Boy's[1] Search for Meaning:

Meaning making as a predictor of trajectories of adaptation in formerly incarcerated youth

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[1] The use of the word "boy" here is a play on Viktor Frankl's *Man's Search for Meaning*. Participants of all genders were invited to participate in this study.

This dissertation is dedicated to the 1,465 people serving juvenile life sentences without parole in the United States—the only country in the world where such a thing is permitted (Rovner, 2021).

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Abstract

Detainment is the most serious and impactful response to juvenile crime that a youth can experience (Pederson et al., 2020). Impacts of incarceration are long-lasting, and can include mental and physical health symptoms, relationship issues, and limited opportunities once released into the community, among others (Haney, 2003; Liebling & Maruna, 2013). These impacts are all the more pronounced in individuals who are detained in adolescence—a sensitive developmental period where ideas about self, others, and the world are rapidly forming and evolving (Erikson, 1950; Sanders, 2013; Steinberg & Morris, 2001). While existing research has explored these negative impacts of juvenile incarceration and the risk factors often preceding youth incarceration (Gatti et al., 2009; Jaffee et al., 2012), little is known about how individuals who experience juvenile incarceration have made meaning of their experience or how they have adapted and adjusted to life post-incarceration. Meaning making—finding one's sense of purpose in the world and making sense of challenging events (Frankl, 2006; Park, 2010)—is a cornerstone of development during adolescence specifically and across the lifespan. The current study aims to explore the process of meaning making in formerly incarcerated adolescents and how this process evolves from before, during, and after incarceration. We utilized an online survey with the largest known sample of formerly incarcerated youth to date exploring meaning making and recovery from incarceration. This study utilized cluster analysis to identify unique trajectories of adaptation for this population to assess change over time. ANOVAs were used to determine which pre-incarceration variables predicted trajectory membership, and to see which post-incarceration outcome variables were predicted by trajectory membership.

Results revealed five distinct recovery trajectories following pathways of adjustment from before, during, and after juvenile incarceration. Clusters were descriptively named:

Consistent Low Satisfaction, New Perspective, Recovery, Consistent Moderate Satisfaction, and Consistent High Satisfaction. Clusters defined trajectories that differed in their initial (pre-incarceration) satisfaction with life (SWL) and also in terms of their changes in SWL over the three time points (pre-incarceration, incarceration, post-incarceration). Clusters 1 and 2 (Consistent Low Satisfaction, n = 23; New Perspective, n = 45) reflected very low initial SWL, which remained consistent over time for Cluster 1 but increased sharply at post-incarceration for Cluster 2. Clusters 3 and 4 (Recovery, n = 16; Consistent Moderate Satisfaction, n = 17) were characterized by moderate SWL pre-incarceration and showed somewhat different patterns of change over time, with Cluster 4 characterized by a drop in SWL during incarceration and a rebound post-release. Cluster 5 (Consistent High Satisfaction, n = 3) was viewed as a possibly anomalous cluster, because the small n for this cluster raises questions about replicability for this trajectory.

The presence of meaning at Time 1 emerged as the only significant predictor of trajectory membership. Several outcome variables were uniquely predicted by trajectory membership. Meaning making emerged as an important factor in how individuals make sense of their lives and their carceral experiences. Demographic analyses revealed a potential confound may be perceived social class in childhood and in the present, as these variables differed significantly between clusters. These findings support the potential utility of focusing on meaning-making in treatment with justice-impacted youth and in individuals who have been released from incarceration. The crucial importance of accessible mental health treatment prior to, during, and following incarceration is discussed.

Chapter 1: Introduction

"Being human profoundly means to be open to the world, a world, that is, which is replete with

other beings and meanings to fulfill."

--Viktor Frankl, Self-Transcendence as a Human Phenomenon (1966)

In 2018, the American juvenile justice system held jurisdiction over more than 31 million youths (Hockenberry & Puzzanchera, 2020). Though often considered relevant to only youth on the margins, juvenile justice system involvement is a prevalent issue in the United States. The U.S. incarcerates more minors than any other country in the world, at a rate of about 60 per 100,000, with youth of color disproportionately overrepresented in various types of detainment (Nowak, 2019; W. Hayward Burns Institute, 2016). Detention is considered the most serious response to juvenile offenses and youth with pre-existing familial, community, and structural vulnerabilities are more likely to be incarcerated than their more privileged peers (Gatti et al., 2009; Pederson et al., 2020). The impacts of incarceration on juveniles are far-reaching, including symptoms of psychopathology, decreased self-worth, issues with overcontrol and under-control, and challenges in communication and relationships with others (Haney, 2003; Liebling & Maruna, 2013). Given the rapid developmental shifts in adolescence for average youths (Hall, 1904), transitioning from childhood to adulthood within a carceral context yields arresting outcomes.

Existing literature on youth incarceration often focuses on risk factors leading to crime and juvenile justice involvement (Chung & Steinberg, 2006; Cruise et al., 2011; Cooley-Quille et al., 2001; Farrington, 1998; McBride et al., 2011; McClelland et al., 2004; Ou & Reynolds, 2010; Robertson et al., 2004; Trent et al., 2019; Salmi & Kivivuori, 2006), types of placements

(Hockenberry & Puzzanchera, 2020;), systemic racism in arrests and outcomes (Hockenberry & Puzzanchera, 2020; Shook & Goodkind, 2009; W. Hayward Burns Institute, 2016), and psychological and other impacts of incarceration (Barnert et al., 2016; Greve, 2001; Grisso, 2008; Lane et al., 2002; Little et al., 2005; Ng, et al., 2011). One question appears not to have been asked of individuals who experienced juvenile incarceration: what is their understanding of the meaning of life and has this changed from before to after incarceration?

Meaning making is the process of attempting to make sense of and integrate one's experiences into their ideas about themselves, the world, and the interaction between the two (Park, 2010). One of the primary responsibilities and anxieties of being human is recognizing that life has no given meaning and that we are each tasked with determining our own meaning (Yalom, 1980). Meaning making has been explored primarily as a response to trauma and other adverse experiences, with research focusing on how individuals who experience trauma shift in their understanding of themselves and the world and how they derive some kind of message or purpose from their traumatic experiences. Studies of meaning have examined individuals who are grieving (Bonanno et al., 2004; Mancini et al., 2011), cancer patients (Fife, 1995; Kernan & Lepore, 2009; Park et al., 2008), and sexual assault survivors (Koss & Figueredo, 2004). Some researchers have examined the loss of meaning or finding of meaning in incarcerated populations (Clark, 2001; Harvey, 2011; Maruna et al., 2006; Ross, 2020; van Ginneken, 2016). Most of this work has been qualitative in nature, making it difficult to compare between individuals and identify groupings of individuals. Furthermore, most existing studies—with a few exceptions— have examined incarcerated adults or individuals who were incarcerated as adults rather than examining individuals who experienced incarceration during the unique developmental stage of adolescence. Of those studies that did examine adolescents (Carhart, 1998; Ruggiero et al., 2013;

Wainryb et al., 2010), study designs were qualitative, often utilized small samples, and focused on meaning making related to specific constructs rather than more open-ended explorations of "the meaning of life."

Meaning making—understanding how a person makes sense of and integrates the conceptualization of an adverse experience into their schemas of their life, self, and world—is essential to furthering understandings of the causes and consequences of both crime and incarceration. Adolescents experience rapid developmental shifts in social, emotional, physical, cognitive, and identity domains unlike other transitional developmental periods (Sanders, 2013; Steinberg & Morris, 2001). Youth offenders experience all these internal changes often in conjunction with environmental and family stressors, including poverty, low parental support, low cognitive abilities, systemic racism, family and community violence, maltreatment, and mental health challenges (Chung & Steinberg, 2006; Fine et al., 2010; Grisso, 2008; Mallett, 2014; Mohajer & Earnest, 2010; Salmi & Kivivuori, 2006; Stohs, 2003; W. Hayward Burns Institute, 2016). If the goal of incarceration is to prevent recidivism and protect the community, policymakers and juvenile justice system stakeholders should be highly motivated to understand the motivating factors behind offending, the meaning and purpose in life at the time of offending, and shifts in this meaning and purpose resulting from incarceration. The premise of this dissertation is that to understand why a person engages in crime and how they grow through and from their criminogenic acts and experiences of incarceration is rooted in how they make meaning of their lives both predating and in response to incarceration.

The focus of this dissertation is an examination of how individuals who were incarcerated in adolescence retrospectively make meaning of their lives and experiences. The goal is to investigate how certain pre-adjudication variables predict the particular recovery trajectory with

which a person identifies. Further, this study hopes to illuminate how these recovery trajectories predict present-day outcomes for participants. This study is grounded in Viktor Frankl's theory of meaning making: that meaning can be made through work, relationships, and suffering, and that, in the absence of meaning, an "existential void" emerges which may be filled by psychopathology and purposelessness where meaning is absent (Frankl, 1966a; 2006). This study further reflects Park's (2010) meaning making model, which asserts that meaning involves an understanding of why an adverse event transpired and a recognition of the changes in one's self, purpose, and goals following this event. This model informs the goal of understanding how one's pre-adjudication sense of global meaning is confirmed, questioned, or revised in response to the experience of incarceration. This study aims to examine how recovery trajectories relate to the efforts to find meaning and the meanings that are ultimately discovered.

There are three primary aims in this study. The first aim is to explore how the search for meaning and the finding of meaning shifts for individuals from before incarceration to after being released from incarceration. The second aim is to investigate the post-release outcomes associated with shifts in the search for and finding of meaning, specifically in the areas of positive and negative affect, adjustment, attachment, coping, and goals. The third aim of the study is to use the outcome variable of life satisfaction to identify how formerly incarcerated youth cluster into trajectories based on the predictor variables of (pre-adjudication attachment, meaning making, exploitativeness, and experiences of discrimination) and outcome variables (post-release attachment, meaning making, coping, goals, positive and negative affect, and exploitativeness). More specifically, the third aim is to observe whether prototypical trajectories can be gleaned from this sample based on their attempts to make meaning. If the data reveal specific clusters of adjustment based on meaning making and life satisfaction, this can inform

our understanding of how juvenile offenders respond to the trauma of incarceration, thus informing prevention and intervention modalities for this population. By comparing participants' reflections on how satisfied they are with life and the degree to which they have tried to make meaning of life over time with outcomes of adjustment, we can shed light on the development path to, adjustment following, and resiliency in the face of incarceration.

Chapter 2: Background

Youth Adjudication

Adjudicated Youth in the United States

In 2018, the juvenile court system heard 744,500 delinquency cases (Hockenberry &
Puzzanchera, 2020). This translates to 23.5 juvenile delinquency cases processed by the courts
for every 1,000 youth in the population. Although the overall case rate for juvenile offenses
declined by 54% from 2005 to 2018, the distribution of types of cases and offender
demographics has shifted with time. For example, property offenses decreased the most from
2005 to 2018 and person crimes remain the most prevalent of all processed cases. More
specifically, the number of cases involving homicide has increased 35% from 2014 to 2018,
suggesting that even if the overall number of cases has declined, the severity of cases that are
processed has increased. Further, while the total volume of cases decreased from 2005 to 2018,
the proportion of cases that resulted in detainment was slightly larger in 2018 compared to 2005.
This may suggest the types of offenses making it into the court system and the way the courts
respond to these cases has shifted with time.

Adjudication and detainment procedures vary significantly by age, gender, and
race/ethnicity (Hockenberry, 2016; Hockenberry & Puzzanchera, 2020; Pederson et al., 2020).
The juvenile court system held jurisdiction over more than 31 million youth in 2018 with 79% of
these youth aged 10 to 15 (Hockenberry & Puzzanchera, 2020). In 2018, the case rates for
person, property, and public offenses plateaued or decreased after age 16, while the case rate for
drug offenses increased continuously. Of these cases, only 27% involved females with the case
rate for males being 2.6 times greater than the case rate for females. In 2013, 68% of juvenile
offenders in residential placement were minority youth (Hockenberry, 2016). For each White

youth in an out-of-home placement in 2013, there were 4.3 Black youth, 1.6 Latinx youth, and 3.7 Native American youth in out-of-home placements (W. Hayward Burns Institute, 2016). The number of processed juvenile offenders dropped from 2003 to 2013: the number of White juvenile offenders decreased by 53% compared to a decrease of 38% for minority youth (Hockenberry, 2016). Overall, males and minority youth tended to be detained for longer periods of time compared to females and White youth. Youth of color are disproportionately overrepresented in the juvenile justice system in incarceration rates, detention rates, out-of-home placements, and residential placements resulting from technical violations, illustrating the severity of racially inequitable policies related to juvenile adjudication and incarceration in the U.S. (W. Hayward Burns Institute, 2016).

Types of Placement

For every year between 2005 and 2018, juvenile delinquency cases were more likely to be processed formally through the juvenile justice system with the filing of a petition for adjudication than to be handled informally (Hockenberry & Puzzanchera, 2020). During this time, the probability of formal processing increased for public order, property, and person offenses but not for drug offenses. More specifically, cases were more likely to be formally petitioned for adjudication for youth who were older, male, and/or Black. Adjudicated delinquent cases that resulted in out-of-home placement decreased by 59% from 2005 to 2018, and the likelihood of out of home placement was greater for Hispanic and Black youth than for youth of other races.

Overall, the number of juvenile offenders placed in residential treatment has decreased in the past 20 years (Cuevas et al., 2019; Hockenberry, 2016; Sickmund, 2010). Not all juvenile cases are processed formally, as 40% of cases in 2018 were handled without the filing of a

formal petition, and 60% of these resulted in court sanctions involving either probation, restitution, community services, or outside referrals. However, the proportion of juvenile cases that were formally processed and that resulted in delinquency adjudicated has remained relatively stable since 2005 (Hockenberry & Puzzanchera, 2020).

When processed through juvenile corrections, youth are either placed in detention or required to engage with informal sanctions or services, including informal probation, fines, voluntary restitution, or referral to social services (Hockenberry & Puzzanchera, 2020). Probation remains the most common sanction levied by the juvenile court system from 2005 to 2018. However, the choice to impose detention or alternative sanctions on youth appears to be determined by factors of age, gender, and race/ethnicity more than by type of offense (Shook & Goodkind, 2009). For example, in 2018 Black and Hispanic youth were overrepresented in the overall detention caseload compared to the overall delinquency caseload (Hockenberry & Puzzanchera, 2020). Conversely, White youth made up a smaller proportion of the detention caseload (35%) compared to the delinquency caseload (44%) in this same year. Across all types of offenses, White youth were generally less likely to be detained than youth of all other racial groups from 2005 to 2018, suggesting a clear and prevalent racial bias favoring White youth.

Detainment is considered the most serious response to juvenile crime. Some studies suggest residential placement may be counterproductive to youth rehabilitation and represent a significant cost to society and individual youths (Pederson et al., 2020). One study found that youths experiencing several intersectional risk factors for juvenile offending—including low socioeconomic status, minimal parental supervision, and impulsivity—are more likely to be involved with the juvenile justice system and that this involvement increases youths' likelihood of future involvement with the adult criminal justice system (Gatti et al., 2009). Further, some

evidence suggests that residential placement may negatively impact child and adolescent development and can increase distress among youth who are separated from their families (Little et al., 2005). However, negative impacts of residential placement on youth may to be connected to both the overreliance on ideology and lack of empirical basis for treatment protocols. Some researchers suggest that institutions with a strong grounding in evidence-based treatment and with a clear priority for promoting youths' wellbeing may be effectively rehabilitative (Bazemore & Umbreit, 1995; Caldwell & Van Rybroek, 2005; Little et al., 2005).

Rehabilitation vs. Punishment

Juvenile justice sanctions can be a divisive topic, with some feeling the state can be too aggressive in its response to juvenile offenses and others maintaining that not enough is being done to deter potential juvenile offenders or punish those who have already offended (Mears et al., 2007). Systemic approaches to incarceration practices are largely informed by the beliefs held by policymakers and facility directors regarding why youth offend and the potential efficacy of rehabilitation (Garland, 1990; Mears et al., 2007). Sanctions for offenders vary by the intent of the justice system, which ranges from rehabilitation and education to retribution and deterrence (Bazemore & Umbreit, 1995; Garland, 1990). One model which has been endorsed by juvenile justice policymakers is the retributive justice paradigm, which prioritizes punishment over rehabilitation and seeks to uphold individual blame and guilt (Bazemore & Umbreit, 1995; Van Ness et al., 2001; Zehr, 1990). This model has garnered support among policymakers who believe punishment is the best way to denounce crime and assert a community-level position of intolerance to criminogenic behavior (Bazemore & Umbreit, 1995).

In the 1980s, researchers attempted to understand the effectiveness of rehabilitation programs with corrections populations to help establish guidelines for best practices in carceral

facilities (Cullen & Gendreau, 2001; Perelman & Clements, 2009). Facilities which prefer an individual treatment model place less emphasis on the specific offense and more emphasis on the needs of the individual offender in pursuit of rehabilitation (Bazemore & Umbreit, 1995). This approach aligns more with a restorative justice model, which focuses on the impacts of crime on individuals and relationships and how to repair these relationships rather than solely seeking retribution in response to the violation of laws and rules (Bazemore & Umbreit, 1995; Van Ness et al., 2001; Zehr, 1990). By the 1990s, however, research moved in support of a "tough on crime" approach as stringent "third strike" policies and punitive, as opposed to rehabilitative, practices gained in popularity (Perelman & Clements, 2009; Pitts, 1992). The response to juvenile offenders has fluctuated between punitive and rehabilitative approaches across time.

Outcomes of Juvenile Incarceration

Incarceration can have lasting outcomes on inmates beginning upon entry to institutionalization and enduring long after release (Haney, 2003; Liebling & Maruna, 2013). Not everyone who is incarcerated experiences enduring psychological consequences, but generally those who spend more time in carceral facilities tend to have more significant negative consequences (Haney, 1997; 2003). These consequences can include muting one's independence and initiative in response to forced external controls, emotional and behavioral overcontrol to prevent appearing "weak," social withdrawal and isolation, diminished self-worth, post-traumatic stress reactions, and an incorporation of prison or jail norms, including exploitativeness, into one's behavioral schema. Most of these shifts represent normal adaptations to an abnormal culture and life circumstance that proves maladaptive upon reentry into the community.

Since the early 2000's, legislative actions in the United States have rendered harsher penalties for juvenile offenders and made it easier for youths to be tried and imprisoned as adults (Lambie & Randell, 2013; Redding, 2003). This shift is largely attributable to the "superpredator myth" which was widely propagated in the late 1990's (Dilulio, 1995). The superpredator myth predicted that leagues of "morally impoverished" teenagers would emerge throughout the country, leaving a trail of violent crime in their wake (Becker, 2001; The Campaign for the Fair Sentencing of Youth, 2021; Dilulio, 1995). This ideology reinforced stricter sentencing for adjudicated youth in general, as well as bolstering already prominent racist tropes by condemning and dehumanizing youth of color specifically (CFSY, 2021; Dilulio, 1995). The superpredator idea was debunked as juvenile crime decreased by half, rather than increased, in the five years following this prediction such that John J. Dilulio, the sociologist who coined the original term, renounced his theory and apologized (Becker, 2001). Unfortunately, by that point, the suprepredator myth had spread widely, influencing politics, legislation, "tough on crime" policy, and extreme sentences for juveniles (Allen & Whitt, 2020; CFSY, 2021; Greene et al., 2017).

Youths transferred to the adult criminal court is especially problematic because these youths are not separated and protected from adult offenders when they have been charged as adults (Levitt, 2010). Adolescents are particularly vulnerable to the effects of incarceration due to their underdeveloped capacities for self-regulation, risk assessment, impulsivity management, resistance to peer influence, anticipation of future consequences, and processing of social information (Steinberg, 2009; Steinberg, Cauffman, et al., 2009; Steinberg, Graham, et al., 2009). Additionally, adolescents are more driven by sensation-seeking and risk-taking than

adults and are more susceptible to the influence of peers, social rewards, and stressful situations (Lambie & Randell, 2013; Steinberg, 2008, 2009, 2010; Steinberg & Scott, 2003).

Juvenile offenders tend to come from backgrounds characterized by marginalization and adversity and experience higher rates of psychiatric illness, substance use, and special education needs (Cruise et al., 2011; Farrington, 1998; McClelland et al., 2004; Ou & Reynolds, 2010; Robertson et al., 2004). Before experiencing institutionalization, this population enters the juvenile justice system from a place of disadvantage and marginalization (Lambie & Randell, 2013). These preexisting vulnerabilities combined with harsh physical and social realities of institutionalized life can lead to various negative outcomes for youth, including poor mental and physical health (Barnert et al., 2016), reduced self-worth (Grisso, 2008; Lane et al., 2002), isolation, bullying (Greve, 2001), and the compounding effects of being removed from one's life and social supports (Ng et al., 2011), all of which may limit the intended rehabilitative effects of incarceration (Lambie & Randell, 2013). Additionally, as many as 70-80% of incarcerated youth are re-arrested within three years of being released, suggesting juvenile correction programs may be ineffective in reducing recidivism and may even encourage further antisocial and criminogenic behaviors (Gatti, et al., 2009; Mendel, 2011).

Normative Adolescent Development

To understand some of the development turning points and deviations for youth who ultimately end up involved in corrections, an understanding of normative adolescent development is first needed. Typical adolescent development involves growth and change in cognitive, psychosocial, physical, and emotional domains (Sanders, 2013; Steinberg & Morris, 2001). Erikson has identified the major developmental crisis of adolescence as one of "identity vs. role confusion," wherein adolescents attempt to become more autonomous and consolidate

their experiences into a coherent sense of ego identity (1950). This means the adolescent will experience continuity in who they are and how they see themselves in various life domains, including in their sense of self, their relationships, and their occupational trajectories.

Scholars have noted that the content, context, timing, and salience of developmental tasks in adolescence vary between individuals and that what is considered a developmental task at any particular life stage is culturally bound (Cohen et al., 2003; Havighurst, 1952, 1956; Schulenberg et al., 2004). However, the adolescent developmental tasks generally agreed upon in Western cultures include affiliation (developing friendships and romantic relationships, renegotiating family relationships), identity (establishing sense of self, understanding how one is a part of a community), and achievement (occupational and educational goals and trajectories, moving away from risky behaviors, establishing financial independence) tasks (Eriskon, 1950; Roisman et al., 2004; Schulenberg et al., 2003; Schulenberg et al., 2004; Youniss et al., 1999). In general, successful resolution of each developmental task or crisis is considered to lay the foundation for how subsequent developmental tasks are approached, such that individuals who successfully navigate the developmental tasks of adolescence tend to be successful when confronting tasks in emerging adulthood (Roisman, 2004; Schulenberg et al., 2003; 2004).

Pubertal Development

Puberty drives a great deal of physical, social, and emotional development in adolescence (Blakemore et al., 2010; Susman & Rogol, 2004). This process begins with gonadarche where the hypothalamic-pituitary-gonadal axis is activated which facilitates growth and development of reproductive and secondary sex characteristics (Blakemore et al., 2010). Secretion of estrogen and testosterone increases which generates changes in the physical body as well as changes the brain and behavior. These physical changes interact with the adolescent's experiences, social

context, and developmental timing relative to pubertal onset for their peers to lead to a meaningful understanding of puberty for the individual (Susman & Rogol, 2004). Some studies suggest that early-maturing boys tend to be popular and have a more positive self-image, while early-maturing girls experience more emotional problems, internalizing symptoms, and lower self-image (Ge et al., 1996; Petersen, 1985; Steinberg & Morris, 2001). Rather than representing a uniform procedure of hormonal and physical changes, puberty represents an interactional process which goes beyond just biological and hormone level changes and yields influence over psychological, social, and cognitive development as well (Susman & Rogol, 2004).

Cognitive Development

Some researchers view the hormonal changes of puberty to be so influential as to constitute a restructuring of the brain in adolescence (Blakemore et al., 2010; Sisk & Foster, 2004). The brain continues to grow from birth through about age 11-12, which can be observed in surface area increases in gray matter (Lopez et al., 2008; Vijayakumar et al., 2018). After this time, the brain begins a pruning process through early adulthood where unused neural connections are lost which allows for faster information processing speed (Giedd, et al., 1999; Gotgay et al., 2004; Lopez et al., 2008; Sowell et al., 1999). Pubertal hormones lead to changes in the hypothalamus, which facilitates reproductive behaviors, reorganization of the sensory and association regions, and changes in neurological reward-pathways (Blakemore et al., 2010; Vijayakumar et al., 2018). During this developmental stage, adolescents develop more advanced reasoning skills, the capacity for abstract thinking, and the ability to engage in meta-cognition (Sanders, 2013). Full maturation of the prefrontal cortex, which is responsible for logic, critical thinking, and decision-making, is not reached until early adulthood (Casey et al., 2000; Lopez et al., 2008).

Emotional Development

Although adolescents have long been marked with a reputation for extreme emotionality, moodiness, and general "storm and stress" (Hall, 1904), this stereotype appears to be largely overexaggerated (Brooks-Gunn et al., 1994; Steinberg & Morris, 2001). In early adolescence, hormonal fluctuations tend to account for greater irritability and aggression in boys and greater depression in girls, however, over the course of adolescence, shifting hormone levels account for only a small proportion of adolescents' negative affect with social factors being the largest contributor (Buchanan et al., 1992; Steinberg & Morris, 2001). Adolescents deepen their awareness of their own emotions and learn to describe and label their own and others' emotions at this time (Sanders, 2013). However, adolescent emotional development does not parallel adolescent physical development. Compared to adults, adolescents experienced heightened limbic activity (emotional responding) with almost no prefrontal cortex activity (moderation of emotional responding) when exposed to fearful stimuli compared to adults who experienced activation in both of these regions (Yurgelun-Todd, 2007). Thus, while adolescents may not live up to the full, illustrative "storm and stress" stereotype, they do tend to feel emotions more saliently without necessarily being able to moderate the experience or expressions of these emotions until the prefrontal cortex matures.

Identity Development

Adolescence represents a culmination of successful negotiations and adaptations to developmental crises to date. In this life stage, individuals develop a sense of who they are and attempt to integrate their diverse experiences and relationships into forming a coherent sense of self (Erikson, 1950). This development is not linear, as adolescents can move between more stable and less stable forms of identity (Meeus et al., 1999). More specifically, the identity status

model posits four possible identity statuses each with varying degrees of commitment and exploration to one's identity (Marica, 1966). These statuses are diffusion (no commitment, no exploration), foreclosure (commitment, no exploration), moratorium (active exploration, no commitment), and achievement (commitment following exploration). Identity development has long been conceptualized as something with a final end point, where adolescents will transition to adulthood with a solid commitment to who they are (Meeus et al., 1999). However, some scholars suggest identity development is less fixed, where adolescents and young adults can either find stability in one of the four identity statuses or they can shift between statuses, and that identity development can be comprised of multiple status transitions (Kroger, 1995; LaVoie, 1994; Stephen et al., 1992).

Social Development

Adolescence marks a time where individuals transition from spending most of their time with their family to spending most of their time with peers (Brown & Larson, 2009). As adolescents spend increasingly more time with their friends, they place greater value on the judgments and opinions of their friends. This coincides with adolescents' tendency to experience increased bickering and decreased closeness with their parents, resulting in a higher valuing of peer opinions than parental feedback and input (Larson & Richards, 1991; Steinberg & Morris, 2001). However, adolescent-parent relationships have been found to influence the types of peer relationships adolescents form, as individuals who have been raised in warm, supportive families tend to have more positive friendships (Brown et al., 1993; Lieberman, Doyle, & Markiewicz, 1999; Steinberg & Morris, 2001) Successful resolution of friendship-developmental tasks in adolescence has been associated with social skills competence in adulthood, suggesting early development of these skills can have lasting consequences (Roisman, 2004).

Developmental Psychopathology

Developmental psychopathology is a conceptual approach to understanding pathology in relation to normative development across the lifespan (Cicchetti & Rogosch, 2002). One foundational definition of developmental psychopathology is "the study of the origins and course of individual patterns of behavioral maladaptation" (Sroufe & Rutter, 1984, p. 18). Developmental psychopathology diverges from traditional clinical and developmental perspectives in that equal focus is placed on both the relationship between child pathology and normative behavior as well as the origins of behaviors that may not emerge until adulthood. Further, diagnostic, prognostic, and interventive issues are less important from a developmental psychopathology perspective compared to the adherence to and deviations from the developmental pathway. This perspective studies pathology contextually, considering disordered behavior as a deviation from normative development, contextualizing development with socialization processes across time, and understanding some pathologies as resulting from "a distortion of the developmental process" (p.19). To fully grasp the varied internal and external influences in maladaptive development, developmental psychopathologists stress the importance of understanding successful adaptation.

