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Can General Strain Theory be Used to Explain the Relationship Between Recidivism and Secure Placement?

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CAN GENERAL STRAIN THEORY BE USED TO EXPLAIN THE
RELATIONSHIP BETWEEN RECIDIVISM AND SECURE PLACEMENT?

by

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A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Criminal Justice
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Abstract

There has been extensive research conducted on recidivism among serious juvenile offenders. This study examines juvenile recidivism through the lenses of General Strain Theory (GST). GST has been used in previous studies to explain recidivism, however, secure placement and its effect on juvenile mental health, has not been studied. The purpose of this study is to test for a relationship between emotional responses like anger and hostility and secure placement, utilizing the Pathways to Desistance data. I will also examine if anger and hostility act as a mediator between secure placement and recidivism. Pathways to Desistance was a prospective study of serious juvenile offenders in Phoenix, Arizona (N = 654) and Philadelphia, Pennsylvania (N = 700). Specifically, I examined if secure placement, as measured by length of time spent in a secure facility (i.e., detention center), affects self-reported offending and criminal history. Anger and hostility were measured using the Brief Symptom Inventory (BSI; Derogatis and Melisaratos, 1983). If results suggested that assigning juveniles to a secure placement does evoke negative emotional responses which in turn increase the likelihood of recidivism, policy reflecting a more constructive deterrent and rehabilitation for juveniles would need to be created.

Keywords: secure placement, juveniles, mental health, general strain theory

Dedication

I would like to thank my family and friends, as well as Dr. Tamara Walden, for their emotional support as I completed this thesis. I would also like to thank Dr. Mark A. Winton for being on my committee and a special thanks Dr. James V. Ray for being my thesis chair. Without your guidance, patience, and encouragement, I could not have completed this academic journey. Thank you for everything.

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Can General Strain Theory Be Used to Explain the Relationship Between Recidivism and Secure Placement?

High rates of recidivism plague the juvenile justice system, particularly for those youth who have been placed in secure facilities. Research shows that 70-80% of juveniles get re-arrested within two to three years after being released from secure placement (MST Services, 2018). Several theories exist that explain this somewhat counterintuitive findings. On the one hand, differential association theory suggests that juveniles assigned to secure placement learn and improve their criminal deviance from the accompanying juveniles to whom they are exposed. Sutherland, Cressey, and Lunkenbil (1992) gives us four factors related to deviant behavior influenced by our peers: duration, intensity, frequency, and priority. This theory tells us that the likelihood of deviance is related to one's peers and with whom they associate.

Labeling theory says there are two stages in becoming deviant (Ballantine, Roberts, and Korgen, 2018). The first stage is primary deviance. This stage includes the first time a deviant act is committed. In the second stage, secondary deviance, a person continues deviant behavior as their deviance becomes known, and they are labeled as such. After receiving this label, which is often derived from a social stereotype, the individual continues in their deviance. This is what is known as the idea of self-fulfilling prophecy. Also, because society members view youth differently once they have been officially labeled, conventional opportunities are blocked, and that youth is at an increased likelihood of seeking out criminal opportunities. Labeling theory, while giving reason for recidivism, does not consider why the crime is committed in the first place. According to Ballantine, Roberts, and Korgen (2018), it only focuses on why individuals are more likely to be caught and punished for deviance. These two theories concentrate on one's deviance as it relates to their relationship with people and their position in society resulting from

juvenile justice involvement. However, they do not address the possibility that high rates of recidivism may be due to a person's mental or emotional response to secure placement.

One theory that is not typically used to explain high rates of recidivism among youth experiencing incarceration is general strain theory (GST; Agnew, 2006). Importantly, GST may also help to explain the role that negative psychological responses play in the link between secure placement and recidivism. In his theory, Agnew says that offending results from inappropriate coping mechanisms due to negative experiences (i.e., sources of strain). Therefore, anger/hostility would be the response to the negative experiences of a secure placement (e.g., poor treatment, mental and physical abuse, separation from family and friends) and recidivism would be the coping mechanism. Thus, it seems somewhat intuitive to apply this theory since incarceration might place undue strain on juveniles. On the one hand, research consistently finds that mental health diagnoses are high among juvenile justice-involved youth (Alessi, McManus, Grapetine, and Brickman, 1984; Dmitrieva, Monahan, Cauffman, and Steinberg, 2012). While many of these youth come into the system with mental health issues, it has also been suggested that system contact can have adverse effects on the mental status of youth (Lambie and Randell, 2013). In turn, this may be one reason for the high rates of recidivism among juvenile offenders. For instance, research has found that youth with higher rates of mental health diagnoses (e.g., bipolar disorder, depression, and conduct disorder) are more likely to recidivate (Yampolskaya and Chuang, 2012).

Despite the applicability of GST to explain recidivism and the high rates of mental disorders reported among juvenile justice populations, few studies have directly tested this as a possible explanation for why secure placement (or more intense levels of secure placement) lead to higher rates of recidivism (Ackerman and Sacks, 2012). The current study attempts to examine

this among a sample of serious juvenile offenders. The goal of this research is to identify mental health and emotional responses, namely anger/hostility, as a mediator between the duration of secure placement and its effect on the likelihood of a justice-involved youth recidivating.

