; teens were less likely to engage in delinquent activities when an adult in their lives was aware of their daily schedules and peer associations (Dishion & Kavanagh, 2003; Romer, 2003). Stewart (2001) also found that connection to a parental figure was found to be protective. Furthermore, juveniles with adults who were involved in their lives, not just their parents or caregivers, and who knew about their daily activities and

relationships were less likely to engage in illegal behaviors (Benson, 1990; Dishion & Kavanagh, 2003; Luthar, 2006; Luthar & Zelazo, 2003).

The U.S. Department of Justice (2009) conducted a survey and found that having a caring adult in a girl's life protected her from multiple forms of delinquent acts including decreasing the likelihood of engaging in status, property, and assaultive offenses, distributing illegal substances, becoming affiliated with gangs, and engaging in assaultive behaviors into their early adulthood. Researchers found an interactive effect between presence of a caring adult and propensity for selling illegal substances where the protective outcome was undermined for those residing in especially disadvantaged and impoverished areas. Researchers also found that girls who had been the victim of a physical assault, the protective outcome of having a caring adult in the juvenile's life was enhanced, particularly related to the reduction in property and assaultive offenses and association with gangs (U.S. Department of Justice, 2009). A negative relationship between the protective effects of having a caring adult when the adolescent female was the victim of familial neglect was found; she was more likely to join a gang (U.S. Department of Justice, 2009). The results of this study illustrated the protective nature of having a caring adult involved in the adolescent's life as long as familial neglect was not also present in the home.

Although parents are typically the most noteworthy adults in a child's life, the broadening of social contacts within the child's world usually begins to occur during the transition into adolescence (Beam, Chen, & Greenberger, 2002). Established relationships with the adolescent's parents and peers are especially important as are the connections made with other influential adults in their lives: teachers, extended family

members, and others in the youth's community. Studies that have investigated adolescents' connections with non-parental adults have shown that these relationships have a significant impact on the psychosocial development of adolescents by exposing them to unique situations and social interactions not present within their family of origin (Beam et al., 2002; Burton, 1996; Luthar & Zigler, 1991; Taylor, Casten, & Flickenger, 1993). Taylor et al. (1993) found that kinship support was inversely related to at-risk behaviors for adolescents in single-parent households. Additionally, Burton (1996) found that the presence of active and involved grandparents was protective for African-American adolescents who were at risk for engaging in delinquent activities.

A non-parental adult has been defined by Greenberger, Chen, and Beam (1998) as being any person who is at least 21 years of age, has considerable influence on the adolescent, and engages in role model type behavior. These researchers found adolescents with non-parental adults present in their lives had significantly less delinquent involvement regardless of the conduct of their parents or peers.

The variable related to adolescent relationships with non-parental adults has been conceptualized as providing a compensatory role or providing support and resources that were not offered by the child's immediate family. Also, these relationships with non-parental adults are normative and evolve naturally in the differing social milieus that occur throughout adolescence (Beam et al., 2002). In a study of 243 eleventh graders involving "very important non-parental adults" (p. 305), Beam et al. found that 82% of the participants had an important connection with a non-parental adult. These findings supported the normative conceptualization of the role that a supportive and caring non-parental adult has in an adolescent's life. More specifically, the results of this study

further clarified the concept of adult involvement in a youth's life as being protective. Not only is parental involvement important but also investment of a supportive and caring non-parental adult.

Ozer, Wolf, and Kong (2008) found teachers and other adults at school were identified by adolescents as being examples of non-parental resources where they might feel cared about through displays of respect and support beyond academic performances. The students in the study felt cared for in far deeper ways than just being a learner in the academic institution. Ozer et al. also found that students reported feeling cared for as a person rather than just a student; these non-parental adults showed concern for their well-being and provided emotional support at a personal level. The researchers found that these relationships, where the student felt known by an adult and felt cared about, were associated with positive scholastic and psychosocial results for the adolescent. Specifically, the results of this study illustrated the protective nature of adolescents forming deep and meaningful relationships with non-parental adults such as teachers or other adult mentors.

Perceived support from family members might also function as a protective variable (Ozer, 2005). Ozer and Weinstein (2004) found that adolescents from families who resided in urban areas were better adjusted than their peers when exposed to violence as related to varying levels of the perception of having more familial support. Luthar et al. (2000) studied aggression and depression in adolescents, which resulted in findings that the presence of supportive mothers was protective for the adolescents against developing psychological symptoms after witnessing violence. A similar effect

was found for youth who reported having strong connections with their siblings (Ozer, 2005).

Youth mentoring has been shown to have a positive impact on the overall functioning of adolescents (DuBois, Holloway, Valentine, & Cooper, 2002). A mentorship role is viewed by DuBois and Silverthorn (2005) as being fulfilled by extended family members, adults from social networks, or from more formal establishments such as teachers or counselors. Heaney and Israel (2002) theorized that mentoring relationships originating within a family system were more predisposed to convoluted factors such as being exposed to the same issues within the family, while mentoring provided a buffering from these same family dynamics and being impacted by similar stressors. This would suggest that youth who establish mentor connections outside the family might have a larger benefit by being exposed to new social networks and encouraged to consider differing perspectives (DuBois & Silverthorn, 2005). DuBois and Silverthorn's research supported that there are differences in familial and other mentoring associations and their outcomes. Their study found that familial members who were viewed as mentors by youth modeled accepting attitudes and behaviors with regard to substance use.

The development of a close emotional bond that involves support and empathy is essential in having a positive outcome for an adolescent (Chen, Greenberger, Faruggia, Bush, & Dong, 2003; Rhodes, 2002). Females had more positive outcomes when they perceived warmth and acceptance from the adults in their lives whom they identified as being very important (Greenberger et al., 1998).

The Big Brothers/Big Sisters program, the largest formal mentoring organization, has been studied; youth who were mentored through this program were less likely to engage in high risk behaviors (U.S. Department of Justice, 1997). A federally administered program called the Juvenile Mentoring Program (JUMP) associated with the Office of Juvenile Justice and Delinquency Prevention was established based on these outcomes. Support was provided for youth through mentoring; it was defined as a "one-on-one relationship between a pair of unrelated individuals, one adult and one juvenile, which takes place on a regular basis over an extended period of time" (U.S. Department of Justice, 1997, p. 2). This connection is typically characterized by mutual dedication and affective attachments of reverence and identification. JUMP was designed to reduce juvenile criminal behavior, gang involvement, and improve academic performance and school retention rates. This program was evaluated over an 18-month period; 46% of those involved in the program were less likely to use illegal substances, one-third displayed less violence, and truancy was reduced by half as compared to juvenile delinquents not involved in the program. The study concluded that mentoring could help to develop caring relationships in the lives of at-risk adolescents.

The results of the JUMP program translated into smaller versions of this mentoring philosophy. One specific local program that emerged was Big Sisters of Colorado and included 59 girls (U. S. Department of Justice, 1997). The program was termed Life Choices; it aspired to assist girls in improving judgment and educational skills and served as a pregnancy-prevention program. Results showed that none of the participants became pregnant or had difficulties with use of illegal substances when measured at the completion of the program.

School Connectedness

Connection to school, or having a positive view of the environment and positive connections with others at school, has also proven to be a protective factor for adolescents; it is especially instrumental for those who have trouble at home (Diagle, Cullen, & Wright, 2007; Perkins & Jones, 2004). This construct is broad and includes how adolescents feel, perceive, and are committed to their schools (Ozer et al., 2008). It is characterized by Goodenow (1993) as "the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment" (p. 80). As adolescents are in school for approximately half of their day, this seems to be an important setting for examining developmental characteristics related to resiliency. It is in this context where academic and social competencies are attained (Ozer, 2005). Milestones associated with achievement, peer connections, conduct, and involvement in extracurricular activities are developed in this setting. School functions as an alternative context where adolescents' achievements and successes are encouraged and honored (U.S. Department of Health and Human Services, 2001). This environment has the ability to provide the appropriate developmental framework where youth are able to excel interpersonally and scholastically (U.S. Department of Justice, 2009). Due to the individuation process that occurs during adolescence, school connection might be essential as these students depend less on their family and more on other relationships within their lives (Goodenow, 1993). It has also been suggested that those with a poorer connection to school tend to associate themselves with similar peers, resulting in more social pressures to engage in delinquent behaviors (Dornbusch, Erickson, Laird, & Wong, 2001). Participation in extra-curricular activities at school has also been found to be a

protective factor for girls (Hart, O'Toole, Price-Sharps, & Shaffer, 2007). Payne, Gottfredson, and Kruttschnitt (2005) suggested in their review of literature that there was a gender differential regarding the protective nature of school bonding. More specifically, the researchers found that girls were more connected to the teachers, administrators, and staff, and generally felt closer to people at their schools than boys.

Research completed by Resnick et al. (1997) showed that adolescents who felt connected to their school had higher levels of psychological functioning in terms of affective distress, behavior involving risk-taking, and violence. The study operationalized the feeling of connection to the students' school as being related to feelings of contentment, belonging, wellbeing, closeness, and impartial treatment by their instructors. In addition, the adolescent participants believed feelings of safety and security on campus were associated with their prolonged improved academic and psychologically adaptive abilities such as self-esteem and locus of control (National Center for Education Statistics, 1997).

It remains uncertain whether a feeling of connection with a school is the cause or effect of improved psychological functioning among adolescents (Ozer, 2005, Resnick et al., 1997). Further research needs to explore the potential protective nature of school connection as there are significant implications regarding providing appropriate interventions for at-risk adolescents. Ozer (2005) suggested that improving a youth's connection to school could serve as an effective global intervention strategy to address individual psychological requirements necessary during adolescence. Hawkins, Guo, Hill, Battin-Pearson, and Abbott (2001) hypothesize that the outcomes related to school connection were a function of youth accepting and internalizing the school's principles of

engaging in safe and prosocial behaviors. The researchers also suggested these students were less likely to engage in risky activities because they did not tend to be truant from classes. By remaining in classes, these students were less likely to be exposed to delinquent behaviors that tended to occur during school hours.

Ozer (2005) reported the construct of connection to school is essential in the development of a healthy adolescent, specifically with regard to the feeling of safety and having positive relations with adults and their friends. In fact, her research showed feelings of connectedness to school was negatively related to the student having intrusive thoughts and symptoms of anxiety after being exposed to violent episodes continuing over a year after the occurrence of the incident. This study controlled for mental health functioning prior to exposure to the violent event and provided longitudinal verification for feelings of school connection being a protective variable against the development or exacerbation of mental health symptoms regarding youth from urban settings. It is unclear if these findings would be consistent across other community settings, e.g., students from rural communities.

Such feelings of connection to the school environment have been shown to be directly influenced by two factors: the availability of extra-curricular activities (McNeely, Nonnemaker, & Blum, 2002; Ozer et al., 2008) and presence of small group instruction as part of the curriculum (Ozer et al., 2008). Small group instruction is rarely incorporated in public high schools, yet these programs focus on improving feelings of connection to school and sharing a sense of community within most primary and secondary schools (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Ozer et al., 2008).

A previous study conducted by McNeely (2005) suggested that an adolescent's feelings of belonging to a school were a much poorer predictor of feelings of school connection and were more strongly related with the relationships the adolescent had with teachers. The researcher also found that the youth's connection to teachers was strongly associated with academic outcomes and not engaging in risky behaviors, more so than measurements related to feelings of belonging to the school. Ozer et al. (2008) suggested that feelings of belonging to school might be more cumulative and abstract, making it difficult to measure for this population. As the concept is not easily connected with specific incidents or occurrences, the idea might have a complex meaning for adolescents. Ozer et al. continued that there is a need for more discerning measurement tools that can distinguish the feelings of belongingness with more precision.

Shochet, Dadds, Ham, and Montague (2006) studied the effects of school connection, the onset of depression and anxiety symptoms, and generalized mental health issues for students in Grades 7 to 9. This longitudinal study found that school connectedness predicted mental health symptoms up to one year later but most significantly for anxiety symptoms in girls. Although the conduct problems subscale was predictive for boys, it was not clear to the researchers why this finding resulted as it did. They suggested that there might have been some inflation due to the self-report nature of the study, which was found in other self-report studies concerning the measurement of risk-taking behavior (Jaccard, Blanton, & Dodge, 2005). To overcome this effect, the authors recommended conducting future studies that included multisource data. Information gained from parents, teachers, and interviews might reduce this self-report inflation among adolescents concerning externalizing behaviors (Shochet et al., 2006).