Developmental Psychopathology and Crime

From this perspective, pathology and pathological behaviors may develop as the result of a series of deviations from normative development across time and as a function of both genetic and environmental influences (Sroufe, 1997). If antisocial and criminogenic behaviors may be reached through various developmental pathways, and if these pathways are the sum of different twists away from normative development, then it follows that there are multiple opportunities for intervention along this pathway. A developmental pathway offers a less deterministic view on

criminogenic behavior in that there are multiple avenues and time points for intervention. The concepts of equifinality and multifinality are applicable here, as modifications or disruptions in any part of the system or pathway of which the individual is a part will necessarily change the outcome (Cicchetti & Rogosh, 1997). The weight of any single process or risk factor thought to result in antisocial behaviors must be considered as one aspect of the path, which also includes individual characteristics and sociocultural influences. Thus, both developmental and non-developmental theories of antisocial behavior may be viewed as predictive, never deterministic.

Developmental psychopathologists understand development is a function of the intersection of a multitude of intersecting factors, both internal and external to the individual (Cicchetti, 1993; Cicchetti & Rogosh, 1997). They recognize that different problems will hold different meanings for each individual based on the nature of the experience and the timing of it compared to other developmental milestones and experiences preceding and succeeding that point (Rutter, 1989). Antisocial behavior has been specifically conceptualized through a developmental psychopathology lens, beginning with the difference between antisocial behaviors that emerge in childhood and persist and those that only emerge in adolescence (Frick & Viding, 2009). The differences between these two groups may be explained by childhood temperament, (McCabe et al., 2001; Silverthorn et al., 2001), levels of family conflict (Aguilar et al., 2000; McCabe et al., 2001), and the adequacy of childhood rearing environment (Moffitt, 1993). The presence or absence of callous-unemotional (CU) traits—those hallmark characteristics of antisocial personality disorder in adulthood, including lack of empathy and a callous use and manipulation of others—are thought to distinguish between antisocial attitudes and behaviors limited to adolescence and those that persist across the lifespan (Dandreaux & Frick, 2009; Frick & Viding, 2009; Moffitt et al., 1996). The presence of CU traits in adolescents tends to correlate

with childhood onset of antisocial behaviors (Dandreaux & Frick, 2009; Moffit et al., 1996), interpreting the actions of others as hostile (Frick et al., 2003), general and violent recidivism (Edens et al., 2007), and dysfunctional parenting practices (Edens et al., 2008).

Beyond an extensive list of risk factors and correlational relationships for how antisocial behaviors develop and subsequently extinguish or persist, the developmental psychopathology literature underscores the importance of both equifinality and multifinality in the development and maintenance of criminogenic behaviors (Cicchetti & Rogosch, 1996; Frick & Viding, 2009). Equifinality refers to the fact that multiple developmental pathways can result in the same outcome, while multifinality is the idea that similar pathways and developmental inputs can lead to multiple different outcomes (Cicchetti & Rogosch, 1996). Antisocial behavior development is not a simplistic, linear process but rather results from the interface between normal and abnormal development (Frick & Viding, 2009). Different interactions between multiple factors have been documented as contributing to antisocial behaviors in adolescence, including temperamental deficits in emotional reactivity (Blair, 1999; Kochanska, 1993; Newman, 1987;), improper socialization that leads to deficits in regulating behavior in response to the environment (Kochanska et al., 2002), and difficulties in adjusting to other developmental crises in adolescence (Frick & Viding, 2009).

Moffit (1993) offers a taxonomy for understanding the equifinality and multifinality of adolescent antisocial behavior in separating out those who only engage in these behaviors in adolescence and grow out of them by adulthood (adolescent-limited) and those who demonstrate consistent antisocial behavior patterns across the lifespan (life-course-persistent). Life-course persistent individuals tend to shift the manifestation of their antisocial behavior over the lifespan and engage in these behaviors across contexts. This kind of presentation is thought to be linked

to neuropsychological deficits (Fogel et al., 1985; Kandel et al., 1989), difficult temperament (Moffitt, 1990), intergenerational transmission of aggressive behavior (Huesmann et al., 1984), cognitive ability (Barrett & Depinet, 1991; Plomin, 1990), socialization experiences (Frick et al., 1993), and the reciprocal, evocative nature of child-parent interactions (Caspi et al., 1987). Contrastingly, adolescent-limited antisocial behavior speaks to the fact that most adolescents display some amount of rebelliousness (Brezina & Piquero, 2007) even when they have no history of delinquency in childhood and do not continue with delinquent choices in adulthood (Moffitt, 1993). This group of adolescents are marked by discontinuity, instability, and inconsistency in both the types and frequencies of their antisocial acts which ultimately do not continue into adulthood. These adolescents tend to engage in antisocial behaviors only for instrumental reasons and to demonstrate autonomy and they are often introduced to delinquency through their life-course-persistent peers (Erikson, 1950; Kandel, 1980; Moffitt, 1993). Adolescent-limited youths typically desist from delinquency as they move into adulthood due to the emergence of more growth-opportunities for demonstrating maturity and independence and a realization of the increasingly significant consequences of committing crimes as an adult (Moffitt, 1993; Paternoster et al., 1983).

The transition from adolescence to adulthood generally represents a foundational turning point, where well-adapted adolescents struggle with the new tasks of adulthood, while other adolescents who have functioned poorly throughout development find success in the face of the new opportunities of adulthood (Schulenburg et al., 2004). Thus, in considering the development of formerly incarcerated youth, emerging from the traditional crises of adolescence coupled with the radical shift from institutionalized life to life in the community may represent additional stress, additional opportunity, or both.

Historical Barriers for Adjudicated Youth

Intersectional Marginalization

Youth involved with the juvenile justice system have often faced a lifetime of disadvantage prior to adjudication. Children and adolescents learn about themselves and their worlds within their unique social contexts (Bronfenbrenner, 1979). These contexts may provide opportunities for youth to form relationships, learn skills, and generally move through physical, cognitive, and emotional development. For many youth, however, their social context is inherently oppressive as opposed to opportunistic, limiting access to support and learning in the pursuit of individual and communal development (Kingston et al., 2003). The theory of differential oppression posits that all children and adolescents are oppressed due to their social and legal status and their experience of rules and demands of obedience placed upon them to prevent their being inconvenient to the adults who care for them (Hewitt & Regoli, 2003). Varying systems with which these youth interact can serve to perpetuate discrepancies between the privileged and the marginalized, including the public education system (Weis & Fine, 2001).

This oppression is compounded by family and community poverty, exposure to community violence, and both structural and individual-level racism (Cooley-Quille et al., 2001; McBride et al., 2011; Trent et al., 2019) These factors have been linked to poor physical health outcomes, increased internalizing and externalizing symptoms, and educational attainment. Not all youth are destined for futures that mirror their upbringing, as youth who come from families with more social capital may be able to navigate education, careers, and general upward social mobility (Coleman, 1988; Furstenberg & Hughes, 1995). Social capital may be understood as both the skills needed to function effectively in social groups as well as the connections to social circles needed to broaden one's network (Coleman, 1988). However, most youth need their

parents to instill the knowledge and social connections inherent to social capital, and when parents struggle to maintain a consistent presence in their children's' lives (due to working long hours, searching for housing, or managing childcare for multiple children, for a few examples), this can be challenging for both parent and child. Under the thumb of oppression, and without the protection of social capital, some adolescents may struggle to make sense of how to be successful by conventional means. The theory of differential oppression thus conceptualizes child and adolescent delinquency, crime, substance use, and mental health challenges as an adaptive reaction to oppressive social situations created by adults (Hewitt & Regoli, 2003; Kingston et al., 2003).

More often than not, these youth involved in the juvenile justice system come from marginalized backgrounds, as many individual and structural factors are linked to criminogenic choices, including economic disadvantage, peer deviance, low parental support, low interpersonal trust, and low cognitive ability (Chung & Steinberg, 2006; Salmi & Kivivuori, 2006). This marginalization continues once incarcerated, as proponents of the "tough on crime" approach see juvenile offenders as potential lifelong criminals and advocate for punitive, rather than rehabilitative tactics (Perelman & Clements, 2009; Pitts, 1992). This is especially damaging for youth of color who are disproportionately overrepresented at every stage and level of the juvenile justice system (Hockenberry & Puzzanchera, 2020; W. Hayward Burns Institute, 2016). For example, in 2018 delinquency cases involving Black or Hispanic youth resulted in out of home placement more often than cases involving youth of other races (Hockenberry & Puzzanchera, 2020). In this same year, the case rate for Black juveniles in the U.S. was approximately triple the case rate for American Indian, White, and Hispanic juveniles.

Instrumentalism of Crime

Adolescents rarely make criminogenic choices because they were simply born to do so. Certain systemic and structural factors influence adolescents—especially adolescents of color and those holding other marginalized identities—to believe both that they are not capable of being successful by conventional means and that criminality is what is expected of them (Diemer & Hsieh, 2008; Lambert et al., 2009; Wilkinson et al., 2009). These societal expectations are compounded by the fact that marginalized youth are often those confronted with family- and community-level disadvantages, including poverty, community violence, and negative physical and mental health outcomes (Fine et al., 2010; Mohajer & Earnest, 2010). For many juvenile offenders, crime becomes a means of survival within a system and culture where few alternatives are viable (Wilkinson et al., 2009). The disadvantages that influence criminogenic choices do not end at the time of adjudication, as systemic racism and other forces of oppression subjugate marginalized youth at higher rates once they have been relegated to the juvenile justice system (Stohs, 2003). Crime may be a reaction both to one's experience of multi-systemic oppression, as well as the more proximal results of this oppression, including poverty, limited educational support, and minimal opportunities for economic growth (Levitt & Lochner, 200; Soares, 2004).

Mental Health

Globally, mental health problems effect 10-20% of adolescents (Kieling et al., 2011). Adolescents who are involved with the juvenile justice system have higher incidences of mental health diagnoses, substance abuse, maltreatment victimization, and special education disabilities compared to adolescents in the general population (Chassin, 2008; Grisso, 1999; Mallett, 2014; Teplin et al., 2002; Washburn et al., 2008). Between 26% and 60% of adolescents involved in the juvenile justice system have experienced some kind of maltreatment (Bender, 2010; Mallett, 2014; Sedlack & McPherson, 2010; Stouthamer-Loeber et al., 2002), and those with

maltreatment histories are significantly more likely to be arrested and to be arrested one year earlier than youth without maltreatment histories (Widom, 1989). Adolescents who have experienced maltreatment are also at an increased risk for mental health, substance use, and academic problems, which are all additionally predictive of youthful offending (Hawkins et al., 2002).

The most common mental health diagnoses for adjudicated youth include conduct disorder, mood disorders, Attention-Deficit Hyperactivity Disorder (ADHD), and substance use (Teplin et al., 2002; Ulzen et al., 1998; Wasserman et al., 2002). For youth in corrections, approximately 13-40% meet criteria for a depressive disorder, 5-10% for a psychotic disorder, up to 25% meet criteria for an anxiety disorder, up to 20% meet criteria for ADHD, 30-80% meet criteria for a disruptive behavior disorder, and 30-70% meet criteria for a substance use disorder (Abram et al., 2003; Goldstein et al., 2005; Mallett 2014; Shufelt & Cocozza, 2006). Interestingly, the prevalence rates of mental health disorders are about the same for youth who commit violent and nonviolent offenses (Huizinga & Jakob-Chien, 1998, as cited in Grisso, 1999). Males tend to show higher rates of conduct disorder and ADHD, females tend to demonstrate higher levels of depression, anxiety, and PTSD, and both males and females show similar rates of substance abuse (Moffitt et al., 2001, as cited in Mallett, 2014; Teplin et al., 2002).

Some studies suggest that depression may be the most common mental health disorder among adjudicated youth, even more prevalent than Conduct Disorder, and that these rates are especially high among adjudicated females (Goldstein et al., 2005; Mallett, 2014; McManus et al., 1984). Incarcerated youth demonstrated the highest rates of mental health disorders, followed by youth entering the juvenile justice system, which were both higher than youth in the general

population (McReynolds et al., 2008). Moreover, incarceration is considered a risk factor for suicidal ideation, attempt, and completion in this population (Mallett, 2014). Adjudicated youth in facilities completed suicide at five times the rate of youth in the general population (Memory, 1989, as cited in Mallett, 2014). Additionally, up to half of incarcerated youth have reported at least some thoughts of suicide with hopelessness and low self-esteem operating as powerful predictors of suicidal ideation in this population (Esposito & Clum, 1999).

Considering depression and suicidal ideation frequently occur in this population, it follows that conduct disorder and other symptoms of disruptive behavior disorders correlate highly with depression in adjudicated youths (Goldstein et al., 2005; Mallett, 2014; Wierson et al., 1992). Depression and ADHD in childhood have both been linked to later delinquency in adolescence (Hawkins et al., 2000; Mallett, 2014; Wasserman et al., 2003). In adolescence, depression is thought to sometimes manifest as anger, which may explain why depressed youths are more likely to engage in deviant or antisocial acts than nondepressed youths (Grisso, 1999; Loeber & Keenan, 1994). In a longitudinal study of formerly incarcerated adolescent males, those who received inadequate mental health care committed twice as many adult offenses and twice as many violent crimes as those who received adequate mental health care, suggesting mental health treatment may be key to reducing recidivism, violence, and aggression in this population (Lewis et al., 1994).

Psychopathy. In discussing adults who commit crimes or who otherwise engage in antisocial behaviors, the construct of psychopathy is often considered. Psychopathy encapsulates a range of personality and behavior traits within interpersonal, affective, behavioral, and socially deviant domains (Hare, 1990). Specific characteristics include superficial charm, grandiose sense of self-worth, manipulativeness, lack of remorse, shallow affect, proneness to boredom, lack of

realistic long-term goals, poor behavioral controls, and criminal versatility (Neumann et al., 2015). Research suggests that many of the characteristics of adult psychopathy are evident in childhood and adolescence, suggesting psychopathy is a developmental disorder (Blair et al., 2006; Neumann et al., 2006; Neumann, et al., 2015; Salekin & Frick, 2005). Diagnostically, youth cannot be labeled as psychopaths until the age of 18, although recent research has shifted to examining psychopathic characteristics that may be present in youth (American Psychiatric Association, 2013; Neumann, et al., 2006). Psychopathic traits observed in youths are similar to those found in adults, with more emphasis placed on adolescent contexts of development including family structure and relationships (Neumann, et al., 2006). While youth with antisocial behavior patterns are often described with the term "psychopathic," some scholars suggest that using this adult term with youth populations may be inappropriate and stigmatizing, carrying the notion that these youth somehow "are" their behaviors and cannot be rehabilitated (Caldwell et al., 2006; Frick, 2002; Seagrave, & Grisso, 2002).

Labeling youth as "psychopaths" or as untreatable in any way is problematic for many reasons, one of which may be the tendency for these youth and those with whom they interact to place little emphasis on their future goals and attempting to align these goals with their values. If an individual is labeled as untreatable, this determinism implies there is no point in preparing for a life outside of this set future. However, evidence suggests juvenile offenders do respond well to treatment, as those who participate in treatment programming rather than traditional incarceration without programming demonstrate lower recidivism scores post-release (Alexander & Parsons, 1973; Brier, 1994; Caldwell et al., 2006; Hagan et al., 1997; Lancaster et al., 2011). Thus, there exists an ethical imperative to discuss youths in terms of behaviors, tendencies, and risk factors rather than in deterministic and stigmatizing diagnoses which imply a lack of

valuing, coping, relating, or progressing (Caldwell et al., 2006; Frick & Viding, 2009; Cicchetti & Rogosch, 1996).

Risk Factors and Family Structure

Many researchers view criminogenic antisocial behaviors as predominantly heritable (Neumann et al., 2006). However, many environmental risk factors have been identified, particularly in understanding the continuity of antisocial traits across the lifespan. Family factors, including smoking during pregnancy, harsh parental discipline, child maltreatment, divorce, teen parenthood, and parental psychopathology, including parental depression, antisocial behavior, and substance abuse, have all been found to predict antisocial behavior (Jaffee et al., 2012). Additional environmental risk factors include social disadvantages such as family and neighborhood poverty, as well as peer deviance, although this may be a product of social selection, or the friend network into which a person self-selects. History of trauma and abuse may impact specific neural systems related to how an individual responds to threats, which may account for some of the reactive aggression and conduct problems seen in individuals with psychopathy (Blair et al., 2006). Many confounding variables may complicate our understanding of how environmental and family factors influence the risk for antisocial development, but in general, parenting practices, divorce and maltreatment all appear to be strong predictors even when considering other variables (Jaffee et al., 2012).

Attachment

One consideration in understanding the connection between youth developmental and family histories and criminogenic behaviors may be attachment patterns and characteristics (Bowlby, 1988). Attachment theory conceptualizes human social development and relationships as all being related to the primary attachment relationship formed between the individual and

their primary caregiver in infancy. This theory posits that the way an individual relates to their caregiver in infancy and childhood informs their expectations of what relationships and relational partners will be like in the future.

The main attachment styles observed in infancy include secure (safety in the relationship, freedom to explore), anxious-avoidant (needs inconsistently met, does not seek contact with caregiver), anxious-ambivalent (distress at caregiver's leaving, ambivalence at her return) and disorganized (confused by caregiver's inconsistency, displays contradictory behaviors in response to caregiver's leaving) (Ainsworth, 1979; Bretherton, 1992; Lyons-Ruth & Block, 1996). Similar patterns are evident in adolescence and adulthood, with secure-autonomous (values attachment relationships, internal evaluations are consistent), dismissing (inconsistent description of parents, report lack of memory of childhood), preoccupied (confused, angry, or passive preoccupation with attachment figures), and unresolved (lapses in reasoning in discussing attachment figures, minor dissociation) (George et al., 1996).

Attachment styles develop as a function of the way the infant expresses her needs and the responses she receives (or fails to receive) from her primary caregiver (Ainsworth, 1979; Bowlby, 1988). Attachment styles formed in infancy have been found to associate significantly with attachment styles in adolescence, although there is some evidence to suggest attachment styles may shift due to negative life events such as parental divorce and family conflict (Hamilton, 2000), interpersonal experiences, history of psychopathology (Davila et al., 1997), and changes in relationship status (Kirkpatrick & Hazan, 1994). Because of the relative stability of attachment styles, the type of attachment one experiences with the primary caregiver has implications across the lifespan. These ramifications include a preference for partners who confirm internalized models of self (Swann et al., 1992), a tendency to partner with similarly

attached others (Kirkpatrick & Davis, 1994), and foundational expectations for how to perceive new potential romantic or platonic relational partners (Hazan & Shaver, 1994; Holmes & Johnson, 2009; Klohnen & Luo, 2003).

Attachment and Empathy. Research suggests that attachment security may be predictive of empathy in childhood and adolescence (Carlson & Sroufe, 1995, as cited in Thompson & Gullone, 2008). In particular, secure parent-child attachment has been associated with increased self-esteem, empathy, and prosocial behaviors in children. An infant's early caregiving experiences lead to the establishment of expectations, attitudes, and feelings about self and others that inform subsequent relationships (Carlson et al., 2003). Through this relational learning and development, early attachment experiences are foundational to the infant's development of self-regulation patterns (Cassidy, 1994; Carlson & Sroufe, 2003). When the infant recognizes that his needs are met and that someone recognizes and cares about his distress, he begins to learn that other people can experience distress and communicate their needs and that these needs can be met by others (Bowlby, 1988; Fearon et al., 2016). Attachment in infancy has been associated with both empathy (Kestenbaum et al., 1989) and psychopathology development (Sroufe et al., 1999; Sroufe et al., 2000) across the lifespan.

Studies examining attachment security and empathy development have generally concluded that secure attachment in infancy is associated with higher rates of empathic concern and behaviors across the lifespan and that insecure attachment in infancy is associated with less empathy across development (Carlson et al., 2003; Engels et al., 2001; Thompson & Gullone, 2008). Empathy has also been described as essential to optimal social and emotional functioning in children and adolescents (Eisenberg et al., 1991) and is noted as a fundamental deficit in adolescents who display antisocial and aggressive behaviors (Lovett & Sheffield, 2007). Less

sensitive care, including inattentiveness or inconsistent responding, has been associated with insecure attachment (Ainsworth, 1969; Blehar et al., 1977). It follows that less sensitive care implies a lack of empathy in the parent-child relationship, which may support the notion that children learn to empathize with others through their experiences of being empathized with in early life (Bowlby, 1988; Carlson et al., 2003; Fearon et al., 2016). In attachment relationships, children learn to express their needs and can, under optimal conditions, experience their needs being acknowledged and addressed (Ainsworth, 1969; Bowlby, 1988). Through this process, children may learn how to take another's perspective and be responsive to the needs of others (Collins & Feeney, 2000; Mikulincer et al., 2001). However, if the child communicates their needs only to have those needs be rarely or inconsistently met, they may not have the opportunity to observe and integrate the skills for being responsive to the needs of others in subsequent contexts and relationships.

Attachment, Empathy, and Antisocial Behaviors. Research regarding antisocial behaviors and attachment suggests insecure attachment styles in infancy predict antisocial and aggressive behaviors in adolescence (Arbona & Power, 2003). Bowlby (1988) noted that impaired attachment in childhood inhibits empathy development which may predispose the child to struggle with relating to others and to demonstrate aggressive and antisocial behaviors. Furthermore, adolescence is generally understood as a uniquely susceptible developmental stage for delinquent behaviors to emerge (Broidy et al., 2003). This susceptibility is increased for those with insecure attachment histories, as secure attachment has been associated with increases in social skill development from ages 16 to 18, while insecure attachment has been associated with increases in delinquency during this period (Allen et al., 2002). In a longitudinal study of mother-child dyads, insecure attachment and early social adjustment were predictive of

aggression (Renken et al., 1989). Furthermore, Marcus and Betzer (1996) found attachments to mother, father, and best friend were all negatively correlated with antisocial behavior in adolescence, suggesting that felt security in relationships need not originate within the nuclear family for the individual to learn and exhibit prosocial behaviors.

The relationship between empathy, attachment, and antisocial behaviors have been well-documented (Carlson et al., 2003; Fearon et al., 2016; Thompson & Gullone, 2008; Carlson & Sroufe, 1995). Empathy is an important construct in the current investigation as it has been noted as a deficit in youths engaging in antisocial behaviors (Lovett & Sheffield, 2007) and its absence has been linked to higher rates of callous human-directed behaviors (Duncan & Miller, 2002). Arbona and Power (2003) argue that a positive, secure parent-child relationship allows the child to see him or herself as capable and lovable. Without this sense of security, the child may develop hostility toward parents and may exhibit antisocial behaviors, possibly either to communicate their dissatisfaction to their parents or simply because they were not given the opportunity to learn prosocial behaviors early on through a secure attachment relationship. A related hypothesis regarding attachment and antisocial behaviors asserts that children who demonstrate aggressive behaviors may be rejected by their peers which may increase the likelihood of deviant group membership (Rappaport & Thomas, 2004). Clearly, these existing hypotheses suggest that criminogenic behaviors may emerge through, and subsequently be reinforced by, relational experiences including attachment relationships. These connections are noteworthy because antisocial behaviors and a lack of empathy are both associated with psychiatric diagnoses predictive of crime, namely conduct disorder and antisocial personality disorder (American Psychiatric Association, 2013).

Trauma

An additional important risk factor in the development of antisocial behaviors and the experience of attachment ruptures is trauma (Herman, 1997; Jaffee et al., 2012). Trauma is generally understood as a stressful event or experience that challenges our coping and adaptation processes (Agaibi & Wilson, 2005). Further, a trauma can be something that threatens our lives, safety, or bodily integrity or that involves a close encounter with death or violence (Herman, 1997; Suleiman, 2008). When a person experiences trauma, the brain can struggle to process or integrate the event such that coping and adaptive responses are incomplete and psychological symptoms (such as psychological numbing, hypervigilance, or dissociation) may ensue (American Psychiatric Association, 2013; Herman, 1997). Post-traumatic stress disorder (PTSD) was not conceptualized and added to the DSM-III until 1980, and prior to this addition symptoms of trauma were discussed primarily as immediate reactions rather than symptomatic presentations that could be delayed (Jones & Wessely, 2006). PTSD and associated symptoms were originally only considered as a response to a life-threatening event, but the inclusion criteria have since been expanded to include a person who "experienced, witnessed, or was confronted with" an event that "involved actual or threatened death or serious injury, or threat to the physical integrity of self or others" (American Psychiatric Association, 1968, 1980, 2013).

Complex Trauma and Incarceration

Complex trauma occurs when an individual is exposed to "multiple, often prolonged or extended traumas over time" (Briere & Scott, 2015, p. 515). Complex trauma often involves a high number, frequency, and variety of traumas that lead to challenges in processing and coping with subsequent traumas over time, thus compounding the effects of trauma (Briere & Spinazzola, 2005; Cook et al., 2005). Complex trauma can result in PTSD, including

multidimensional symptom presentations, as well as additional comorbid psychiatric difficulties (Briere et al., 2008; Briere & Scott, 2015).

Youth who are involved in the juvenile justice system tend to have higher rates of mental health diagnoses, exposure to violence, and cognitive and emotional deficits and experience more risk factors compare to youths not involved in the juvenile justice system (see "Historical Barriers for Adjudicated Youth," above). Therefore, many youths who are adjudicated delinquent and experience institutionalization likely enter a state of incarceration with a complex trauma history and the related behavioral, emotional, and cognitive implications of this history. Research suggests prison populations experience higher rates of both trauma and mental illness prior to incarceration and during incarceration, thus institutionalization serves as another step in the complex trauma cycle (Armour, 2012). Further, incarcerated populations are at an increased risk for suicide, self-harm, violence, victimization, and general mortality and are also less likely to be identified and treated for mental illness, even while rates of mental illness are higher in this population compared to the general population (Fazel et al., 2016). In juveniles specifically, incarceration has been associated with a decline in the ability to regulate impulsive and aggressive behavior and other psychosocial self-regulation capacities (Dmitrieva et al., 2012). Therefore, incarceration may represent one more link in this complex trauma chain of events.

Reactions to Trauma

Generally, reactions to trauma are understood through the DSM-5 symptom criteria for PTSD (American Psychiatric Association, 2013). These symptoms include intrusive dreams, thoughts, or memories about the event, dissociative reactions, flashbacks, prolonged distress when exposed to reminders of the event, and physiological reactions when reminded of the event. Additional symptoms include avoidance of thoughts of the event and avoidance of stimuli

that may trigger thoughts or memories of the event, trouble remembering part of the event, negative beliefs about self or the world, negative affect, lessened interest in activities, irritability, recklessness, hypervigilance, or difficulties with sleep or concentration.

Behavioral and Emotional Reactions to Trauma. Some of the DSM-5 symptoms of PTSD have clear behavioral manifestations (irritability and angry outbursts, hypervigilance and exaggerated startle response, avoidance, etc.) (American Psychiatric Association, 2013). Experiencing trauma early in life can lead to disrupted development of the ability to regulate emotions and behaviors and integrate a sense of self-concept (Teicher et al., 2002). Individuals who are exposed to complex trauma in childhood and adolescence may be at increased risk for development of psychological disorders beyond PTSD, including attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), conduct disorder, anxiety disorders, and eating disorders (Cook et al., 2017). Additionally, traumas experienced early in life can lead to deficits in identifying emotional states in self and others (Beeghly & Cicchetti, 1994; Cook et al., 2017). These deficits may lead to difficulties in recovery from trauma and forming secure relationships later in life (Cook et al., 2017; Herman, 1997).