Theoretical Framework

Agnew's (1992) general strain theory is a revision of the classical strain theory of Merton, which concentrated criminal deviance in the lower socioeconomic class. The assumptions that classical strain theory works under are as follows: (1) there are norms put in place in society, (2) there are different social classes and, (3) society creates strain on the lower class. These assumptions are why this theory focuses on explaining street crime. The main critique Agnew has is that the classical focus on the lower class when deviance and crime can also happen in the middle class. This theory is under the assumption that strain is the blockage of goal-seeking behavior and pain-avoidance behavior (Agnew, 1985). However, there are three main sources of strain that Agnew identifies: (1) losing something one values, (2) not being able to reach one's goals, and (3) being treated in an adverse manner by others (2006, p. 193). Secure placement can fit in each of these categories. When a juvenile is assigned to secure placement, they lose the benefits of having important bonds with people in their lives, their lives are steered off the track they most likely had in place for themselves, and, in turn, there is a negative stigma placed on them. These sources of strain cause negative emotions for which the juvenile will cope with by re-offending. The negative emotions closely associated to delinquency are anger and hostility. Agnew also mentions chronic strain. Being exposed to continuous strain leads to negative emotional traits, like anger, that are conducive to crime (2006, p. 39). So, the more someone experiences a strain, the more likely they are to develop these traits, and thus commit crime. GST argues that crime may allow the juvenile to reduce or escape from their strains, seek

revenge against those who have mistreated them, or alleviate their negative emotions (Agnew, 2006,). Secure placement is a unique strain because it leaves no other alternative. The juvenile cannot escape nor engage in pain-avoidance behavior, and thus evoking the anger and hostility which could lead the juvenile to commit crime.

With that, the goal of my research is two-fold: (1) to find out what effect secure placement, as a strain, has on the mental health (anger/hostility) of a juvenile offender, and (2) as a result, does that mental health response increase the likelihood of recidivism. My research question is essentially asking, is the mental health response a mediator between being placed and length of time in secure placement (independent variable), and a juvenile reoffending (dependent variable). Thus, from a GST perspective, secure placement is a source of strain, anger/hostility is a likely mental outcome. Among those who experience anger/hostility, recidivism may be more likely.

Literature Review

The Effects of Secure Placement on Recidivism

There are various ways that experiencing secure placement can affect one's likelihood of recidivism. Secure placement could be a strain on the offender to which they have an emotional response that, in turn, causes them to recidivate. There has been plenty of research on the negative influences of secure placement on juvenile justice outcomes such as subsequent offending (i.e., recidivism). According to Fagan and Piquero (2007), because adolescence is a developmental period in which psychological, social, and biological changes occur, secure placement can have serious consequences on youth development. In their study, they examined factors, like legal socialization, that influenced recidivism among adolescent felony offenders. Legal socialization is the internalization of law, rules, and agreements among members of

society, and the legitimacy of authority to deal fairly with citizens who violate society's rules and includes two distinct dimensions that reflect different perceptual frameworks for how adolescents evaluate law and legal institutions (Fagan and Piquero, 2007, p. 718). It is also influenced by legal sanctions and punishment such as being assigned to a secure facility. Fagan and Piquero (2007) found that being placed in a secure facility will affect a juvenile differently than a fully developed adult with regards to legal socialization. Fagan and Piquero's sample included the 1,354 adolescents, ages 14 to 18, (1170 males and 184 females) that were a part of the Pathways to Desistance study. Pathways to Desistance was a prospective study of serious juvenile offenders in Phoenix, Arizona (N = 654) and Philadelphia, Pennsylvania (N = 700). Specifically, they examined if secure placement, as measured by length of time spent in a secure facility, affects self-reported offending and criminal history. They also examined if mental health, maturity, and substance dependency modified these associations. Modification is the idea that the characteristics of an individual in the sample impacts the way the independent variable impacts the dependent variable. By controlling for these measures, Fagan and Piquero are accounting for the individual differences among the participants that could otherwise skew their results. It was concluded that there are processes of legal socialization that influence patterns and trajectories of self-reported offending and a significant predictor of aggressive offending. The way criminal justice actors treat juvenile offenders directly affects the variation of their offending patterns over time. Thus, their findings establish a relationship between secure placement and recidivism.

In another study, Ryan, Abrams, and Huang (2014) compared recidivism rates of youth who were placed in probation camp (a form of secure placement) to youth who were placed on in-home probation and group-home placement in Los Angeles County. Their sample included

juveniles that had at least one violent charge. Those that were assigned to in-home probation remained in the family home while being monitored by a probation officer. Group-home placement refers to community-based facilities to which youths are remanded, typically for six to nine months, and provide a variety of services that are theoretically matched with the individual and unique needs of each youth (Ryan, Abrams, and Huang, 2014). Those assigned to a probation camp stayed in one of 18 camps across the county from four to nine months, where they were required to go to school and go through vocational training. They concluded that compared to those placed in in-home probation, a juvenile's likelihood of recidivating was 2.30 times greater if assigned to a probation camp and 1.29 times greater if they are assigned to a group home while controlling for demographic characteristics including race and gender. These findings suggest a positive correlation between secure placement and recidivism.

Loughran, Mulvey, Schubert, Fagan, Piquero, and Losoya (2009) also examined the effect that secure placement has on recidivism. Utilizing the Pathways to Desistance data, they tested for 1) a causal effect of institutional placement, as opposed to probation, on future rate of re-arrest; and, 2) a marginal effect (i.e., benefit) for longer length of stay once the institutional placement decision had been made. Their results implied there is no marginal benefit, in terms of reducing future rate of re-arrest or rate of self-reported offending for additional length of stay. Although, there was an overall null effect of secure placement on recidivism, the effect that was present showed that secure placement had a positive relationship with the future rate of re-arrest and future rate of self-reported offending.