School Success

Ripple and Luthar (2000) concluded that early success in school, as measured by grade point average, was protective for the child and reduced the likelihood of that child engaging in negative activities such as delinquency. Resnick et al. (2004) found that grade point average was the most salient variable when distinguishing adolescents' propensity to engage in violent behaviors. However, the U.S. Department of Justice (2009) study did not find school connectedness to be a significant protective factor. On the contrary, those who were connected to their schools were more likely to have been involved with assaultive behaviors into early adulthood (U.S. Department of Justice, 2009). School success was found to be a protective variable, while school connectedness was not. Given this, youth who were successful in school were more likely to engage in property crimes.

Crosnoe, Riegle-Crumb, and Muller (2007) measured academic success using two external markers. They calculated a ratio being the number of classes attempted to those failed and used it as an index of academic failure for a scholastic year. The other marker was the parental report related to the child's learning disability status. For girls, the researchers found that class failures for those who had not been diagnosed with a learning disability had increasingly negative self-perceptions that negatively impacted their successes in math and science, especially for those whose family and peers prioritized academic success.

There appears to be no direct causal relationship between academic success and delinquency. However, Katsiyannis, Ryan, Zhang, and Spann (2008) stated delinquent adolescents experienced considerable scholastic deficits when compared to their non-

delinquent equals. Several delinquency theories, differential association, school failure, social control, containment, and susceptibility theory have attempted to explain the relationship between academic performance and delinquency, though none have been successful in totality. Early in the 20th century, Doll (1921) reported that only 5% of detained youth achieved at or above the average score on academic examinations issued in public schools. Since this finding, research has shown that delinquent youth consistently scored between 8 and 12 points lower on intelligence tests (Lynam, Moffitt, & Stouthamer-Loeber, 1993). It appears these performance gaps were representative across all academic subject areas and tended to increase with age (Meltzer, Levine, Karniski, Palfrey, & Clarke, 1984). Katsiyannis et al. (2008) identified that by middle school, delinquent youth had significantly fallen behind their peers in reading, spelling, math, and handwriting. Traxler (1941) reported that 83% of delinquent youth required special educational assistance as compared to 10% of the non-delinquent population, while other research suggested offenders were four times more likely to receive such services than the average population (Quinn, Rutherford, Leone, Osher, & Poirier, 2005). Meltzer et al. (1984) reiterated that delinquent adolescents were trailing their peers between two and five years in reading levels. It is suggested that academic performance by those in this population continue to worsen (Katsiyannis et al., 2008). Beebe and Mueller (1993) found 95-98% of the 271 delinquent youth involved in their study had significant deficits in reading. Zamora (2005) found 44% of the 167 high school delinquents involved in a county justice system who participated in a study testing the academic achievement and delinquency connection were found to read at elementary grade levels and 48% were at the elementary math level.

While there is evidence for poorer academic performance and lower IQ among juvenile delinquents, Katsiyannis et al. (2008) suggested there are various reasons for these deficits. For some delinquents, innate deficiencies are evident; however, others perform poorly due to lack of family support, other family issues that conflict with academic success, truancy, not being in class to learn new concepts, and negative peer associations that do not support academic success.

While there have not been many studies, similar findings were reported for achievement scores in arithmetic abilities. Habermann and Quinn (1986) found youth involved with two correctional senior high schools had math scores at the fifth grade level. Zamora (2005) reported 48% of high school delinquents scored in elementary levels in math using the Kauffman Test of Educational Achievement. Casey and Keilitz (1990) found that 35.6% of juvenile delinquents had learning disabilities and Quinn et al. (2005) suggested 13% were significantly disabled.

In general, delinquent youth produce poorer grades in school than their non-offending peers (Davis, Sanger, & Morris-Friehe, 1991; Katsiyannis et al., 2008). Zabel and Nigro (1999) estimated that approximately 75% of youth offenders had failed in at least one subject area. These pervasive deficits contribute to the elevated dropout rate for youth offenders. Maguire and Pastore (1995) estimated that nearly 70% of juvenile delinquents failed to successfully complete high school.

Beebe and Mueller (1993) suggested that the magnitude of academic deficiency was directly related to the severity of criminal offenses committed by youth. Youth who had been involved in serious felonies (such as homicide and rape) had more significant

deficits in arithmetic and reading than those who committed less serious felony offenses (property offenses), misdemeanors, and status offenses (such as curfew violations).

With efficacious academic intervention and successful educational remediation evidenced by success in school, recidivism rates among juvenile offenders could be reduced (Archwamety & Katsiyannis, 2000). Drakeford (2002) found that improvements made in reading skills over an eight-week period among 611 detained juvenile delinquents decreased recidivism rates by 3.5% that persisted for at least one year.

The relationship between academic deficiencies and delinquency has been explored. Most of the prior studies have focused on detained youth and not on juveniles who are not incarcerated but involved with the juvenile justice system. Most adolescents who have been involved with the juvenile justice system remain in their communities rather than being detained (Brown, Riley, Walrath, Leaf, & Valdez, 2008). Nationally in the late 1990s, 30% of youth involved with the juvenile justice system had no contact with the courts (Brown et al., 2008). Of those who were referred to the courts, approximately 24% resulted in residential placement, 62% were sentenced to probation, 10% received fines or community service, and 4% were only reprimanded (Puzzanchera, 2003; Snyder, 2005). In 2002, only 3% of juveniles involved with the Maryland Department of Juvenile Services who were referred to Court were incarcerated while the other 97% returned to their communities (Maryland Department of Juvenile Services, 2002).

Brown et al. (2008) studied the academic achievement of 157 youth who had been in contact with the juvenile justice system only briefly (this was the first systemic investigation of the academic performances related to this population). They found that

62.4% of the youth had academic deficits and that achievement scores were below average, up to five standard deviations. Those who exhibited significantly poorer achievement scores were minority youth who resided in urban areas. The researchers suggested further research was needed regarding various characteristics associated with juveniles who had brief contact with the juvenile justice system (Brown et al., 2008) but there did appear to be an association between lower academic achievement and delinquency.

Religiosity

As the majority of adolescents associated themselves with a religious denomination, religion plays an integral role in the development of our youth (Mason & Windle, 2002). Religiosity, or the importance of religion in a person's life, is a protective factor that seems to defend against various harmful outcomes and generalizes across various diverse populations (Ball et al., 2003; Bridges & Moore, 2002; Johnson, Jang, Larsen, & Li, 2001; Mason & Windle, 2002; McKnight & Loper, 2002). Agnew (2005) concluded that religion had a significant impact on the prevention of juvenile delinquency for females when compared to their male counterparts. Some researchers suggested religion has limited protective ability and only guards against slight indiscretions (Benda & Toombs, 2000; Burkett, 1993; Evans, Cullen, Dunaway, & Burton, 1995). While there is no consensus, a few studies have recognized that religiosity has some positive impact on decreasing the likelihood of an adolescent engaging in delinquent behaviors (Baier &Wright, 2001; Benda & Toombs, 2000; Regnerus, 2003). In the U.S. Department of Justice (2009) study, religiosity was inversely related to incidents of distributing illegal substances but was not found to be a protective factor for other delinquent behaviors.

However, if the adolescent resided in a disadvantaged area, he or she was less likely to engage in assaultive behaviors.

Because religion provides guidance about morality and sanctity, it is understandable that attendance and participation in religious activities and the importance of religion in one's life might be a protective factor for at-risk youth (Benda, Pope, & Kelleher, 2006). A meta-analysis conducted by Baier and Wright (2001) found a moderate effect (-.12), suggesting that engagement in religious activities were inversely related to criminal activity. The research involved 60 studies spanning all ages from 1969 to 1998 regarding the relationship between religion and crime. Most of the results reported a statistically significant inverse relationship between the two variables (Baier & Wright, 2001). Benson, Scales, Sesma, and Roehlkepartain's (2005) findings supported that religion is moderately correlated with the reduction of risk behaviors but also that predictions were more significant for indicators of thriving behaviors, e.g., success in school and helping others.

Cochran, Wood, and Arneklev (1994) found evidence in their research supporting that any effect that engagement in religious activities might have on delinquency was mediated by other more powerful predictors such as provocation and social control indicators. The results from this study indicated when predictors were controlled, the outcome of religious affiliation became statistically insignificant with exception of use of tobacco and alcohol. The researchers believed these findings supported the ascetic argument suggesting that religion only discourages behaviors that are clearly prohibited by religion, whereas the larger culture is more undecided and inconsistent. Use of alcohol by minors is a behavior where society responds in a generally inconsistent

manner, viewing the act of drinking by individuals who are underage as more indulgent than illegal (Cochran et al., 1994). In terms of use of illicit drugs and illegal behaviors, society's responses are believed to be stronger and more consistent.

Researchers suggested that adolescent females were more strongly impacted by religion due to gender socialization that occurs in most religious organizations (Benda et al., 2006; Smith, Lundquist, Faris, & Regnerus, 2002). Because females are socialized to care for others and be obedient, religious affiliation would have a stronger impact with girls being less likely to engage in delinquent behaviors.

Baier and Wright (2001) found that most of the studies of religion and its relationship to juvenile delinquency used a one-item measurement of religion associated with attendance at church. Although it was assumed that this was an adequate measure of religious beliefs, the researchers suggested it was not a good predictor of religiousness or the importance of religiosity in one's life. Benson et al. (2005) suggested this single-item measure was too global and did not account for other salient variables such as the depth of beliefs or importance of experiences. Because attendance at church is often the result of issues unrelated to religious ideologies, external pressures, or expectations, it could be a custom devoid of importance for adolescents (Benda et al., 2006).

Benda et al. (2006) suggested that the single-item measurement of religion was responsible for the modest and inconsistent findings from previous studies. Therefore, the researchers suggested church attendance and religiosity, or the importance of religion on one's life, should be measured to provide a more appropriate measure of religiousness. In their study using a six-item measurement of religiousness, a strong inverse relationship was found when correlated to delinquency. They also found that this variable was a more

robust indicator of illicit drug use than the single-item of church attendance, which defeated the ascetic argument supported in previous research. Benson et al. (2005) supported this new multi-dimensional measure related to individual theology.

The study conducted by Benda et al. (2006) found that religiousness was more important to females than for the males. They suggested these findings supported the gender-role theory. This socialization allows girls to more readily adopt the values and customs of their guardians (Regnerus, 2003). The researchers suggested that the principles and convictions associated with religiosity to positively influence adolescent behavior more so than church attendance was not an appropriate measure of one's faithfulness.

Pearce and Haynie (2004) believed spurious findings related to delinquency and religiosity were related to the lack of investigating beyond characteristics of adolescents to considering the manner in which those who were influential impacted a youth's life. The varying contexts including where an adolescents resides and with those within their network were of interest to the researchers. They hypothesized the more religiously homogenous the family, the less likely an adolescent would engage in delinquent behaviors. Stark (1996) believed that residing in a religious environment augmented the protective nature of religiosity on delinquency. This concept borrowed from research on marital satisfaction, supporting that lasting relationships were characterized by how similar a couple was in their religious values and participation (Chi & Houseknecht, 1983; Glenn, 1982; Heaton, 1984). The notion that religious differences provided an opportunity for increased disagreement and conflict could be applied to adolescents (Pearce & Axinn, 1998).

Pearce and Haynie (2004) suggested adolescents under this type of familial stress and tension were likely to externalize the problem and act out through engaging in delinquent behaviors. Results of their nationally representative study involving adolescents and their mothers concluded that religiosity was inversely related to the adolescent's involvement in delinquent behaviors when the youth and mother had similar religious values and practices. When they differed, youth were more likely to engage in delinquent activities than others who shared the same religiousness as their mothers. This supported the usefulness of conceptualizing religiousness within the context of the family.

Age 15 is when the greatest proportion of delinquency cases occurs for girls (Snyder & Sickmund, 2006). By this time, negative events from childhood involving victimization and living in poverty have become ingrained in their lives. Also, protective factors can only be revealed when studying average adolescent girls who have not engaged in extensive delinquent activities as they do not provide an accurate view of the interplay between risk and protection (Taylor et al., 2003; U.S. Department of Justice, 2009).

Conclusion

In summary, the study of resiliency among female juvenile delinquents is in its infancy. Research provided evidence that there are gender differences with regard to resiliency, which is likely to extend into the juvenile justice system. Studies must begin to focus on the understanding of the manner in which protective factors function in the lives of girls involved in the juvenile justice system and how they are relevant to their development and progression (U.S. Department of Justice, 2009).