Trauma and Attachment

Research suggests that the effects of insecure attachment in childhood can be compounded by traumas throughout life, leading to negative outcomes in adolescence and adulthood (Carlson et al., 2003; Ogawa et al., 1997; Sroufe et al., 1999). Specifically, insecure attachment and a history of trauma have been associated with dissociative symptoms (Putnam, 1994). A child with disorganized attachment may fail to form coherent organizational frameworks for understanding themselves and others, particularly in a relational context. This individual, when confronted with traumatic events later on, may respond with a preestablished

pattern of disconnecting the trauma from normative cognitive and emotional processing (Liotti, 1992; Ogawa et al., 1997). Additionally, recurrent traumas in the context of inadequate caregiving can increase the arousal response and drive the individual to compartmentalize their overwhelming emotional and cognitive responses (Sroufe et al., 1999).

Moreover, one symptomatic criterion for PTSD is detachment and estrangement from others or social withdrawal, suggesting relational and attachment elements are implicit in trauma responding, symptomatology, and recovery (Sroufe et al., 2000). Given the established relationship between attachment and empathy development (see "Attachment and Empathy," above), it may follow that traumas interact with insecure attachment to further inhibit empathy development and promote antisocial behaviors (Kestenbaum et al., 1989; Ogawa et al., 1997; Thompson & Gullone, 2008). These associations are implicit in recovery from trauma as well, as the psychological functions that have been damaged as a result of trauma (trust, autonomy, initiative, competence, identity, and intimacy) are thought to only be reparable through connections with others (Herman, 1998). These patterns represent how insecure attachment is not the same thing as psychopathology but can serve as an entry point for certain pathologies to develop later in life (Carlson et al., 2003; Sroufe, 1997).

Meaning Making

Many risk factors can make youth vulnerable to both juvenile justice system involvement and the negative repercussions of institutionalized life. Many of these individual, familial, and systemic level factors have been explored in the previous sections and are essential in considering the process and outcomes of juvenile incarceration. However, many of these youth demonstrate incredible resiliency both during incarceration and preceding their adjudication by relying on their strengths to navigate adversity (Fergusson & Lynskey, 1996; Mowder et al.,

2010; Zimmerman, 2013). One element that may predict and result from this resiliency is meaning making (Linley & Joseph, 2004; Park, 2010). Understanding the process of meaning making for this population is important because identifying one's sense of purpose, meaning, and place in the world are all crucial developmental tasks that take place in adolescence (see "Normative Adolescent Development, above). Further, the capacity to search for and make meaning within the context of suffering or oppression—such as incarceration—has been conceptualized as a way of successfully coping with the stressor (Frankl, 2006). Therefore, understanding how individuals who were incarcerated as juveniles searched for and potentially made meaning of their circumstances within an already tumultuous developmental period is pertinent to our understanding of both the path to and adaptation following incarceration.

Meaning making is the process of searching for understanding or significance in the face of stressful or challenging life events (Park, 2010). Meaning represents a variety of constructs in the literature but is perhaps best understood as a "mental representation of possible relationships among things, events, and relationships. Thus, meaning *connects* things" (Baumeister, 1991, p.15, as cited in Park, 2010, p. 257). Meaning has long been a consideration in understanding cognitive and affective processes in various psychological disciplines, however placing meaning at the forefront of understanding the human condition arguably began with humanistic and existential psychology traditions (Buhler, 1971; Frankl, 2006; Park, 2010; Yalom, 1980).

Humanism

Briefly, the humanistic school of thought considers individuals to be constantly striving for growth in an effort to self-actualize (Halbur & Halbur, 2015). This approach emphasizes viewing both the person as a whole and their life trajectory as a whole, rather than parsing out or medicalizing either (Buhler, 1971). Humanistic psychology places emphasis on the natural

intentionality of human beings, whereby the individual focuses on her goals and takes deliberate actions to reach them. This intentionality serves to shape the individual's orientation to the world and her self-concept.

Existential Psychology. A more nuanced branch of humanistic psychology is existential psychology. This approach to understanding human beings and treating their psychopathologies centers on questions of the meaning of life and individual purpose (Halbur & Halbur, 2015). Fundamental to the existential approach is understanding the individual phenomenologically, the goal being to see the world as the individual sees it without applying one's own assumptions and presuppositions to the individual's worldview (Yalom, 1980). Existentialism also seeks to confront some of the darker aspects of the human condition, including death and mortality, isolation, and anxiety (Halbur & Halbur, 2015). Existentialism poses questions for which there is no ultimate answer, as the individual is tasked with creating their own answer and living in accordance with the values underlying these answers (Yalom, 1980).

Frankl's "Will to Meaning." Viktor Frankl has offered some of the most foundational theorizing regarding meaning making in the psychological and psychotherapeutic literature (Frankl, 1953, 1955, 1962a, 1962b, 1966a, 1966b, 2006). Frankl argued that "man's primary concern is to find and fulfill purpose and meaning in life" (1966a, p. 258). He suggests that to exist is not an end in itself for being human, and that only through questioning, searching for, and finding meaning in life does a person live up to what it means to be "truly human" (Frankl, 1953, 1962a). Frankl points out that psychodynamic theories uphold the pleasure principle as the driving force behind our decisions and actions, but that this is not the true goal (Frankl, 1962a). Rather, finding pleasure and happiness in life is a byproduct of the true goal in life, which is finding meaning (Frankl, 1962a, 1966b).

Inherent to existential questioning is contemplating and responding to meaninglessness. Yalom (1980) proposes that the fundamental problem of meaninglessness is that (a) human beings require meaning to live and, without it, will experience distress, and (b), the world holds no absolute meaning and offers no guidelines for finding it. When the individual confronts the truth that life has no meaning and he must create or find meaning of his own, he is vulnerable to experiencing an "existential void" (Frankl, 2006). When such a void develops and there is no meaning to fill it, neuroses may fill the void, including anxiety, purposelessness, delinquency, or impulsivity (Frankl, 1966a).

Frankl posits that the entire human condition comes down to the search for and ultimate making of meaning (Frankl, 1955, 1962a, 1962b, 1966a, 1966b, 2006). He argues that to be truly "free" is not to be free from negative conditions, but to have the freedom to "take a stand toward conditions" (Frankl, 1962a, p. 277). Frankl understands people are driven by their own aspirations which are all directed in some way towards attempting to find meaning, but that it is always up to the individual to decide whether or not to fulfill this drive (1966b). Implicit in the individualized nature of the search for meaning is a decision-making process—no one is able to give meaning to someone else; rather, one must decide what is meaningful for themselves. Frankl termed this innate drive to find what is meaningful about one's own life and existence as "the will to meaning" (1966a, p. 252). Rather than seeing tension as the cause of neuroses, Frankl argued that some tension, such as that caused by the existential drive to search for meaning, is intrinsic to being human and required for well-being (1966b).

Frankl identifies three pathways to meaning: through work and creation, through connecting with others and, when suffering is unavoidable, through self-transcendence and growth in the face of suffering, resulting in personal change (2006). He notes that unavoidable

suffering is a necessary part of being human and that these negative experiences can still result in something positive when approached with the right attitude (Frankl, 1966a). Frankl clarifies that to suffer unnecessarily is not meaningful, but when one is confronted with inevitable suffering, there are ways to transcend this suffering and grow in spite of it. For those who are not faced with suffering, meaning can be made through creating or through loving. Frankl goes on to state that life can become meaningful through what we create in the world, what we experience from the world, and through the attitude we take toward the world (1962a). When meaning is developed, we identify our personal values which align with this meaning and which then serve to inform our actions and choices (Yalom, 1980).

Park's Global and Situational Meaning

Park (2010) notes a lack of consensus in defining meaning making, but that the general consensus is that people have general orientations (also known as global meaning) to the world that give them a framework through which to interpret their experiences. When this global meaning is stressed, the individual appraises the stressful situation and identifies the meaning therein. Distress can arise when global meaning is discrepant with this appraised meaning, which can elicit a process of meaning-making, where the individual attempts to reduce this discrepancy and restore their sense of seeing the world as meaningful. This process of searching for meaning has been associated with better adjustment (Park et al., 2008), less distress (Davis et al., 1998), and positive affect and outlook (Bower et al., 2005) in response to traumatic or stressful events.

Global Meaning. Global meaning is the general orientation one has towards life, including fundamental assumptions, beliefs, goals, expectations, and subjective feelings (Dittman-Kohli & Westerhof, 1999; Park, 2010; Park & Folkman, 1997; Reker & Wong, 1988). One's global meaning can include our beliefs about ourselves, the world, and interactions

between the two, including issues of justice, control, predictability, and coherence (Janoff-Bulman & Frantz, 1997; Leary & Tangney, 2003). These global meanings form the core schemas through which we understand and interpret events, interactions, and experiences (Janoff-Bulman & Frantz, 1997). Our sense of global meaning, including our perceptions of what makes life meaningful, inform global goals (Austin & Vancouver, 1996). The most commonly reported goals relate to relationships, work, religion, knowledge, and achievement (Emmons, 2003)—not dissimilar from the domains of meaning-making proposed by Frankl (2006). Global meaning is thought to be constructed early in life and subsequently changes in response to life experiences (Austin & Vancouver, 1996; Block, 1982). The individual's subjective sense of meaning—what is considered meaningful in life—is thought to provide a general sense of purpose and direction (Reker & Wong; Yalom, 1980).

Situational Meaning. Separate from global meaning is situational meaning, which is the meaning that is made in response to a specific event or encounter (Park, 2010). Situational meaning can also be understood as the interaction between global beliefs and a specific transaction (Park & Folkman, 1997). Situational meaning is derived through experiencing a stressful event, assigning meaning to the event (known as "appraised meaning"), and determining how the situational meaning converges and diverges with the preexisting global meaning. Situational meaning may also be conceptualized as meaning as a coping process (Park & Folkman, 1997), and has been assessed as making sense of why an event occurred (Dollinger, 1986), reevaluating a negative event as positive (Thompson, 1985), questioning why an event occurred (Frazier & Schauben, 1994), and seeing oneself as having made sense of or having made meaning of the event (McIntosh et al., 1993; Silver et al., 1983). Three processes compose situational meaning: 1) the appraisal of meaning, or the initial assessment of the significance of

an event; 2) the search for meaning as a coping process, and; 3) meaning as outcome, or the

meaning that is made following the event (Park & Folkman, 1997). This is an especially salient

process in instances where beliefs and senses of global meaning are violated by a specific event,

including violation of the "just-world belief" where we assume good things happen to good

people and bad things happen to bad people (Lerner, 1980). This is one of the most common

belief violations in need of reckoning, especially following unprecedented or unpredictable

traumatic events (Janoff-Bulman, 2004; Park et al., 2008).

     Meanings Made. Meanings made are the end products or changes at which one arrives

through attempting to reduce discrepancies between global meaning and situational meaning

(Park, 2010). Several different kinds of meaning can be made (Park, 2010; Park et al., 2008). The

most common outcome, according to some theorists, is the sense of the event having "made

sense" (Davis et al., 1998; Wortman & Silver, 2001). Acceptance or coming to terms with the

event is also considered a type of meaning made and may exist in conjunction with other types of

meanings made (Davis et al., 1998; Evers et al., 2001). Reattributions are also considered a

meaning made, as attempts to understand the cause of an event may take place multiple times for

long after the event has occurred (Janoff-Bulman & Frantz, 1997; Lazarus, 1991). Perceptions of

growth and positive life changes may be the most commonly assessed meaning made (Abbey &

Halman, 1995). Positive changes that have been reported in response to trauma include improved

coping skills and relationships, a deeper appreciation of life, and increased self-confidence and

personal resources (Park & Helgeson, 2006; Stanton et al., 2006). People may report a reduction

or increase in their sense of meaning in life following the process of searching for meaning

(Janoff-Bulman & Frantz, 1997; Park 2010). Those who do experience a deepened sense of the

meaning of life may experience better psychological adjustment and quality of life following the

trauma (Brady et al., 1999; Jim et al., 2006; Laubmeier et al., 2004; McClain et al., 2003; Park et al., 2008). Additional meanings made include reduced inconsistency of just-world beliefs (Nordin et al., 2001; Park, 2005), changes in identity resulting from integrating the stressful experience into one's self-narrative (Gillies & Neimeyer, 2006) reappraised meaning of the stressor (Bonanno & Kaltman, 1999; Thompson, 1985), changed global beliefs, and changed global goals (Martin & Tesser, 1996; Park, 2010; Park et al., 2008).

Attachment as Meaning

Frankl argues that relationships can serve as one of the primary avenues towards making meaning in one's life (1966b; 2006). Attachment experiences and patterns have cognitive and affective implications, impacting how the person feels in relationships, thinks about themselves as a relational partner, and develops expectations for relational others (Ainsworth, 1979; Bowlby, 1988; George et al., 1996; Kirkpatrick & Davis, 1994; Swann et al., 1992). Attachment experiences early in life establish a person's expectations and interpretations of others throughout the lifespan (Ainsworth, 1979; Bowlby, 1988; Blehar et al., 1977). These expectations and interpretations lead to the formation of internal working models which impact the way individuals make sense of subsequent interpersonal interactions and relationships (Ainsworth, 1969). These internal working models can predispose us to experience others in certain ways (Greenberg & Mitchell, 1983; Priel & Besser, 2001). Thus, attachment style represents a meaning making system in itself, informing the lens through which we understand interpersonal communications and impacting how we make meaning of our experiences and encounters.

Measuring Meaning Making

A consensus regarding the definition of meaning making has been difficult to reach, making it even hard to establish a consensus in how to measure the search for meaning and meanings made (Park, 2010). In general, however, the bulk of meaning making studies define meaning making as coping with the recognition of a discrepancy between global meaning and situational meaning (Joseph & Linley, 2005; Park, 2010). Researchers vary in how they assess this discrepancy and approaches to coping with this discrepancy, including changing situational meaning to align with global meaning (assimilation) or changing global beliefs to support the situational meaning (accommodation; Joseph & Linley, 2005). Additional approaches include attempts at making the event "make sense" or searching for the significance or value of the event (Janoff-Bulman & Frantz, 1997), cognitive processing (Creamer et al., 1992; Duhamel et al., 2004; Greenberg 1995), emotional processing (Foa & Kozak, 1986; Stanton et al., 2000), and a combination of cognitive and emotional processing (Hayes et al., 2007; Hunt et al., 2007). Further, some distinction has been drawn between measuring the drive and effort of searching for meaning and the felt sense of the presence of meaning in one's life (Steger et al., 2006).

The essential task of being human is realizing no inherent purpose or meaning is given, and that each of us must decide for ourselves the meaning of our lives (Frankl, 2006; Yalom, 1980). Thus, making meaning in one's life is an inherently intimate process as no one source of meaning will exist for all people (Frankl, 1955). Additionally, having a sense of purpose or meaning in life has generally been associated with overall psychological adjustment, growth, authentic living, and well-being (Kenyon, 2000; Park & Folkman, 1997; Ryff, 1989; Steger et al., 2006). Therefore, assessing the search for and perception of meaning offers a universally understood yet idiosyncratically defined approach and attitude towards life.

Values. Goals and values have been associated with meaning making, as values can both give direction to avenues of meaning making and can themselves shift and reorganize in response to meaning making processes (Bower et al., 1998; Park, 2010). Values have been linked to goals and, in many cases, are thought to inform the goals a person sets for themselves (Ford & Nichols, 1987). Goals are also considered an aspect of global meaning, as the general orientation one has towards life includes that towards which they strive (Janoff-Bulman & Frantz, 1997; Park & Folkman, 1997).

Values may be understood as a source and outcome of meaning making (Janoff-Bulman & Frantz, 1997; Park, 2010). Values are understood as the "criteria people use to select and justify actions and to evaluate people (including the self) and events" (Schwartz, 1992, p. 1). Values are different from attitudes in that they transcend specific situations and are hierarchically ordered, thus serving to guide our behaviors and evaluations (Schwartz & Bilsky, 1987, 1990). In addition to meaning making, values have been associated with goal setting and striving (Kasser & Ryan, 1993, 1996) and motivation and behaviors (Schwartz, 1992). For these reasons, values are appropriate to include in an evaluation of meaning-making.

Life Satisfaction and Well-Being

Satisfaction is linked with meaning-making as both involve cognitive appraisal processes (Diener et al., 1985; Park, 2010). A person is thought to make a judgment about their satisfaction with life as compared to what they considered to be an acceptable standard (Diener et al., 1985). The process of meaning making, which often occurs in response to a traumatic or stressful event (otherwise thought of as an experience below the acceptable standard) may influence satisfaction with life by altering a person's level of satisfaction in light of both the past trauma and their current circumstances. Previous findings suggest the frequency of searching for meaning and of

discussing the traumatic event may predict lower satisfaction (Tait & Silver, 1989), while others have found that searching for and making meaning is related to higher life satisfaction (Pakenham et al., 2007). Thus, examining life satisfaction may provide insight into an individual's happiness and acceptance of their life circumstances, which is intertwined with the process and outcomes of meaning making (Lent, 2004; Ryff & Stinger, 1998; Steger et al., 2006).

Related to life satisfaction is the concept of well-being. Historically, well-being has been poorly operationalized and conceptualized with a lack of consensus in the early literature, however most understandings have centered on the differences between negative and positive affect and satisfaction with life (Andrews & Withey, 1976; Bryant & Veroff, 1982; Diener & Emmons, 1984; Liang, 1984; Ryff, 1989; Stock et al., 1986). General areas of convergence in what constitutes well-being include feelings, self-perceptions, symptoms of distress, aspects of adjustment to life roles, positive relations with others, autonomy, environmental mastery, purpose in life, personal growth, and self-acceptance (Bryant & Veroff, 1982; Ryff, 1989). Well-being has been assessed as an outcome of searching for meaning (Park, 2010). For example, Michael and Snyder (2005) found that engaging in sense making following a loss was associated with less rumination and increased well-being. Other studies have found meaning making predicts better adjustment (a synonym for well-being following a stressful event) and less distress (Creamer et al., 1992) as well as lower depressive symptoms and higher perceived growth and self-esteem (Hayes et al., 2005).

Well-being outcomes may be more complex than linear, as McIntosh et al. (1993) found that cognitive attempts at meaning making were related to less well-being initially but predicted higher well-being later on. Well-being may thus indicate positive adjustment to the stressor

following engagement in the search for meaning. As affect has been conceptualized as a primary dimension of well-being, measures of positive and negative affect have been found to predict distress, general disposition, life satisfaction, and psychological adjustment (Bryant & Veroff, 1982; Clark & Watson, 1988; Costa & McCrae, 1980; Tellegen, 1985; Watson & Clark, 1984).

Meaning Making and Incarcerated Populations

Much of the research on meaning making for incarcerated populations has been qualitative in nature (Clark, 2001; Harvey, 2011; Maruna et al., 2006; Ross, 2020; van Ginneken, 2016). These studies suggest incarceration may be experienced as a "rock bottom" point that leads to loss of meaning (Maruna et al., 2006) and may serve to shift expectations about self, others, and the world (van Ginneken, 2016). This is consistent with research on the impacts of prison, which include higher distress, lower self-worth, symptoms of psychopathology, emotional and behavioral dysfunction, and significant challenges with reentry to civilian life (Haney, 2003; Maruna et al., 2006; Sinha, 2010). Vanhooren et al., (2017a) used a retrospective cross-sectional design to examine the relationship between incarceration, loss of meaning, and distress. They asked inmates to complete the Loss of Meaning in Prison (LMP) questionnaire that they developed for this study. Participants were instructed to complete this questionnaire once as they would have completed it before arriving in prison, and a second time based on how they feel at the time of study. The researchers calculated a "loss of meaning" by finding the difference between these two scores. Results suggest that a loss of meaning predicted distress and that this was highest for participants who had yet to be sentenced.

While much of this work has reflected a loss of meaning caused by incarceration (Harvey, 2011; Vanhooren et al., 2017b), some studies take a growth-oriented approach in examining inmates or former inmates who reported changing in positive ways as a result of

incarceration. Ross (2020) interviewed a sample of former inmates who reported a greater appreciation for life, awareness of new possibilities, and more close relationships, among other positive changes. Maruna et al. (2006) interviewed inmates who self-identified as religious converts and reported that embracing religion offered a framework for sensemaking, hope for the future, and forgiveness through God that can facilitate forgiveness of the self. In a sample of sex offenders, Vanhooren et al. (2017b) found that prison could serve as a catalyst for change for this population and that receiving emotional support from others, taking responsibility for the crime, and engaging in therapy led to posttraumatic growth.

Fewer studies have looked more specifically at meaning making for incarcerated adolescents. In a doctoral dissertation study, Carhart (1998) examined how eight incarcerated male adolescents made meaning of the treatment program in which they participated in their residential treatment facility. Results from this qualitative study were framed by Kegan's (1982) developmental stage theory and indicated a disconnect between participants' capacity for perspective-taking and their integration of the program's treatment goals and messages. Wainryb et al. (2010) investigated how violent youth offenders construct narratives about their crimes, with a specific focus on moral agency. Comparing incarcerated male youth to male and female youth in the community, the researchers discovered youth offenders are more likely to share factual information related to their violent offenses than interpretive, meaning-focused information. The inverse was found to be true for community youth when asked about a time where they did something hurtful to someone they know. Wainryb et al. (2010) interpreted these qualitative findings to suggest that youth with a history of violent offending may construct their narratives in a self-defending manner, limiting their own agency and failing to recognize the psychological states of themselves and their victims.

In a unique examination of meaning making for youth offenders, Ruggiero et al. (2013) examined an intervention designed to help participants make meaning through learning and creating their own video games. They found that participation in the program was associated with feeling motivated by game development, engagement in the projects, and making of meaning through designing games geared toward teaching social issues. As with studies with adult samples, these studies utilized qualitative methods to understand meaning making processes for youth offenders. Additionally, these studies investigated specific constructs related to meaning making (e.g., the meaning of treatment, the meaning of video game design, etc.) rather than more open, exploratory questions of the broader meaning of life.

Coping

One conceptualization of searching for meaning in the face of a stressful event is meaning-focused coping which can be targeted at changing global or situational meaning (Park, 2010; Park & Folkman, 1997). Meaning-focused coping targets the discrepancy between global and appraised meaning in an attempt to reduce distress (Folkman & Moskowitz, 2007). Coping has been conceptualized as a pathway for regulating distress and increasing positive affect following the appraisal of a threat (Lazarus, 1966, as cited in Folkman & Moskowitz, 2007; Lazarus & Opton Jr, 1966). Folkman (1997) reported that different avenues for coping with psychological distress that result in positive psychological states—including positive reappraisal, problem-focused coping, setting goals, spiritual beliefs and practices, and finding or adding meaning to ordinary events—all include the search for and finding of positive meaning. Folkman explained that meaning-making coping involves "positive reappraisal of events, revising goals and planning goal-directed problem-focused coping, and activating spiritual beliefs and experiences" (p. 1216).

Two main purposes of coping are to regulate distress and to solve or manage the problems generating distress (Lazarus & Folkman, 1984). Many studies on measures of coping have identified three main coping strategies: emotion-focused coping, problem-focused coping, and avoidance (Hasking & Oei, 2002; Ingledew et al., 1996; Lyne & Roger, 2000; Parker & Endler, 1992). Meaning making is effective as a form of coping because it serves to decrease the threatening and harmful nature of the stress or trauma through reappraisal which may increase positive affect (Folkman & Moskowitz, 2007; Park & Folkman, 1997). Positive affect can increase personal resources and motivation for continued coping and management of stressors (Folkman & Moskowitz, 2007; Fredrickson, 2001; Tugade & Fredrickson, 2004). Thus, coping is inherently linked to the process of meaning making and may be assessed as part of the "search for meaning" process (Park, 2010; Park & Folkman, 1997).

Trajectories of Adaptation

Recovery from stressful experiences has historically been conceptualized as following a normal distribution, with most people experiencing moderate distress and fewer people experiencing either resilience or extreme distress (Mancini et al., 2015). More recent work has conceptualized recovery from traumatic and stressful events as more heterogeneous and following various trajectories (Bonanno, 2004; Bonanno & Mancini, 2012; Bonanno et al., 2011). Contrary to the historical theoretical literature surrounding recovery from trauma, which suggests most people must move through specific stages (Bowlby, 1980; Middleton et al., 1993) and develop psychopathological symptoms if they do not (Osterweis et al., 1984), recent studies indicate the most common outcome following a stressful event may be a trajectory of resilience (Bonanno et al., 2011). This is highlighted by the statistical finding that over half of the U.S. population experience some kind of traumatic stress in their lifetime, but only 5-10% of this

population develops PTSD (Ozer et al., 2003). Of those who experience traumatic events, only 6.6% to 17.8% go on to experience chronic PTSD (Ehlers et al., 1998; Hanson et al., 1995; Resnick et al., 1993; Sutker et al., 1995).

Bonanno (2004) conceptualized four major trajectories of trauma recovery: stable and resilient functioning, gradual recovery, delayed reaction, and chronic distress (Bonanno et al., 2011; Mancini et al., 2015). Resilient functioning generally describes those who experience minor disruptions in functioning in response to the stressor (Bonanno, 2004; Bonanno et al., 2011). Gradual recovery is characterized by an initial onset of acute symptoms followed by a return to baseline within one to two years (Bonanno et al., 2011). Delayed reaction tends to represent the onset of subthreshold symptoms immediately after the trauma that worsen over time (Bonanno et al., 2011; deRoon-Cassini et al., 2010). Finally, chronic distress is marked by chronic symptoms of psychopathology, primarily PTSD, following the trauma and may be more common in individuals whose traumatic exposure has been prolonged and/or severe (Bonanno et al., 2010; Bonanno et al., 2011).

The trajectory model has been supported in studies of recovery from spousal loss (Bonanno et al., 2002), in 9/11 survivors (Bonanno et al., 2005), in breast cancer survivors (Deshields et al., 2006), and in survivors of spinal cord injuries (Bonanno et al., 2012). An important note is that most of the research on recovery trajectories is associated with literature on grieving and bereavement processes (Bonanno, 2004; Bonanno et al., 2002; Bonanno et al., 2011). While loss can represent a type of trauma, differences exist between the experience of both distress and recovery in response to different forms of traumatic experiences.

From these findings, a developmental psychology perspective must be applied to trauma recovery as pathways to both resilience and recovery are heterogeneous and do not follow a

normal distribution (Bonanno, 2004; Luthar et al., 1993; Rutter, 1987). Thus, the current

investigation aims to explore trajectories of participant responses to incarceration rather than

assuming all formerly incarcerated individuals will experience similar changes in specific

domains. Adjustment following incarceration may or may not align with these four trajectories,

as some individuals may perceive their institutionalization to have been traumatic and others

may not. Given this and other individual differences within this population, the experience of

adolescent incarceration may yield unique trajectories of adjustment post-release.

Trajectories Assessed via Retrospective Data

To understand potential change over time from before adjudication to after release from

incarceration, the current study utilizes some retrospective data. While this is consistent with

much of the research concerning responses to and recovery from traumatic events, using

retrospective data poses several substantial limitations in research. Retrospective self-reports are

generally understood to be vulnerable to bias (Schwarz, 2007). Some types of questions, such as

those concerning historical information or about the frequency of certain behaviors, may lead to

more valid data than other types of questions, such as those concerning intensity of experiences,

change over time, or causation. Further differentiation exists between direct retrieval of a

memory, which is often automatic, and inferential retrieval regarding certain attributes of the

event or subjective experiences, which takes more cognitive effort (Schwarz & Sudman, 2012).

Inferential retrieval can be influenced by the length of the interval between the encoding and

retrieving of a memory, the associated emotionality, and the familiarity of the memory.

Furthermore, affective mood states can influence the way information is learned, remembered,

and retrieved, necessitating special considerations when collecting retrospective data that is

emotionally charged. For example, individuals are better able to recall memories when their

mood state at the time of retrieval matches the mood state at the time of learning (Tobias et al., 1992). Additionally, global mood states have been found to impact a person's judgments about seemingly unrelated events (Schwarz & Clore, 1983). Both of these findings suggest that retrospective self-reports can be influenced by the individual's mood at the time of the event and at the time of questioning.

Human memory is imperfect—it is capable of being distorted by perception and the act of retrieving the same memory multiple times can result in a recoded version of the memory that becomes altered over time (Hassan, 2005). Some studies suggest that memories that are emotionally charged are more easily recalled than those that are not emotionally charged (Buchanan, 2007; Talarico et al., 2009). However, other research suggests that it is more challenging to construct a coherent narrative of very emotionally charged events, such as traumatic events, which can interfere with accurate recall (Van der Kolk & Fisler, 1995). Retrospective data is often the only option for research investigating trajectories of trauma recovery as longitudinal data is especially difficult to obtain, apart from a few studies (Bonanno et al., 2002; 2012) when the trauma cannot be anticipated ahead of time.