The Effects of Secure Placement on Mental Health

Secure placement can also be a factor in an offender's mental health development. Being cut off from family and friends would be considered what Agnew (2006) says as losing

something they value. Bonds with people we care about help shape who we are as a person and reinforce our sense of self. Youth placed in secure facilities are likely to feel cut-off from those to whom they are close to (e.g., family, friends, teachers) while also experiencing negative treatment by others (e.g., correction officers, judges, and possibly their fellow offenders). These experiences are likely to result in negative emotions (e.g., anger, sadness, anxiety, etc.). A study by Alessi, McManus, Grapetine, and Brickman (1984) focused on the identification of depressive disorders (major and minor) in a sample of juveniles who were incarcerated for serious offenses. They also examined the relationship between diagnosed depressive disorders and several measures of severity of delinquency. Their sample was comprised of juveniles, ages 14-18, housed in the training school system in the State of Michigan (male, 40; female, 31). The sample was then compared to the results of a previous study conducted by Strober, Green, and Carlson (1981) to provide a psychiatrically hospitalized comparison population (40 subjects; male, 12; female, 28). Both samples were evaluated using the same methodology. The Schedule for Affective Disorders and Schizophrenia (SADS; Spitzer and Endicott, 1978) and the Research Diagnostic Criteria (RDC; Spitzer, Endicott, and Robins, 1977) were used to diagnose depressive disorder. The SADS and RDC tests contain a collection of psychiatric diagnostic criteria and symptom rating scales. They are often used in conjunction with each other and have been found to reliably diagnose affective disorders in adolescents. Of the juveniles with major depression disorder in each sample, one third of the hospitalized population were endogenously depressed versus one half of the incarcerated population. The findings of Alessi et al. (1984) indicate that there are significant differences in the way in which major depressive disorders find symptomatic expression in delinquent versus psychiatrically hospitalized adolescents (p. 14). It was also found that secure placement, even compared to other forms of placement, can have

detrimental effects on youths' mental health. With these results it is safe to assume there is some connection between secure placement and mental health and emotional response.

Continuing this research, Dmitrieva, Monahan, Cauffman, and Steinberg (2012) looked at the effect of secure placement on the development of the psychosocial maturity, or mental and social development, of juvenile offenders. An important aspect of psychosocial maturity is aggression and how well an adolescent can suppress it, which we know is linked to delinquency (Weinberger and Schwartz, 1990; Khatibi and Sheikholeslami, 2016). They included the male sample from the Pathways data. They examined if the length of time in a secure facility affected an individual's psychosocial maturity. Other factors considered were the type and quality of the facility, the short-term impact of incarceration on psychosocial functioning, and age mediating the effect on incarceration of the juvenile. Each facility was separated into two groups – those who spent less than 75% of time in that facility over the course of the study and those who spent at least 75%. Over the course of the study, those who spent more time in secure facilities were less psychosocially mature at age 14 compared to youth who had not been incarcerated. For those that were incarcerated, this negative effect was greater for those who spent at least 75% of the time in secure placement versus those who spent time in less than 75%. Their results provide evidence that incarceration in a secure facility is associated with stunted development of psychosocial maturity in the short term. This study suggests a negative correlation between time spent in a secure facility and the mental development of the juvenile offenders. Given the link between psychosocial maturity and aggression, it is also likely that secure placement will result in increases in anger and hostility, though the reviewed literature did not examine if mental health outcomes resulted in higher rates of recidivism.

The Effects of Mental Health on Recidivism

Emotional responses to secure placement, such as anger and hostility, could be a significant predictor of an offender's likelihood to recidivate. According to GST, crime can be a coping mechanism for certain strains, especially when anger is an emotional response. Juveniles are already higher in negative emotionality, quick to anger or easily upset (Agnew, 2006), which increases the likelihood of a negative emotional response versus an adult. Also, it has already been established that a longer time in secure placement can increase the negative effect it has on one's mental health development (Dmitrieva, Monahan, Cauffman, and Steinberg, 2012). This increased anger and hostility could be the link connecting the strain of secure placement and the response of recidivating. Mallett, Fukushima, Stoddard-Dare, and Quinn (2013), examined factors (e.g., demographic, education, mental health, substance use, etc.) that lead to recidivism among a sample of juvenile offenders who were placed in secure detention. The sample included a total of 433 court-involved youth from two counties over a distinct period. In urban counties, there were 100 juveniles in 2006, 137 in 2007, and 105 in 2008. In rural counties there were 91 juveniles in 2008. Data was collected from pre-existing files from each county's juvenile court including juvenile court histories, probation supervision case files, and mental health assessments. Their findings suggested that the main factors for predicting recidivism were age (for each additional year, 1.3 times more likely), previous diagnosis of a conduct disorder, and number of court offenses. Another cited influence was a self-reported previous suicide attempt. Those who reported attempting suicide were more likely to engage in recidivism. However, in their study, they did not consider being placed in secure placement as a factor in predicting recidivism. Nonetheless, their findings suggest that mental health may be an important factor in predicting recidivism.