As the proportion of juvenile delinquency increasingly involves females, there is be an increased need to further understand their experiences, how to decrease recidivism, and provide efficacious interventions. Protection for girls from delinquent behavior is an area that needs more supportive evidence to guide effective programming. Due to the limited research on the resiliency of female juvenile delinquents, an investigation regarding protective factors and the evaluation of which factors mitigate risks associated with girls will significantly contribute to the literature.

CHAPTER III

METHODOLOGY

This chapter describes the methodology implemented in the current study. The processes used to answer the research questions are explained and statistical procedures that address each research hypotheses are described.

Research Design

This study utilized a correlational research design that examined the relationships between selected protective factors as self-reported by pre-adjudicated female youth and their parents using predictive statistical methods. The dependent variables were resilience and externalizing behavior, and the independent variables were presence of a loving caregiver, connectedness to school, academic success, and religiosity. This study relied exclusively on youth and parental perceptions and self-reports of resiliency using two self-report surveys--youth and parent versions.

Procedures

Approval from the University of Northern Colorado's Institutional Review Board was sought first (see Appendix A), followed by approval from the Department of Youth Corrections. Then, permission was sought from each Senate Bill 94 Pre-Trial Release Program's program director to distribute the surveys to youth and their parents who were involved with the program. This involved meeting with each program director to discuss the impact this study would have on the program and case managers as well as to address

any questions each director had related to the study. Prior to disseminating the surveys, a training meeting was conducted with each program to discuss procedures and address any questions. Regular contact via e-mail and telephone was maintained with each program throughout the duration of the study to address questions or concerns that arose during the data collection phase.

Parents and youth were given an introductory letter that familiarized them with the purpose and potential uses of the study data during their initial visit with the Pre-Trial Release program (Appendix B). When potential participants decided against completing the survey, they were asked to voluntarily complete a brief two-item refusal questionnaire that attempted to evaluate the reasons for refusal so as to rectify the problem (see Appendix C). When the family decided to participate in the study, they were provided an informed consent informational letter along with the appropriate surveys (see Appendices D, E and F). The assessment tools were counterbalanced within the packets, randomizing placement of youth and parent surveys within the packet. The youth were asked to complete the survey in a separate and private room away from their parent(s). Upon completion, the family was provided a follow-up letter thanking them for their participation and providing them with mental health referrals should intervention be necessary (see Appendix G).

Participants

Potential participants were approached by Senate Bill 94 Case Managers during their initial appointments at six Pre-Trial Release Programs across the Denver Metropolitan area. Each program represented a different juvenile Court district: the Second Judicial District was in Denver, the Fourth was in Colorado Springs, the Eighth

was in Fort Collins, the 17th was in Thornton, the 18th was in Centennial, and the 19th was in Greeley. The participants were parents/guardians and adolescent females who had recently become involved with the district level juvenile court system in their respective areas (see Table 1).

Individuals were offered the opportunity to participate in the study by the case manager who was completing the intake paperwork with the family. It involved a convenience sample; those who accepted were provided a packet that included the introductory and disclosure letter along with both surveys. The parents and adolescents were separated while completing the surveys, which took approximately 15 minutes. Upon completion, the surveys were collected from the participants, the parent/guardian was provided a thank you letter, and the surveys were secured in an unlabeled manila envelope separate from the signed disclosure letter that was kept with the other completed letters in a different manila envelope labeled Disclosure Letters. Both folders were locked in a cabinet within the program's office. The case managers left the survey-takers alone while the questionnaires were being answered so as not to influence the respondents in any way. Additionally, no personally identifying information was collected in order to protect the anonymity of the respondents. Midway through the data collection process, an incentive was offered to the case managers that involved raffling of two Broncos football tickets. For each survey completed, the case manager's name was entered into the pool. After three months, the raffle was completed and the tickets were disseminated accordingly.

Table 1

*Frequency by Judicial Distric*t

Judicial District	Frequency	Percent
Denver	31	26.70
Colorado Springs	25	21.55
Fort Collins	20	17.2
Thornton	21	18.10
Centennial	2	1.7
Greeley	17	14.65

In total, 125 survey packets were collected, 120 packets were completed, and 116 were considered usable for analysis. Four survey pairings were eliminated from the sample as two parent surveys had more than two items omitted and two youth surveys scored in the extremely high range for two or more validity indexes, suggesting the data might be invalid. There were five refusals to participate in the study and one where the parent/guardian did not complete the survey and the youth did. The usable survey rate was 92.8%. Of the five who refused to participate in the study, only one completed the refusal survey provided in the packet. This potential participant felt completing the survey would be too intrusive and he/she did not want to divulge any additional information beyond that collected during the Pre-Trial Release Program intake. In cases where only one or two questions were omitted, the survey was kept and the omitted item was coded as a 9 to fill those missing data values. Furthermore, the number of surveys collected from each regional District varied greatly; in most cases, this was dependent on how motivated the case managers were to offer the surveys to potential participants and forgetting about the study in general.

Sample Size

To conduct analyses for the study, the appropriate number of participants was calculated using power at .80 and alpha at .05 (Green, 1991). Given this study had four predictors or independent variables and the researcher sought a medium effect size, this study required a minimum of approximately 84 participants based upon power analysis estimates. I oversampled to include 116 participants to account for missing data and insure adequate power was achieved.

Sample Selection Methods

This section summarizes the sample selection methods used in this study. Due to the fluidity of youth in the Senate Bill 94 Pre-Trial Release Program, it would have been extremely difficult to generate a list of potential respondents. Instead, the sample of participants included counties from the Front Range and involved 6 of the 22 Judicial Districts in Colorado. Each selected SB 94 program was provided a code on the back of each survey corresponding with their geographic area and pairing the surveys between youth and her parent/guardian.

Instrumentation

Both the parent and youth surveys included several separate sections that inquired about resiliency and protective variables, although the specific content of the two surveys differed somewhat. Both surveys included a demographic section. The parent and youth surveys utilized a well-established instrument, the Behavior Assessment System for Children-Second Edition (BASC-2, Reynolds & Kamphaus, 2004), which is often used in forensic situations. The youth survey had an additional six items added to assess for Religiosity (Benda et al., 2006).

Religiosity was measured using a 6-item tool adapted from Benda et al. (2006) and were items 1-6 on the current survey. The items were scaled using a 5-point Likert-type scale ranging from *never/not at all* to *very often/very much* with the middle anchor being *sometimes/somewhat*. A single item assessed church attendance and the remaining five items measured what is termed by Benda et al. as religiousness. High scores indicated elevated levels of religiosity and where low scores designated low levels of religiosity. Statistically significant findings were evident using Pearson product-moment correlations studying religiosity (-0.30, $p < .01$) and church attendance (-0.13, $p < .05$) to delinquency. Using ordinary least squares (OLS) regression analyses, Benda et al. found religiosity to account for -.30 ($p < .01$) of the variance of participation in illegal activities; two other variables explained more variance (caregiver supervision, -0.33 and friends' alcohol use, 0.32). An OLS analysis used to identify the unique amount of variance found that religiousness explained 3.4% of the variance associated with delinquency. The researchers also found that females were more affected by variables associated with religiousness than were their counterparts with regard to engagement in delinquent activities. Interpretation of these scores was as follows: high scores indicated high levels of religiousness and low scores indicated low levels of religiousness.

Parent Survey

The parent survey contained 150 items and utilized the BASC-2: Parent Rating Scales-Adolescent measure. The independent variable of success in school was evaluated based upon a correlation of the parent and child's estimated GPA; the independent variable of resilience was assessed based upon scores from the BASC-2 Resiliency scale. The dependent variable of externalizing behaviors was assessed using the Externalizing

Problems composite scale from the BASC-2. Validity scales were evaluated to asses for inconsistency, patterned responding, and reading difficulties.

The BASC-2 is a revision of the original assessment tool that was published in 1992. It asserts to be a multidimensional system that evaluates behaviors and self-perceptions of individuals ranging in age from 2-25. While the primary function of the BASC-2 is to aid in the identification of emotional and behavioral disorders in children and to assist in treatment planning, other uses include providing corroborative diagnostic evidence consistent with the DSM-IV-TR by determining need for special education services, program evaluation, forensic assessment, and use in research (Reynolds & Kamphaus, 2004). The BASC-2 has a software program that offers additional indices not available with hand-scoring including the Consistency Index and Response Pattern Index.

The BASC-2: Parent-Rating Scale-Adolescent survey provided a 4-point response scale: Never, Sometimes, Often, and Almost Always. T-scores and percentile ranks were provided and could be evaluated based upon age, gender, and clinical status using the BASC-2 female specific norms updated in 2004 to closely match the target U.S. Census from the 2001 Current Population Survey. Overall composite scores as well as scale scores were provided and validity assessments aided in assessing for deceitful and biased responses, misinterpretations, and other possible threats to reliability and validity. The F Index measured overly negative assessments: raw scores between 0-4 were deemed acceptable, 5 was in the cautionary range, and 6-20 cited extreme caution. A maximum of two omitted items were allowed per scale. The Pattern Response Index compared responses from 0-61 similar items: raw scores of 62-117 were considered to be in the acceptable range and scores above 118 needed to be interpreted with a high degree of

caution. Cutoffs for the Consistency Index were as follows: 0-13--acceptable, 14-18–cautionary, and 19 or above--use extreme caution.

The BASC-2 was standardized on a sample of over 13,000 participants between the ages of 2 and 18 between 2002 and 2004. The sample was representative of the U.S. population, both clinical and nonclinical norms, with regard to race, ethnicity, geographic region, and gender. Clinical norms included 1,779 children between the ages of 4 and 18 who were identified by their parents as having been clinically diagnosed with a learning disability, speech/language impediment, mental retardation or developmental disability, emotional or behavioral disorder, hearing impairment, attention-deficit hyperactivity disorder, or a pervasive developmental disorder.

The Externalizing Problems composite scale summed the Hyperactivity, Aggression, and Conduct Problems subscales into a total T-score. It was designed to assess for disruptive behavior including delinquency and those unresponsive to direction. The Resiliency scale measured the youth's ability to employ internal and external support systems to reduce stress and overcome adversity. Individuals who scored low on this scale were those who had difficulties adjusting to changes in their environment or social lives. High scores on all of the subscales represented a greater magnitude of that variable being present for the individual.

Reliability of the BASC-2 included internal consistency, test-retest, and interrater reliability data. The coefficient alpha reliabilities for Externalizing Problems for females age 15-18 in the general population norm was $r = 0.92$. Female adolescents in the clinically normed sample resulted in coefficient alphas of $r = 0.94$ for Externalizing Problems. These results suggested generally high internal consistency for both scales.

Test-retest reliabilities for the adolescent group resulted after a median 41 day time span and a sample size n = 88 in a correlation of r = 0.84 for Externalizing Problems after using a variability correction due to range restriction of the standard deviation. Interrater reliability for the Externalizing Problems scale using a sample size n = 51 for adolescents resulted in an adjusted correlation of r = 0.78. The T-score standard error of measurement of the Externalizing Problems composite scale for females between ages 15 and 18 was 2.8 and 2.4 for the clinically normed population.

Evidence for validity included convergent and divergent intercorrelations, factor analyses, and concurrent validity. The intercorrelations for the Adolescent form with regard to the Externalizing Problems composite scale was negatively correlated with all of the adaptive scales for the general and clinical populations, ranging from -0.42 to -0.66 for the clinical norm group and -0.42 to -0.64 for the general norm group. Within the Parent Rating Scale, Externalizing Problems along with Attention Problems resulted in the highest intercorrelations. Two factor analyses were conducted when developing the composite scales, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA). The CFA with a varimax rotation confirmed the factor loadings for composite scales determined by the EFA. The CFA factor loadings for Externalizing Problems was r = 0.90 for Hyperactivity, r = 0.84 for Aggression, and r = 0.82 for Conduct Problems. Validity was assessed compared to three established teacher, parent, self-report measures including the Achenbach et al. (1986) *System of Empirically Based Assessment Child Behavior Checklist* (ASEBA), Conners' (1997) *Parent Rating Scales-Revised*, and the *Behavior Rating Inventory of Executive Functioning* (BRIEF; Gioia, Isquith, Guy, & Kenworthy, 2000). *Externalizing Problems on the Parent Rating Scale* correlated with

the ASEBA for ages 6-18 with a sample size $n = 67$ at $r = 0.74$, the *Conner's Parent Rating Scales-Revised* Global Index Total with a sample size $n = 55$ at $r = 0.54$, and the *BRIEF* Global Executive Composite with a sample size $n = 40$ at $r = 0.84$, after correction for range restrictions for all of the correlations.