Mancini, Bonanno, and Sinan (2015) attempted to address the challenges with retrospective data collection concerning trajectories of recovery from trauma. Bonanno's (2004) original four prototypical trajectories (stable/resilient, gradual recovery, delayed reaction, and chronic distress) were described for participants, and they were asked to select the trajectory that best fit their experience. In a sample of high-exposure survivors of the 9/11 attacks, self-identified trajectories were consistent with trajectories based on observers' longitudinal ratings (Mancini et al., 2015). In a sample of bereaved spouses, self-identified trajectories were consistent with symptom ratings of depression, grief, PTSD, and somatic complaints and with

life satisfaction. Based on these findings, asking participants to help identify their own trajectories of recovery by responding to questions concerning their functioning before adjudication and after release from incarceration is a valid approach to understanding recovery from the potential trauma of incarceration. By asking participants to respond to questions regarding these two time points on several measures, trajectories or clusters of recovery profiles for this population may be identified.

Recovery Trajectories in the Present Study

For the current study, recovery trajectories will be assessed by the outcome of life satisfaction (Diener et al., 1985). The reason for using this outcome measure is that the majority of research examining adaptation and adjustment following trauma has centered on primarily negative outcomes (see "Reactions to Trauma" section above). Research on the impacts of psychological trauma often utilize negative indicators and outcome variables, including symptoms of PTSD (Herman, 1997; Yehuda et al., 2001), psychopathology (Price et al., 2013), difficulty with learning and memory (Bücker et al., 2012; Kira et al., 2012; Perry, 2006), and relational challenges (Drapeau & Perry, 2004; Godbout et al., 2013; Goff et al., 2006). Studies looking at the impacts of the trauma of incarceration specifically are focused on negative outcomes, including symptoms of PTSD and behavioral and emotional dysregulation (Haney, 1997; 2003), poor mental and physical health (Barnert et al., 2016), lower self-worth and self-esteem (Grisso, 2008; Lane et al., 2002), isolation (Greve, 2001) and social isolation (Ng et al., 2011). Clearly, the research to date on the impacts of incarceration focus on distress and other negative outcomes, which may further perpetuate the othering of individuals who have experienced incarceration.

To diverge from this trend, the current study utilizes a positive outcome variable to assess adaptation to and recovery from trauma. The intention behind assessing recovery trajectories in terms of adjustment and well-being is to focus on resiliency, adaptation, and healing rather than solely concentrating on how a population that has experienced a high degree of oppression and adversity pre-incarceration are further damaged and oppressed following incarnation (Seligman & Csikszentmihalyi, 2000). The Satisfaction with Life Scale (SWLS; Diener et al., 1985) was chosen for this study because life satisfaction is a subjective assessment of how a person feels about their life based on their own internalized criteria of what makes a life satisfying (Pavot & Diener, 2009; Shin & Johnson, 1978). This conceptualization maps on well to the idiosyncratic nature of meaning making. Further, life satisfaction is related to the standard developmental tasks of adolescence, including identifying one's sense of identity, purpose, and community—all of which can contribute to satisfaction with life. Additionally, the SWLS was chosen because it is a brief measure with good reliability and validity data (Diener et al., 1985) that has been found to be reliable in adolescent and young adult populations across cultures (Bacro et al., 2020; Di Fabio & Gori, 2016; Pavot & Diener, 1993; Pavot et al., 1991). Moksnes et al., 2014; Neto, 1992; Silva et al., 2015) and has been used with incarcerated populations (Huynh et al., 2015; Kearney & Sellen, 2013).

Contributions of the Current Study

The primary aim of the current study is to examine whether recovery trajectories can be observed in how individuals adjust to incarceration during adolescence. To understand this developmental process, a cluster analysis will be employed to identify trajectories of life satisfaction from before incarceration, during incarceration, to after release from incarceration to determine if there are prototypical developmental trajectories for processing incarceration.

Developing through traditional adolescence and into young adulthood outside of institutionalized settings has been conceptualized through various trajectory and stage-based models (Erikson, 1950; Freud, 1905; Piaget, 1962). The current study aims to see if trajectories specific to meaning making and life satisfaction exist within the context of juvenile incarceration.

A secondary aim of this study is to understand how an individual's pre-adjudication attachment-related avoidance and anxiety, exploitative thinking, experiences of discrimination, and meaning making might predict their recovery trajectory through the stages of engagement with the juvenile justice system (pre-adjudication, during incarceration, post-release).

The tertiary aim of this exploratory study is to understand how recovery trajectories predict post-release outcomes, including the process of searching for and finding meaning after incarceration. The goal for aim three is to understand the present-day outcomes of formerly incarcerated minors' pathways into and out of the juvenile justice system. Outcomes for these trajectories, including exploitative characteristics, efforts to search for meaning, achieved meaning, values, positive affect, negative affect, and coping strategies, will be examined.

The overarching goal of this study is to examine how meaning impacts an individual's pathway into the juvenile justice system, how they experience institutionalization, and how they adjust to life in the community after being released from incarceration. Existing research suggests incarceration can effectuate both losing and questioning life's meaning for some and searching for, redefining, and living in accordance with what one finds meaningful for others (Maruna et al., 2006; Park, 2010; Ross, 2020; van Ginneken, 2016; Vanhooren et al., 2017a, 2017b). Considering the detrimental effects of prison both during incarceration and as individuals re-enter society (Arditti & Parkman, 2011; Haney, 2003), the primary question this study hopes to explore is what historical differences exist between those who experience

adaptive versus maladaptive adjustment to incarceration and what differences in outcomes can be observed based on the trajectory of adjustment one follows before, during, and after incarceration.

The quest for meaning has been argued as a uniquely human urge (Baird, 1985). The question at hand is how this quest relates to the development of one's finding of meaning, coping strategies, life values, and general adjustment and functioning in the context of incarceration and its aftermath. As incarceration can be a type of suffering (Haney, 2003), this examination represents an inquiry into Frankl's conceptualization as suffering providing an opportunity for meaning making (2006). Therefore, Frankl's other two pathways to meaning—one's work and one's relationships—will be examined as outcomes as well. By deepening our understanding of how young people make sense of their lives before, during, and after incarceration, as well as the impact of juvenile justice involvement on normative development, more targeted prevention and intervention efforts aimed at reducing youth crime and institutionalization and facilitating positive reentry and growth can be developed.

Research Hypotheses

Hypotheses for this study will necessarily be exploratory, as this is the first study to examine outcome trajectories for this population. Once Life Satisfaction trajectories have been identified, the goal of this study is to examine how correlates of adjustment differ for different trajectory clusters.

Hypothesis 1

Several distinct trajectories of life satisfaction will emerge for this population. Trajectories will be traced over three time points: before adjudication, during incarceration, and post release.

Hypothesis 2

Certain pre-adjudication variables will predict group membership for life satisfaction trajectories, including:

a. Attachment-related avoidance and attachment-related anxiety

b. Search for meaning

c. Achieved meaning

d. Exploitativeness

e. Experiences of discrimination

Hypothesis 3

Group membership for life satisfaction trajectories will predict certain post-release outcomes, including:

a. Attachment-related avoidance and anxiety

b. Search for meaning

c. Achieved meaning

d. Exploitativeness

e. Intrinsic values vs. Extrinsic values

f. Negative Affect

g. Positive Affect

h. Adaptive coping vs. "Questionable" coping

Hypothesis 4

Participants who report lower levels of pre-adjudication attachment-related avoidance and attachment-related anxiety will report more searching for meaning and more achieved meaning post-release compared to those who report higher levels of pre-adjudication attachment-related avoidance and anxiety.

Hypothesis 5

Higher levels of reported post-release searching for meaning and achieved meaning will be associated with higher intrinsic values relative to extrinsic values.

Hypothesis 6

Greater length of time elapsed since being released from incarceration will be associated with more meanings made compared to lesser length of time elapsed since being released from incarceration.

Hypothesis 7

Greater experiences of discrimination during incarceration will predict greater search for meaning post-release.

Chapter 3: Method

Positionality Statement

This study examines individuals who were incarcerated as juveniles. As a researcher with this population, it is important to point out that I myself am not a formerly incarcerated person. My experiences with the criminal justice and juvenile justice systems come exclusively through my work as a psychotherapist and evaluator providing therapy and conducting assessments with currently and formerly incarcerated persons. Further, my position as a white, cisfemale with a graduate education largely makes me an outsider to the experiences of this population which, in this study, is predominantly male and composed of racial and ethnic minorities. I am also approaching this research as somewhat of an insider, having been the person to hold space for and hear the stories of individuals who are justice-impacted through my role as a mental health practitioner. Significant insights and limitations exist in my perspectives based on both these insider and outsider perspectives (Holmes, 2020; Weiner-Levy & Abu Rabia Queder, 2012).

Further, my position is informed by my perspectives and worldviews as a researcher and practitioner. As a clinician who has worked primarily with adolescents and, at this stage in my training, predominantly with justice-impacted adolescents, I am sensitive to and empathic towards the structural and systemic forces that contribute to a youth's justice involvement (See "Risk Factors and Family Structure," in Chapter 3). Moreover, I approach therapy through both an existential (Frankl, 2006; Yalom, 1980) and third-wave cognitive behavioral (DBT; Linehan, 1993) lens, which reflects my belief in the process of lifelong development and the inherent human inclination towards growth and change.

Participants

A total of 180 participants completed the prescreening (part 1) survey. Of these, 130 were screened in and invited to take the second part of the survey. 108 of those invited from part one completed part two. Three participants were removed due to incomplete data (less than 70% of items completed). Participants were incarcerated at least once during their adolescence (age 18 or younger) and were all 18 or older at the time of data collection. Participants were also required to currently be living in the community (as opposed to currently being incarcerated) at the time of data collection. There are no exclusion criteria based on number of separate instances of incarceration, type of offense, or length of incarceration. There is no limit based on gender identity, age, or other identifying variables for participation in the study apart from the minimum age to participate (18 years), currently living in the community, and needing to have been incarcerated at least one time during adolescence.

Table 3.1 provides demographic data on the survey respondents. Of the 105 total participants included in final analyses, 77.1% identified as male ($n = 81$), 20.9% identified as female ($n = 22$), and 1.9% identified as transgender or nonbinary ($n = 2$). The mean age for participants was 34.91 years ($sd = 10.72$). In terms of race and ethnicity, 25.7% of participants identified as Black ($n = 27$), 31.4% identified as Hispanic or Latinx ($n = 33$), 25.7% identified as White ($n = 27$), 10.5% identified as multiracial ($n = 11$), 3.8% identified as American Indian or Alaska Native ($n = 4$), and 0% ($n = 0$) identified as Asian American or Pacific Islander. The majority of participants (53.3%) reported their highest level of education as college ($n = 56$), with 34.3% reporting high school ($n = 36$), 7.6% reporting an advanced degree ($n = 8$), and 3.8% reporting middle school ($n = 4$). For marital status, 42.9% of participants reported they were single and not dating ($n = 45$), 32.4% reported they were in a relationship and not married ($n = 34$), and 21.9% reported they were married ($n = 23$). 79% of respondents reported they are

employed ($n = 83$) and 19% reported they are not employed ($n = 20$). For religious or spiritual

identity, 26.7% of participants identified as religious only ($n = 28$), 25.7% identified as spiritual

only ($n = 27$), 21.9% identified as both religious and spiritual ($n = 23$), and 20% identified as

neither religious nor spiritual ($n = 21$). Regarding geographic region, 57.1% of respondents

reported their current geographic region as the American West, ($n = 60$), 28.6% reported the

Midwest ($n = 30$), 6.7% reported the Northeast ($n = 7$), 3.8% reported the Southeast ($n = 4$), and

2.8% reported the Southwest ($n = 3$). For statistics regarding other demographic variables, please

see Table 3.1.

The majority of participants (39.2%) reported that the first offense for which they were

adjudicated was a property offense ($n = 40$), followed by 34.3% for a person offense ($n = 35$),

14.7% for a drug offense ($n = 15$), and 11.8% for an other offense ($n = 12$). The mean number of

charges faced as a juvenile was 3.31 ($sd = 3.41$) and the mean number of charges faced as an

adult was 6.63 ($sd = 11.72$). The mean number of total months spent incarcerated as a juvenile

was 23.81 ($sd = 36.77$) and the mean number of total months spent incarcerated as an adult was

91.18 ($sd = 105.32$). The mean age at first incarceration was 14.33 years ($sd = 2.67$). The mean

number of months spent incarcerated for the first offense was 21.32 ($sd = 54.59$). The mean

number of separate times spent incarcerated as a juvenile was 3.94 ($sd = 5.16$).

Table 3.1. Demographic Characteristics for Participants

Demographic Characteristics	n(%)	M(*sd)*
Gender		
Male	81(77.1%)	
Female	22(20.9%)	
Trans/Nonbinary	2(1.9%)	
Other	0(0%)	
Highest Level of Education		
Middle School	4(3.8%)	
High School	36(34.3%)	
College	56(53.3%)	
Advanced Degree	8(7.6%)	
Race/Ethnicity		
Asian American	0(0%)	
Black	27(25.7%)	
Hispanic or Latinx	33(31.4%)	
White	27(25.7%)	
Multiracial	11(10.5%)	
American Indian or Alaska Native	4(3.8%)	
Type of First Offense for which Adjudicated		
Person	35(34.3)	
Property	40(39.2%)	
Drug	15(14.7%)	
Other	12(11.8%)	
Marital Status		
Single – Not Dating	45(42.9%)	
In a Relationship – Not Married	34(32.4%)	
Married	23(21.9%)	
Current Employment Status		
Employed	83(79%)	
Not Employed	20(19%)	
Perceived Childhood Social Class		
Lower Class	38(36.2%)	
Working Class	19(18.1%)	
Lower-Middle Class	16(15.2%)	
Middle Class	23(21.9%)	
Upper-Middle Class	4(3.8%)	
Upper Class	0(0%)	
Perceived Current Social Class		
Lower Class	21(20%)	
Working Class	35(33.3%)	
Lower-Middle Class	11(10.5%)	
Middle Class	28(26.7%)	
Upper-Middle Class	4(3.8%)	
Upper Class	3()	

Combined Annual Household Income
    $0-19,999   26(2.9%)
    $20,000-39,999   25(23.8%)
    $40,000-59,999   18(17.1%)
    $60,000-79,999   7(6.7%)
    $80,000-99,999   7(6.7%)
    $100,000-119,999   6(5.7%)
    $120,000-139,999   2(1.9%)
    $140,000-159,999   1(0.9%)
    $160,000-179,999   2(1.9%)
    $180,000-199,999   1(0.9%)
    $200,000 and above   3(2.8%)
Religious or Spiritual Identity
    Religious   28(26.7%)
    Spiritual   27(25.7%)
    Both Religious and Spiritual   23(21.9%)
    Neither Religious nor Spiritual   21(20%)
Geographic Region
    West   60(57.1%)
    Southwest   3(2.8%)
    Southeast   4(3.8%)
    Midwest   30(28.6%)
    Northeast   7(6.7%)
Number of Charges (Juvenile)   3.31(3.41)
Number of Charges (Adult)   6.63(11.72)
Total Number of Months Incarcerated (Juvenile)   23.81(36.77)
Total Number of Months Incarcerated (Adult)   91.18(105.32)
Current Age   34.91(10.72)
Age at first incarceration   14.33(2.67)
Time in Months Spent Incarcerated for First Offense   21.32(54.59)
Number of Separate Times Incarcerated (Juvenile)   3.94(5.16)
Average Number of Hours Worked/Week   36.34(13.71)

Procedure

Participants were recruited through various agencies and organizations that have direct contact with individuals who experienced incarceration as minors. Parole officers, public defenders, college counselors, and employees of non-profit organizations were contacted and asked to send out recruitment materials to individuals who were incarcerated as minors. Some participants were recruited via snowballing method where initial respondents in this study referred additional respondents to complete the study survey (Biernacki & Waldorf, 1981). There is no geographical restriction placed on recruitment of study participants beyond that they must be residents of the United States. Parole officers, public defenders, and employees of non-profits were contacted across state lines to increase the potential participant pool and to achieve diversity in geographically based experiences.

This survey has been approved by the University of Wisconsin—Madison Institutional Review Board (UW-Madison IRB), and was later reviewed by employees of the Placer County Youth Empowerment Support (YES) Program. Prior to completion of this proposal, I contacted the program manager of the YES program, to share thoughts about this study and ask for her help in recruiting study participants. She agreed to help recruit participants for the study and asked to review the survey before sending it out to the young adults with whom she works. Of the many things we discussed during the development phase of the study proposal, one top priority for both of us was preventing harm and potential retraumatization through collection of this data. Following approval by the UW-Madison IRB and the YES program, the survey was sent through Qualtrics to the above listed contact persons via email explaining the purpose of the study and the approximate length of time to complete the survey.

The survey asked participants to respond to items from three states of mind (see Table 3.2). For Part A of the survey, participants were asked to put themselves "in the state of mind they were in before being arrested/interacting with the juvenile justice system/being determined guilty of a crime" and to respond retrospectively to questions from that perspective. For Part B, participants were asked to put themselves "in the state of mind they were in while incarcerated in a facility as a juvenile for the first time" and to respond retrospectively to questions from that perspective. For Part C of the survey, participants were asked to "respond as you feel right now, after having been released from incarceration." The survey took, on average, approximately 30-45 minutes to complete. Potential participants were informed that the survey was completely voluntary, that they would be compensated with a $20 Amazon gift card for completing the survey, and that they would provide consent before beginning the survey. Participants read the consent statement at the beginning of the survey and were informed that, by proceeding with the survey, they were providing their consent to participate.

When data collection began in April 2021, there was a rapid response rate (over 2,000 responses overnight). Upon review of this data, it became clear that much or all of this data was fraudulent and/or generated by internet "bots." The study was paused pending review of the existing procedures. All of the existing data was thrown out, and respondents received an email explaining what had happened and inviting them to retake the survey in a new format that was designed to protect against fraudulent responses. The new format included a two-part survey, where part one was a brief screening survey to assess for 1) if participants were real human respondents (and not bots), and 2) if participants had genuinely been justice-involved. Implementation of the new procedure began in August 2021.

Many of the hypotheses in this study are tests of bivariate relationships between variables. Therefore, a minimum $N = 84$ was expected with an ultimate goal of reaching 150-200 participants to increase the statistical power and generalizability of the findings. However, an important feature of this study is the cluster analysis which is not necessarily based on statistical power. As discussed in more detail below, recruitment for this population proved difficult, and by the close of data collection there were 105 complete responses used in the analysis.

Table 3.2. Measures used at each survey time point[a].

Part A	Part B	Part C
IES		IES
MLQ		MLQ
SWLS	SWLS	SWLS
ECR-RS		ECR-RS
EOD	EOD	
		AI
		PANAS
		Brief COPE

Table includes the Interpersonal Exploitativeness Scale (IES), Meaning in Life Questionnaire (MLQ), Satisfaction with Life Scale (SWLS), Experiences in Close Relationships-Relationships Structure (ECR-RS), Experiences of Discrimination (EOD, adapted), Aspiration Index (AI), Positive and Negative Affect Schedule (PANAS), and the Brief COPE.
[a]Part A includes questions based on the participant's state of mind pre-incarceration, Part B asks questions based on the participant's state of mind during first incarceration, and Part C asks questions based on the participant's state of mind at the time of data collection.

Measures

Demographic questionnaire

Basic demographic information was collected, including age, gender, race/ethnicity, highest level of education obtained, marital status, employment status, current household income, perceived social class in childhood, perceived current social class, and religion/spirituality. For a complete list of demographic information collected, please see Appendix A. Additionally, basic descriptive data about participants' experiences in the juvenile justice system was also collected. These questions included age at first incarceration, number of juvenile charges, number of adult charges, whether participants were represented by a private or public defender, length of time spent incarcerated, number of separate times incarcerated, approximate date of most recent incarceration, and approximate date of release from most recent incarceration. For a complete list of data collected regarding participants' experiences in the juvenile justice system, see Appendix B.

The Interpersonal Exploitativeness Scale (IES)

The Interpersonal Exploitativeness Scale is a 6-item measure designed to assess exploitativeness, or benefitting at the expense of others (Brunell et al., 2013). This measure was used to assess antisocial personality characteristics, traits, and behaviors both prior to and during incarceration. Exploitativeness is considered a hallmark characteristic of antisocial personality disorder, psychopathy and, to a slightly lesser extent, conduct disorder (American Psychiatric Association, 2013; Hare, 1990; Neumann et al., 2015). Participants were asked to report how much they agree or disagree with six statements using a 1 to 7 scale, where 1 was "Strongly Disagree," 2 was "Disagree," 3 was "Slightly Disagree," 4 was "Neither Agree nor Disagree," 5 was "Slightly Agree," 6 was "Agree," and 7 was "Strongly Agree." Items include statements such as "It doesn't bother me to benefit at someone else's expense" and "Vulnerable people are fair game." For a complete list of items from the IES, see Appendix C.

Brunell et al. (2013) found the IES was positively associated with measures of narcissism, including the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), the Pathological Narcissism Inventory (PNI; Pincus et al., 2009), and each of these measures' respective subscales of exploitativeness and entitlement. The 6-item IES was found to fit the intended one-factor model, which accounted for 79.8% of the variance and yielded a Cronbach's alpha of 0.87. The fit of the one-factor 6-item scale was confirmed through confirmatory factor analysis indicating acceptable fit (CFI = 0.98; Mueller & Hancock, 2008). The factor structure of the IES was further supported in a follow-up study by Brunell and Buelow (2018) who found factor loadings ranged from 0.675 to 0.904.

Meaning in Life Questionnaire (MLQ)

The Meaning in Life Questionnaire is a 10-item questionnaire aimed at assessing two dimensions of meaning: the search for meaning (the degree to which participants are actively striving to find meaning in life) and presence of meaning (how much participants feel a sense of meaning in their lives; Steger et al., 2006). Participants were given the instructions: "Please take a moment to think about what made your life and existence feel important and significant to you" twice: once ending in "before your involvement with the juvenile justice system" and again ending in "since you have been released from incarceration." Participants were then asked to respond to 10 items on a 1 to 7 scale, where 1 = "Absolutely Untrue," 2 = "Mostly Untrue," 3 = "Somewhat Untrue," 4 = Can't Say True or False," 5 = Somewhat True," 6 = "Mostly True," and 7 = "Absolutely True." Items can be analyzed to find Search for Meaning and Presence of Meaning subscale scores as well as a total score. For a complete list of items, please refer to Appendix D.

Steger et al. (2006) reported expected convergent and discriminant validity for the MLQ subscales in their initial validation study. Furthermore, Steger and Kashdan (2007) found relative stability in test-retest scores for the MLQ for one year (total score $r_{xx} = 0.41$) and found the MLQ measures distinct constructs from the Satisfaction with Life Scale (Diener et al., 1985). Steger and Shin (2010) confirmed the factor structure of the MLQ and reported that the two five-item subscales rendered internal consistency coefficients above $\alpha = .80$ across multiple samples. They further reported that the MLQ demonstrated adequate convergent validity, measured by a one-month test-retest and informant report, and discriminant validity when compared to life satisfaction, optimism, self-esteem, and social desirability.

Satisfaction with Life Scale (SWLS)

The Satisfaction with Life Scale is a brief, 5-item questionnaire designed to measure global life satisfaction (Diener et al., 1985). The SWLS was designed to measure life satisfaction as a "cognitive-judgmental process" (Diener et al., 1985, p. 71) rather than more affective aspects of life satisfaction. The instructions for the SWLS ask participants to indicate their agreement with each of the five items using a 1-7 scale where 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Slightly Disagree," 4 = "Neither Agree nor Disagree," 5 = "Slightly Agree," 6 = "Agree," and 7 = "Strongly Agree." Items include statements such as "In most ways my life is close to ideal" and "I am satisfied with my life." For a complete list of items, please see Appendix E. Participants in this study were asked to rate their agreement with the items from three different frames of mind: based on how they felt before incarceration, based on how they felt during incarceration, and based on how they felt at the time of survey completion after release from incarceration.

The SWLS yields a total score from totaling all the items where higher scores indicate higher life satisfaction (Diener et al., 1985). In the initial development and validation studies of the SWLS, Diener et al. (1985) found a two-month test-rest correlation coefficient of .82 and an internal consistency alpha of .87 in a sample of undergraduate students. The authors also found that the items loaded onto a single factor which accounted for 66% of the variance in this sample. Further, Diener at al. found the SWLS demonstrated moderately strong correlations with other measures of subjective well-being, with r ranging from .58 to .75. The SWLS was also found to correlate with interviewer estimates of life satisfaction based on the Life Satisfaction Index (Adams, 1969) in a sample of geriatric participants.

The Experiences in Close Relationships-Relationships Structure Questionnaire (ECR-RS)

The Experiences in Close Relationships-Relationships Structure Questionnaire was designed as a response to the authors' complaints that most attachment measures are too ambiguous or too narrow, contain too many items, and do not allow for the assessment of within-person variation across relational contexts (Fraley, Heffernan, et al., 2011). The ECR-RS is a derivation of the Experiences in Close Relationships-Revised (ECR-R; Fraley et al., 2000) designed to be a brief measure of attachment-related avoidance and attachment-related anxiety in each of four relationship types: with father, mother, best friend, and romantic partner. Attachment-related anxiety is understood as the extent to which the participant worries that they might be rejected by the attachment figure, and attachment-related avoidance represents participants' comfort or discomfort with closeness and dependency on others (Fraley, Heffernan et al., 2011; Fraley, Vicary, et al., 2011). Individuals who are more prototypically secure in their attachment style tend to score lower on both of these dimensions.

For the purpose of this study, participants were asked to complete the ECR-RS from two states of mind: once based on how they felt before incarceration, and once how they feel at the time of survey completion, after release from incarceration. For the before-incarceration completion of the ECR-RS, participants were asked to answer the questions "about the person with whom you were closest while growing up (e.g., mother, father, grandparent, guardian, etc.)" and to identify that person on the survey. For the post-release completion of the ECR-RS, participants were asked to answer the questions "about whoever you are closest with now (e.g., best friend, romantic partner, parent, etc.)" and to identify that person on the survey. Examples of items include "I usually discuss my problems and concern with this person" and "I worry that this person won't care about me." For a complete list of items, please see Appendix F.

The ECR-RS is a 9-item measure where, for each item, participants were asked to rate their agreement on a 1-7 scale where 1 = "Strongly Disagree" and 7 = "Strongly Agree." In the initial factor analysis of the ECR-RS, Fraley, Heffernan, et al. (2011) found the items designed to measure avoidance and anxiety each has moderate to strong loadings onto their respective factors. They also found that the alpha reliability estimates of scores from the initial study were comparable to scores derived from the original Experiences in Close Relationships (Brennan et al., 1998) and ECR-R (Fraley et al., 2000) scales, suggesting the ECR-RS taps into the same constructs with fewer items. Further, the composite scores for each attachment-related anxiety and attachment-related avoidance yielded alpha reliability estimates above .80 (Fraley et al., 2011). Fraley et al. (2011) also discovered the correlations between attachment dimensions across relationships were relatively modest, suggesting higher fidelity may be achieved when assessing context-specific attachment rather than global or trait-like attachment.

The Experiences of Discrimination Measure (EOD, adapted)

The Experiences of Discrimination measure is a brief, self-report instrument designed to measure exposure to racial discrimination (Krieger et al., 2005). For the 9-item version of the measure, Cronbach's alphas were $\alpha = .74$ or higher and test-retest reliabilities for two to four weeks were .69 or higher. In the initial validation study of the measure, both a 7-item and 9-item version were tested and yielded similar results. Additionally, confirmatory factor analysis found factor loadings ranged from .47 to .72 and factor loadings from a differential item functioning model for individual items ranged from .49 to .73. Both of these findings demonstrate that experiences of discrimination in one situation implies experiences of discrimination more globally. This suggests that by assessing for a selection of situations and interactions where discrimination may occur at each time point, general, we can extrapolate participants' general, global experiences of discrimination across situations at each time point.