Yampolskaya and Chuang (2012) also examined the influence of mental health on recidivism with juveniles placed in out-of-home care. The sample of juveniles came from reports of maltreatment in the Florida Statewide Child Welfare Information System (Home SafeNet) and the Florida Medicaid claims databases. The goal of the study was to identify predictors of juvenile justice involvement and recidivism. These 5,720 juveniles were placed in out-of-home care and the youth in the study were followed for a 24-month period beginning after the child was removed from their home. It was found that those who did not have a mental health diagnosis had a 3.6% chance of experiencing a first secure placement (a detention center or a juvenile justice facility) and those that did, had a 16% chance. Mental health disorders measured included, bipolar disorder and substance abuse disorder (85% more likely), depression (72% more likely), and conduct disorder (5 times more likely). This suggests that there is a positive correlation between a juvenile's mental health and their chance in becoming involved in the juvenile justice system. They also found a positive correlation between mental health disorders and recidivism. There were 250 (81%) juveniles sentenced to secure placement that subsequently exited that placement during the study period. This group was used as the cohort to identify the factors influencing recidivism. Of this subset, 59% recidivated and 42% had a mental health disorder. Those with a mental health disorder were found to be more likely to recidivate than those without. Overall, their results concluded that compared to children who did not have an identified mental health problem, children who did have mental health disorders were 81% more likely to recidivate. This establishes a juvenile's mental health as a significant predictor of their recidivism as it relates to being assigned to a secure placement.

Does Anger Mediate the Association between Secure Placement and Recidivism?

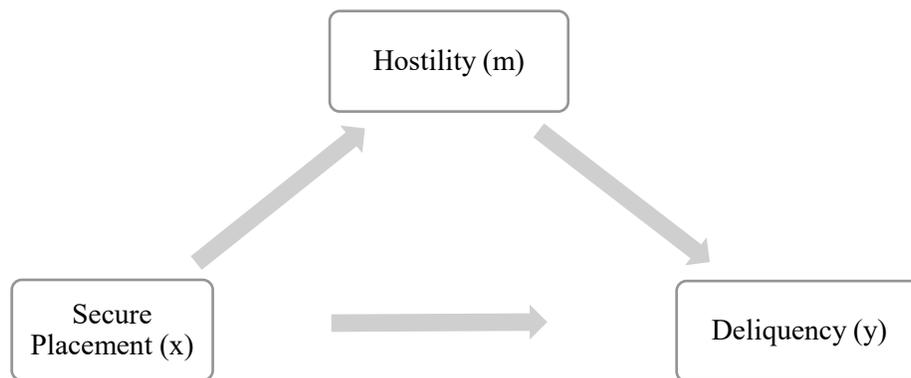
The previously reviewed literature examined the connections between secure placement and recidivism and mental health. There is no question that all three are connected. However, few studies have looked at mental health and emotional responses as a mediator between secure placement and recidivism. Although not analyzing a sample of juvenile offenders, Ackerman and Sacks (2012) assessed the recidivism of sex offenders in the context of General Strain Theory. Using OLS Regression, their goal was to predict overall recidivism, as well as sex, violent, drug, and property recidivism with two models each. While controlling for age, gender, and time on the registry, they also measured for anger and depression and how that influences the effect of strain for each prediction model. The results for general recidivism found that those high in anger were more likely to recidivate and those who were high in depression were less likely. Strain was a significant predictor for recidivism, which was more likely among those reporting higher levels of strain. The sex crime results were similar to general recidivism in that strain increased the likelihood of reoffending. For violent, drug, and property recidivism the results suggested the same thing. The first models showed that strain increased the likelihood of recidivism and the second models showed anger to be a positive and significant predictor for recidivism. Overall, Ackerman and Sacks (2012) established a positive correlation between strain and recidivism, with anger being the link between the two.

Current Study

The goal of this study is to examine the mental health and emotional responses of serious juvenile offenders and to link that to recidivism using GST. The reviewed literature has established positive correlations between secure placement and recidivism, mental health and recidivism, and secure placement and mental health. Mental health and emotional responses have

been shown to mediate the association between secure placement and recidivism. However, this has only been applied either to adult offenders or juvenile offenders in a context that does not include secure placement as a strain itself. Research and theory suggest that juveniles, compared to adults, are more vulnerable to the negative emotional responses of strain, such as anger (Agnew, 2006) and, in turn, may be more likely to recidivate. My research model is illustrated in Figure 1 below. My independent variable is secure placement (the strain), my dependent variable is delinquency, with the mediator being hostility.

Figure 1: Mediation Model



And since being assigned to secure placement limits the opportunity to cope legally or healthily, the following research questions are to be answered:

- Does being put in a secure placement affect the mental health of serious juvenile offenders?
- How does mental health affect their likelihood of recidivism?
- Does the strain of secure placement affect the likelihood of a serious juvenile offender reoffending?
- Does anger/hostility mediate the relationship between secure placement and recidivism?

Hypothesis

Based on the research reviewed above and GST I have formulated four hypotheses:

1. Those individuals who experience more time in secure placement will have higher rates of recidivism compared to those who experience less time in secure placement.
2. Those who experience more time in secure placement will have higher levels of anger/hostility compared to those who experience less time in secure placement.
3. Those with higher levels of anger/hostility will be more likely to reoffend.
4. Anger/hostility will mediate the relationship between secure placement and recidivism.

Methods

Sample

The data included in this study comes from the Pathways to Desistance study. The juvenile offenders in the sample are serious offenders (N = 1,654) that range from 14 to under 18 years of age (1,170 males and 184 females). Serious offenses refer to those that were predominantly charged with felonies, with a few exceptions for some misdemeanor property offenses, sexual assault, or weapons offenses. The secure placement facilities they were assigned to were in Maricopa County, Arizona (n = 654) and Philadelphia, Pennsylvania (n = 700). In the Arizona sample, male juveniles accounted for 86.4% (565) of the population and female juveniles 13.6% (89). The largest racial/ethnic group representations were Hispanic (347, 53.1%) and White (202, 30.9%). In the Pennsylvania sample, there were 605 males (86.4%) and 95 females (13.6%). Slightly differing from the Arizona sample, the largest representation of racial/ethnic groups were Black (503, 71.9%) and Hispanic (106, 15.1%). For the total sample, the mean age was 16 years old.