Specific demographics requested on the parent and child surveys included youth's age, ethnicity, religious affiliation, current delinquency charge, and estimated grade point average. Unique items on the parent survey included occupation, number of parents in the household, and estimated annual income (see Appendix E).

Youth Survey

The youth survey was 182 items in length and was constructed using two tools: the BASC-2 Self-Report of Personality, Adolescent measure (Reynolds & Kamphaus, 2004) and a 6-item instrument developed by Benda et al. (2006) that assessed religiosity. The independent variable of presence of a loving caregiver was measured using the Relations with Parents and Interpersonal Relations scales, both from the BASC-2; success in school was evaluated based upon the estimated GPA. The independent variable of connection to school was assessed using the Attitude to School and Attitude to Teachers scales on the BASC-2. Religiosity was measured using a 6-item assessment tool adapted from Benda at al. (2006, see Appendix F).

On the BASC-2 Self-Report-Adolescent response form, the first 69 items offered True-False response options with the remainder of the items being rated on a 4-point response options identical to the Parent Rating Scale. T-scores and percentile ranks were provided and could be evaluated based upon age, gender, and clinical status. Overall composite scores as well as scale scores were provided and validity assessments aided in

assessing for deceitful and biased responses, misinterpretations, and other possible threats to reliability and validity.

The F Index measured overly negative assessments: a raw score of 0-3 was deemed acceptable, 4-6 was in the cautionary range, and 7-15 indicated extreme caution. The L Index assessed social desirability: a raw score of 0-8 was acceptable, 9-11 was in the cautionary range, and 12-15 indicated use extreme caution. The V Index measured carelessness and failure to comprehend or cooperate with the evaluation process. Raw scores on the V Index were interpreted as follows: 0-2 was acceptable, 3 was caution, and 4-12 was extreme caution. A maximum of two omitted items was allowed per scale. The Pattern Response Index allowed for 0-57 similar items, 58-123 was in the acceptable range, and anything above 123 was considered high caution. Cutoffs for the Consistency Index were as follows: 0-14 was acceptable, 15-20 was cautionary, and 21 or above was use extreme caution.

Using the BASC-2, several scales were used as independent variables in this study. The following is a brief description of each scale that was used:

- The Relations with Parents scale measured the degree to which a youth felt she was positively regarded by her parents and had the feeling of being valued by them. High scores indicated positive adjustment, while low scores suggested family problems and potential feelings of alienation.
- The Interpersonal Relations scale measured the youth's perceptions of having strong social relationships with others. Low scores suggested difficulties in relating to others, while clinically significant scores indicated a youth had substantial problems in relating to others including adults.

- The Attitude to School scale assessed a student's feelings of estrangement, resentment and general unhappiness with school. Those who scored below $T = 41$ generally were satisfied and comfortable at school. Those with scores in the clinically significant range ($T \leq 65$) were at an increased risk of dropping out.
- The Attitude to Teachers scale evaluated an adolescent's feelings of anger and aversion toward her teachers coupled with a belief that her teachers were unjust, indifferent, and overly difficult. Low scorers indicated those who typically had high regard for teachers. Those who scored in the clinically significant range were pervasively dissatisfied with their teachers and were at an increased risk for dropping out.

Reliability of the Self-Report of Personality assessment tool evaluated the internal-consistency and test-retest performance of the measure. Coefficient Alpha reliabilities for scores based on females ranging in age from 15-18 with a sample size n=493 were as follows: Attitude to School—r = 0.82, Attitude to Teachers—r = 0.77, Relations with Parents—r = 0.88, and Interpersonal Relations—r = 0.77. The Test-Retest reliability study conducted with the adolescent population included a sample size n = 107 of which 73 were females, the test interval ranged from 14-51 days, and the median was 20 days. Due to range restrictions, the adjusted reliability correlation scores were as follows: Attitude to School was r=0.84, Attitude to Teachers was r=0.73, Relations with Parents was r=0.80, and Interpersonal Relations was r=0.75.

Validity was assessed using scale score intercorrelations, factor analyses in determining the composite scale scores, and concurrent evaluations. Scale

intercorrelations for the general norm sample involved a sample of 1,866. Attitude to School and Teachers scores were highly correlated at $r = 0.59$, and Relations with Parents and Interpersonal Relations scores were moderately correlated at $r = 0.33$. Correlations with other self-report measures were described: the Children's Depression Inventory ($n = 39$), Revised Children's Manifest Anxiety Scale ($n = 40$), ASEBA Youth Self-Report ($n = 51$), and Conners' Adolescent Self-Report Scale ($n = 54$). The Attitude to School scale score was most highly correlated with the Externalizing scale scores ($r = 0.62$), while the Attitude to Teachers scale score was most highly correlated with the Aggressive Behavior score ($r = 0.62$), closely followed by the Externalizing scale score ($r = 0.61$), both of the ASEBA. The Relations with Parents score was most highly correlated with the Attention Problems score from the ASEBA ($r = -0.58$) and Family Problems score from the Conners' tool ($r = -0.58$). Lastly, Interpersonal Relations score was most highly correlated with the Withdrawn/Depressed scale score on the ASEBA ($r = -0.70$) with a high correlation on the Negative Self-Esteem scale score on the Children's Depression Inventory ($r = -0.68$).

Specific demographics requested on the parent and child surveys included youth's age, ethnicity, religious affiliation, current delinquency charge, and estimated grade point average. Unique items on the youth survey included grade in school, history of pregnancies, and who resides in the family home.

Other assessment tools were investigated: the ASEBA *Youth Self Report* (Achenbach et al., 1986), *Youth Risk and Resiliency Inventory* (Brady, 2006), and the *Behavioral and Emotional Rating Scale-Second Edition* (Epstein, 2004). Due to poor psychometric properties of some measures when compared to the BASC-2, not providing

indices for measuring strengths, and the lack of validity testing, these assessment tools were not used for this study.

Data Analysis

The data were evaluated for the study using descriptive and inferential analyses. The frequencies, mean, range, standard deviation and variance, skew, and kurtosis were reviewed. The acceptable range for the kurtosis value was between -1.0 and 2.0 (Huck, 2004). Should the data have been highly skewed, attempts would have been made to transform the data to attain a near normal distribution. Reliability was analyzed using an internal consistency method as this study involved a single observation of the survey participants. The purpose of assessing reliability was to determine if the information collected from the assessment tools was internally consistent. If the items had been highly correlated, then Norusis (2006) suggested they would be regarded as reliable. While several methods could have been used, this study employed correlation coefficients, specifically Cronbach's alpha to determine the psychometric properties of each survey.

Regression analyses were used in this study to investigate the relationship between the variables. Regression analysis was selected for this study to learn more about the relationship between several independent or predictor variables, protective variables, and a dependent or criterion variable, resiliency and externalizing behavior, in this study. These analyses used an independent variable to predict the outcomes related to dependent variables (Foster, Barkus, & Yavorsky, 2006). This procedure was used to determine which independent variable best predicted the dependent variable in multiple regression and how much the variable or variables influenced that prediction (Foster et

al., 2006). This technique is popular when investigating correlations of multiple variables (Tabachnick & Fidell, 2007). As the investigation of relationships between multiple variables is common in social science studies, many researchers use regression procedures. Regression analyses have been used in other studies investigating juvenile risk and resiliency issues (Pobanz, 2000; Sullivan & Farrell, 1999).

It was essential to consider the assumptions of linearity, independence, normality, and homogeneity of variances when using these statistical techniques. Statistical assumptions associated with regression analyses of homoscedasticity, independence, normality, and linearity were considered during the data analysis phase of the study. To determine homoscedasticity and independence, a residuals plot was used. Normality of the residuals was evaluated using the Shapiro-Wilk test (Shapiro & Wilk, 1965). A scatter plot of residuals versus predicted values was used to examine linearity. To address multicolinearity should it have become evident, the highly correlated variables would have been either combined in a meaningful way or deleted if extremely highly correlated; however, this was not evident in the current data set.

The following is a review of the hypotheses for the study and explanations on how each research hypothesis was evaluated statistically. A significance level of .05 was used with all statistical tests.

H1 Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver will positively predict Resiliency.

To test this hypothesis, multiple linear regression was used. Bonferroni adjustments were made to assist in determining the strength of each independent variable with the dependent variable of Resiliency.

H2 Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver will inversely predict Externalizing Behavior.

To test this hypothesis, multiple linear regression was used. Bonferroni adjustments were made to assist in determining the strength of each independent variable with the dependent variable of Externalizing Behavior.

Summary

This chapter provided an overview of the procedures used for the data collection in this study and a review of the methodology necessary to answer the research questions. Data were analyzed using a multiple linear regression model with Bonferroni adjusted alphas. A thorough description of the results is presented in Chapter IV.

CHAPTER IV

RESULTS

The results from this study are presented in terms of preliminary and primary analyses. The preliminary analyses addressed the demographic information and qualifying assumptions for using multiple linear regression analysis. The primary analyses were conducted to answer each of the research questions.

Description of Sample

A small selection of pertinent demographic variables were collected: age, grade in school, ethnicity, religion, number of parents in the home, household income, with whom the adolescent resided, parent/guardian's occupation, and current delinquency charge. The average age of adolescent respondents was 15.95 years (*SD* = 0.87) with a range of 15-18. In terms of grade in school, one of the respondents (0.86%) did not indicate her grade. The average grade was 10.09 with a range from 6th grade to having graduated. Most of the respondents classified themselves as White/Caucasian (44.8%). The majority identified their religious preference as being Christian (64.66%). Eight respondents denoted the "other" category and wrote in the space provided they were "Catholic". In those cases, they were coded as Christian. It should be noted that no participants identified as Buddhist, Hindu, Islamic, or Jewish. In terms of number of parents in the home, respondents from over half of the sample reported being raised in a single parent home (50.86%). The average annual household income for participants ranged from

$5,001 to $10,000 (23.2%) and $30,001 to $40,000 (23.2%). Twenty-one participants did not report their average household income, leaving only 95 responses in this category. The majority of adolescents in this study resided with someone other than their mothers, grandparents, and aunts/uncles (81.9%). It seemed this demographic item was confusing as many participants wrote in the other section that they resided with their mother and step-father or grandparent, mother, and siblings or some other combination of the demographic items listed. Step-parents, step-siblings, and great grandparents were not included as an option for the demographic survey and were denoted by participants in the other category. Upon further calculation, nearly half of the sample resided with two or more related adults in the home (49.14%). More specifically, the nature of the adult relationship to each other varied from spouse to adult grandchild. Participants reporting that their parent/guardian's occupation as not being in the workforce was 31%. Lastly, the majority of adolescents were currently facing delinquency charges related to crimes toward a person (62.1%; see Table 2 for further details).

Table 2

Demographics for Sample

Demographic	Frequency	Percentage	Mean	SD
Age			15.95	0.87
15	45	38.79		
16	34	29.3		
17	35	30.17		
18	2	1.7		
Grade in School			10.09	2.16
No Answer	1	0.86		
6	7	6.03		
8	16	13.79		
9	21	18.1		
10	20	17.2		
11	17	14.66		
12	17	14.66		
Graduated	17	14.66		
Ethnicity				
Af-Am/Black	4	3.45		
Cau/White	52	44.8		
Hisp/Latino	47	40.5		
Other	13	11.2		
Religion				
Christian	75	64.66		
Non-Religious	18	15.52		
Other	23	19.83		
Number of Parents in the Home			1.46	0.53
No Answer	2	1.7		
1	59	50.86		
2	55	47.4		
Household Income				
$5,000 or less	2	2.1		
$5,001 to $10,000	22	23.2		
$10,001 to $20,000	5	5.3		
$20,001 to $30,000	11	11.6		
$30,001 to $40,000	22	23.2		
$40,001 to $50,000	6	6.3		
$50,001 to $60,000	15	15.8		
$60,001 to $70,000	6	6.3		
$70,001 and over	6	6.3		

(table continues)

Table 2 Continued

Demographic	Frequency	Percentage	Mean	SD
With whom the Adolescent Resides				
Mother	9	7.8		
Grandparent	10	8.6		
Aunt/Uncle	2	1.7		
Other	95	81.9		
Parent/Guardian's Occupation				
Not in Workforce	36	31		
Medical Field	18	15.5		
Financial	14	12.1		
Laborer	16	13.8		
Service Worker	20	17.2		
Real Estate	5	4.3		
Government	4	3.4		
Model	2	1.7		
Business Owner	1	0.86		
Current Delinquency Charge				
Person	72	62.1		
Property	44	37.9		

Preliminary Analysis

Descriptive Statistics

Adult participants in the study responded to the BASC-2 Parent Rating form that included 150 survey questions designed to measure constructs related to Externalizing Problems and Resiliency. A 4-point Likert-type scale (N = *Never* to A = *Almost Always*) was used in all cases to examine respondents' perceptions of items comprising these scales.