The measure has been adapted for use in this study in a number of ways. First, the measure was used at two time points in the study, both retrospective (before incarceration and during incarceration). For each time points, participants were asked to indicate how often they had experienced discrimination in each of the situations listed, where 0 is "never," 1 is "once," 2.5 is "2-3 times," and 5 is "4 or more times." Total scores resulted from summing all items. For the before adjudication time point, participants were asked about situations that would have been common in adolescence generally (e.g., "at school," "at work," and "at the doctor or getting medical care."). For the during incarceration time point, participants were asked about situations that would have been common in an institutional setting (e.g., "with your attorney," "with your parole or probation officer," and "from your peers in the treatment/rehabilitation center where you were incarcerated."). For a full list of items, please see Appendix G.

The second way this measure has been adapted is that we opened up experiences of discrimination to whatever identity variable(s) is most salient for the participants. Instead of asking only about experiences of racial and/or ethnic discrimination only, participants are asked to identify every identity variable for which they have experienced discrimination.

Aspiration Index (AI)

The Aspiration Index is a survey designed to assess individual goals (Kasser, 2019; Kasser & Ryan, 1993). Participants are presented with a list of possible aspirations and are asked to rate on a 1-7 scale, where 1 = "Not at all" and 7 = "Extremely," how important each aspiration has been to them in the past month. Each of these aspirations are considered to fall under 11 domains: affiliation, community feeling, conformity, financial success, hedonism, image, physical health, popularity, safety, self-acceptance, and spirituality (Kasser, 2019). Additionally, these domains have been grouped into intrinsic (growth and actualization oriented, congruent with needs for relatedness and autonomy) and extrinsic (oriented around the approval of others, a means to an end) categories (Grouzet et al., 2005; Kasser & Ryan, 1996). According to self-determination theory, intrinsic goals based on relatedness, autonomy, and competence are considered essential for psychological growth (Deci & Ryan, 2000; Kasser, 2002). Evidence confirming these two clusters of intrinsic and extrinsic aspirations has been confirmed by other researchers in different cultural contexts (Grouzet et al., 2005; Schmuck et al., 2000).

A higher prioritization of intrinsic goals compared to extrinsic goals has been associated with more positive outcomes, including increased psychological and physical health (Kasser et al., 2014; Kasser & Ryan, 1996; Niemiec et al., 2009), enhanced learning and persistence (Vansteenkiste et al., 2006; Vansteenkiste et al., 2009), and greater self-determination (Sheldon, 2005). In Grouzet et al. (2005)'s original validation of their 11-domain version of the AI, they

found acceptable internal consistency as alpha reliability averages across domains ranged from .62 to .90 across 15 countries. Grouzet et al. (2005) found strong support for the 11-domain factor structure (SRMR = .050; RMSEA = .045 (90% CI: .044; .046).

The original version of the AI contains only seven domains (Affiliation, Attractive Appearance, Community Feeling, Financial Success, Physical Fitness, Self-acceptance, and Social Recognition) across 32 items (Kasser & Ryan, 1996). The full-length 11-domain version of the AI popularized by Grouzet et al. (2005) contains 57 items. In this study, a shorter version of the AI with only three items in each of the eleven domains was used (Kasser et al., 2014). This version was validated on a sample of adolescents and uses more simplified language compared to earlier versions of the AI. For the purpose of this study, items in the Hedonism and Spirituality domains were removed because they do not map onto the intrinsic and extrinsic categories which were used in the analyses. Therefore, the total number of items used for the AI in this study is 26. Examples of items include "People will show affection to me, and I will to them," and "I will have a job that pays well." For a complete list of items, please see Appendix H.

Kasser (2019) describes the AI as having no cutoff points for determining if an individual has an intrinsic or extrinsic based value system. Rather, several options are given for how to draw meaningful results from AI scores. The current study utilized participants' composite intrinsic values and extrinsic values scores. Kasser and Ryan (1996) found support for the factor structure for distinct intrinsic and extrinsic value subscales in two studies, one with a sample of 100 adults and the other with 192 undergraduate students. They further found that intrinsic subscale scores were positively associated with well-being and self-actualization and negatively associated with distress, depression and narcissism. Extrinsic subscale scores were positively associated with distress, depression, and narcissism and negatively associated with well-being

and self-actualization. This two-factor structure has been replicated in multiple cultures,

including Germany (Schmuck et al., 2000), South Korea (Kim et al., 2003), and Russia (Ryan et

al., 1999). Kasser and Ryan (1996)'s original alpha reliabilities for these factor analysis studies

ranged from $\alpha = .59$ to .87 in the adult sample and $\alpha = .72$ to .89 in the undergraduate sample. In

two samples of religious undergraduate students ($N = 540$ and $N = 485$), Steffen (2014) found

Cronbach's alphas for the intrinsic subscale to range from $\alpha = .86$ to .88 and for the extrinsic

subscale to range from $\alpha = .89$ to .90. Similarly, in a Spanish sample of over 2,000 adults, Otero-

López and Villardefrancos (2015) found overall alpha reliabilities for the intrinsic and extrinsic

subscales to be $\alpha = .87$ and $\alpha = .89$, respectively.

The Positive and Negative Affect Schedule (PANAS)

The PANAS is a brief, self-report measure comprised of one 10-item positive affect scale

and one 10-item negative affect scale (Watson et al., 1988). Positive affect (PA) measures a

person's degree of energy, enthusiasm, and concentration, and negative affect (NA) measures a

person's level of distress, anger, or nervousness. Participants are asked to indicate the extent to

which they had experienced each item on the PANAS over the past week on a 5-point rating

scale where 0 is "very slightly or not at all," 3 is "moderately," and 5 is "very much." Items on

the PA subscale include "interested," "determined," and "inspired," and items on the NA

subscale include "afraid," "nervous," and "irritable." For a full list of items, please see Appendix

I.

Alpha reliabilities for the PA subscale range from $\alpha = .86$ to .90 and range from $\alpha = .84$

to .87 for the NA subscale in the initial validation study (Watson et al., 1988). When asked about

the extent to which participants had experienced each item over the past few weeks, 8-week test-

retest reliabilities were .47 for the PA scale and .47 for the NA scale. Confirmatory factor

analysis revealed that each the PA and NA scales correlated highly with their respective corresponding regression-based factor scores and yielded convergent correlations ranging from .89 to .95. The original PANAS and adapted versions of the PANAS have been validated in Romanian (Cotigă, 2012), Brazilian (Carvalho et al., 2013), Indian (Dahiya & Rangnekar, 2019), and French-Canadian samples (Gaudreau et al., 2006).

The Brief COPE

The COPE Scales are a "multidimensional coping inventory designed to assess the different ways in which people respond to stress" (Carver et al., 1989, p. 267). Examples of items from the COPE include "I take action to try to make the situation better" and "I pray or meditate." For a complete list of items, please see Appendix J. The developers of the COPE proposed 13 conceptually distinct scales of coping: Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Seeking Social Support for Instrumental Reasons, Seeking Social Support for Emotional Reasons, Positive Reinterpretation and Growth, Acceptance, Turning to Religion, Focus on and Venting of Emotions, Denial, Behavioral Disengagement, Mental Disengagement, and Alcohol-Drug Disengagement. Active Coping and Planning were both found to load onto one factor and Seeking Social Support for Instrumental Reasons and Seeking Social Support for Emotional Reasons were both found to load onto one factor. The original COPE contained 53 items with the instructions to participants to indicate what they generally do when they experience stressful events. Responses range from 1-4 where 1 = "I usually don't do this at all" and 4 = "I usually do this a lot."

In the initial development study, Carver et al. (1989) found the COPE had acceptable internal consistency (all but one $\alpha > .6$) and an eight-week test-retest reliability ranging from r_{xx} = .46 to r_{xx} = .86 for the different scales. The scales are not strongly intercorrelated, but were

found to cluster into theoretically adaptive strategies (Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Positive Reinterpretation and Growth, Seeking out Social Support (both reasons)) and theoretically "questionable" tendencies (Denial, Behavioral Disengagement, Mental Disengagement, Focus on and Venting of Emotions, Alcohol-Drug Disengagement). While Carver et al. (1989) proposed a four-factor structure for coping (task, cognitive, emotional, and avoidance) other researchers have failed to confirm this factor structure and have instead confirmed a three-factor structure (task-oriented, emotion-focused, and avoidance; Hasking & Oei, 2002; Ingledew et al., 1996; Lyne & Roger, 2000; Parker & Endler, 1992).

The Brief COPE was developed in response to the criticism of the COPE being too long (Carver, 1997). The Brief COPE uses 14 scales with two items per scale, totaling 28 items. The Restraint Coping scale was removed from the Brief COPE because it had "not proven to be of value in previous research" (p.94) and the Suppression of Competing Activities scale was removed because it had been found to be redundant with the Active Coping scale. Carver (1997) selected two items from each remaining scale based on which items had a high loading on the relevant factor in the original factor analyses (Carver et al., 1989) and the item's clarity based on previous studies using the original COPE. Further three of the original scales (Positive Reinterpretation and Growth, Focus on and Venting of Emotions, and Mental Disengagement) each became more narrowed in focused and were renamed (Positive Reframing, Venting, and Self-Distraction, respectively). A new scale, Self-Blame, was also added to the Brief COPE, on the basis that self-blame has been found to be a predictor of poor adjustment under stress (Bolger, 1990; Carver, 1997; McCrae & Costa, 1986). Exploratory factor analysis with the Brief COPE yielded a similar factor structure to the original COPE (Carver, 1997; Carver et al., 1989).

Additionally, internal consistencies for the Brief COPE scales were all above .50 (all but three had $\alpha > .60$).

Qualitative Measures

Due to the lack of research on meaning making and meanings made for individuals who were incarcerated as minors, a list of exploratory qualitative questions related to individual experiences of incarceration and responses to incarceration have also been included. For a full list of questions, please see Appendix K.

Data Analysis

Descriptive Analyses

Descriptive statistics, including means, standard deviations, ranges, and a matrix of correlations were calculated for all principal and demographic variables prior to testing the primary hypotheses. Coefficient alphas were calculated to estimate internal consistency reliability of all measures. Demographic items were included in the initial analyses to determine whether the variables acted as covariates. For analyses regarding missing data, I conducted an initial missing data analysis to determine the proportion of missing data overall and by respondent. Based on this, I determined the appropriate procedures for addressing missingness, consulting Enders (2010) for guidance.

Primary Analyses

The principal hypotheses were tested through a series of quantitative analyses. For all regression analyses, I reported the regression coefficient and 95% confidence intervals.

Hypothesis 1. *Several distinct recovery trajectories will emerge for this population. Trajectories will be traced over three time points: before adjudication, during incarceration, and post release.*

A cluster analysis of the SWLS at three time points (one current, two retrospective), was performed to examine whether respondents cluster into distinct trajectories. This analysis followed Hair and Black (2000)'s recommended guidelines for a six-step cluster analysis decision-making process. The goal of this analysis was to identify distinct clusters that demonstrate high internal homogeneity (within each cluster) and high external heterogeneity (between clusters). Step one is to identify the goal of the analysis, which for this study is to use longitudinal life satisfaction data to derive a taxonomy of response trajectories during the time before, during, and after incarceration. Step two is to decide on a research design, which in the present study involves collection of longitudinal retrospective data on the Satisfaction with Life Scale (SWLS; Diener et al., 1985). Step three is to acknowledge the limitations of the cluster analysis, including the sample's multicollinearity and representativeness. Step four is to derive the clusters from the data and assess the overall fit of the cluster model. For this step, a Euclidean distance is calculated to measure the similarity between each participant response. Euclidean distances are computed by determining the length of a straight line drawn between two objects, where smaller distances indicate greater similarity. Clusters are formed through a hierarchical procedure of identifying the two most similar responses and combining them into one cluster and repeating this step until all responses are combined into one cluster (repeating N-1 times). We used complete linkage clustering in this analysis, in which the distance between each pair of clusters is defined as the largest distance between any two points (one in each cluster). This method tends to create compact clusters (Adams, 2021). We determined the final number of clusters by a combination of statistical and theoretical criteria. We looked at the within-cluster sums of squares to identify the point where differentiating additional clusters resulted in smaller reduction of heterogeneity (i.e., flattening of the scree plot). Then we compared several nearby

cluster solutions to evaluate whether the added cluster in each comparison was (a) meaningfully different from existing clusters (i.e., a unique and interpretable SWLS trajectory) and (b) well-represented in our sample (i.e., non-trivial *n*). Step five is to interpret the clusters and step six is to validate the clusters and create a profile. Cluster analyses are descriptive and do not allow for inferences to be drawn from the sample and applied to the general population, and therefore should be considered exploratory (Hair & Black, 2000).

Hypothesis 2. *Certain pre-adjudication variables will predict group recovery trajectories, including attachment-related avoidance, attachment-related anxiety, search for meaning, achieved meaning, exploitativeness, and experiences of discrimination.*

To test the association between pre-adjudication variables and recovery trajectory clusters, I used an omnibus ANOVA (*F* test) with pairwise comparisons among group means when the *F* statistic was significant ($p < .05$). This method was selected because it aligns with the exploratory nature of the cluster analysis. The ANOVA, which typically treats the clusters as the independent variable and predicts the continuous dependent variable, reverses the hypothesized direction of causation in this study. This is because in these analyses, we are conceptualizing the Time 1 continuous variables as possible causes of the adjustment trajectories. For each of the predictor variables, we computed an *F* test of the differences between cluster means and, when the *F* statistic was significant, conducted pairwise comparisons among cluster means to better understand the pattern of these differences. This procedure was used to test whether each of the following Time 1 predictor variables predicted trajectory membership:

- Attachment-related avoidance (IV1; ECR-RS)

- Attachment-related anxiety (IV2; ECR-RS)

- Search for meaning (IV3; MLQs)

- Presence of meaning (IV4; MLQp)

- Exploitativeness (IV5; IES)

- Experiences of discrimination (IV6; EOD)

Hypothesis 3. *Recovery trajectories will predict certain post-release outcomes, including attachment-related avoidance and anxiety, search for meaning, achieved meaning, exploitativeness, intrinsic and extrinsic values, positive affect, negative affect, adaptive coping, and "questionable" coping.*

To test the association between recovery trajectory clusters and post-release outcome variables, a series of omnibus ANOVAs (*F* test) with pairwise comparisons among group means when the *F* statistic was significant (*p* < .05) were conducted. For each of the outcome variables, we performed an *F* test of the differences between cluster means and, when the *F* statistic was significant, conducted pairwise comparisons among cluster means to better understand the pattern of these differences. This procedure was used to test whether each of the following Time 3 outcome variables were predicted by trajectory membership:

- Attachment-related avoidance (DV1; ECR-RS)

- Attachment-related anxiety (DV2; ECR-RS)

- Search for meaning (DV3; MLQs)

- Presence of meaning (DV4; MLQp)

- Exploitativeness (DV5; IES)

- Total values score (DV6; AI)

- Positive affect (DV7; PANAS PA subscale)

- Negative affect (DV8; PANAS NA subscale)

- Adaptive coping (DV9; Brief COPE Adaptive subscale)

- "Questionable" coping (DV10; Brief COPE questionable subscale)

Hypothesis 4. *Pre-adjudication attachment-related avoidance and attachment-related anxiety will be negatively associated with post-release searching for meaning and achieved meaning.*

Two separate regression analyses were conducted, each regressing meaning making outcomes onto both attachment dimensions in one model. This was done to assess the effects of attachment-related avoidance while controlling for attachment-related anxiety and vice versa. The first analysis regressed post-release search for meaning (DV3; MLQ) onto both pre-adjudication attachment-related avoidance (IV1; ECR-RS) and attachment-related anxiety (IV2; ECR-RS), and the second regressed post-release achieved meaning (DV4; MLQ) onto both pre-adjudication attachment-related avoidance (IV1; ECR-RS) and attachment-related anxiety (IV2; ECR-RS).

Hypothesis 5. *Higher levels of post-release searching for meaning and achieved meaning will be associated with higher intrinsic values relative to extrinsic values.*

First, subscale scores were calculated by totaling the extrinsic values subscale and the intrinsic values subscale on the Aspiration Index. Then, a total score was calculated by subtracting the intrinsic values scale from the extrinsic values scale, such that positive total scores represent a more extrinsic values orientation, and negative total scores represent a more intrinsic values orientation. The hypothesis was tested via calculating Pearson's *r* between post-release search for meaning (DV3; MLQ) and total values score (IV7; AI) and post-release achieved meaning (DV4; MLQ) and total values score (IV7; AI).

Hypothesis 6. *Length of time elapsed since being released from incarceration will be positively associated with meanings made.*

The hypothesis was tested via calculating Pearson's *r* between post-release achieved meaning (DV4; MLQ) and time elapsed since release from incarceration (IV8).

Hypothesis 7. *Greater experiences of discrimination during incarceration will predict greater search for meaning post-release.*

The hypothesis was tested via calculating Pearson's *r* between post-release search for meaning (DV3; MLQ) and experiences of discrimination (IV9; EOD) during incarceration.

Qualitative Data

Due to the lack of research on the search for and finding of meaning in life for individuals who were incarcerated as juveniles, I have chosen to include a series of four exploratory qualitative questions I developed related to the study hypotheses. For the purpose of this dissertation, the qualitative data will be collected, coded for major themes, and used as supplementary in the analysis. Future studies will involve a more detailed qualitative analysis of the qualitative data collected.

Chapter 4: Results

Descriptive Analyses

Prior to conducting the primary hypotheses, three participants were removed due to providing incomplete responses (N = 105). Incomplete was defined as any participant who responded to less than 70% of the survey items. The majority of participants (N = 92) were missing fewer than 5% of the survey items. Items with the most missing responses were two qualitative items preceding the Experiences in Close Relationships Scale-Relationships Structure (ECR-RS, Fraley, Heffernan, et al., 2011) which asked participants to identify the relationship of the person to whom they felt closest, and two qualitive items preceding the adapted Experiences of Discrimination measure (EOD, Krieger et al., 2005) which asked participants to identify the identity for which they had been discriminated against. With two exceptions, items requesting numeric responses were missing for fewer than 10% of respondents. Because the Satisfaction with Life scale (SWLS; Diener et al., 1985) was a central variable of interest in the cluster analysis, respondents who did not complete the SWLS at all three time points were excluded, resulting in a final sample of N = 104.

Descriptive statistics were calculated for all principal variables, including means, standard deviations, and ranges, as well as a matrix of correlations. Additionally, coefficient alphas were calculated to estimate internal consistency reliability of all measures. See Table 4.1 for descriptive statistics for all principal variables, a matrix of correlations, and for internal coefficient alphas for each scale.

Table 4.1. Correlation matrix, alpha coefficients, and descriptive statistics for principal measures

	IESa	IESc	ECRAVa	ECRAVc	ECRAXa	ECRAXc	EODa	EODb	PAS	NAS	MLQpa	MLQpc	MLQsa	MLQsc	ADAP	QUEST	AITotal	SWLSa	SWLSb	SWLSc
IESa	1.00																			
IESc	**0.24**	1.00																		
ECRAVa	-0.05	**-0.20**	1.00																	
ECRAVc	-0.19	**0.26**	0.14	1.00																
ECRAXa	0.12	**0.33**	**0.41**	0.22	1.00															
ECRAXc	0.00	**0.48**	-0.10	**0.50**	**0.43**	1.00														
EODa	**-0.24**	-0.19	0.13	0.13	0.08	-0.08	1.00													
EODb	**-0.29**	**-0.24**	**0.22**	0.12	0.08	**-0.16**	**0.73**	1.00												
PAS	0.08	-0.11	-0.10	**-0.37**	-0.07	-0.15	-0.05	0.05	1.00											
NAS	-0.16	0.16	0.14	**0.20**	**0.31**	**0.27**	0.08	0.07	**-0.31**	1.00										
MLQpa	-0.13	**0.23**	**-0.24**	0.09	0.07	0.15	0.04	0.17	0.18	-0.02	1.00									
MLQpc	0.09	**-0.31**	0.01	**-0.43**	0.06	**-0.21**	-0.05	-0.07	**0.44**	**-0.31**	0.10	1.00								
MLQsa	**-0.22**	-0.06	0.09	0.06	-0.03	-0.10	**0.31**	**0.28**	-0.11	**0.20**	**0.19**	-0.15	1.00							
MLQsc	0.03	0.06	-0.06	-0.03	0.06	0.11	-0.02	-0.11	0.05	0.02	-0.07	0.11	0.05	1.00						
ADAP	0.00	-0.08	-0.15	**-0.22**	-0.09	**-0.19**	0.14	0.16	**0.36**	**-0.21**	**0.21**	**0.25**	0.13	0.08	1.00					
QUEST	-0.09	**0.35**	0.05	**0.40**	0.23	**0.33**	**0.23**	0.13	**-0.30**	**0.49**	0.07	**-0.45**	**0.23**	0.02	0.04	1.00				
AITotal	0.11	**0.44**	-0.09	0.15	**0.31**	**0.29**	-0.12	-0.19	-0.04	0.08	0.07	**-0.28**	-0.04	0.09	0.06	**0.38**	1.00			
SWLSa	-0.06	**0.37**	-0.18	0.14	**0.23**	**0.27**	-0.16	-0.11	0.01	0.13	**0.46**	-0.05	0.10	0.06	0.12	**0.20**	**0.40**	1.00		
SWLSb	-0.02	**0.32**	-0.14	**0.24**	0.03	**0.22**	-0.07	-0.01	0.01	**0.20**	**0.40**	-0.19	**0.20**	0.07	0.14	**0.33**	**0.31**	**0.69**	1.00	
SWLSc	0.10	-0.08	0.11	**-0.23**	**0.23**	-0.03	0.00	-0.06	**0.25**	-0.08	0.05	**0.47**	-0.01	0.00	**0.28**	-0.11	-0.02	**0.33**	**0.26**	1.00
Mean	4.1	2.2	3.82	2.30	3.47	2.84	2.43	2.49	3.84	2.16	2.96	5.60	4.92	5.50	3.40	2.41	-20.64	2.59	2.17	4.3
SD	1.75	1.54	1.74	1.120	2.09	1.78	1.04	1.03	0.78	0.92	1.48	1.29	1.45	1.27	0.48	0.71	16.92	1.32	1.24	1.41
α	.92	.94	.90	.80	.91	.90	.89	.89	.91	.92	.83	.88	.88	.85	.81	.84		.79	.84	.84

Note. IESa is the Interpersonal Exploitativeness Scale at time 1. IESc is the Interpersonal Exploitativeness Scale at time 3. ECRAVa is the Experiences in Close Relationships-Relationships Structure attachment avoidance subscale at time 1. ECRAVc is the Experiences in Close Relationships-Relationships Structure attachment avoidance subscale at time 3. ECRAXa is the Experiences in Close Relationships-Relationships Structure attachment anxiety subscale at time 1. ECRAXc is the Experiences in Close Relationships-Relationships Structure attachment anxiety subscale at time 3. EODa is the Experiences of Discrimination scale at time 1. EODb is the Experiences of Discrimination scale at time 2. PAS is the Positive Affect Scale at time 3. NAS is the Negative Affect Scale at time 3. MLQpa is the Meaning in Life Questionnaire presence of meaning subscale at time 1. MLQpc is the Meaning in Life Questionnaire presence of meaning subscale at time 3. MLQsa is the Meaning in Life Questionnaire search for meaning subscale at time 1. MLQsc is the Meaning in Life Questionnaire search for meaning subscale at time 3. ADAP is the Brief COPE adaptive coping subscale at time 3. QUEST is the Brief COPE questionable coping subscale at time 3. The AITotal is the Aspiration Index Total score at time 3. *N*'s ranged from 98 to105. Correlations in boldface are significant (p < .05).

Exploratory Analyses: Demographic Predictors of SWLS

Prior to conducting the principal analyses, exploratory analyses were conducted to determine whether there were significant differences in life satisfaction (SWLS) at three time points between demographic groups, including race, gender, level of education, current family income, current employment status, and religious status. Specifically, a series of one-way between subjects ANOVAs revealed that there were significant differences in SWLS scores at three time points between groups in terms of education level, childhood perceived social class, current perceived social class, and combined annual household income. Respondents reporting higher income and social class tended to report higher life satisfaction at all three time points. Those with higher educational levels reported higher life satisfaction at Time 3, but not at Times 1 and 2. There were no significant differences in life satisfaction by gender, race, or religion/spirituality. See Table 4.2 for a comparison of SWLS scores at three time points grouped by participants' demographic characteristics.

Table 4.2. SWLS for Each Demographic Group at 3 time points.

Demographic Variable	SWLSa (Time 1) (F, p) / ($M(sd)$)	SWLSb (Time 2) (F, p) / ($M(sd)$)	SWLSc (Time 3) (F, p) / ($M(sd)$)
Race/ Ethnicity	$F = 1.43$ ($p = .220$)	$F = 1.76$ ($p = .128$)	$F = 0.86$ ($p = .513$)
Black	2.57(1.59)	2.28(1.61)	3.99(1.50)
Hispanic or Latinx	2.67(1.14)	1.88(0.67)	4.31(1.27)
White	2.77(1.42)	2.45(1.39)	4.54(1.49)
Multiracial	2.00(0.99)	1.78(0.94)	4.40(1.45)
American Indian or Alaska Native	2.75(1.14)	3.00(1.66)	3.60(0.35)
Gender	$F = 1.28$ ($p = .283$)	$F = 2.43$ ($p = .093$)	$F = 0.86$ ($p = .428$)
Male	2.59(1.32)	2.18(1.20)	4.21(1.43)
Female	2.65(1.38)	2.20(1.40)	4.71(1.22)
Trans/Nonbinary	1.90(0.71)	1.20(0.28)	3.40(2.26)
Highest Level of Education	$F = 0.65$ ($p = .628$)	$F = 0.48$ ($p = .747$)	$F = 6.58$ ($p = .00$)
Middle School	2.45(1.52)	2.30(1.28)	2.45(1.31)a
High School	2.43(1.05)	2.27(1.14)	3.88(1.44)b
College	2.78(1.48)	2.13(1.36)	4.56(1.20)c
Advanced Degree	2.20(1.29)	1.98(1.00)	5.63(0.98)d
Type Offense for which First Adjudicated	$F = 0.39$ ($p = .757$)	$F = 0.38$ ($p = .769$)	$F = 0.65$ ($p = .588$)
Person	2.45(1.32)	1.95(1.13)	4.39(1.28)
Property	2.70(1.33)	2.28(1.17)	4.16(1.55)
Drug	2.45(1.27)	2.23(1.21)	4.29(1.42)
Other	2.67(1.73)	2.16(1.43)	4.27(1.16)
Marital Status	$F = 1.49$ ($p = 0.223$)	$F = 0.70$ ($p = 0.554$)	$F = 2.38$ ($p = 0.075$)
Single-Not Dating	2.30(1.20)	1.97(1.17)	4.03(1.46)
In a Relationship—Not Married	3.02(1.40)	2.48(1.38)	4.59(1.27)
Married	2.51(1.27)	2.02(1.08)	4.53(1.37)
Current Employment Status	$F = 0.22$ ($p = 0.802$)	$F = 0.34$ ($p = 0.711$)	$F = 1.77$ ($p = 0.176$)
Employed	2.51(1.29)	2.15(1.19)	4.37(1.39)
Not Employed	2.90(1.38)	2.20(1.42)	3.87(1.49)

Perceived Childhood Social Class	$F = 8.93$ ($p = 0.00$)	$F = 3.06$ ($p = 0.013$)	$F = 3.29$ ($p = 0.009$)
Lower Class	2.24(1.00)a	2.00(1.00)a	4.05(1.20)a
Working Class	2.71(1.26)b	2.48(1.26)b	3.92(1.51)a
Lower-Middle Class	1.90(0.62)a	1.69(0.68)ab	4.19(1.55)ab
Middle Class	3.39(1.53)bc	2.40(1.53)bc	5.13(1.18)b
Upper-Middle Class	3.70(2.64)c	2.75(2.71)bc	6.13(1.33)b
Perceived Current Social Class	$F = 3.91$ ($p = 0.002$)	$F = 3.41$ ($p = 0.004$)	$F = 5.01$ ($p = 0.00$)
Lower Class	2.41(1.07)a	2.17(1.03)a	4.01(1.38)a
Working Class	2.21(0.92)a	1.93(0.88)a	4.29(1.27)a
Lower-Middle Class	1.82(0.58)a	1.85(0.88)a	3.37(1.20)a
Middle Class	3.20(1.66)b	2.34(1.58)ab	4.57(1.29)b
Upper-Middle Class	3.25(1.25)ab	2.00(1.49)ab	6.05(1.17)bc
Upper Class	4.33(2.39)b	4.27(2.20)c	6.53(0.31)c
Combined Annual Household Income	$F = 3.59$ ($p = 0.005$)	$F = 2.00$ ($p = 0.085$)	$F = 4.64$ ($p = 0.000$)
$0-19,999	2.29(1.05)abc	1.94(1.01)	3.79(1.47)a
$20,000-39,999	1.97(0.99)b	1.83(0.79)	4.00(1.36)a
$40,000-59,999	2.88(1.43)ad	2.85(1.48)	4.31(1.27)ab
$60,000-99,999	3.31 (1.44)cd	2.43(1.36)	4.90(0.97)bc
$100,000-159,999	3.53(1.79)d	2.36(1.95)	5.62(1.02)c
$160,000+	2.70(1.40)abcd	1.73(0.99)	5.47(0.81)bc
Religious or Spiritual Identity	$F = 2.07$ ($p = 0.090$)	$F = 0.96$ ($p = 0.434$)	$F = 0.25$ ($p = 0.907$)
Religious	2.89(1.29)	2.29(1.29)	3.86(1.35)
Spiritual	2.46(1.42)	1.88(1.20)	4.64(1.21)
Both Religious and Spiritual	2.18(1.01)	1.86(0.68)	4.38(1.30)
Neither Religious nor Spiritual	2.69(1.52)	2.45(1.55)	4.57(1.63)
Geographic Region	$F = 0.38$ ($p = .826$)	$F = 0.32$ ($p = .866$)	$F = 0.19$ ($p = .943$)
West	2.42(1.19)	2.05(1.03)	4.37(1.34)
Southwest	2.87(1.03)	1.53(0.50)	4.27(1.01)
Southeast	2.35(0.87)	2.00(0.75)	4.35(1.10)
Midwest	2.58(1.38)	2.25(1.35)	4.08(1.50)
Northeast	2.97(0.93)	1.86(0.78)	3.60(1.36)

Note. SWLS is the Satisfaction with Life Scale. Time 1 is before first incarceration, Time 2 is during first incarceration, and Time 3 is the present time. Means in the same row that share a subscript do not differ significantly ($p < .05$). (degrees of freedom (*df*) for the F tests for the numerator is the number of categories minus 1; *df* for the denominator ranges from 91 to 105).