Measures

The following are my research study measures. The distribution of the sample on each of these measures are described in Table 1.

Secure placement. Time in all settings – Participants were asked how much time in the previous six months did they spend incarcerated. This measure was taken at wave one and wave two. Time in without community access – Participants were asked how much time in the previous six months did they spend incarcerated in a facility that did not grant them community access (e.g., group home, probation). This measure was taken at wave one (i.e., the 6-month follow-up).

Outcome. The Self-Report Offending scale (SRO; Huizinga, Esbensen, and Weiher, 1991) – The SRO is a self-report measure of offending that is based on 24 different types of offenses and was used to measure the adolescent's report of being involved in antisocial and illegal activities (e.g., in a fight, shoplifted, carjacked). This measure is calculated as a proportion. The numerator is the number of different types of acts endorsed, regardless of when it was committed. The denominator is the number of items for which the subject gives either a "yes" or "no" answer. All items which the subject refused to answer, replied "don't know", or was not asked are not included in the denominator. The closer this figure is to "1", the greater the variety of offenses the youth is committing. This measure was taken at wave three (i.e., 18-month follow-up) and asks the youth to reference the previous six months.

Mediator. The Brief Symptom Inventory (BSI; Derogatis and Melisaratos, 1983) – The BSI is a 53-item self-report inventory in which participants rate, from 0 meaning "not at all" to 4 for "extremely", the extent to which they have been bothered in the past week by various symptoms. There are nine subscales that are designed to assess individual symptom groups

including depression (DEP, e.g., "Feeling no interest in things") and hostility (HOS, e.g., "Having urges to break or smash things"). The BSI also has three scales to capture global psychological distress. This measurement test was given at the beginning of the offenders' term, the end of the term, as well as follow-up measurements every six months starting from November 2000 to January 2003. In the current study the 6-month follow version was included in the analyses.

Control variables. Several empirically and theoretically relevant variables will be included in the model to rule out other factors.

Demographics. There were four demographic indicators from the baseline interview used in this study: age, gender, site, and race. Age is the continuous variable coded as the subject's age at the time of the interview. The participants were coded as either male (1) or female (2) and there were two sites used, Philadelphia (1) and Phoenix (2). I created four individual dummy variables to capture each race/ethnic group: Black (1, else 0), White (1, else = 0), Hispanic (1, else 0), and "other race/ethnicity" (1, else 0). Thus, the White category served as the reference group.

Depression. Signs and symptoms of clinical depressive syndromes (e.g., dysphoric affect and mood, withdrawal of interest in life activities, and loss of energy) are measured in this six-item subscale of the BSI, described above.

Delinquent peer association. The Peer Delinquent Behavior items are a subset of those used by the Rochester Youth Study (Thornberry, Lizotte, Krohn, Farnsworth, and Jang, 1994) to measure the degree of antisocial activity among the adolescent's peers. In this current study, I used the peer antisocial behavior measure. This contained 12 items (e.g., During the last six months how many of your friends have sold drugs?). Scale responses were on a 5-point Likert-

type scale ranging from none of them to all of them. The items were then summed up to create a total score for peer delinquency.

Parental Monitoring. The Parental Monitoring inventory (Steinberg, Dornbusch, & Darling, 1992) was adapted for this study to measure the parenting practices related to supervising the study participant. Preliminary questions were asked in order to establish the presence of an individual (X) who is primarily responsible for the youth. The respondent's answers to items about their current living situation, specifically whether they live with the identified caretaker, establishes the skip pattern followed in the parental monitoring items. The scale is composed of 9 items. There are five items that measure parental knowledge (e.g. How much does X know about how you spend your free time) and they are answered on a 4-point Likert scale ranging from "doesn't know at all" to "knows everything". Even if a youth does not live with the person identified as their primary caretaker, they are asked these questions. If the youth lives with the primary caretaker, there are four additional items are asked to measure parental monitoring of the youth's behavior (e.g. How often do you have a set time to be home on weekend nights?). These are answered on a 4-point Likert scale which ranges from "never" to "always". The average of two sub scores is used to calculate the scores for this measure.

Maternal Warmth. The Quality of Parental Relationships Inventory (Conger, Ge, Elder, Lorenz, & Simons, 1994) was adapted to measure the affective tone of the parental-adolescent relationship variable in this study. Items included were parental warmth - mother (e.g., "How frequent does your mother let you know she cares about you?"), parental hostility - mother (e.g., "How frequent does your mother get angry with you?"), parental warmth - father (e.g., "How frequent does your father let you know that he loves you?"), and parental hostility - father (e.g., "How frequent does your father throw things at you?"). The scale contains 42 items to which

participants respond on a 4- point scale ranging from "Always" to "Never". There are 21 items to assess the maternal relationship and 21 to assess the paternal relationship. Items were reversed coded and then summed to calculate the composite scores. Higher scores on the warmth scale indicate a more supportive and nurturing parental relationship. Higher scores on the hostility scale suggest a more hostile relationship.