Adolescent participants responded to the BASC-2 Self-report form that included 176 survey questions designed to measure constructs related to Attitude to School, Attitude toward Teachers, Relations with Parents, and Interpersonal Relations. The first 69 questions involved T/F responses and the remaining items involved a 4-point Likert-

type scale (N = *Never* to A = *Almost Always*). An additional six item survey was included in the packet addressing religiosity. A fiv5e-point Likert-type scale (1 = *Never/Not at all* to 5 = *Very often/Very much*) was used in all cases to examine respondents' perceptions of religiosity. Data were transformed into T-scores prior to analyses using SPSS.

Means and standard deviations for each of the survey items can be found in Table 3. Most of the items with which respondents most strongly agreed were within the Religiosity construct. Of the Religiosity questions, the item with the highest mean related to having a belief in God (M = 3.72; SD = 1.43). Most of the negatively skewed items were within the Externalizing Problems and Attitude to Teachers constructs. Of the Attitude toward Teachers statements, the item with the lowest mean related to *feeling provoked by a teacher* (M = 0.6; SD = 0.81). Of the Externalizing Problems statements, the items with the lowest mean related to *acting in an unkind manner toward others* (M = 0.63; SD = 1.03), *engages in bullying behaviors* (M = 0.64; SD = 0.82), and *makes threats to harm others* (M = 0.64; SD = 1.06).

Table 3

Descriptive Analysis of Survey Items by Scale

Scale and Item	Mean	SD
Youth Reported GPA	2.32	0.95
Parent Reported GPA	2.42	0.71
Total Scale	2.37	0.73
	Correlation=0.55	
Religiosity		
Item 1	2.27	1.25
Item 2	2.66	1.26
Item 3	3.05	1.29
Item 4	2.85	1.29
Item 5	2.97	1.36
Item 6	3.72	1.43
Total Scale	2.92	1.05
	Cronbach's Alpha=0.88	
Resiliency		
Item 7	2.12	0.84
Item 14	1.84	0.97
Item 31	1.47	0.84
Item 38	1.26	0.85
Item 61	1.45	0.77
Item 67	1.25	0.92
Item 78	1.47	0.89
Item 82	1.38	0.85
Item 111	1.14	0.90
Item 134	0.59	0.82
Item 144	1.37	0.75
Total Scale	1.33	0.3
	Cronbach's Alpha=0.29	
Attitude to School		
Item 10	1.01	0.94
Item 40	0.92	1.25
Item 70	0.71	0.86
Item 82	1.50	1.21
Item 112	1.42	1.15
Item 142	0.89	1.28
Item 172	1.24	1.06
Total Scale	1.29	0.49
	Cronbach's Alpha=0.74	

(Table 3 continues

Table 3 Continued

Scale and Item	Mean	SD
Attitude to Teachers		
Item 37	1.46	0.92
Item 67	1.25	0.92
Item 85	1.27	0.98
Item 97	0.68	0.77
Item 115	0.90	0.92
Item 127	1.03	0.83
Item 145	1.50	0.89
Item 157	0.82	0.94
Item 175	0.60	0.81
Total Scale	1.03	0.48
	Cronach's Alpha=0.45	
Relations with Parents		
Item 42	0.86	0.85
Item 72	1.88	0.93
Item 102	1.32	1.13
Item 126	1.49	0.98
Item 132	1.37	1.00
Item 141	1.93	1.02
Item 155	1.77	0.99
Item 156	1.65	1.04
Item 171	1.45	0.95
Item 173	1.61	0.95
Total Scale	1.53	0.56
	Cronbach's Alpha=0.75	
Interpersonal Relations		
Item 13	1.51	0.87
Item 43	1.20	0.91
Item 73	2.60	0.63
Item 103	2.47	0.73
Item 133	2.07	0.84
Item 151	2.45	0.83
Item 163	2.03	1.35
Total Scale	1.71	0.37
	Cronbach's Alpha=0.22	
Externalizing Problems		
Item 4	1.10	0.90
Item 10	1.01	0.94
Item 13	1.51	0.87
Item 15	1.00	0.93
Item 19	0.97	1.41
Item 20	1.48	0.96
Item 29	0.70	0.75

(table continues)

Table 3 Continued

Scale and Item	Mean	SD
Item 34	0.91	0.85
Item 40	0.64	1.06
Item 43	1.20	0.91
Item 45	1.28	0.89
Item 49	0.82	1.03
Item 50	1.10	0.99
Item 59	0.96	0.99
Item 64	1.98	1.35
Item 70	0.71	0.86
Item 73	1.41	1.06
Item 75	1.19	0.94
Item 79	1.51	0.93
Item 80	1.21	1.14
Item 89	1.35	1.05
Item 94	0.64	0.82
Item 100	1.39	1.06
Item 103	0.87	1.35
Item 105	0.90	0.99
Item 109	1.00	0.97
Item 119	1.13	0.97
Item 124	0.71	0.83
Item 130	0.63	1.03
Item 133	1.37	0.84
Item 135	0.66	1.09
Item 139	1.41	1.01
Total Scale	1.09	0.58
	Cronbach's Alpha=0.94	

The necessary assumptions of linearity, independence, normality, and equality of variances were examined. Statistical assumptions associated with regression analyses of homoscedasticity, independence, normality, and linearity were considered using the descriptive statistics of this study. To determine homoscedasticity and independence, residual plots and normal plots were inspected. Both suggested that none of the assumptions had been grossly violated. Since some of the factors were significantly correlated (see Table 3 above), tests to determine whether multicollinearity was present

in the model were performed. According to Tabachnick and Fidell (2007), multicollinearity is present when at least two different variables have condition indices of 30 and variance proportions greater than .50. Four pairs had a variance proportion slightly greater than .50 but the conditioning index was not near 30 for any dimension. Thus, it was determined that there were no multicollinearity issues in the final regression model. The normality of the residuals was evaluated using the Shapiro-Wilk test (Shapiro & Wilk, 1965). The Shapiro-Wilk Test of Normality was not significant, resulting in a *p*-level of 0.07. Examination of skewness (0.37) and kurtosis (-0.48) also suggested the data were normally distributed. A scatter plot of residuals versus predicted values was used to examine linearity.

Statistical Assumptions

Prior to running the primary analyses, the necessary assumptions of normality and linearity were inspected (Huck, 2008). One standard method for assessing normality is by examining histograms and checking descriptive statistics for skewness and kurtosis values. The rules of thumb are that skewness values should fall between -1 and 1 and kurtosis values should fall between -1 and 2. While not all of the items fell exactly between these usual ranges, none of the items appeared to exhibit gross violations of normality; hence, they were considered acceptable for use. In terms of the linearity assumption, scatterplots were inspected and did not suggest the presence of any non-linear relationship between variables. In addition, the data were not collinear as evidenced by the Shapiro-Wilk (1965) test and examination of skew and kurtosis suggested the data were normally distributed (see Table 4).

Table 4

Skew and Kurtosis by Scale

Scale	Skewness	Kurtosis
Attitude to School	1.39	3.82
Attitude to Teachers	2.27	13.46
Resiliency	0.38	-0.65
Relations with Parents	0.14	-0.57
Externalizing Problems	0.41	-0.53
Interpersonal Relations	0.16	0.34
Religiosity	-0.06	-0.70
GPA	-0.22	0.62

Research Hypotheses

In order to answer the research hypotheses, multiple linear regression and Pearson correlation coefficients were conducted. Statistical Package for the Social Sciences (SPSS) version 18.0 was used to run all analyses in the current study. Results are presented in order by research hypothesis.

H1 Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver will positively predict Resiliency.

Prior to conducting regression analyses, a table of Pearson correlation coefficients was produced to investigate pair-wise relationships between the variables. The correlations between factors can be found in Table 5.

Table 5

Summary of Pearson Correlations for Scores Between Factors

Factor	1	2	3	4	5	6	7	8
1. Resiliency		0.16	-0.11	-0.19*	-0.09	0.13	-0.02	0.05
2. GPA			-0.10	-0.03	-0.10	-0.15	0.01	0.10
3. Religiosity				0.03	-0.07	0.13	0.06	0.09
4. Attitude to School					0.48**	0.03	0.01	-0.15
5. Attitude to Teachers						0.03	0.03	-0.15
6. Externalizing Problems							0.01	-0.15
7. Interpersonal Relations								0.26**
8. Relations with Parents								

Note. * indicates significance at the 0.05 level (2-tailed).

A multiple linear regression was then conducted to determine if the predictor variables--Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver--could predict the criterion variable Resiliency. The predictor variables were added together and were not introduced into the model incrementally to examine linearity.

Since four regression analyses were simultaneously being conducted on the same set of predictor variables, Bonferroni adjusted significance level of .05/4 = 0.01 was established a priori (Huck, 2008). The results of the regression can be found in Table 6. The overall model was not significant $F(6, 109) = 1.26$, ($p = 0.28$) and only 1.4% of variability was explained by the model.

Table 6

Multiple Linear Regression Results for Dependant Variable: Resiliency

Independent Variable	Beta	*t*	*p*-value
Religiosity	-0.09	-0.91	0.36
Attitude to School	-0.18	-1.66	0.10
Attitude to Teachers	0.00	0.04	0.97
Interpersonal Relations	-0.02	-0.18	0.85
Relations with Parents	0.02	0.21	0.83
GPA Vai	0.14	1.51	0.13

Note.* $F(6,109)=1.26$, $p = 0.28$, $R^2 = 0.01$.

H2 Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver will inversely predict Externalizing Behavior.

A second multiple linear regression was conducted to examine the ability of Religiosity, Success in School, Connection to School, and Presence of a Loving Caregiver to inversely predict Externalizing Behavior--the criterion variable. Again, the predictor variables were added at once and were not introduced to the model incrementally. As before, the necessary assumptions were examined using descriptive statistics, residual plots, and normal p-p plots, which again suggested that there were no assumption violations. The Shapiro-Wilk (1965) Test of Normality was significant at the .01 level, suggesting the data were not normally distributed. However, examination of skewness (0.46) and kurtosis (-0.43) suggested the data were normally distributed. Three pairs had a variance proportion slightly greater than .50 but the conditioning index was not near 30 for any dimension; thus, it was presumed that there were no multicollinearity issues in this regression model either.

As before, a Bonferroni adjusted significance level of .01 was established a priori. The model was not significant $F(6, 109) = 1.18$, ($p = 0.32$), and explained 1% of the variance in the model. The findings were consistent with the correlation table (see Table 5), showing no strong relationships. The results of the regression model are illustrated in Table 7.

Table 7

Multiple Linear Regression Results for Dependant Variable: Externalizing Problems

Independent Variable	Beta	t	p-value
Religiosity	-0.13	1.35	0.18
Attitude to School	-0.00	-0.03	0.97
Attitude to Teachers	-0.00	-0.04	0.97
Interpersonal Relations	0.04	0.44	0.66
Relations with Parents	-0.17	-1.74	0.09
GPA	-0.12	-1.28	0.21

Note. * $F(6,109)=1.18$, $p = 0.32$, $R^2 = 0.01$.

Results Summary

In this chapter, descriptive statistics were analyzed for the surveys representing the various multi-dimensional constructs. For the subsequent multivariate procedures, tt was necessary to check for the following assumptions: linearity, independence, normality, and equality of variances. It was determined that none of the assumptions were grossly violated, and thus further statistical tests were appropriate. Also, each of the

multi-dimensional constructs exhibited acceptable reliability and validity under commonly employed parameters.

Regression analyses were then performed to answer the two research questions presented in Chapter I. Research question 1 examined the relationship between Religiosity, Connection to School, Success in School, and Relations with Parents in terms of ability to predict Resiliency. A multiple linear regression was used to determine which independent variables were significant predictors of Resiliency. The overall model was not found to be significant and explained 1.4% of the variability in the model.