Principal Analyses

The principal hypotheses were tested through a series of quantitative analyses.

Hypothesis 1

Several distinct recovery trajectories will emerge for this population. Trajectories will be traced over three time points: before adjudication, during incarceration, and post release.

Exploratory analyses were conducted to determine whether responses on the SWLS at three time points clustered into discrete trajectories similar to those identified by Mancini et al. (2015) and Thomas (2021). SWLS was conceptualized as a measure of recovery over time, as participants rated their subjective level of life satisfaction at three time points: before they were incarcerated, during their first incarceration, and in the present. A total of 104 participants completed the SWLS at all three time points and were included in the trajectory analysis.

A cluster analysis of the SWLS at three time points (one current, two retrospective), was performed to examine whether respondents cluster into distinct trajectories. Cluster analysis was conducted using the "complete" linking method using the "hclust" function in R. In utilizing "complete" linkage clustering, each point is a cluster of its own at the beginning of the analysis. The clusters are sequentially combined into larger clusters until all points are joined into the same cluster. The cluster analysis was run for each a three-cluster, four-cluster, and five-cluster solution. We created a plot of within-group sum of squares (WSS) by the number of clusters. WSS reflects the average level of heterogeneity within clusters, which decreases as the number of clusters increases. In cluster analysis, the goal is to choose an optimal number of clusters that reduces within-cluster heterogeneity (so clusters constitute coherent trajectory groups) and is parsimonious (so clusters are not so numerous as to become difficult to differentiate). Upon examination, the bend in the WSS scree plot (Figure 4.1) in this analysis came after the five-

cluster solution, which is why we examined solutions up through a five-cluster solution. In reviewing the means of the different cluster solutions across three time points, the five-cluster solution appeared to be the best fit. See figure 4.2 for a dendrogram illustrating the five-cluster solution. A dendrogram visually depicts the hierarchical relationship between the participants where each color represents one of the five clusters.

Next, each cluster was interpreted and given a descriptive name. The clusters were designated Consistent Low Satisfaction (cluster 1, $n =23$), New Perspective (cluster 2, $n = 45$), Recovery (cluster 3, $n = 16$), Consistent Moderate Satisfaction (cluster 4, $n =17$), Consistent High Satisfaction (cluster 5, $n = 3$), and. The Consistent Low Satisfaction group reported low life satisfaction at all three time points that shifted negligibly. The Consistent Moderate Satisfaction group reported moderate ($M = 3.45$ across all three time points) life satisfaction at all three time points that shifted negligibly. The Consistent High Satisfaction group reported high life satisfaction at all three time points that shifted negligibly. The New Perspective group reported low life satisfaction before first incarceration, slightly lower life satisfaction during first incarceration, and significantly higher life satisfaction in the present. The Recovery group reported moderate life satisfaction before first incarceration, low life satisfaction during first incarceration, and returned to slightly above their time 1 life satisfaction in the present. In general, the trend for all participants is toward increasing life satisfaction over time. This trend is more pronounced for the New Perspective and Recovery groups and was not significant for the Consistent High Satisfaction group due to the small n in that cluster. See Table 4.3 and Figure 4.3 below which demonstrate the means of life satisfaction by cluster at the three time points.

Table 4.3. Means (and Standard Deviations) of Life Satisfaction by Cluster at 3 Time Points.

Cluster Name	T1	T2	T3	d [95% CI]
Consistent Low Satisfaction ($n = 23$)	1.97(0.77)	1.81(0.61)	2.36(0.71)	1.08[0.22, 1.95]
New Perspective ($n = 45$)	1.83(0.66)	1.56(0.60)	5.02(0.90)	3.08[2.21, 3.96]
Recovery ($n = 16$)	4.4(0.39)	2.51(1.37)	5.10(0.75)	1.33[0.62, 2.04]
Consistent Moderate Satisfaction ($n = 17$)	3.18(0.64)	3.34(0.78)	3.82(0.72)	0.98[-0.16, 2.12]
Consistent High Satisfaction ($n = 3$)	6.6(0.40)	6.33(0.64)	6.8(0.2)	0.5[-7.28, 8.28]

Note. Satisfaction was measured on a 1-7 scale. T1 is the time point just before first incarceration. T2 is during first incarceration as a juvenile. T3 is the present time. *d* represents the standardized mean change score from T1 to T3 for each cluster.

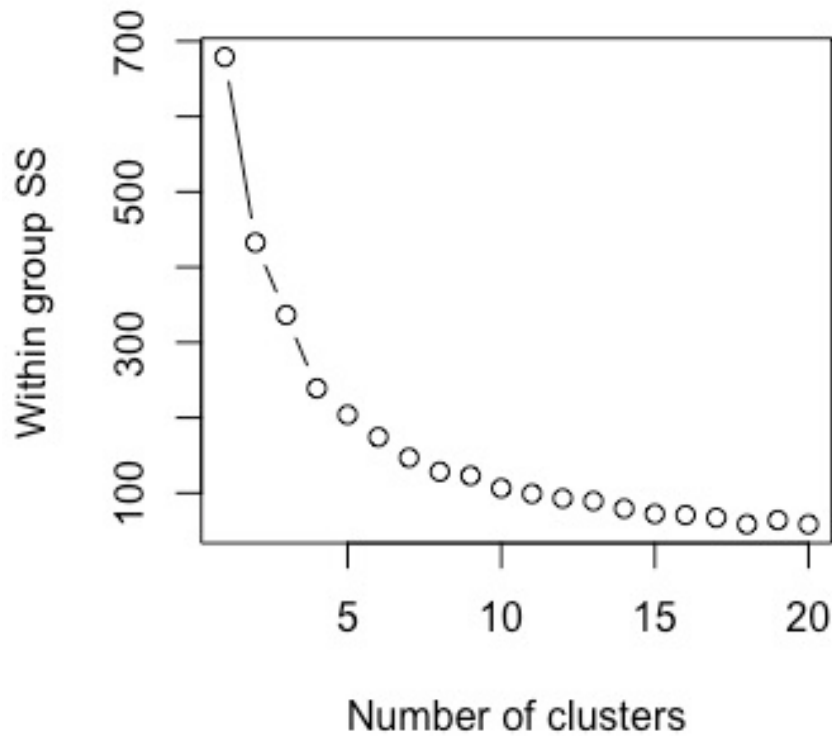Figure 4.1. Within Sum of Squares (WSS) Scree Plot

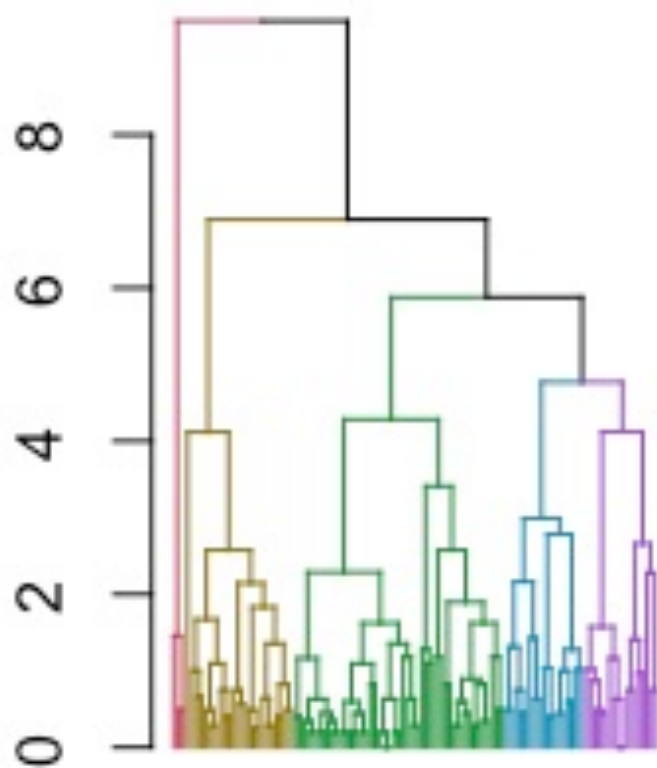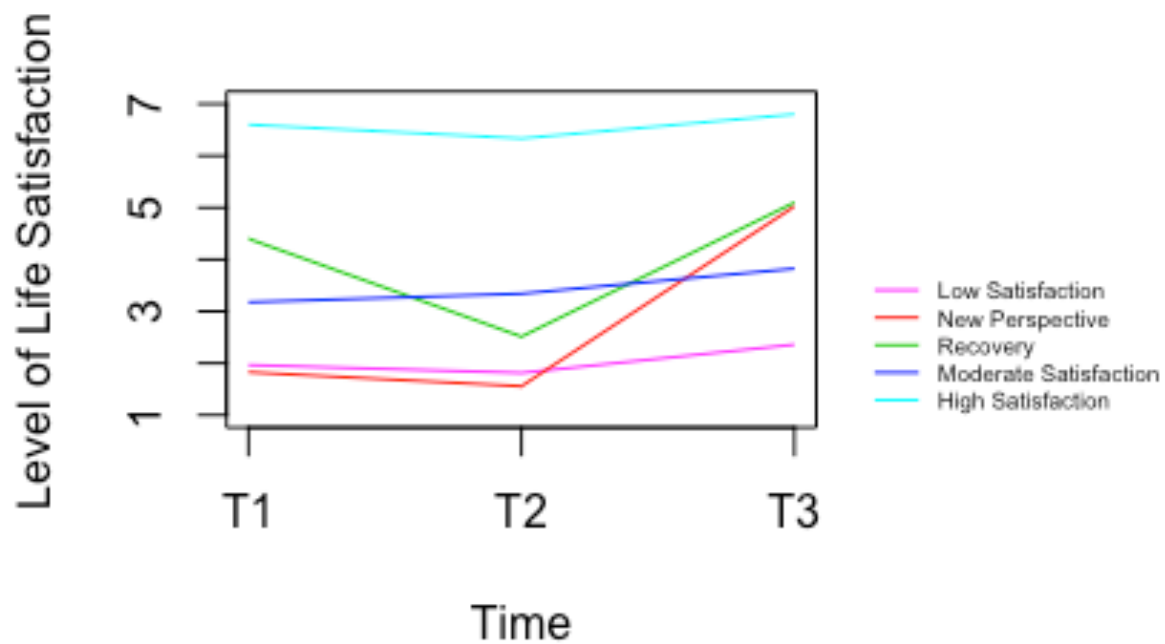Figure 4.2 Dendrogram of Five-Cluster Solution

Figure 4.3. Means of Life Satisfaction by Cluster at 3 Time Points.

Interestingly, clusters 1 and 2 both started with relatively low life satisfaction at Time 1 that was maintained at Time 2. However, at Time 3 these clusters differed somewhat substantially, with cluster 1 maintaining low life satisfaction at all three time points and cluster 2 experiencing an increase in life satisfaction at Time 3. A similar relationship, though not as dramatic, was observed in clusters 3 and 4: both started with relatively moderate life satisfaction at Time 1 and demonstrated different patterns at Times 2 and 3. Cluster 5 differed in that participants at all three time points reported extremely high life satisfaction, suggesting members of this cluster seemed somewhat impervious to what is generally considered to be the challenges of juvenile incarceration. We are curious about the factors that differentiate members in cluster 1 from those in cluster 2, as well as what differentiates members of cluster 3 from cluster 4. We are also curious if findings for cluster 5 would replicate in future studies, since the small number of participants in this cluster ($n = 3$) make it difficult to make generalizations. If this finding were replicated, we would hope to explore what factors differentiate people who maintain very positive thinking about their quality of life despite experiencing challenging circumstances.

Hypothesis 2

Certain pre-adjudication variables will predict group recovery trajectories, including attachment-related avoidance, attachment-related anxiety, search for meaning, achieved meaning, exploitativeness, and experiences of discrimination.

A series of one-way between subjects ANOVAs revealed there were no significant differences between clusters in levels of exploitativeness ($F(4, 99) = 0.52$, $p = .72$), attachment-related anxiety ($F(4, 95) = 1.26$, $p = .29$), attachment-related avoidance ($F(4, 97) = 2.12$, $p = .09$), experiences of discrimination ($F(4, 99) = 0.95$, $p = .44$), or searching for meaning ($F(4, 99) = 0.97$, $p = .43$) at time 1. There was no significant difference between clusters in

experiences of discrimination ($F(4, 99) = 0.83$, $p = .51$) at time 2. Cluster means for presence of meaning (MLQpa) did differ at Time 1 ($F(4, 99) = 7.49$, $p = .00$), with Clusters 1 and 2 (Consistent Low Satisfaction; New Perspective) reporting the lowest levels of meaning prior to incarceration. Clusters 3 and 4 (Recovery; Consistent Moderate Satisfaction) reported intermediate levels of meaning prior to incarceration. These patterns of the MLQpa means fairly closely tracked the cluster means on SWLS at Time 1 (Clusters 1 and 2 had the lowest life satisfaction at Time 1; Clusters 3 and 4 had intermediate levels, and Cluster 5 reported high life satisfaction at Time 1, as seen in Figure 4.2). Table 4.3 includes the means and standard deviations by cluster for all predictor variables in this analysis.

We additionally examined if any demographic variables predicted which trajectory a participant was likely to follow. Perceived social class in childhood, number of months incarcerated as a juvenile, and number of separate times incarcerated as a juvenile all differed significantly between clusters. Generally, Clusters 3 and 4 had higher childhood social class than the other clusters. Clusters 1 and 2 had a greater average number of total months spent incarcerated than the other clusters, and Cluster 1 had the greatest number of separate times incarcerated as a juvenile compared to the other clusters. Notably as well are the variables which did not differ significantly between groups: cluster membership was not significantly predicted by race/ethnicity, gender, education level, marital status, employment status, or income, among other variables. Please see Appendix L for a detailed description of differences in demographic variables between clusters.

Hypothesis 3

Recovery trajectories will predict certain post-release outcomes, including attachment-related avoidance and anxiety, search for meaning, achieved meaning, exploitativeness, intrinsic

and extrinsic values, positive affect, negative affect, adaptive coping, and "questionable"

coping.

A series of one-way between subjects ANOVAs revealed that there were significant

differences across clusters in levels of exploitativeness ($F(4, 98) = 4.85$, $p = .01$), attachment-

related avoidance *($F(4, 99) = 2.64$, $p = .04$)*, attachment-related anxiety *($F(4, 98) = 2.51$, p*

= .047), presence of meaning ($F(4, 99) = 11.38$, $p = .00$), positive affect ($F(4, 98) = 5.85$, *p*

$= .00$), adaptive coping ($F(4, 99) = 2.60$, $p = .04$), questionable coping ($F(4, 99) = 4.24$, $p = .00$),

and extrinsic versus intrinsic values orientation ($F(4, 95) = 3.83$, $p = .0$), at time 3. In general,

more positive outcomes at Time 3 were observed for participants in the New Perspective and

Recovery clusters and more negative outcomes were observed in the Consistent Low Satisfaction

and Consistent Moderate Satisfaction clusters. For example, participants in the New Perspective

and Recovery clusters reported not only greater life satisfaction at Time 3, but also greater

presence of meaning at Time 3 ($M =$ 6.26 and 5.98, respectively) than participants in the

Consistent Low Satisfaction and Consistent Moderate Satisfaction clusters (M = 4.73 and 4.74,

respectively). Cluster 5 (Consistent High Satisfaction) means were numerically largest for

positively-valenced outcomes, although comparisons with other groups were not statistically

significant given the low sample size ($n = 3$) for this cluster. This is a general finding, and the

actual patterns of mean comparisons differ somewhat for different outcomes. Please see Table

4.4 for a detailed description of significant findings regarding outcome variables at time 3.

We further examined whether any demographic variables after Time 1 predicted cluster

membership. Household income, current perceived social class, total months spent incarcerated

as an adult, and current geographical region all differed significantly between clusters.

Generally, Clusters 3 and 4 reported higher current social class and higher income than the other

clusters. Total months spent incarcerated as an adult was higher for Clusters 1 and 5 compared to the other clusters, although this difference was not statistically significant. Clusters 1 and 5 also had the greatest proportion of respondents from the West or Midwest compared to the other clusters, although this difference was not statistically significant. Please see Appendix L for a detailed description of differences in demographic variables between clusters.

Table 4.4. Means (and Standard Deviations) of all variables by Cluster at 3 Time Points

	Consistent Low Satisfaction (n = 23) M (sd)	New Perspective (n = 45) M (sd)	Recovery (n = 16) M (sd)	Consistent Moderate Satisfaction (n = 17) M (sd)	Consistent High Satisfaction (n = 3) M (sd)	F	p
			Predictor Variables: Times 1 & 2				
IESa	4.23 (1.25)	4.26 (2.08)	4.44 (1.52)	3.73(1.55)	3.46(1.98)	0.52	.722
ECRAVa	3.79 (1.87)	4.20 (1.87)	3.45 (1.68)	3.49(1.23)	2.56(0.79)	1.26	.290
ECRAXa	2.74 (1.77)	3.63 (2.28)	4.44 (1.82)	3.03(1.78)	4.78(3.29)	2.12	.085
EODa	2.45 (0.99)	2.59 (1.08)	2.04 (0.93)	2.29(1.05)	2.17(1.48)	0.95	.441
MLQpa	2.42 (1.32)$_a$	2.56 (1.49)$_a$	3.68 (1.19)$_b$	3.79(1.08)$_b$	5.60(1.40)$_c$	7.49	.000
MLQsa	4.84 (1.45)	4.77 (1.49)	4.78 (1.44)	5.39 (1.12)	5.87(1.96)	0.97	.429
EODb	2.56 (1.10)	2.59 (1.06)	2.06 (0.83)	2.46(1.07)	2.67(1.04)	0.83	.508
			Outcome Variables: Time 3				
IESc	2.41 (1.33)$_a$	1.60 (1.12)$_b$	3.00 (1.96)$_a$	2.61(1.55)$_a$	4.00(2.73)$_a$	4.85	.001
ECRAVc	2.60 (1.24)$_a$	1.97 (1.09)$_b$	2.15 (0.84)$_{ab}$	2.79(0.92)$_{ac}$	2.67(1.17)$_{abc}$	2.64	.038
ECRAXc	2.35 (1.32)$_a$	2.62 (1.77)$_b$	2.98 (1.97)$_{abc}$	3.47(1.74)$_{bcd}$	5.11(2.71)$_{cd}$	2.51	.047
MLQpc	4.73 (1.63)$_a$	6.26 (0.70)$_b$	5.98 (0.89)$_b$	4.74(1.13)$_{ab}$	6.07(0.83)$_b$	11.38	.000
MLQsc	5.55 (1.19)	5.52 (1.47)	5.04 (1.22)	5.70(0.80)	6.32(0.48)	0.95	.440
PAS	3.47 (0.93)$_a$	4.13 (0.55)$_b$	3.62 (0.82)$_{ac}$	3.70(0.61)$_{ac}$	4.87(0.15)$_{bc}$	5.85	.011
NAS	2.39 (0.87)	1.95 (0.89)	2.21 (0.95)	2.43 (0.96)	2.17 (1.36)	1.27	.287
ADAP	3.16 (0.51)$_a$	3.50 (0.40)$_b$	3.35 (0.43)$_{ab}$	3.46(0.60)$_b$	3.75(0.22)$_b$	2.60	.041
QUEST	2.56 (0.68)$_a$	2.18 (0.56)$_b$	2.33 (0.67)$_{ab}$	2.81(0.81)$_a$	3.20(1.18)$_a$	4.24	.003
AITotal	-20.68 (16.82)$_a$	-25.93 (16.96)$_a$	-10.34 (9.82)$_b$	-15.85(15.81)$_{ab}$	-6.47(15.97)$_{ab}$	3.83	.002

Note. Table includes the following predictor variables at Times 1 and 2: Interpersonal Exploitativeness Scale (IESa), Experiences in Close Relationships-Relationships Structure attachment avoidance subscale (ECRAVa) and attachment anxiety subscale (ECRAXa), Experiences of Discrimination (EODa; EODb adapted), Meaning in Life Questionnaire search for meaning subscale (MLQs_a) and presence of meaning subscale (MLQs_a). Table includes the following outcome variables at Time 3: Interpersonal Exploitativeness Scale (IESc), Experiences in Close Relationships-Relationships Structure attachment avoidance subscale (ECRAVc) and attachment anxiety subscale (ECRAXc), Meaning in Life Questionnaire search for meaning subscale (MLQs_c) and presence of meaning subscale (MLQs_c), Positive and Negative Affect Schedule positive affect subscale (PAS) and negative affect subscale (NAS), the Brief COPE "adaptive" coping subscale (ADAP) and "questionable" coping subscale (QUEST), and the Aspiration Index total score (AItotal).
Means in the same row that share a subscript do not differ significantly ($p < .05$). (degrees of freedom (*df*) for the *F* tests for the numerator is 4 for each row; *df* for the denominator ranges from 95 to 99).

Hypothesis 4

Pre-adjudication attachment-related avoidance and attachment-related anxiety will be negatively associated with post-release searching for meaning and achieved meaning.

Two separate regression analyses were conducted, each regressing meaning making outcomes onto both attachment dimensions in one model. This was done to assess the effects of attachment-related avoidance while controlling for attachment-related anxiety and vice versa. Time 1 attachment orientation did not significantly predict presence of meaning at Time 3, R^2=0.004, $F(2, 98) = 0.21$, $p = 0.81$; βs = .03[-0.18, 0.24] and .04[-0.17, 0.25] for attachment-related avoidance and anxiety, respectively. Time 1 attachment orientation also did not significantly predict the search for meaning at Time 3, $R^2 = 0.01$, $F(2, 98) = 0.61$, $p = 0.55$; βs = -.07[-0.28, 0.14] and .07[-0.14, 0.28] for attachment-related avoidance and anxiety, respectively.

Hypothesis 5

Higher levels of post-release searching for meaning and achieved meaning will be associated with higher intrinsic values relative to extrinsic values.

A total extrinsic values versus intrinsic values score was calculated for each participant by totaling the extrinsic values subscale and the intrinsic values subscale on the Aspiration Index. Then, a total score was calculated by subtracting the intrinsic values scale from the extrinsic values scale, such that positive total scores represent a more extrinsic values orientation, and negative total scores represent a more intrinsic values orientation. This hypothesis was partially supported: there was a small correlation between the presence of meaning at Time 3 and a more intrinsic than extrinsic values orientation ($r = -0.28$, 95% CI[-0.45, -0.09]). No correlation was observed between total values score and the search for meaning ($r = 0.09$, 95% CI[-0.11, 0.28]) at Time 3.

Hypothesis 6

Length of time elapsed since being released from incarceration will be positively associated with meanings made.

No relationship was observed between the amount of time elapsed since being released from incarceration and the level of meanings made in the present ($r = 0.09$, 95% CI[-0.10, 0.28]).

Hypothesis 7

Greater experiences of discrimination during incarceration will predict greater search for meaning post-release.

No relationship was observed between search for meaning at Time 3 and experiences of discrimination at Time 2 ($r = -0.11$, 95% CI[-0.30, 0.08]).

Qualitative Data

A full analysis of the qualitative data is beyond the scope of this study and qualitative findings will primarily be used in future research. However, a brief review of some qualitative findings allow for a more rich contextualization of the quantitative data, and will be reviewed here briefly.

Attachment Figures

Prior to completing the attachment-related questions at Time 1 and Time 3, participants were given the option to write in their relationship to the person for whom they were answering questions (romantic partner, parent, etc.). Of the 87 responses to this item at Time 1 (some respondents listed more than one primary attachment figure), 35.6% identified their mother as their primary attachment figure, 17.2% identified a grandparent, 14.9% indicated their father, 11.5% indicated a sibling, 11.5% indicated a friend, 3.4% indicated "family" or "parents," 2.3% indicated another extended family member, and 3.4% responded "no one." 71.3% of respondents

identified some kind of parental figure, which is fairly consistent with the attachment literature that identifies caregivers as the youth's primary attachment figure (Ainsworth, 1979; Bowlby, 1988).

Of the 85 responses to this item at Time 3, 37.6% identified a romantic partner as their primary attachment figure, 29.4% identified a close friend, 17.6% identified their mother, 8.2% identified a sibling, 4.8% identified an extended family member, and 2.4% identified their child. This a unique finding in light of traditional attachment research which tends to conceptualize attachment figures as parents or romantic partners and does not attend to the possibility of alternate attachment figures, especially in adulthood (Ainsworth, 1979; Bowlby, 1988; George et al., 1996; Hazan & Shaver, 1994).

Sources of Meaning

The third optional qualitative question asked, "How important is it for you to have a sense of meaning or purpose for your life? Can you share with us what types of experiences increase your sense of meaning or purpose?" 97.6% of respondents who answered this question identified a sense of meaning as being important to them. Of the 83 responses (some participants gave multiple responses), observed themes of what generates meaning included 27.5% for helping others, 26.5% for relationships, 15.7% through self-improvement or self-actualization, 9.6% through work or education, 9.6% through religion, 6% through wanting a different kind of life (from incarceration), and 6% through hobbies and interests. While not all participants responded to this question, those who did respond often shared rich descriptions of the varied ways they have found meaning in life and how this has impacted them.

Chapter 5: Discussion

This chapter discusses study findings in the context of existing literature on meaning making, adjustment, and coping with trauma. A brief summary of the study design is provided followed by a discussion of the results in context. Next, the study's limitations and suggestions for future research are discussed. The chapter concludes with implications for mental health providers working with at-risk, incarcerated, and formerly incarcerated youth as well as implications for policy reform.