Analytical Plan

First, descriptive statistics and bivariate associations between all study variables were examined using correlational (i.e., Pearson's zero-order correlation coefficient) or comparison of means tests (i.e., t-tests, ANOVAs). Second, mediation was tested by following the Baron and Kenny's (1986) causal steps approach using regression analysis. This was first done without controlling for other variables and then again controlling for demographic variables, depression, parenting, peer delinquency, and prior self-reported offending. First, a regression model was conducted in which BSI anger/hostility was regressed onto secure placement. A second stepwise regression model was conducted to assess the mediation of BSI scores on the relationship between secure placement and recidivism. In the first step, the SRO at the 1.5-year follow-up was regressed onto secure placement. Then, scores from the BSI stepped into the model. In order, to determine if mediation occurred, I observed the change in the coefficient and p-value of secure placement from step one to step two. If the p-value was reduced to non-significance in the second step, then full mediation was the outcome. If the coefficient for secure placement was still significant but the size of the coefficient was reduced, then partial mediation was determined to be the outcome. However, if the coefficient remains the same, then I concluded that no mediation occurs. This procedure was then repeated while including control variables at each step.

Results

Descriptive Statistics

Table 1 gives a summary of all the measures in the study and at what point they were measured, in six-month periods. At baseline, all my variables were measured except those in the recall period. The average score for the parental measures was 2.802 for parental monitoring and 3.208 for parental warmth, both on a scale of 1 to 4. When measuring delinquent peer association, it was found that overall, the sample's average for antisocial behavior of their peers was 2.321 on a scale of 1 to 5. For total variety offending, the juveniles in the sample committed on average 32.8% of the acts ever and 14.9% of the acts in the past six months. Using the BSI, the anger measurements showed high levels of hostility. The average BSI score for depression was .596, meaning that on average juveniles in the sample were experiencing almost none of the symptoms associated with clinical depression according to the BSI.

At wave one and wave two, hostility, and time incarcerated without community access (secure placement) were measured. At wave one, hostility levels slightly decreased. On average, juveniles reported committing 6.6% of the offenses in the prior six months.

Table 1: Descriptive Statistics

Measures	Baseline					Wave 1					Wave 2					Wave 3				
	n	%/M	SD	min	max	n	%/M	SD	min	max	n	%/M	SD	min	max	n	%/M	SD	min	max
Age	1354	16	1.143	14	19															
Sex																				
Male	1170	86.4		0	1															
Female	184	13.6		0	1															
Ethnicity																				
White	274	20.2		0	1															
Black	561	41.4		0	1															
Hispanic	454	33.5		0	1															
Other	65	4.8		0	1															
Parental																				
Monitoring		2.802	.861	1	4															
Warmth – Mother		3.208	.696	1	4															
Peer Delinquency		2.321	.926	1	5															
Total Offending Variety																				
Ever		.328	.209	0	.95															
Past 6 Months		.149	.153	0	.91															
BSI																				
Depression		.596	.745	0	4															
Hostility		.746	.778	0	4	.637	.704	0	4	.631	.722	0	4							
Recall Period																				
Time in w/o Community Access						.479	.439	0	1	.426	.432	0	1							
Total Offending Variety															1228	.066	.107	0	.73	

Zero-order Correlations

The correlations among all the study variables are presented in the Table 2. As seen in the table, the main study variables (secure placement, hostility, and delinquency) were all correlated in expected directions. Specifically, secure placement and hostility measured at wave one were positively correlated with the total variety offending at wave three. Additionally, secure placement was positively correlated with hostility. Based on these associations, there is reason to properly test for a mediation process as proposed. Additionally, several control variables were found to be positively correlated with the main study variables.

Several of the control variables correlated with the main study variables. For instance, age was positively correlated with secure placement suggesting that older youth spent more time in secure placement. Being White or Hispanic, were both negatively correlated with secure placement while being Black was positively correlated with secure placement suggesting that Black youth spent more time in secure placement compared to White and Hispanic youth.

Parental monitoring was also found to be negatively correlated with delinquency suggesting that the less a juvenile's parent monitored them the more likely they are to commit crime. The same was found for my maternal warmth variable. However, the opposite was found for the peer delinquency variable. The more delinquent peers a juvenile had, the more likely they themselves would be delinquent.

Table 2: Zero-Order Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	–													
Ethnicity														
2. White	-.042	–												
3. Black	.036	-.424**	–											
4. Hispanic	-.019	-.358**	-.597**	–										
5. Other	.037	-.113**	-.189**	-.159**	–									
6. Sex	-.019	.063*	-.036	-.026	.022	–								
Baseline														
BSI														
7. Depression	.103**	-.018	-.134**	.123**	.071*	.066*	–							
8. Hostility	.052	.070*	-.047	-.015	.010	.148**	.500**	–						
Parental														
9. Monitoring	-.259**	.108*	-.071*	-.016	-.005	.115**	-.064*	-.047	–					
10. Warmth - Mother	-.042	-.114**	.125**	-.014	-.046	-.131**	-.071*	-.143**	.153**	–				
11. Peer Delinquency	.098**	-.074**	-.076**	.128**	.031	-.089**	.321**	.359**	-.246**	-.043	–			
12. Variety Offending, Past 6 Months	.012	.054*	-.131**	.079**	.026	-.107**	.164**	.263**	-.189**	-.084**	.505**	–		
Wave 1														
13. Secure Placement	.089**	-.151**	.198**	-.075**	-.003	-.204**	.197**	.100**	-.190**	.156**	.203**	.167**	–	
14. BSI: Hostility	.035	.076*	-.032	-.025	-.017	.056	.293**	.467**	-.073*	-.111**	.237**	.224**	.073*	–
Wave 3														
15. Total Variety Offending	.005	.049	-.079**	.045	-.013	-.118**	.098*	.145**	-.088**	-.032	.302**	.288**	.058*	.192**

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

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

Regression Models

Following my analytical plan, I created three regression models. For the first model, using the data from wave one, Table 3 shows secure placement to be a significant predictor of hostility. Specifically, the more time that youth spent in secure placement was associated with higher levels of hostility. This model was conducted in order to establish that secure placement positively related to hostility.