Research question 2 investigated the relationships between Religiosity, Connection to School, Success in School, and Relations with Parents in terms of ability to predict Externalizing Behaviors. Similarly, a multiple regression model was created that explained 1% of the variance in the dependent variable. Again, the overall model was not found to be significant.

CHAPTER V

DISCUSSION

Juvenile delinquency involving female offenders has increased at a faster rate than for males, and females are participating in more violent types of crimes (Mullis et al., 2004; Snyder, 2008). Spanning the 13-year period from 1990 to 2003, the rate at which juvenile females were arrested for being involved with violent offenses increased over 60% and the rate for aggravated assaults increased by 64% (Office of Research and Statistics, 2007). In addition, delinquency involving a female juvenile offender increased by 8% (Puzzanchera & Kang, 2008). Moreover, females accounted for 30% of juvenile offenders in Colorado in 2004 (Office of Research and Statistics, 2007). Studies have begun researching these changes; few have investigated gender differences and resiliency. The purpose of this study was to evaluate four protective factors with female first time delinquent offenders and their caregivers related to issues of resilience and the presence of protective factors. The findings of the current study did not support previous findings as was theorized. Attempts are made within this chapter to better understand the reason or reasons why this study did not support the findings of previous research.

In this chapter, details of the findings are summarized and interpreted. The context for the findings is described in terms of convergence and divergence with prior research as well as contributions to the literature. The implications of the findings are discussed with a focus on application in the field of counseling psychology. The

limitations of the current and future directions in the area of studying resiliency with pre-adjudicated females are also discussed.

Summary of Findings

The results of this study did not suggest there were significant relationships between the four predictive variables and resiliency. Contrary with prior research, this study did not find relationships between Success in School, Connection to School, Religiosity, and Presence of a Loving Caregiver with Resiliency or Externalizing Behaviors.

This study included 116 participants; the average participant was represented by a 16-year-old Caucasian or Hispanic/Latino female 10th grader of Christian faith who was being raised by a single parent/guardian who was not in the workforce and was of low socioeconomic status. More than likely, she was being charged with a crime against a person and she was maintaining a C average in school.

Research Questions

For the first hypothesis, a multiple linear regression model was created to assess whether the predictor variables of Religiosity, Connection to School, Success in School, and Presence of a Loving Caregiver would predict the criterion variable--Resiliency. The overall model was not significant and only explained 1.4% of the variance in Resiliency. Such results might be related to the poor internal consistency related to various scale items on the BASC-2. Several items in the Resiliency scale had poor reliability; other scales had one or two items that loaded poorly, weakening the internal consistency of the overall scale. Specific items on the Resiliency scale had poor reliability: information related to the youth’s creativity, ability to make friends, having a negative view of life,

and being easily upset and annoyed by others. It is likely the poor internal consistency with the criterion variable could account for these findings.

To answer the second hypothesis, a multiple linear regression model was created to determine whether the four predictor variables would inversely predict the criterion variable--Externalizing Behavior. Similar to the first question, the overall model was not significant, this time explaining just 1% of the variance in Externalizing Behavior. Similarly with resiliency, no strong relationships were found. This finding was also quite different from prior research. For instance, prior research related to protective factors found that adolescent females were less likely to engage in delinquent activities when they felt connected to parental figures or had a supportive and caring adult in their lives (Stewart, 2001; U.S. Department of Justice, 2009). Other studies also concluded that success in school was protective (Ripple & Luthar, 2000) and academic success reduced the likelihood of adolescent females engaging in status and assaultive behavior (U.S. Department of Justice, 2009). Lastly, religiosity was found in past research to be protective and reduced the chances of the adolescent female engaging in assaultive behaviors (U.S. Department of Justice, 2009). These studies included longitudinal methods involving large samples that did not distinguish among level of judicial charges or degree of involvement in the juvenile justice system. In addition, many of the studies were not highly specified in terms of participant age as was the current study. More specifically, the U.S. Department of Justice study involved three waves spanning six years and involved over 5,700 participants in a longitudinal format. The benefit from this methodological approach was that the researchers could identify patterns of development and reveal behaviors that likely influenced that person’s developmental path.

Possible explanations for why this study had different findings include the sample using only pre-adjudicated females. Other studies that included participants who had more contact with the courts might be qualitatively “more hardened” than the first time offenders in this study. Another potential rationale might be the unique nature of data collection involving the youth and parental input. It is possible that each person’s perspective of the youth’s life circumstances was vastly different and not unified on what was protective relative to their lives. It is possible that a significant number of participants in this study might have spoken English as a second language, or might not have been U.S. citizens, and migh not have understood items on the BASC-2 in the same manner as would native speakers and citizens. While internal consistency for the BASC-2 was generally high (low to mid .90s), the Self-Report of Personality (SRP) composites were lower (mid to high .80s) than for the Parent-Rating Scale. Potentially, this discrepancy was exacerbated in the current study. In addition, relatively lower alpha coefficients (mid .80) were evidenced for composites specific to the SRP. Moreover, test-retest reliabilities for the SRP ranged from the middle .70s to the low .90s. The potential introduction of variability in terms of internal consistency and reliability along with smaller sample size and highly specified target sample might begin to explain the lack of significant findings in this study.

Conclusions

Theoretical Implications

The purpose of this study was to further evaluate four protective factors related to first time delinquents from a personal and caregiver perspective. This research could further the understanding of resiliency for at-risk females as well as assist in identifying

and promoting resilient factors for those involved with the juvenile justice system using a resiliency theory lens. A study of such strength-focused treatments that focus on prevention during adolescence was suggested by Stewart (2001). Because larger society is impacted by the small percentage of youth responsible for the majority of crimes committed during adolescence (Mullis et al., 2004), acquiring a greater understanding about this population would help in providing resources in a more effective manner.

Having conceptualized the juvenile delinquent as being involved in a complex open system who is mutually influenced by internal and external elements and processes (Magnavita, 2012), lack of supportive results limits generalizability to other systems with which these youth are involved. Because much cannot be understood in a complex system such as the human experience by isolating parts (Magnavita, 2012), the lack of significant findings might suggest viewing the issues at a broader systems level. More specifically, understanding more extensively the youth's delinquent involvement in terms of her interactions with Municipal Courts, age, seriousness of initial contact with the Courts, understanding more about her family system, history of mental health issues, and academic career/learning disabilities might have provided the necessary direction for this study.

While this study did not identify significant relationships between predictor and criterion variables, it seems reasonable to suggest that future studies where resiliency with pre-adjudicated females was the target sample, relevant systemic constructs should be identified and included as a variable or covariate. Such variables might be related to information around the youth's family system of origin, charting her academic career, use

of ecomapping, and understanding her mental health and exposure to trauma to name a few.

This study also had a small sample size, limiting the type of statistical procedures that could be completed on the data. With more time and resources, the number of participants in the study could have reached the appropriate level to have run a CFA to confirm the factor structure evident with the BASC-2.

Finally, the results of this study illustrated the uniqueness of the concept of resiliency with respect to pre-adjudicated females as evidenced by the lack of confirmation with previous research. Specifically, the predictor variables in this study did not exhibit the same relationships with the criteria variables. Previous research has examined these variables in more general scenarios within a broader category such as females or pre-adjudicated independently. This would indicate that the formation of a model to better explain resiliency among pre-adjudicated females is suggested. Such a model might focus on the youth and family's experiences that have resulted in being involved with the Juvenile Courts. In addition, assessing only the youth or solely the parent might provide more information to help direct future studies involving the dyad.

Implications

One of the central motivations for this study originated from a previous study conducted by the U.S. Department of Justice (2009) that explored four protective areas that differed for girls. These findings were encouraging in terms of providing empirical support for a population that is largely underserved within the juvenile justice system. Similar to this Department of Justice study, the current study also used regression analyses to analyze the data. The current study differed in that the data were not

longitudinal in nature and involved original data collection using known and local sources of data rather than use of existing data from the National Longitudinal Study of Adolescent Health data bank.

Although predictability of Religiosity, Connection to School, Success in School, and Presence of a Loving Caregiver as related to Resiliency and Externalizing Behavior was not found in this study, this should not be completely discouraging as research in this area is in its infancy. Furthermore, psychologists working with this population should continue to track successes and failures in hopes of providing qualitative analyses regarding ongoing trends in the field. While this research did not support findings from previous research, implementing strategies to improve or support protective factors evident in a youth's life could be useful in reducing recidivism rates.

Limitations

The current study was constructed based on established theory related to resiliency but should still be considered exploratory and preliminary. The variables in this study were scales originating from the BASC-2, a validated, well-known measurement tool paired with a religiosity measure found in the original data from the U.S. Department of Justice (2009) study. The origins of the religiosity measure are unknown; therefore, there was no direct basis of research to draw upon for use in this study since the U. S. Department of Justice (2009) study did not mention how religiosity was measured or what specific tool was used for data collection.

While the respondent pairs were selected using a convenience sampling method, the case managers responsible for providing eligible participants with the opportunity to complete the surveys were inconsistent and often did not provide the opportunity to the

youth and parent for various reasons. It is possible the nature of participants who were offered the survey were different than those who were not. Due to confidentiality issues, high case loads, and the brief nature of the Pre-Trial Release Program, it was not reasonable or feasible for the case managers to determine which families were missed and provide them with the opportunity to participate. Future researchers might want to administer the questionnaires to consecutive participants of the program.

Lastly, data were collected in such a manner that the dependent variables were measured using the parent survey and independent variables were collected using the youth survey with exception of grade point average that was provided by both the youth and parent instruments. This lack of integration could have introduced an increased degree of variance into the study, particularly if the dyad was inversely polarized with each other in terms of perspective related to the constructs measured in this study.

Future Directions

An important goal of this study was to gain preliminary and interpretable results that would generate both practical and theoretical recommendations. Because resiliency among pre-adjudicated females has received little attention in the literature, significant work remains before theory can be firmly established in this area. With this in mind, the following recommendations are made for future research in this area:

1. This study should be replicated using different methodology related to survey dissemination and increasing the sample size. For instance, rather than relying on case managers to disseminate the surveys, future researchers should be available or someone not associated with the program who could keep better track of eligible participants. Also, a certain region of the state

was represented in this study. It might be helpful to expand to other regions within the state.

2. Future research should concentrate on large sample sizes. This would provide the opportunity to use CFA to assess the data. Appropriate incentives should be directed toward case managers as well as participants to help increase cooperation with the project.
3. It is also possible that the methods of data analysis used in this study might not have revealed the exact nature of the relationships between the variables. Other techniques might be better suited to examine the potentially complex interplay between the variables in this study. Tabachnick and Fidell (2007) suggested that structural equation modeling is a statistical procedure that can test more intricate variable relationships as well as uncover latent variables that may be undetectable using other analyses.
4. Future studies that investigate resiliency with pre-adjudicated females might be better suited to approach the topic from a mixed method perspective. Identifying qualitatively what systems-based constructs are important to the sample might guide the researcher in developing a survey measuring these important constructs in a more meaningful way. Due to the individual nature of many ancillary factors perceived by the parent and youth that surrounded this topic, generalizable results might simply not be attainable and using methods similar to case studies would better control for unique factors.

In conclusion, studying resiliency among pre-adjudicated females continues to have limited results. While this study did not support the findings of previous research, understanding the experiences of pre-adjudicated females has been identified as important and necessary. Suggestions on how to approach future research related to this population have been discussed. It is important to gain an understanding of how first time female offenders are resilient to help future generations of girls in similar situations be more successful in such a difficult system. Future research will also help those involved with the Juvenile Courts provide interventions specific to the female offender and her family that is empirically supported and effective.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY of
NORTHERN COLORADO
Institutional Review Board (IRB)

May 10, 2010

TO: Spencer Weiler
ELPS

FROM: Megan Babkes Stellino, Co-Chair
UNC Institutional Review Board

RE: Expedited Review of Proposal, *Resiliency with Pre-Adjudicated Females,* submitted by Lori Romont (Research advisors: Brian Johnson)

First Consultant: The above proposal is being submitted to you for an expedited review. Please review the proposal in light of the Committee's charge and direct requests for changes directly to the researcher or researcher's advisor. If you have any unresolved concerns, please contact Megan Babkes Stellino, School of Sport and Exercise Science, Campus Box 39, (x1809). When you are ready to recommend approval, sign this form and return to me.