Summary of the Current Study

The current study utilized a 182-item two-part online survey to examine the way individuals who experienced incarceration as youth have adjusted to and recovered from the experience of incarceration over time. While some areas in the United States are taking steps to reduce the number of youth who are incarcerated (National Center for Youth Law, 2022), the overwhelming national trend is for a greater proportion of youth who engage with the juvenile justice system to end up detained by that system (Hockenberry & Puzzanchera, 2021). Most of the literature concerning incarcerated youth focuses on risk factors for adjudication and recidivism, but historically, little has been known about the way youth respond to incarceration at a young age and how they make sense of their lives following incarceration. In a country where we incarcerate a higher rate of the population than any other country in the world (Gramlich, 2021), understanding the impacts of incarceration and ways to recover from incarceration are paramount if we hope for a society where people who experience incarceration can define themselves, and have the world define them, by parameters outside of their conviction history. Through understanding the different ways individuals recover from youth incarceration, the pre-incarceration predictors and post-incarceration outcomes of these recovery pathways, and

how meaning making impacts this timeline, this study can inform prevention, treatment, and policy efforts for justice-impacted youth.

This study had three main aims: 1) to investigate different patterns of responding to juvenile incarceration, based on self-perceived quality of life and operationalized as satisfaction with life; 2) to identify how formerly incarcerated youth cluster into trajectories based on how life satisfaction has changed or evolved at three time points (prior to incarceration, during incarceration, and in the present); 3) to examine predictors and outcomes of these adjustment patterns. A predictor and outcome of particular interest was meaning making, based on earlier empirical and theoretical work examining the role of meaning in making in recovery from trauma (Frankl, 2006; Park, 2010). Through identifying common trajectories of adaptation, and the factors that influence and are influenced by belonging to each of these trajectories, we can understand 1) common psychological and affective responses to incarceration, 2) which factors are associated with positive or negative adjustment following incarceration, and 3) how meaning making in particular is associated with adaptation in response to juvenile incarceration, and how meaning making can be explored as a potential factor in treatment for this population.

Discussion of Findings

Identification of Trajectories of Adaptation

One primary goal of this study was to determine if distinct trajectories of adaptation emerged for this population. Hypothesis 1 predicted that such trajectories would emerge, based on previous findings that distinct trajectories emerged in response to other challenging life events, such as loss (Bonanno et al., 2002), terrorist attacks (Bonanno et al., 2005), cancer (Deshields et al., 2006) and wrongful convictions (Thomas, 2021). This method was originally developed by Bonanno (2004) who identified four prototypical trajectories following the death of

a spouse. These trajectories are labeled Stable and Resilient Functioning, Elevated and Chronic Distress, Gradual Recovery, and Delayed Reaction. Bonanno's original study examined recovery following the trauma of loss. Subsequent studies replicated these trajectory findings, in samples of cancer patients (Fife, 1995; Kernan & Lepore, 2009; Park et al., 2008), sexual assault survivors (Koss & Figueredo, 2004), traumatic injury survivors (Bonanno et al., 2012; deRoon-Cassini et al., 2010), and natural disaster survivors (Norris, et al., 2009). However, no previous study has examined how individuals respond to juvenile incarceration, which has been conceptualized as traumatic based on the unique developmental vulnerabilities that define adolescence (Eriskon, 1950; Roisman et al., 2004; Sanders, 2013; Schulenberg et al., 2003; Schulenberg et al., 2004; Steinberg & Morris, 2001; Youniss et al., 1999) and the nature of incarceration more generally (Haney, 1997; 2003; Liebling & Maruna, 2013).

Rather than utilize the subjective measure of distress developed by Mancini et al. (2015), in the current study, participants responded to the Satisfaction with Life Scale (SWLS; Diener et al., 1985) regarding three time points: before first incarceration, during first incarceration, and at the present time. Responses to the SWLS at two retrospective and one current time point were scored and analyzed via cluster analysis to identify five distinct trajectories: Consistent Low Satisfaction, New Perspective, Recovery, Consistent Moderate Satisfaction, and Consistent High Satisfaction. The Consistent Low Satisfaction group reported low satisfaction with life at all three time points ($M = 1.97$, 1.81, and 2.36, respectively). The New Perspective group reported low life satisfaction before and during first incarceration, but significantly higher life satisfaction at present. The Recovery group reported moderate satisfaction before first incarceration, experienced a significant drop in satisfaction during incarceration, and recovered to slightly above their Time 1 life satisfaction at time 3. The Consistent Moderate Satisfaction group

reported moderate levels of life satisfaction at all three time points that slightly increased at each time point (M = 3.18, 3.34, and 3.82, respectively). The Consistent High Satisfaction group were similar in reporting high levels of life satisfaction (M = 6.6, 6.33, and 6.8, respectively) at all three time points. Of the five trajectories, the New Perspective group is the largest (n = 45) which suggests that, despite life satisfaction decreasing for all participants during incarceration, some participants respond to juvenile incarceration with resilience, and many find higher levels of life satisfaction following their incarceration.

Predictors of Trajectory Membership

Presence of the meaning at Time 1 (MLQpa) was the only significant predictor at Time 1 of trajectory membership. Participants in the Recovery (cluster 3), Consistent Moderate Satisfaction (cluster 4), and Consistent High Satisfaction (cluster 5) clusters reported significantly higher presence of meaning before first incarceration compared to those in the Consistent Low Satisfaction (cluster 1) and New Perspective (cluster 2) clusters. Drawing conclusions about the Consistent High Satisfaction cluster is challenging due to the small sample size (n = 3), therefore I will interpret this result for the other four clusters. This finding suggests that participants who felt a sense of meaning in their lives as adolescents before their first incarceration demonstrated greater resilience in response to juvenile incarceration compared to those who had less of a sense of meaning in their lives at Time 1. Participants in clusters 3, 4, and 5 demonstrated high life satisfaction at Time 3, which may indicate the protective quality of having a felt sense of meaning in adolescence over time, regardless of how life satisfaction decreased at Time 2. Contrastingly, although participants in the Consistent Low Satisfaction group reported lower meaning at Time 1 and lower life satisfaction at all three time points, those in the New Perspective group, who tended to report lower presence of meaning at Time 1,

reported high life satisfaction at Time 3. Additionally, the correlation between life satisfaction at Time 1 and presence of meaning at Time 1 is relatively large ($r = .46$), which implies some overlap among the constructs measured by the MLQ presence subscale and the SWLS. Therefore, it is not surprising that the two clusters that have low life satisfaction at Time 1 (Consistent Low Satisfaction and New Perspective) would also have low presence of meaning at Time 1. Overall, these results suggest that, although the presence of meaning at Time 1 appears protective for some participants, it was not required for all participants to demonstrate positive adjustment following juvenile incarceration.

What is also notable is that the other Time 1 and Time 2 variables, including exploitativeness, attachment avoidance, attachment anxiety, experiences of discrimination, and searching for meaning, did not predict trajectory membership. This suggests that the types of attachment relationships a person has before they are incarcerated as a juvenile do not significantly predict how they adjust to incarceration over time. This also suggests that experiencing discrimination prior to or during incarceration does not significantly predict adjustment to incarceration over time. Finally, the tendency to search for meaning in adolescence prior to experiencing juvenile incarceration does not significantly predict how a person adjusts to juvenile incarceration over time.

We also observed some differences in predictive demographic factors between clusters. Perceived social class in childhood was significantly lower in Clusters 1 and 2 and higher in Clusters 3 and 4. One of our primary curiosities in this study is why Clusters 1 and 2 start off at the same place in their adaptation trajectories but end up in different places at Time 3. We are similarly curious about why Clusters 3 and 4 are very similar at Time 1 but diverge by Time 3. For perceived social class in childhood, Clusters 1 and 2 do not differ significantly, suggesting

childhood social class does not differentiate those who recover following juvenile incarceration and those who do not. However, childhood social class is significantly different between Clusters 3 and 4, suggesting childhood social class may be predictive for those who begin at Time 1 with moderate life satisfaction and who then either maintain that life satisfaction or increase in life satisfaction by Time 3. Cluster 3 reported significantly higher childhood social class than Cluster 4. Based on this finding, it is possible that respondents followed the Recovery trajectory rather than the Consistent Moderate Satisfaction trajectory at least in part because of the higher social class they experienced in childhood.

Additionally, total months spent incarcerated as a juvenile and the number of separate times incarcerated as a juvenile also differed significantly between clusters. Total months incarcerated as a juvenile was higher in Clusters 1 and 2 than in Clusters 3 and 4. However, there were no significant differences between Clusters 1 and 2 or between Clusters 3 and 4. This suggests that total number of months spent incarcerated as a juvenile did not predict the likelihood of respondents following the Consistent Low Satisfaction vs. the New Perspective trajectories. This variable also did not predict the likelihood of respondents following the Recovery vs. the Consistent Moderate Satisfaction trajectories. Last, the number of separate times incarcerated as a juvenile differed significantly between clusters. Cluster 1 reported a significantly higher number of separate times incarcerated as a juvenile than Clusters 2, 3, or 4. Clusters 2, 3, and 4 did not differ significantly from one another. Thus, having been incarcerated as a juvenile a greater number of times appears to have predicted following the Consistent Low Satisfaction trajectory more than the other trajectories.

Outcomes of Trajectory Membership

Trajectory membership predicted nearly all Time 3 variables, including exploitativeness, attachment avoidance, attachment anxiety, presence of meaning, positive affect, adaptive coping, questionable coping, and extrinsic vs. intrinsic values orientation. The only Time 3 variables that were not significantly predicted by trajectory membership were the search for meaning and negative affect at Time 3.

Exploitative Thoughts. Participants in the New Perspective group reported significantly less exploitative thoughts at Time 3 compared to the other four clusters, suggesting that the apparent mindset shift they experienced as a result of incarceration reduced the degree to which they thought about manipulating others at Time 3. Exploitativeness scores for all clusters are relatively low and, moreover, are all lower at Time 3 compared to Time 1, except for the Consistent High Satisfaction group which demonstrated an increase in exploitativeness from Time 1 to Time 3.

Attachment. Attachment-related avoidance at Time 3 was highest in the Consistent Moderate Satisfaction and Consistent High Satisfaction groups, followed by the Consistent Low Satisfaction group. Those in the New Perspective and Recovery trajectories reported the lowest avoidance in close relationships at Time 3 relative to other clusters. Additionally, attachment-related anxiety at Time 3 was highest for the Recovery, Consistent Moderate Satisfaction, and Consistent High Satisfaction clusters. This suggests that participants in the New Perspective cluster demonstrate the greatest adjustment in terms of interpersonal relationships, as these respondents reported the lowest attachment-related avoidance and anxiety at Time 3 relative to other groups.

Meaning and Positive Affect. As with the Time 1 variables, the presence of meaning at Time 3 differed significantly between groups, with respondents in the Consistent Low

Satisfaction and Consistent Moderate Satisfaction clusters demonstrating lower presence of meaning compared to the other three groups. Members of the New Perspective, Recovery, and Consistent High Satisfaction groups all reported higher current presence of meaning and life satisfaction, suggesting a relationship between having meaning in life and feeling satisfied with life. Relatedly, positive affect at Time 3 was highest for the New Perspective and Consistent High Satisfaction groups and lowest for the Consistent Low Satisfaction group, which is consistent with these groups' Time 3 life satisfaction scores.

Coping. Regarding coping, the New Perspective, Consistent Moderate Satisfaction, and Consistent High Satisfaction groups used the most adaptive coping, while the New Perspective and Recovery groups used the fewest questionable coping strategies. Adaptive coping included strategies such as positive reinterpretation and growth and seeking social support (Carver, 1997; Carver et al., 1989). Questionable coping strategies included denial and disengagement. Of note is the fact that all clusters endorsed some adaptive and some questionable coping strategies, suggesting use of these types of strategies is not mutually exclusive and that people use a variety of strategies for coping with distress (Folkman, 1997).

Values Orientation. Values orientation was calculated through summing each participant's extrinsic values score and their intrinsic values score, then subtracting the intrinsic score from the extrinsic score (Kasser, 2019). Thus, participants with larger negative values tended to have a more intrinsic values orientation and participants with larger positive values tended to have a more extrinsic values orientation. The mean values score for all participants was -20.64. The New Perspective cluster reported the most intrinsically oriented values score of all groups ($M = -25.93$, $sd = 16.96$). The Consistent Low Satisfaction group was almost the exact score of the mean for all participants ($M = -20.68$, $sd = 16.82$). The Recovery, Consistent

Moderate Satisfaction, and Consistent High Satisfaction groups all reported significantly more extrinsically oriented values. However, it is important to note that all clusters generated large standard deviations around the mean, suggesting large between-participant variability in values orientation even within individual clusters. Interestingly, the two clusters that reported the lowest satisfaction at Time 1 (clusters 1 and 2) are also the two clusters that had the greatest tendency towards intrinsic values. Between these two, cluster 2 had the most intrinsically oriented values system of all clusters, and this was also the group that made the greatest gain in life satisfaction across time points. Those who were more extrinsically oriented (clusters 3, 4, and 5) reported more moderate life satisfaction at Time 1. Of these, the most intrinsically oriented cluster (cluster 3) was also the cluster that rebounded the most in life satisfaction from Time 2 to Time 3. This may be because extrinsic values, including money, status, and popularity, are more easily obtained in the community compared to in a carceral setting. For example, while incarcerated, there are uniforms, prison identification numbers, and other factors that serve to equalize power and status among incarcerated persons—although there are hierarchical systems operating within these facilities as well (Kreager et al., 2017; Wacquant, 2001). One possibility is that participants in cluster 3, who identify most strongly with an extrinsic values orientation system, rebound in life satisfaction at Time 3 because they now have access to the things that speak to these extrinsic values (e.g., physical appearance, social recognition) once they return to the community.

Demographic variables. We also observed some differences in demographic outcomes between clusters. Perceived current social class was higher in Clusters 3 and 4 than in Clusters 1 and 2. Additionally, combined annual household income was highest in Clusters 2, 3, and 5. Clusters 1 and 2 differed significantly from one another in perceived current social class, with

Cluster 2 reporting higher current social class than Cluster 1. Clusters 3 and 4 did not differ

significantly from one another on this variable. This suggests that respondents who reported

higher current social class were more likely to have followed the New Perspective trajectory than

the Consistent Low Satisfaction trajectory. Further, Clusters 1 and 2 differed significantly from

one another with Cluster 2 reporting higher income than Cluster 1, and Clusters 3 and 4 differed

significantly from one another with Cluster 3 reporting higher income than Cluster 4. This

suggests that one potential confound of trajectory membership may be current income, as the

Recovery and New Perspective Clusters reported higher income and higher life satisfaction at

Time 3 compared to the Consistent Low Satisfaction and Consistent Moderate Satisfaction

Clusters.

The Role of Meaning Making in Adapting to Life Following Youth Incarceration

One of the primary aims of this study was to examine the relationship between meaning

making and adjustment following juvenile incarceration. This dissertation is based on two main

theoretical frameworks: Frankl's (1953, 1955, 1962a, 1962b, 1966a, 1966b, 2006) "will to

meaning," and Park's (2010; Park et al., 2008) concept of global and situational meaning. To

briefly review, Frankl asserted that the search for meaning is what makes us truly human, and

psychological wellbeing is predicated on the successful finding of meaning which is

idiosyncratically determined (1962a, 1966a, 2006). He further suggested that the three main

pathways to meaning are through our work, our relationships, and through suffering (Frankl,

2006). Park's theory suggests humans have a general global sense of meaning which provides a

framework for making sense of the world which informs our decisions (2010). She further posits

that we make situational meaning in response to specific events, and that when our global and

situational meanings conflict, we attempt to resolve these discrepancies in an attempt to find "meanings made" *of* the adverse event (Park, 2010; Park et al., 2008).

This study is grounded in both Frankl's and Park's perspectives: that in general, human beings are oriented around searching for and making meaning in their lives generally, and that the pathway for human resilience and recovery in the face of trauma requires the capacity to make meaning of adverse experiences (Frankl, 1966a; Park 2010; Park & Folkman, 1997). This process is necessary for the individual to integrate the traumatic experience into their life narrative and general sense making system.

Searching for Meaning as a Youth was Unrelated to Adjustment Trajectories. In the current study, the process of searching for meaning in life was neither a significant predictor at Time 1 nor outcome at Time 3 related to trajectory group membership. This may speak to the universality of searching for and questioning meaning as a youth, regardless of other factors (Erikson, 1950; Sanders, 2013; Steinberg & Morris, 2001). However, the finding of meaning was predictive of recovery trajectories at both Time 1 and Time 3. Thus, feeling a sense of meaning in life impacted the way formerly incarcerated participants responded to and recovered from the experience of juvenile incarceration. The presence of meaning before first incarceration significantly correlated with other Time 1 predictor variables, including attachment-related avoidance ($r = -0.24$), the search for meaning at Time 1 ($r = 0.19$), and life satisfaction at Time 1 ($r = 0.46$). The presence of meaning before first incarceration was also predictive of several Time 3 outcome variables, including exploitativeness ($r = 0.23$) and adaptive coping ($r = 0.21$). These findings suggest that those who experienced less attachment avoidance in adolescence, and presumably more security in interpersonal relationships at that time, also reported a greater felt sense of meaning. It is possible that at least some of this meaning at Time 1 came from

having close interpersonal relationships, which was ultimately predictive of recovery from, or resilience in the face of, juvenile incarceration. Additionally, the correlation between presence of meaning at Time 1 and the use of adaptive coping strategies at Time 3 suggests the possibility of meaning either informing or being informed by the use of adaptive coping (or both). Future studies should further investigate the connections between both meaning and attachment and meaning and coping to assess for the specific mechanisms of action involved in resiliency and recovery in the face of trauma.

Presence of Meaning is Associated with Positive Adjustment. Current presence of meaning was not significantly correlated with any Time 1 variables. However, current presence of meaning was significantly correlated with many Time 3 variables, including exploitativeness (-0.31), attachment avoidance (-0.43), attachment anxiety (-0.21), positive affect (0.44), negative affect (-0.31), adaptive coping (0.25), questionable coping (-0.45), values orientation (-0.28), and life satisfaction (0.47). This means that those who report a sense of meaning in life also report more positive affect and less negative affect, suggesting better mood and wellbeing overall. Furthermore, current presence of meaning was positively correlated with the use of adaptive coping strategies and negatively correlated with the use of questionable coping strategies. These associations do not point out whether meaning causes adaptive coping or if adaptive coping increases the sense of meaning; regardless, it is important to note that those who have a strong sense of meaning seem to respond more adaptively to stressful events. Given that presence of meaning at Time 1 and Time 3 were both positively correlated with adaptive coping strategies, there may a longitudinal relationship between finding meaning and coping successfully with adversity over time.

The presence of meaning at Time 3 was negatively correlated with values orientation which, based on the scoring system for values, indicates that present meaning is associated with a more intrinsic than extrinsic values orientation. This means that those with a greater sense of meaning report more values that are consistent with the humanistic tendency towards growth and actualization and may tend to value things like relatedness, a sense of community, and self-acceptance (Kasser & Ryan, 1996). Moreover, those with a greater sense of meaning report fewer extrinsic values that are contingent upon the reactions of others, such as social and financial success and physical appearance. These findings are consistent with Kasser and Ryan (1996)'s findings that those who report greater intrinsic values demonstrate more well-being and less distress. This trend was reinforced by the strong, positive correlation between presence of meaning at and life satisfaction at Time 3.

Presence of Meaning is Associated with Secure Relationships and Adaptive Relational Functioning. Current meaning was also negatively correlated with attachment avoidance and anxiety, supporting the idea that those with strong, secure relationships may find their life meaning within these relationships, or may feel safe and supported enough to have searched for and found their sense of meaning outside of their relationships. Relatedly, having a sense of meaning was negatively associated with current exploitativeness. This may reflect a decreased tendency toward manipulative behaviors resulting from having a sense of purpose and meaning. This is further supported by the association between attachment avoidance and anxiety at Time 3 and exploitativeness at Time 3 ($r = 0.26$ and 0.48, respectively), suggesting those in secure relationships (e.g. those experiencing less anxiety and avoidance) demonstrate fewer thoughts and behaviors that may exploit others. In these ways, Frankl's (2006) assertion that relationships serve as one of the primary pathways to meaning appears to be supported.

Patterns in Attachment Style and Adaptation Trajectories

Attachment style is a principal focus of this study both because of the connection between relationships and meaning (Frankl, 1966a; 2006), and because of the connection between attachment style in infancy and the demonstration of empathy and aggression in adolescence (Arbona & Power, 2003; Carlson et al., 2003; Engels et al., 2001; Marcus & Betzer, 1996; Thompson & Gullone, 2008).

Attachment Style in Adolescence Does Not Predict Meaning Following Incarceration. We hypothesized that attachment avoidance and anxiety at Time 1 would strongly correlate with the search for meaning and finding of meaning at Time 3. Attachment avoidance and anxiety at Time 1 were not correlated with the search for or presence of meaning at Time 3. This suggests that the security and strength of a person's relationships in adolescence prior to experiencing juvenile incarceration do not predict the degree of searching for meaning or amount of achieved meaning that person reports at Time 3. In this way, relationship security in adolescence is not predictive of meaning making processes in adulthood following one or several stays in a carceral facility. However, the presence of meaning at Time 1 negatively correlated with attachment avoidance at Time 1, suggesting those with more avoidance, and thus a less secure attachment style, before first incarceration experienced a lower sense of meaning at the same time. Additionally, the presence of meaning at Time 3 was negatively correlated with both attachment avoidance and attachment anxiety at Time 3, suggesting a significant positive relationship between the presence of meaning and security in present relationships.

The finding that attachment security in adolescence did not predict meaning in adulthood is surprising in light of previous findings which found that attachment style in infancy predicts attachment style in adolescence (Hamilton, 2000) and that attachment styles in youth are

associated with positive outcomes, including better mental health, social functioning, and perceptions of self-worth when compared to those with insecure attachment (Cooper et al., 1998; Feeny & Noller, 1990; Liu, 2008). This may indicate that the experience of incarceration, or perhaps the way in which individuals responded to stress more generally, is a better predictor of meaning and wellbeing following a trauma than the security of one's relationships prior to the trauma. Future studies should explore attachment in more depth and how attachment style impacts adjustment at various stages of one's experience with the carceral system.

Current Attachment Security Differs Significantly Between Clusters. Although attachment security at Time 1 did not predict the presence of or search for meaning at Time 3, present attachment security was significantly correlated with trajectory membership. Present attachment anxiety was lowest in the Consistent Low Satisfaction and New Perspective groups and highest in the Consistent Moderate and Consistent High Satisfaction groups. The Recovery group demonstrated attachment anxiety very close to the mean score for all participants. By contrast, current attachment avoidance was lowest in the New Perspective group and relatively the same for all other groups. Taken together, the New Perspective group demonstrated the greatest overall attachment security at Time 3. Causality cannot be determined without further investigation, however one potential explanation for this relationship could be the finding of strong relationships either during or following incarceration which have contributed to a sense of achieved meaning, life satisfaction, and attachment security for the New Perspective group. Alternately, experiencing a significant increase in life satisfaction following first incarceration may have adjusted participants' outlooks on relationships and life in general, which may have lowered their attachment fears and anxieties for this group. Further research should investigate

the relationship between successfully recovering from a traumatic event and experiencing an increase in attachment security.

Participants Reported a Variety of Primary Attachment Figures. Prior to completing the attachment-related questions at Time 1 and Time 3, participants were given the option to write in their relationship to the person for whom they were answering questions (romantic partner, parent, etc.). Responses at Time 1 were fairly consistent with the existing literature, whereby participants indicated a parent or grandparent as their primary attachment figure in adolescence over 70% of the time. Time 3 responses offered more diversity in attachment objects: of the 85 responses to this item, about half (55.3%) reported either a parent or romantic partner, but the other 45% of responses included other family members or friends. This finding is enlightening in that attachment has largely been conceptualized regarding parental and romantic relationships (Ainsworth, 1979; Bowlby, 1988; George et al., 1996). These findings suggest that formerly incarcerated youth may be able to heal and find meaning through their connections with friends and other family members outside of their parents or romantic partners.

Impact of Time Elapsed Since Release from Incarceration

We hypothesized that the amount of time elapsed since being released from most recent incarceration would correlate significantly with the amount of meaning made in the present. This hypothesis was not supported, indicating that participants report higher or lower scores in achieved meaning regardless of the amount of time that has passed since they have been released from incarceration. We had assumed that the more time that has passed would allow for more distancing between the participant and their (presumably negative) experience with incarceration. We also hypothesized that a greater amount of time would allow for more processing of the participant's experiences and more opportunities to search for and ultimately

find meaning. The fact that this hypothesis was not supported is not only surprising, but also somewhat liberating—participants need not wait a considerable amount of time to achieve meaning and experience life satisfaction once released into the community.

Conclusions

Overall, the presence of meaning was significantly associated with positive adjustment following juvenile incarceration. This finding is consistent with existing literature that suggests the presence of meaning, especially after a challenging life event, is associated with greater wellbeing and adjustment following the event (Bower et al., 2005; Davis et al., 1998; Frankl, 2006; Joseph & Linley, 2005; Park, 2010). In our sample, higher presence of meaning scores at Time 3 may represent a general finding of meaning in adulthood, potentially through one of Frankl's main pathways of work or relationships (Frankl, 2006). Frankl's theory is further supported by the finding that meaning correlated with present attachment security, suggesting meaning is most present in the context of secure relationships.

Higher current presence of meaning may also reflect the successful resolution of discrepancies between global and situational meaning, resulting in "meanings made" in the present, in support of Park's (2010) framework. Both Frankl and Park stressed the centrality of meanings made in recovering from trauma and in living a satisfying life generally, which is reflected in our finding that greater achieved meaning is associated with more life satisfaction, positive affect, and adaptive coping strategies.

While a full qualitative analysis from the optional qualitative questions in this research will be explored in a future study, a brief review of the qualitative data revealed some observational patterns in how participants have found meaning in the present. Almost all the participants who responded to the optional question about how important it is to them to have a

sense of meaning and where they have found their meaning. Further, the largest percentage of respondents indicated helping others as their source of meaning, and many indicated specifically that they gain meaning through helping others who are justice-impacted. This suggests that, at least for this subset of participants, the meaning made comes through using their own experience to help others going through a similar experience, providing support for Park's and Frankl's assertions that meaning can be made through suffering.

Study Strengths and Limitations

Strengths

This study is the first of its kind to utilize a mixed methods investigation of meaning making and recovery following juvenile incarceration. We utilized what appears to be the largest known sample of formerly incarcerated juvenile offenders in an examination of meaning making and adaptation trajectories. A primary strength of this study is the diversity of sample, which included participants distributed across racial and ethnic identities, gender, education level, and other variables. In working with a historically difficult to access population, the sample size and diversity of the sample help highlight the innovative nature of this investigation.

Limitations

Sample Size

Prior to recruiting participants, a power analysis revealed that, to detect medium effects for principal hypotheses, a minimum of 84 participants was needed to detect a correlation of $r = .30$ and 200 participants were needed to detect a correlation of $r = .20$. This study is the first quantitative examination of meaning making for formerly incarcerated youth—a notoriously difficult to reach population in research. While the sample size is smaller than our initial goal

and this may have impacted statistical power, we believe our total sample of N = 105 allows us to draw important conclusions from the data.

Limitations of Sampling Strategy

A primary limitation of this study is the way in which participants were invited to participate. To recruit participants, I reached out to over 361 agencies and individuals who work with formerly incarcerated people. Of these, I received 116 email responses. Of these, 89 individuals and agencies agreed to forward out the survey invitation to their clients. Recruitment was thus limited both by participants' self-selection into the study as well as agencies' willingness to aid in participant recruitment.

The most successful recruitment strategy was through the Rising Scholars, Project Rebound, and Underground Scholars programs in California. These programs operate through California's public community colleges, California State University campuses, and University of California campuses, respectively. In contacting these programs, I primarily connected with advocates and peer mentors who are themselves formerly incarcerated college students. In talking with these students about the current study, they appeared the most interested and motivated to help of all the agencies I contacted. This is likely why 57.1% of the final sample reported college or an advanced degree as their highest level of education. This is similar to the educational achievement rate for the general population (57% of the general public reports either "some college" or "bachelor's degree or higher"), and is significantly higher than the general rate for formerly incarcerated persons (23% report "some college" or "bachelor's degree or higher"; Couloute, 2018). Thus, due to recruitment strategy, the sample is skewed as more educated than is representative of the general formerly incarcerated population.