Table 3: Regression Model Assessing Secure Placement as a Predictor for Hostility

	B	SE	<i>b</i>
Secure Placement	.116	.049	.073*

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; † = marginally significant

The results in Table 4, Model 1 show the influence of secure placement at wave 1 on delinquency reported at wave 3. The results suggest that secure placement had a marginally significant positive effect on delinquency at wave 3. Specifically, more secure placement at wave one was a marginally significant predictor ($b = .073, p = .063$) of higher delinquency at wave three (Model 1). Higher levels of hostility at wave one predicted more delinquency at wave three. However, secure placement was no longer marginally significant once hostility was included in the model ($b = .046, p = .138$; Model 2). Additionally, the size of the coefficient for secure placement was slightly reduced. Based on these findings, I conclude that the effect of secure placement on delinquency was partially mediated by hostility.

Table 4: Regression Model Assessing the Mediation Role of Hostility on the Relationship between Secure Placement and Delinquency

	Model 1			Model 2		
	B	SE	<i>b</i>	B	SE	<i>b</i>
Secure Placement	.014	.008	.059†	.011	.008	.046
BSI: Hostility				.029	.005	.187***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; † = marginally significant

In my third regression model, as shown in Table 5, all the control variables were included, as well as the variables measured at baseline and wave one. In Model 1, age ($b = -.105$, $p = .001$), sex ($b = -.080$, $p = .015$), depression ($b = -.068$, $p = .045$), peer delinquency ($b = .122$, $p = .005$), and total variety offending ($b = .318$, $p = .000$) were shown to be significant predictors of delinquency at wave three. Specifically, being older, experiencing more symptoms of depression, and having more delinquent peers, was associated with more delinquency. In Model 2, secure placement was included in the model. With the exception of depression, all the variables that were significant in the previous model remained significant. Additionally, secure placement ($b = -.115$, $p = .001$) significantly predicted delinquency. However, the sign was negative suggesting that less time in secure placement predicts more delinquency.

In Model 3, hostility was included as a predictor of delinquency. All variables found significant in Model 1, were significant in model 3 including depression. Both secure placement ($b = -.112$, $p = .001$) and hostility ($b = .172$, $p = .000$) were significant predictors of delinquency at wave three and the coefficient only slightly changed suggesting that no mediation occurred once other factors were controlled. However, it is important to point out that the sign for the coefficient associated with secure placement changed to a negative sign once other variables were controlled (see Tables 3 and 4). As explained in my analytical plan, there is no mediation because even though secure placement is significant predictor, it's coefficients from Model 2 ($b =$

-.115) to Model 3 ($b = -.112$) virtually saw no reduction once other variables are taken into account.

Table 7: Regression Model Assessing the Mediation Role of Hostility on the Relationship between Secure Placement and Delinquency w/ Control Variables

Measures	Model 1			Model 2			Model 3		
	B	SE	<i>b</i>	B	SE	<i>b</i>	B	SE	<i>b</i>
Control Variables									
Ethnicity									
Black	-.020	.011	-.082	-.015	.011	-.060	-.014	.011	-.056
Hispanic	-.006	.011	-.024	-.007	.011	-.025	-.001	.011	-.005
Other	.003	.020	.004	.003	.019	.005	.007	.019	.012
Age	-.012	.004	-.109**	-.012	.004	-.109**	-.012	.004	-.105**
Sex	-.028	.011	-.080*	-.033	.011	-.097**	-.036	.011	-.105**
Baseline									
BSI: Depression	-.011	.006	-.068*	-.007	.006	-.044	-.014	.006	-.083*
Parental Monitoring	-.004	.005	-.027	-.006	.005	-.042	-.006	.005	-.044
Parental Warmth	-.009	.006	-.050	-.005	.006	-.029	-.003	.006	-.017
Antisocial Behavior	.016	.006	.122**	.017	.006	.124**	.014	.006	.105*
Total Variety Offending: Ever	.191	.026	.318***	.202	.026	.336***	.186	.026	.310***
Wave 1									
Secure Placement				-.032	.010	-.115**	-.031	.010	-.112**
BSI: Hostility							.030	.006	.172***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; † = marginally significant

Discussion

Research shows that 70-80% of juvenile offenders recidivate within two or three years of being released from incarceration (MST Services, 2018). There could be many reasons for this including the state of the juvenile offenders' mental health and emotional responses to being in secure placement. The purpose of this study was to examine the relationship between secure placement and recidivism through those emotional responses. Since anger and hostility are the emotions closely associated with delinquency, I decided to create a research model testing hostility as a mediator between secure placement and delinquency. This was not at random. Agnew's (1992) general strain theory (GST) gives a theoretical framework from which my research model can work. His revision of Merton's classical strain theory assumes strain as either the prevention of goal-seeking behavior or pain-avoidance behavior. Secure placement can be

considered as both. Following the theory, this kind of behavior prevention can invoke negative emotions (anger, hostility) in the offender, thus causing them to commit crime as an escape from the strain itself or the emotions it causes in them.