I recommend approval as is. Spencer Weiler 5-27-10
Signature of First Consultant Date

with attached emails and revised documentation

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is approved ~~as proposed~~ based on revisions attached. for a period of one year: June 16, 2010 to June 16, 2011

Megan B Stellino 6/16/2010
Megan Babkes Stellino, Co-Chair Date

Comments:
emailed w/ more? and revisions 6/2, emailed 6/14 - more requests

APPENDIX B

INTRODUCTORY LETTER

UNIVERSITY of
NORTHERN COLORADO

March 2010

Dear Senate Bill 94 Pre-Trial Release family,

Hello, my name is Lori Romont and I am a doctoral student in the Counseling Psychology Department at the University of Northern Colorado in Greeley. I hope you will consider participating in my research survey. The study is designed to measure resiliency issues, your daughter's ability to recover quickly from setbacks that are characteristic of females who are first time delinquents at the Juvenile District Court level. There is a parental and youth survey which measure protective characteristics from two differing perspectives. The Parental form assesses behavioral and emotional aspects of your child and your overall stress. The Youth form measures family involvement and school functioning, as well as rule breaking behavior.

Thank you for your time and consideration. Your participation in this study will help to improve services that are provided to youth and families by increasing knowledge about resiliency and protective factors that are evident in your family and daughter.

Sincerely,

Ms. Lori Romont, M. S., LPC
Doctoral Student in Counseling Psychology at University of Northern Colorado

APPENDIX C

REFUSAL QUESTIONAIRE

Refusal Questionnaire

1. Knowing you are under no obligation to answer any of these questions, please state your reason (s) for not participating in this study.

2. Again, you are under no obligation to answer this, if the above mentioned things were addressed (as applicable), what would make you be interested in participating in the study at a future date?

APPENDIX D

INFORMATIONAL LETTER

Informational Letter for Participation in Research
University of Northern Colorado
Project Title: Resiliency with Delinquent Girls

Researcher: Lori A. Romont, M. S., Doctoral Student, Department of Counseling Psychology
Phone Number: (303) 204-0115
Research Advisor: Dr. Brian Johnson, (970) 351-2209

I am researching female juvenile delinquency and resiliency issues. If you grant permission and if your daughter indicates she is willing to participate, I would ask for 10-15 minutes of you and your daughter's time in completing a brief survey, independent of each other. I am interested in understanding how you and your daughter experience events that may be considered as being preventative of further delinquency involvement. There are two different forms; one survey is for the parent and the other for the youth. The parental form focuses on behavioral and emotional aspects of your child and your overall stress. It includes 150 items with questions being measured on various scales. Examples of the types of items on the parental form include the following: indicate how frequently your daughter threatens to hurt others and says "nobody likes me." The youth form has a similar format as the parental form and has 182 items, some of which ask questions about your child's potential delinquent behavior. Sample questions are as follows: I wish I were different and I feel sad.

I foresee no risks to participants beyond those that are normally encountered for those completing a survey. Your participation in this study in no way impacts your compliance status with the Senate Bill-94 program. This study is not designed to improve your daughter's legal circumstances in Court either. Should there be any emotional responses that need treatment, a debriefing letter with three mental health references will be provided following the survey. If you chose to seek treatment, it will be at your own expense.

Be assured that I intend to keep the contents of these surveys private and anonymous. The youth and adult surveys are coded to indicate which juvenile survey is matched to her parent's survey and to specify which SB 94 Pre-Trial Release regional program you are responding from, there are no other identifying coding systems. To further help maintain confidentiality, no additional identifying information is requested (such as

social security number, date of birth, Court case number, etc.) and your anonymity will be maintained. Identifying information of participants will not appear in any professional report of this research.

Please feel free to phone me if you have any questions or concerns about this research and please retain one copy of this letter for your records. Thank you for assisting me with my research.

Sincerely,

_____

Lori A. Romont, M. S., Doctoral Student, Counseling Psychology

Participation is voluntary. You may decide not participate and to allow your child to participate in this study and if either of you begin participating you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you or your child are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please begin completion of the surveys if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Sponsored Programs and Academic Research Center, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1907

APPENDIX E

PARENT SURVEY

PARENT SURVEY

Are you the legal parent/guardian of the child who is completing the youth survey?
Yes No

Your daughter's age:_____

Her current delinquency charge: _____

Ethnicity:
_____African-American/Black
_____Asian American
_____Caucasian/White
_____Hispanic/Latino
_____Middle Eastern
_____Native American/American Indian
_____Native Hawaiian/Pacific Islander
_____Other (specify) _____

Occupation:_____

Religion:
Buddhist
Christian
Hindu
Islamic
Jewish
Non-religious
Other_____

Youth's estimated GPA:_____

1 or 2 parent household (Circle appropriate number)

Estimated Yearly Household Income:
$5,000 or less
$5,001 to $10,000
$10,001 to $20,000
$20,001 to $30,000
$30,001 to $40,000
$40,001 to $50,000
$50,001 to $60,000
$60,001 to $70,000
$70,001 and over

APPENDIX F

YOUTH SURVEY

YOUTH SURVEY

Directions: Read each statement below. Then think how often the statement describes you or your situation by circling the appropriate response using the following scale:
1=Never/Not At All 2=Seldom/A Little 3=Sometimes/Somewhat 4=Often/A Lot 5=Very Often/Very Much
1. How often do you attend church? 1 2 3 4 5
2. How religious are you? 1 2 3 4 5
3. How religious is your family? 1 2 3 4 5
4. How religious do you wish your family would be? 1 2 3 4 5
5. How important is religion in your life? 1 2 3 4 5
6. Do you believe in God? 1 2 3 4 5

Age:_____

Ethnicity: _____African-American/Black
_____Asian American
_____Caucasian/White
_____Hispanic/Latina
_____Middle Eastern
_____Native American/American Indian
_____Native Hawaiian/Pacific Islander
_____Other (specify)
_____

Grade in school:_____ Estimated GPA:_____

Religion: Buddhist
Christian
Hindu
Islamic
Jewish
Non-religious
Other_____

Current delinquency charge:_____

How many pregnancies have you had?_____

Circle who you live with? (circle all that apply)
Mother
Father
Grandparent
Siblings, how many_____
Aunt/Uncle
Foster family
Friend
Other_____

APPENDIX G

DEBRIEFING LETTER

UNIVERSITY of
NORTHERN COLORADO

March 2010

Dear Senate Bill 94 Pre-Trial Release family,

Thank you so much for your time and energy expended in participating in this survey. Your assistance in improving the services we provide to delinquent youth is very much appreciated and hopefully your family can benefit in some way from the results of this study. If some of the questions from the survey have caused emotional responses that warrant intervention, you should contact one of the three providers listed below. This study is in no way connected with any of these providers and each offers treatment at a sliding scale rate for which you would be responsible. They are as follows:

Aurora Mental Health	(303) 617-2300
Arapahoe Douglas Mental Health Network	(303) 730-3303
Mental Health Corporation of Denver	(303) 504-6500

Again, thank you for your participation in furthering our knowledge in the area of resilience and delinquent females.

Sincerely,

Ms. Lori Romont, M. S., LPC
Doctoral Student in Counseling Psychology at University of Northern Colorado

APPENDIX H

MANUSCRIPT FOR PEER REVIEW PUBLICATION

RESILIENCY WITH PRE-ADJUDICATED FEMALES

Abstract

The purpose of this study is to determine if there were differences between selected protective factors as self-reported by pre-adjudicated female youth and their parents. The determinants were presence of a loving caregiver, connectedness to school, academic success, and religiosity and the dependent variables were resilience and externalizing behavior. The study used a correlational research design that examined the relationships between the protective factors as self-reported by pre-adjudicated female youth and their parents. This study relied exclusively on youth and parental perceptions and self-report of resiliency using two self-report surveys involving the BASC-2 and a religiosity measure. In total, 116 survey packets were considered usable for analysis. A multiple linear regression was conducted to determine if Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver could predict Resiliency. A second multiple linear regression was conducted to determine if Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver could inversely predict Externalizing Problems. Neither was found to be significant and less than 2% of the variance was explained by either model.

INTRODUCTION

Female delinquency has increased at a faster rate than has delinquency for males, and females are engaging in more violent types of crimes such as assault and disorderly conduct than previously (Mullis, Cornille, Mullis, & Huber, 2004; Snyder, 2008). Between 1990 and 2003, female arrested for violent crimes increased over 60% (Office of Research and Statistics, 2007). During the same span of time, female arrests for aggravated assault increased by 64% (Office of Research and Statistics, 2007). Since 1985, the percentage of delinquency cases involving girls has grown by 8% (Puzzanchera & Kang, 2008). With this, juvenile courts are dispositioning an unprecedented number of cases. In 2004, females accounted for 30% of all juvenile offenders in Colorado (Office of Research and Statistics, 2007).

While research has attempted to keep pace, most studies have focused on risk factors that precipitate juvenile delinquency. This direction has provided large amounts of information; however, researchers are finding there are no specific characteristics that inevitably determine delinquency outcomes. Resilience studies have described protective factors in a juvenile's life that interfere with a youth's response to risk factors in their lives. Of the few studies investigating gender differences and resiliency, it has been suggested by Hartman et al. (2009) and Taylor et al. (2003) that the unique needs and experiences of girls has a significant impact on their responses to protective factors. A seminal article by the U. S. Department of Justice (2009) discussed the interaction of female juvenile offenders and resiliency. The researchers identified four protective areas, which included (a) support or the presence of a loving caretaker,(b) connectedness to school, (c) academic success, and (d) religiosity.

Need for the Study

The purpose of the current study is to further the understanding of resiliency for at-risk females as well as assist in identifying and promoting resilient factors, as there is a need for doing so for the purpose of clinical treatment and the advancement of research (Kersting, 2003). It has been recommended researchers begin studying strength-focused treatments as there are many therapeutic advantages to emphasizing wellness and resilience, such as protection from stress and improving psychological abilities (Lightsey, 2006). It is important for appropriate interventions to occur when people are young to prevent routine behaviors from becoming customary and to assist adolescents in the development of healthy lifestyles (Stewart, 2001). Every person is impacted by female delinquency, both directly and indirectly. While only a small percentage of youth are responsible for the majority of crimes committed during adolescence (Mullis et al, 2004), it becomes imperative to have a greater understanding about this population to use the appropriate resources in the most effective manner.

While many of the resilience factors mentioned previously can be improved in a juvenile's life, these things cannot be done effectively while the juveniles are in detention (Taylor, Karcher, Kelly, & Valescu, 2003). Promotion of protective factors is therefore most important upon release of the juvenile into the community. It is during this time that intervention is imperative and research should focus on this critical opportunity for encouraging resiliency.

There have been multiple studies on risk and resiliency related to juvenile delinquency focusing on adolescent males. Of the few studies examining gender differences and resiliency, it has been proposed by Hartman et al. (2009) and Taylor et al.

(2003) that the needs and experiences of girls are unique and likely impact their response to protective factors. They concluded that researchers must gain more understanding of the function and meaning of protective factors in the lives of female juvenile delinquents and when these factors are most significant in their development. Further information is needed to understand when protective factors are capable of prevailing over risks.

The unique contribution of this study was the combination of a parental and youth survey methodology. Two different surveys were distributed, each intended to elicit perceptions of the attitudes and behaviors of the female juvenile delinquent. The youth survey solicited self-reflective responses while the parental survey requested information from an adult perspective.

Outcomes of this study were used to improve the program Case Manager's assessment skills, assist Case Manager's in effectively adapting their supportive services when working with females and their families, and promote policy change as indicated. As it cost Colorado tax payers approximately $143.36 to house a youth in detention and $178.78 to commit an adolescent to the Department of Youth Corrections per day in 2006, remediation of juvenile offenders and identification of factors that promote resiliency not only is ethically responsible, but also assists in the state becoming fiscally responsible (Office of Research and Statistics, 2007).

Statement of the Problem

Research Questions and Hypotheses

Q1 To what extend does Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver positively predict Resiliency?

H1 Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver will positively predict Resiliency.

Q2 To what extent does Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver inversely predict Externalizing Behavior?

H2 Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver will inversely predict Externalizing Behavior.