Previous research has positively linked secure placement, mental health, and recidivism together and even found anger/hostility to be a mediator between the two. However, my research was a unique continuation of them. My study included longitudinal research with a diverse sample of serious juvenile offenders. It was important to create a research model in this way because it gives light to secure placement's lasting effects. Also, adolescence is a very important period in human development, especially psychologically. With my selected sample, I can test for secure placement's impact on an offender at this stage in life, while also accounting for ethnic and gender diversity. This separates my study from that of Ackerman and Sacks (2012) whose sample only included adults, who most likely would react differently to strain than a juvenile.

Generally, my findings suggest that hostility does not mediate the relationship between secure placement and delinquency. However, my findings did suggest a positive relationship between the two. So, while there may be no mediation shown in my research model, one can assume that secure placement is a significant predictor.

Implications

Taking a practical approach to GST, secure placement would not be an effective prevention of crime for juveniles or adults. Established by research, secure placement has been proven to cause increases in delinquency. My research has also found this. My regression models found secure placement to be significant in predicting both hostility and delinquency. Knowing this as well as juvenile recidivism rates, an alternative to secure placement should be considered. Dmitrieva, Monahan, Cauffman, and Steinberg (2012) established a negative relationship

between length of time in a secure facility and psychological development for adolescents. So, community-based prevention measures should be taken. While my research did not find mediation or completely model Agnew's theory, it does suggest hostility to be a significant predictor of delinquency. Giving a juvenile offender a constructive and non-isolating way to learn from their ways and be rerouted from a life of crime will have a better impact on them and society as a whole. For example, the Texas Juvenile Justice Department has the Second Chance program. Focused on gang-related youth, this program supports services tailored to the individual's needs. This includes employment, education, cognitive behavioral therapy, and anger management (CSG Justice Center, 2016). Much like drug court gives drug offenders a second chance at a crime-free life, the criminal justice system could adopt a similar program for juvenile offenders, especially the serious ones. A study of the program participants found that about 80% had no further contact with the juvenile justice system within four to six months of release (Fox, Webb, Ferrer, Katz, and Hedberg, 2012).

While my research did establish a positive relationship between hostility and delinquency, it is important to note that my study only found hostility as a mediator between secure placement and delinquency without my controls accounted for. This suggests that while the circumstances my research model created did not find mediation, there could be a situation in which mediation does occur between secure placement and delinquency. The overall goal of this study was to apply the knowledge gained from it to better the way we treat juveniles in the criminal justice system. There are many reasons why my findings turned out the way they did.

Limitations

My study was productive in continuing the previously reviewed research. However, there were several limitations that should be considered when interpreting the findings.

My sample was ethnically diverse, but it was only comprised of serious juvenile offenders that were mostly male. This limits my ability to use my findings to generalize to all juvenile offenders. The juvenile justice population is diverse and includes less serious offenders who make up the majority of this population. A larger variety of offenders in my sample would allow me to make implications of a wider scope, and thus more effective solution proposals. Also, while collecting the data from my sample, some profiles were lost as the study progressed. Because the Pathways to Desistance study was longitudinal, this was always a risk. Many participants could have faced certain socioeconomic barriers that lead them to a life of crime in the first place. These same barriers could have also prevented them from participating in the study, alluding to a more systemic social issue. This would lead to the underrepresentation of marginalized groups like minorities and low-income participants in studies like these and thus what we know about the juvenile population in the criminal justice system. The location of my sample was restrictive as well. Because of this my sample was unable to capture the diversity in environments a juvenile would be in while committing crime.

Regarding my theoretical framework, there are some areas of Agnew's GST that is unaddressed. One major strain not accounted for would be that juvenile offenders are treated negatively by others (Agnew, 2006). If one feels as if they do not deserve to be in secure placement, that could heavily impact their emotional response to it, as opposed to accepting it. I did not include perceptions of secure placement in my analyses. It is likely that some youth are indifferent about their experience in secure placement while others have very negative experiences and still others may find it better than being in an abusive home or on the streets. Taking this variable into account would have given me a lens to analyze the negative responses secure placement can invoke as a strain. My other measures were self-reported, which means no

official offending was used. There is always the possibility that individuals were not truthful in any of the questionnaires. Inaccurate answers undermine the validity of any study. While this information was already difficult to track down, it is impossible to check to see if any data was missing as well.

Further Research

While my findings have important implications, it also highlights areas that can be expanded upon in future research. If I were to expand on my established research, I would start by modifying the sample. Juvenile offenders from various communities would be included, despite the charges against them. Studying juvenile offenders as a whole would give better understanding to their emotional responses to the criminal justice system itself. This makes room for two new variables and addresses other parts of GST.

The two variables, perceived procedural justice and environmental influences, would give the study more things to control for or test as a mediator. With perceived procedural justice accounted for, GST can be addressed more thoroughly. As a control variable, it would weed out those who do not experience negative emotions in secure placement. As a mediator, it would just be a more specific source of those negative emotional responses. With environment as a control variable, it would expand on delinquent peer association. So instead of being asked "How many of your peers do ____?" it would be "How many people in your life do ____?" This accounts for other pressures and influences that would lead an adolescent to commit crime. With an expanded research model, this study would better give reason to the positive relationship between the secure placement and recidivism rates of juvenile offenders.

My research findings are important because it sheds light to the issue of how juvenile offenders react to the criminal justice system. As it currently stands, those without a diverting

path end back up in secure placement. There have also been high levels of hostility linked to recidivism. The purpose of my study was to unpack all that and look for a deeper cause through mediation. Although only one of my models found mediation, the one that did not was tailored to a particular sample. This opens up the opportunity to modify my research model or even take it a few steps further. Future research should evaluate all possible causes and solutions for juvenile recidivism.

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