METHODOLOGY

Participants

Potential participants were approached by Senate Bill 94 Case Managers during their initial appointments at six Pre-Trial Release Programs across the Denver Metropolitan area. Each program represented a different juvenile Court district. For instance, the Second Judicial District is in Denver, Fourth is in Colorado Springs, Eighth is in Fort Collins, 17th is in Thornton, 18th is in Centennial, and 19th is in Greeley. The participants were parents/guardians and adolescent females who had recently become involved with the district level juvenile court system in their respective areas.

In total, 125 survey packets were collected, 120 packets were completed, and 116 were considered usable for analysis. Four survey pairings were eliminated from the sample as two parent surveys had more than two items omitted and two youth surveys scored in the extremely high range for two or more validity indexes, suggesting the data were invalid. There were five refusals to participate in the study and one where the parent/guardian did not complete the survey and the youth did. The usable survey rate was 92.8 percent. Of the five who refused to participate in the study, only one completed the refusal survey provided in the packet. This potential participant felt completing the survey would be too intrusive and he/she did not want to divulge any additional information beyond that collected during the Pre-Trial Release Program intake.

Instrumentation

Both the parent and youth surveys included several separate sections that inquire about resiliency and protective variables, although the specific content of the two surveys differ somewhat. However, both surveys included a demographic section. The parent and youth surveys utilized a well-established instrument, the Behavior Assessment System for Children, Second Edition (BASC-2, Reynolds & Kamphaus, 2004) which is often used in forensic situations. The youth survey had an additional 6 items added in order to assess for Religiosity (Benda et al., 2006).

Parent Survey

The parent survey contained 150 items in length and utilized the BASC-2, Parent Rating Scales-Adolescent measure. The independent variable of success in school was evaluated based upon a correlation of the parent and child's estimated GPA and the independent variable of resilience was assessed based upon results on the Resiliency scale. The dependent variable of externalizing behaviors was assessed using the Externalizing Problems composite scale. Validity scales were evaluated to asses for inconsistency, patterned responding, and reading difficulties.

Youth Survey

The youth survey was 182 items in length and was constructed using 2 tools, the BASC-II Self-Report of Personality, Adolescent measure (Reynolds & Kamphaus, 2004) and a 6-item instrument developed by Benda et al. (2006) that assesses religiosity. The independent variable of presence of a loving caregiver was measured using the Relations with Parents and Interpersonal Relations scales, both from the BASC-2, and success in school was evaluated based upon the estimated GPA. The independent variable of

connection to school was assessed using the Attitude to School and Attitude to Teachers scales on the BASC-2. Religiosity was measured using a 6 item assessment tool adapted from Benda at al. (2006).

Design

Procedure

Approval from the University of Northern Colorado's Institutional Review Board was sought first, followed by approval from the Department of Youth Corrections. Then, permission was sought from each Senate Bill 94 Pre-Trial Release Program's program director to distribute the surveys to youth and their parents who were involved with the program. This involved meeting with each program director to discuss the impact this study would have on the program and case managers to address any questions each director had related to this study being conducted via their program. Prior to disseminating the surveys to each program, a training meeting was conducted with each program to discuss procedures and address any questions. Regular contact via e-mail and telephone was maintained with each program throughout the duration of the study to address questions or concerns that arose during the data collection phase of the study. Parents and youth were given an introductory letter that familiarized them with the purpose and potential uses of the study during their initial visit with the Pre-Trial Release program. When potential participants have decided against completing the survey, they were asked to voluntarily complete a brief two-item refusal questionnaire that attempted to evaluate the reasons for refusal so as to rectify the problem. When the family decided to participate in the study, they were provided an informed consent informational letter along with the appropriate surveys. The assessment tools were counter balanced within

the packets, randomizing placement of youth and parent surveys within the packet. The youth were asked to complete the survey in a separate and private room away from her parent(s). Upon completion, the family was provided a follow-up letter thanking them for their participation and providing them with mental health referrals should intervention be necessary.

Results

Demographic Information

A small selection of pertinent demographic variables were collected, namely age, grade in school, ethnicity, religion, number of parents in the home, household income, with whom the adolescent resided, parent/guardian's occupation, and current delinquency charge. The average age of adolescent respondents was 15.95 years (SD=0.87), with a range of 15-18 years. In terms of grade in school, 1 of the respondents (0.86%) did not indicate her grade. The average grade was 10.09 with a range from 6th grade to having graduated. Most of the respondents in the sample classified themselves as White/Caucasian (44.8%). The majority identified their religious preference as being Christian (64.66%). Eight respondents denoted the "other" category and wrote in the space provided they were "Catholic". In these cases, they were coded as Christian. It should be noted that no participants identified as Buddhist, Hindu, Islamic, or Jewish. In terms of number of parents in the home, respondents from over half of the sample were being raised in a single parent home (50.86%). The average annual household income for those involved with this study ranged from $5,001 to $10,000 (23.2%) and $30,001 to $40,000 (23.2%). Twenty-one participants did not report their average household income, leaving only ninety-five responses in this category. The majority of adolescents in this

study resided with someone other than their mothers, grandparents, and aunts/uncles (81.9%). It seemed this demographic item was confusing as many participants wrote in the other section that they reside with their mother and step-father or grandparent, mother, and siblings or some other combination of the demographic items listed. Step-parents, step-siblings, and great grandparents were not included as an option for the demographic survey and were denoted by participants in the other category. Upon further calculation, nearly half of the sample resided with two or more related adults in the home (49.14%). More specifically, the nature of the adult relationship to each other varied from spouse to adult grandchild. Participants reporting that their parent/guardian's occupation as not being in the workforce was 31%. Lastly, the majority of adolescent's were currently facing delinquency charges related to crimes toward a person (62.1%).

Statistical Analysis

A multiple linear regression was then conducted to determine if Religiosity, Connection to School, Success in School, and Presence of Loving Caregiver, the predictor variables, could predict Resiliency, the criterion variable. The predictor variables were added all together and were not introduced to the model incrementally. First, the necessary assumptions of linearity, independence, normality, and equality of variances were examined. Statistical assumptions associated with regression analyses of homoscedasticity, independence, normality, and linearity were considered using the descriptive statistics of this study. To determine homoscedasticity and independence, residual plots and normal plots were inspected. Both suggested that none of the assumptions had been grossly violated. Since some of the factors were significantly correlated, tests to determine whether multicollinearity was present in the model were

performed. According to Tabachnick and Fidell (2007), multicollinearity is present when at least two different variables have condition indices of 30 and variance proportions greater than .50. There were four pairs that had a variance proportion slightly greater than .50 but the conditioning index was not near 30 for any dimension, so it was determined that there were no multicollinearity issues in the final regression model. The normality of the residuals was evaluated using the Shapiro-Wilk test (Shapiro & Wilk, 1965). The Shapiro-Wilk Test of Normality was not significant, resulting in a p-level of 0.07. Examination of skewness (0.37) and kurtosis (-0.48) also suggested the data were normally distributed. A scatter plot of residuals versus predicted values was used to examine linearity.

Since four regression analyses were simultaneously being conducted on the same set of predictor variables, Bonferroni adjusted significance level of .05/4=0.01 was established a priori (Huck, 2008). The results of the regression can be found in Table 1. The overall model was not significant F(6, 109) = 1.26, (p=0.28) and only 1.4% of variability is explained by the model.

Table 1

Multiple Linear Regression Results (DV=Resiliency)

Independent Variable	Beta	t	p-value
Religiosity	-0.09	-0.91	0.36
Attitude to School	-0.18	-1.66	0.10
Attitude to Teachers	0.00	0.04	0.97
Interpersonal Relations	-0.02	-0.18	0.85
Relations with Parents	0.02	0.21	0.83
GPA	0.14	1.51	0.13

Note.* $F(6,109)=1.26$, $p=0.28$, $R^2=0.01$.

A second multiple linear regression was conducted to examine the ability of Religiosity, Success in School, Connection to School, and Presence of a Loving Caregiver to inversely predict Externalizing Behavior, the criterion variable. Again, the predictor variables were added at once and were not introduced to the model incrementally. As before, the necessary assumptions were examined using descriptive statistics, residual plots and normal p-p plots, which again suggested that there were no assumption violations. The Shapiro-Wilk Test of Normality was significant at the .01 level, suggesting the data were not normally distributed. However, examination of skewness (0.46) and kurtosis (-0.43) suggested the data were normally distributed. There were three pairs that had a variance proportion slightly greater than .50 but the conditioning index was not near 30 for any dimension, so it was presumed that there were no multicollinearity issues in this regression model either.

As before, a Bonferroni adjusted significance level of .01 was established a priori. The model was not significant $F(6, 109) = 1.18$, ($p=0.32$), and explained 1% of the variance in the model. The findings were consistent with the correlation table, showing no strong relationships. The results of the regression model are illustrated in Table 2.

Table 2

Multiple Linear Regression Results (DV=Externalizing Problems)

Independent Variable	Beta	t	p-value
Religiosity	-0.13	1.35	0.18
Attitude to School	-0.00	-0.03	0.97
Attitude to Teachers	-0.00	-0.04	0.97
Interpersonal Relations	0.04	0.44	0.66
Relations with Parents	-0.17	-1.74	0.09
GPA	-0.12	-1.28	0.21

Note. * $F(6,109)=1.18$, $p=0.32$, $R^2=0.01$.

Limitations

The current study was constructed based on established theory, but should still be considered exploratory and preliminary. The variables in this study were scales originating from the BASC-2, a validated, well-known measurement tool paired with a religiosity measure found in the research, as the original data from the U.S. Department of Justice (2009) study. The origins of the religiosity measure is unknown and therefore there was no direct basis of research to draw upon for use in this study as the U. S. Department of Justice (2009) study did not mention how religiosity was measured or what specific tool was used for data collection.

While the respondent pairs were selected using a convenience sampling method, the Case Managers responsible for providing eligible participants with the opportunity to complete the surveys were inconsistent and often did not provide the opportunity to the youth and parent for various reasons. It is possible the nature of participants that were offered the survey were different than those who were not. Due to confidentiality issues,

high case loads, and the brief nature of the Pre-Trial Release Program, it was not reasonable or feasible for the Case Managers to determine which families were missed and provide them with the opportunity to participate. Future researchers may want to administer the questionnaires to consecutive participants of the program.

T-scores were obtained based on the sample data and not the BASC-2 normative data. This could account for the lack of significant findings. Having not used the established norms associated with a well-established measurement tool likely introduced variance given the differences among the normed population and this sample in terms of mean and standard deviation. Because the BASC-2 normative samples had sufficient sample size to make highly reliable estimates in terms of t-scores, probabilities for normally distributed scores would have been easily estimated. Rather, this study had a significantly smaller sample size, making the estimates of t-scores less reliable and likely introduced considerable error.

Lastly, data were collected in such a manner that the dependent variables were measured using the parent survey and independent variables were collected using the youth survey, with exception of grade point average which was provided by both the youth and parent instruments. This lack of integration could have introduced an increased degree of variance into the study, particularly if the dyad was inversely polarized with each other in terms of perspective related to the constructs measured in this study.

Future Directions

An important goal of this study was to gain preliminary and interpretable results that would generate both practical and theoretical recommendations. Because resiliency among pre-adjudicated females has received little attention in the literature, significant

work remains before theory can be firmly established in this area. With this in mind, here are some recommendations as to future research in this area.

1. This study should be replicated using different methodology related to survey dissemination and increasing the sample size. For instance, rather than relying on Case Managers to disseminate the surveys, future researchers should be available or someone not associated with the program who could keep better track of eligible participants. Also, a certain region of the state was represented in this study. It may be helpful to expand to other regions within the state.
2. As alluded to previously, future studies should concentrate on large sample sizes. This will provide the opportunity to use CFA to assess the data. Appropriate incentives should be directed toward Case Managers as well as participants to help increase cooperation with the project.
3. It is also possible that the methods of data analysis used in this study may not have revealed the exact nature of the relationships between the variables. Other techniques might be better suited to examine the potentially complex interplay between the variables in this study. Tabachnick and Fidell (2007) suggest that structural equation modeling is a statistical procedure that can test more intricate variable relationships as well as uncover latent variables that may be undetectable using other analyses.
4. Future studies that investigate resiliency with pre-adjudicated females might be better suited to approach the topic from a mixed method perspective. Identifying qualitatively what systems-based constructs are important to the

sample might guide the researcher in developing a survey measuring these important constructs in a more meaningful way. Due to the individual nature of many of ancillary factors as perceived by the parent and youth which surround this topic, generalizable results may simply not be attainable and using methods similar to case studies would better control for unique factors.

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