This sample is also geographically limited in that the majority of respondents are located in the American West (57.1%) and Midwest (28.6%). This is likely due to this author having connections in the Midwest through the University of Wisconsin and connections in the West through growing up in and attending college in that area. Nationally, the highest rates of incarceration per capita are found in the Southwest and Southeast regions of the United States (510.5 and 470.1 per 100,000, respectively; Motivans, 2021; The Sentencing Project, 2021). These regions were also the least represented in this sample (2.8% and 3.8% of the total sample, respectively). Thus, a major limitation is that the sample primarily came from regions of the country which incarcerate lower numbers of people per capita, which may reflect different attitudes and practices in the justice systems in those states more broadly. Future studies should attempt to examine a more nationally representative sample when exploring recovery from juvenile incarceration.

Limitations of Using an Online Survey

Data was collected through an online Qualtrics survey. When data collection began, this survey was accessed by over 2,000 internet bots and otherwise fraudulent respondents. When phase two of data collection began, every effort was made to increase the security of the survey, including use of a two-part survey screening process and use of security features through the Qualtrics platform. No security measure is completely accurate; therefore it is possible that some legitimate respondents were screened out and some fraudulent respondents were screened in. We utilized the best strategies at our disposal to minimize the impacts of this limitation.

Additionally, we learned through interacting with formerly incarcerated individuals in the course of recruitment that many formerly incarcerated persons may struggle with using technology. This is particularly true for respondents who may have been incarcerated for a long

time and who were only recently released. This means that some respondents may have made errors in completing the survey due to limited technological literacy. Additionally, the fact that this was an online survey may have caused potential respondents with limited technological proficiency to self-select out of taking the survey, which limits the representativeness of the total sample.

Limitations of Self-Reported, Retrospective Data

Self-report data is subject to many criticisms, including the concern that participants will respond in ways to manage their self-presentations and self-perceptions (Paulhus & Vazire, 2007). In this study, which examines change over time for a justice-impacted population, participants may have been motivated (subconsciously or consciously) to appear as either more socially desirable or socially undesirable (Krumpal, 2013; Tett & Simonet, 2011). Participants may respond in ways that minimize their flaws and exaggerate strengths to appear more well-adjusted or to avoid the stigma associated with mental health challenges ("faking good") or may exaggerate difficulties and signs of maladjustment ("faking bad" or malingering) to achieve specific goals (Birkeland et al., 2006; Rogers et al, 2003: Tett & Simonet, 2011; Walker et al., 2022). Additional concerns have been expressed regarding self-report data that is also retrospective, as the quality of the data is affected by both the validity of the respondent's self-reflection and awareness and the validity of their memory (Lauritsen, 1999). Retrospective self-report relies on memory, which is subject to many distortions over time, as humans are not able to recall events exactly as they happened, but rather filter recall through their affective and cognitive states both at the time of recall and at the time the memory was encoded (Hassan, 2005; Schacter, 2002). However, some studies have found that recall of traumatic events and symptoms maintain at least moderate reliability over time (Cammack, et al., 2016). Furthermore,

it is difficult to determine causality between variables using retrospective data. Future studies using a longitudinal design can clarify how justice-impacted youth experience, recover from, and make meaning following juvenile incarceration.

Modifications to Existing Measures

Two measures used in this study, the EOD and AI, were modified. Items in the domains of Hedonism and Spirituality were removed from the AI because they do not map onto the extrinsic versus intrinsic total score that was used in our analyses. The EOD was administered in reference to situations at two time points: Time 1 questions asked about discrimination in situations common to adolescence generally (e.g. at school, at the doctor), and Time 2 questions asked about situations specific to justice-impacted youth (e.g., from the police, from your probation officer). It is possible that these adjustments could have impacted the standardization of the measure. Future studies should examine the psychometric properties of modified measures for use specifically with justice-impacted populations.

Directions for Future Research

While the current study utilized a final sample of 105 participants from a relatively hard to reach population, findings from this study can be strengthened through use of a larger sample that is more representative of formerly incarcerated youth across the country. Future studies should utilize a sample of 200 participants, as suggested by earlier power analysis, and should make every attempt to include participants from diverse geographic and educational backgrounds.

To better understand the causal direction of meaning making and recovery in a sample of formerly incarcerated adolescents, a longitudinal study should be conducted with youth who are currently incarcerated or at risk of future incarceration. The current study sheds light on the

reflections of formerly incarcerated youth in how they have made meaning from before first incarceration to the present. This data is useful in evaluating how best to provide mental health and social support services to individuals who are currently incarcerated or recently released from incarceration. A study examining these variables in real time beginning in adolescence will allow for more nuanced understandings of how to provide support for youth at risk of justice involvement and through their justice involvement. A longitudinal study will allow for a deeper consideration of the intersection of developmental variables with meaning making variables over time.

As indicated elsewhere in this discussion, two groupings of clusters were observed based on start points: clusters 1 and 2 had similar life satisfaction at Times 1 and 2 and presence of meaning at Time 1, yet differed significantly in life satisfaction and presence of meaning at Time 3. Relatedly, clusters 3 and 4 had similar life satisfaction at Time 1, but differed significantly at Times 2 and 3. Future studies should examine the factors that differentiate participants in clusters 1 and 2 and participants in clusters 3 and 4 who share similar start points, but follow divergent trajectory pathways over time. Understanding the mechanism of action that underlies why some participants' life satisfaction rebounds or even increases following incarceration while others' life satisfaction appears unaffected by their experiences will inform treatment for justice-impacted populations.

Justice-impacted populations experience high rates of mental illness as both a risk factor prior to incarceration and as an outcome of incarceration (Armour, 2012; Cruise et al., 2011; Farrington, 1998; Fazel et al., 2016; Haney, 1997; 2003; 2017; McClelland et al., 2004; Ou & Reynolds, 2010; Robertson et al., 2004). This study utilized the PANAS to measure positive and negative affect in the present. While affect is a major aspect of mental health, it does not capture

the full psychological impacts of incarceration or adaptation following incarceration and cannot be used independently for mental health diagnoses. Given the high prevalence of mental health disorders in justice-impacted populations (Fazel et al., 2016; Fazel & Seewald, 2012; Prins, 2014) future studies should utilize measures designed to assess for specific psychiatric symptoms and diagnoses. This will expand our understanding of common diagnoses preceding, during, and following juvenile incarceration and how these symptoms intersect with meaning making. Furthermore, understanding how mental illness evolves over time for justice-impacted individuals will allow for the creation of targeted, meaning making informed treatments that correspond with psychiatric symptoms and developmental levels.

In the course of data collection, I had the opportunity to connect with individuals who work in the reentry space who are themselves formerly incarcerated. In meeting with these individuals to discuss the current study, we often had conversations about their own experiences with incarceration and the meaning they have made following incarceration. These conversations were informal and not considered as data in the current study, however the content of these conversations was rich with themes of development, growth, meaning making, and recovery. Moreover, far more detailed content was captured through these conversations than in the optional open-ended qualitative questions at the end of the survey. Future studies should utilize a mixed methods design incorporating both quantitative survey data and interview data to understand general patterns and changes over time in justice-impacted youth as well as specific factors related to individual differences in development and recovery. Interview questions assessing where youth find meaning prior to and during incarceration should be central to these interviews, as findings from these questions can inform interventions for youth who feel lost in their search for meaning. This study appears to be the first to use quantitative data with a large

sample to examine meaning making in formerly incarcerated youth, shedding light on objective patterns in predictors and outcomes of adjustment to incarceration. This design was intentional, given that existing literature on meaning making for this population has generally been qualitative in nature utilizing smaller sample sizes (Carhart, 1998; Ruggiero et al., 2013; Wainryb et al., 2010). To fully understand the unique experiences and needs of this population, the strengths of both quantitative and qualitative study methods should be utilized with a large, diverse, and nationally representative sample.

Implications for Policy and Practice

Practice Implications

Results from the current study reveal significant correlations between the presence of meaning, life satisfaction, and positive adjustment. Results also reveal distinct trajectories of recovery following juvenile incarceration. Very few Time 1 variables predicted which trajectory participants would follow over time—in fact, the only variable that was predictive was the presence of meaning at Time 1. Those who reported greater meaning were more likely to follow the Recovery, Moderate Satisfaction, or High Satisfaction pathways, which all resulted in fairly high life satisfaction at Time 3. These findings should be utilized by treatment providers working with youth at the beginning of this trajectory timeline. Providers should assess for adolescents' felt sense of meaning and actively work on identifying opportunities for making meaning in the course of treatment. A conversation about adolescents' values may be a good starting point for achieving meaning, and the correlation between an intrinsic values orientation and greater presence of meaning from this study should inform these conversations. Treatment approaches that utilize the identification of values and elements of a meaningful life include Acceptance and Commitment Therapy (ACT; Hayes et al., 2011) and Dialectical Behavior Therapy (DBT;

Linehan, 1993). These treatments have been found to be efficacious with adolescent populations (Fleischhaker et al., 2006; Halliburton & Cooper, 2015; Livheim et al., 2015; Miller et al., 2007), incarcerated populations (Berzins & Trestman, 2004; McCann et al., 2000; Valizadeh et al., 2020), and justice-impacted youth specifically (Matowski, 2019; McCann et al. 2007; Shelton et al., 2011; Trupin et al., 2002). Promising new findings suggest existential therapy, which focuses on purpose, responsibility, and freedoms inherent to the human condition, may also be as effective as ACT in treating incarcerated populations (Ziaee et al., 2022). Therapists should consider utilizing these evidence-based treatment approaches with justice-impacted youth to help them identify "valued actions" (Hayes et al., 2011) and "a life worth living" (Linehan, 1993) and orient behaviors around these goals.

Treatment should further focus less on symptom reduction and more on the root causes of symptoms. Youth appear to experience a crisis of meaning around the time that their justice involvement begins—a common experience in adolescence generally, which may be more common in youth experiencing the aforementioned risk factors for justice involvement. If youth with justice involvement experience higher rates of psychiatric diagnoses than the general population, filling the "existential void" that precedes psychological distress will likely reduce symptoms. (Frankl, 1966a; 2006). Utilizing a meaning-focused treatment approach, especially during the developmentally sensitive period of adolescence, may yield lifelong benefits, including reduced psychopathology, increased positive affect, greater achieved meaning, and life satisfaction.

In the current sample, participants who reported low initial life satisfaction either maintained low life satisfaction or improved over time (Consistent Low Satisfaction (1) and New Perspective (2)clusters, respectively). This is similar to participants who reported moderate

initial life satisfaction (Consistent Moderate Satisfaction (4) and Recovery (3) clusters, respectively). Because of the high correlation between satisfaction with life and presence of meaning, it follows that these clusters also had low initial sense of meaning (clusters 1 and 2) or moderate initial sense of meaning (clusters 3 and 4). Some participants who reported an absence of meaning initially appeared to have continued in this state, as Frankl predicted (1966a; 2006). However, other participants (cluster 2) found meaning through, or in spite of, their incarceration experiences. Future research should investigate what differentiates those in cluster 1 from those in cluster 2, and what differentiates those in cluster 3 from those in cluster 4. An examination of why some people are resilient in the face of the challenges of incarceration and others are not will be important to inform interventions with this population.

The correlation between attachment security and positive adjustment cannot be overlooked. Treatment providers should evaluate youths' attachment styles and relationships to understand how youth relationships influence their sense-making systems. This study revealed that participants who reported greater attachment security in the present also reported greater meaning and adjustment. This finding is intuitive, as strong attachment relationships have long been associated with positive outcomes across the lifespan (Bowlby, 1988; Bradford et al., 2017; Engels et al., 2001; Jayamaha et al., 2017; Thompson & Gullone, 2008). Of specific clinical relevance is the finding that many types of relationships beyond parental and romantic relationships were reported as secure by this sample. Clinicians should explore the role of siblings, extended family members, and close friends in youths' lives and how these relationships may offer the opportunity for reparative attachment experiences through which meaning can be derived. Existing literature reveals that attachment styles are predictive, but not prophetic and are more malleable in adolescence than adulthood (Fraley et al., 2004; Fraley &

Roisman, 2019; Jones et al., 2018). This finding was echoed in the current study which found an overall decrease in attachment avoidance and anxiety over time. Therapists can capitalize on this finding by making attachment repair a focus of treatment through discussing safe relationships with youths, helping them develop new internal working models of attachment, and modeling a secure base within the therapeutic relationship (Brown & Elliott, 2016). Where indicated, therapists can consider facilitating Attachment-Based Family Therapy within the youth's family system (Diamond, 2014; Diamond et al., 2016).

Given the important connections between adjustment and meaning and adjustment and attachment security, group therapy interventions should be developed and utilized for this population. Group therapy has been found to be effective in treating a variety of diagnoses from a range of theoretical perspectives (Kösters et al., 2006). Group treatment is also associated with high treatment retention and increased self-disclosure (Yalom et al., 1967) and has been found effective in treating incarcerated populations (Morgan & Flora, 2002; Richards et al., 2019). Group therapy has also been used to treat facets of insecure attachment and mood symptoms (Marmarosh & Tasca, 2013), as attachment styles and patterns have emerged within group therapy relationships (Marmarosh, 2019). Group therapies should be developed that focus on the struggle to find meaning, where youth have searched for meaning successfully (and unsuccessfully), and identification of values and taking meaningful action that aligns with these values. These treatments should be developed specifically for use with justice-impacted youth at various stages of system involvement. This kind of treatment is likely to be effective not only in helping youth find meaning, which correlates with positive adjustment following justice system involvement over time, but also through the process of relating to other group members and facilitators which may serve as a form of reparative attachment. A therapy group that considers

the specific challenges faced by justice-involved youth can provide a sense of belonging and understanding for youth as they work towards finding their "why."

In the same spirit as group therapy, treatment providers should consider the function of criminogenic behavior for youth. Youth often commit crimes to obtain a desired resource, typically in the context of families and communities with limited resources (Lane, 2018; Mocan & Rees, 2005; Vigil, 2019). Youth also commit crimes for social reasons, including as a reaction to limited social capital and control (Salmi & Kivivuori, 2006), to feel like they fit in with their peers, (Freng, 2019; Miller, 2014), to find a sense of belongingness, and to gain status and protection (Klein, 1995; Li et al., 2002; Spergel, 1995; Thornberry et al., 2003; Vigil, 1988). Treatment providers and those who develop treatment protocols should consider the social and belongingness function of criminogenic behaviors and focus on helping youth develop a sense of belonging with prosocial peers and communities. Helping youth build social support networks can be both a pathway to strong relationships and meaning and a diversion from associations with peer groups who engage in criminogenic behaviors.

Additionally, practitioners must consider the role of racism and other forms of discrimination in their treatment of justice-impacted youth. Youth of color represent 34% of the youth population in the U.S. and 62% of individuals charged in the juvenile justice system (Office of Juvenile Justice and Delinquency Prevention, 2018). The United States incarcerates more youth than any other country and the racial disparities endemic to the juvenile justice system perpetuate "the myth that people of color commit more crimes" (Dragomir & Tadros, 2020, p. 62). In the current study, youth who experienced higher rates of discrimination prior to and during first incarceration reported a greater search for meaning prior to first incarceration than youth who did not experience higher rates of discrimination. One possibility is that these

youth felt a sense of meaninglessness in the face of an unjust world where they were mistreated due to identities beyond their control. It is paramount that treatment providers educate themselves about the reality of structural racism in the United States and specifically within the justice system, become well versed in anti-racism practice, and receive training in multiculturally competent care (APA, 2017; Noltemeyer & Grapin, 2021; Sue, 2002; Sue et al., 1982, 1992). Therapists should proactively invite and explore experiences of racism and discrimination in their work with justice-impacted youth, including conversations about the impacts of systemic racism on efforts to find meaning, establish connections and community, and experience psychological wellbeing.

      Developmental Considerations in Treatment. Incarceration of any kind has lasting impacts, but incarceration during the sensitive developmental period of adolescence can yield especially pronounced effects. One perspective in this study is a developmental psychopathology framework, which asserts that both normative and pathological development are contextually bound, representing diverse interactions between biological, social, and environmental processes (Cicchetti & Rogosch, 1997; 2002; Sroufe, 1997). In the current study, significant differences in several variables were observed between the time prior to first incarceration to the present. Most notably, participants decreased in exploitativeness and insecure attachment, and increased in secure attachment, presence of meaning, search for meaning, and life satisfaction from before first incarceration to the present. Additionally, the very existence of distinct recovery trajectories illustrates the developmental perspective—experiencing incarceration as a juvenile is not a uniform experience, and its impact is only one factor in a constellation of life circumstances. Formerly incarcerated youth are whole people who existed before, during, and after their justice involvement. Thus, we must consider the whole person as a developmental being in making

sense of the impacts of juvenile incarceration and how to support positive adjustment following juvenile incarceration.

An important finding is that exploitativeness decreased from Time 1 to Time 3 ($M = 4.1$ and 2.2, respectively). This rejects the notion that exploitative (and potentially other antisocial) characteristics are solely genetically determined traits found in a "superpredator" subclass of adolescents. Rather, adolescents demonstrate these thoughts and behaviors for a variety of reasons, which can include gendered social pressure to act "tough" and to conceal emotions, especially in adolescent boys (O'Neil, 1990; Wisdom et al., 2007). The pressure to "act tough" may be most salient for gang-involved adolescents, for whom toughness, success, and control are reinforced as masculine ideals (Luyt & Foster, 2001). Expressions of this toughness, which often occur through violence, may be more performative than antisocial and oriented around gaining status among gang members and ensuring self-protection (Melde et al., 2009; Murer & Schwarze, 2020). The conceptualization of antisocial behaviors serving a social performance function may explain why participants appeared to "grow out of" their exploitative thoughts and behaviors. Specifically, finding meaning, life satisfaction, and secure relationships as adults may attenuate the need to project a tough front, leading to lower exploitativeness scores over time. A developmental understanding of how exploitativness can change over time, and the social functions served by these changes, is important for effective prevention and intervention work with justice-impacted youth.

Policy Implications

Finally, these clinical implications all rest on the fulcrum of one primary policy implication: mental health care must become more accessible in this country for youth to avoid justice system involvement, and for youth who are already justice-impacted to successfully

recover from incarceration and prevent recidivism. About half of all incarcerated persons in the United States experience some kind of mental health concern, and 10-25% of this population experience serious mental illness (Collier, 2014). This is unsurprising given the significantly high rates of trauma in the histories of those who are justice-impacted and in justice-involved youth specifically (Armour, 2012; Baglivio et al., 2014; Dierkhising et al., 2013). Given the extensive risk factors preceding youth justice-involvement, including child maltreatment, parental psychopathology, and family and community poverty (see "Risk Factors and Family Structure," above), accessible mental health treatment for youth and their families is a necessary step in reducing youth crime, preventing recidivism, and healing trauma. Outreach programs are required to connect youth and their families with resources that are available. Where possible, these programs should be staffed with individuals from the families' own community to help bridge the gap between institutions and community members to make care more accessible. Additionally, mental health care in carceral facilities must become available, accessible, and culturally responsive. Prisons and jails are court mandated to provide care, yet 63% of incarcerated people with a history of mental illness do not receive treatment while incarcerated (Bronson & Berzofsky, 2017; National Alliance on Mental Illness, n.d.). Moreover, when justice-involved people are released from incarceration, the majority of them receive no supports for the continuation of their care in the community (NAMI, n.d.; Thomas et al., 2016). Mental health treatment that is accessible for youth and their families at risk of justice involvement, for individuals who are currently incarcerated, and for individuals who have been released from incarceration is critical if our society is to disrupt patterns of mass incarceration and support the capacity for healing and growth in youth.

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Appendix A

Demographic Questions

Instructions: Please answer the following questions as honest and thoroughly as possible.

1. Age: _____ years
2. Gender:
   a. ___ Male
   b. ___Female
   c. ____Transgender/ Non-binary
   d. _____(Other: Please describe) _____
3. My race/ethnicity is (select all that apply):
   a. ____ Asian or Asian American (please specify: _____)
   b. ____ Black or African American
   c. ____ Hispanic or Latinx, including Mexican American, Central American, and others (please specify:_____)
   d. ____ White, Caucasian, Anglo, European American; not Hispanic
   e. ____ American Indian/Native American
   f. ____ Other (please specify) _____
4. What is your highest level of education obtained
   a. _____ No formal schooling
   b. ____ Grade School
   c. ____ Middle School
   d. ____ High School
   e. ____ College
   f. ____ Advanced Degree (e.g., Master's degree, Nursing degree, etc.)
5. What is your current marital status?
   a. Single – not dating
   b. In a relationship, not married
   c. Married
6. Are you currently employed?
   a. ____ Yes
   b. ____ No
7. On Average, how many hours per week do you work? _____
8. What is the combined annual income of the person(s) in your home?
   a. ____0 - $19,999
   b. ____$20,000 - $39,999
   c. ____$40,000 - $59,999
   d. ____$60,000 - $79,999
   e. ____$80,000 - $99,999
   f. ____$100,000 - $119,999
   g. ____$120,000 - $139,999
   h. ____$140,000 -$159,999
   i. ____$150,000 - $179,999
   j. ____$180,000 - $199,999

k. ____$200,000 and above

9. In thinking about your childhood, which label best describes your perceived social class at that time?
    a. ____Lower Class
    b. ____Working Class
    c. ____Lower-Middle Class
    d. ____Middle Class
    e. _____Upper-Middle Class
    f. Upper Class

10. In thinking about your life currently, which label best describes your perceived social class?
    a. ____Lower Class
    b. ____Working Class
    c. ____Lower-Middle Class
    d. ____Middle Class
    e. _____Upper-Middle Class
    f. _____Upper Class

11. Do you identify as religious and/or spiritual?
    a. ___Yes, religious
    b. ___Yes, spiritual
    c. __ Both religious and spiritual
    d. ___No, neither

Appendix B

Demographic Questions About Experiences in the Juvenile Justice System

1. What was/were the first charge(s) that you faced that led to incarceration?

2. How much time did you spend incarcerated in juvenile detention or some other facility for your first offense?

3. Which state did you live in at the time of your first incarceration?

4. Did you have a private attorney or public defender?

    a. ____Private attorney

    b. ____Public defender

    c. ____I represented myself *pro se*.

5. In a few words, how did you feel about your former probation officer after your first offense?

6. What was your favorite thing to order from canteen?

7. How many separate times were you incarcerated as a juvenile?

8. What was the approximate date of entry of your most recent incarceration?

9. What was the approximate date of release from your most recent incarceration?

10. How old were you the first time you were incarcerated or detained?

11. How many charges did you face as a juvenile?

12. How many charges, if any, have you faced as an adult?

13. What is the total combined length of time you spent incarcerated as a juvenile? If less than one year, please only indicate the number of months and write "0" for number of years.

    a. Years:_____

      b. Months:_____

14. If you spent any time incarcerated as an adult (age 18 and over) what is the total amount

    of time you spent <u>incarcerated as an adult</u>? If less than one year, please only indicate the

    number of months and write "0" for number of years.

      a. Years:_____

      b. Months:_____

Appendix C

The Interpersonal Exploitativeness Scale (IES)

Please respond to the following statements using the scale below:

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree nor Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

_____1. It doesn't bother me to benefit at someone else's expense.

_____2. I'm perfectly willing to profit at the expense of others.

_____3. I'm less interested in fairness than getting what I want.

_____4. Vulnerable people are fair game.

_____5. Only weak people worry about fairness.

_____6. Using other people doesn't bother me too much.

Appendix D

Meaning in Life Questionnaire (MLQ)

Please take a moment to think about what made your life and existence feel important and

significant to you (<u>before your involvement with the juvenile justice system/ since you have been

released from incarceration</u>). Please respond to the following statements as truthfully and

accurately as you can, and also please remember that these are very subjective questions and that

there are no right or wrong answers. Please answer according to the scale below:

1 = Absolutely Untrue
2 = Mostly Untrue
3 = Somewhat Untrue
4 = Can't Say True or False
5 = Somewhat True
6 = Mostly True
7 = Absolutely True

_____1. I understand my life's meaning.

_____2. I am looking for something that makes my life feel meaningful.

_____3. I am always looking to find my life's purpose.

_____4. My life has a clear sense of purpose.

_____5. I have a good sense of what makes my life meaningful.

_____6. I have discovered a satisfying life purpose.

_____7. I am always searching for something that makes my life feel significant.

_____8. I am seeking a purpose or mission for my life.

_____9. My life has no clear purpose.

_____10. I am searching for meaning in my life.

Appendix E

Satisfaction With Life Scale (SWLS)

Below are five statements that you may agree or disagree with. Using the scale below, indicate

your agreement with each item. Please answer the following questions based on your perspective

before you were incarcerated as a juvenile/while you were incarcerated the first time/right now.

Please be open and honest in your responding.

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree nor Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

1. _____ In most ways my life is close to my ideal.

2. _____ The conditions of my life are excellent.

3. _____ I am satisfied with my life.

4. _____ So far I have gotten the important things I want in life.

5. _____ If I could live my life over, I would change almost nothing.

Appendix F

The Experiences in Close Relationships-Relationships Structure Questionnaire (ECR-RS)

Please answer the following 10 questions about the person with whom you were closest while

growing up (e.g., mother, father, grandparent, guardian, etc.). Please indicate the relationship of

that person (e.g. mother, uncle, etc.) and do NOT include their actual name. How was/is this

person related to you?:

_____

Now, please answer the following questions about this person based on (how you felt ***before***

being adjudicated and/or incarcerated/ how you currently feel. Please answer according to the

scale below:

1 = Strongly Disagree
2 = Disagree
3 = Somewhat Disagree
4 = Neutral
5 = Somewhat Agree
6 = Agree
7 = Strongly Agree

_____1. I usually discuss my problems and concerns with this person.

_____2. I talk things over with this person.

_____3. It helps to turn to this person in times of need.

_____4. I find it easy to depend on this person.

_____5. I prefer not to show this person how I feel deep down.

_____6. I don't feel comfortable opening up to this person.

_____7. I'm afraid this person may abandon me.

_____8. I worry that this person won't care about me.

_____9. I often worry that this person doesn't really care for me.

Appendix G

Experiences of Discrimination Measure (EOD—Adapted)

This set of questions is going to ask about how you and others like you are treated, and how you typically respond. Before being incarcerated as a juvenile (part A)/ while you were incarcerated (part B), had you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations because of your race, ethnicity, color, or some other part of your identity? For each situation where you respond "yes," please indicate the number of times that this happened using the following scale:

0 = Never
1 = Once
2.5 = two or three times
5 = four of more times

Part A

Please indicate the identity/identities for which you have been discriminated against (for example, race, ethnicity, age, gender, religion, social class, etc.): _____

1. At school?

2. Getting hired or getting a job?

3. At work?

4. At the doctor/ getting medical care?

5. Getting service in a store or restaurant?

6. From the police or in the courts?

Part B

Please indicate the identity/identities for which you have been discriminated against (for example, race, ethnicity, age, gender, religion, social class, etc.): _____

1. From the police or in the courts?

2. With your attorney?

3. With your parole or probation officer?

4. With staff at the treatment/rehabilitation center where you were incarcerated?

5. Receiving medical care?

6. From your peers in the treatment/rehabilitation center where you were incarcerated?

Appendix H

Aspiration Index (AI-Adapted)

This set of questions asks you about goals you may have for the future. Using the scale below, rate each item by filling in how important each goal is to you. Try to use the entire scale when rating the items. That is, some of your answers will likely be at the lower end of the scale, some will be in the middle, and others will be at the higher end of the scale.

1= Not at all
2=
3= A little
4=
5 = Moderate
6=
7= Very important
8=
9= Extremely

1. My image will be one that others find appealing.

2. I will assist people who need it, asking for nothing in return.

3. I will choose what I do, instead of being pushed along by life.

4. People will show affection to me, and I will to them.

5. I will have many expensive possessions.

6. I will be admired by many people.

7. I will be polite and obedient.

8. My basic needs for food, shelter, and clothing will be met.

9. I will feel that there are people who really love me.

10. My name will be known by many different people.

11. I will be in good physical shape.

12. Someone in my life will accept me as I am, no matter what.

13. I will feel safe and secure.

14. People will often comment about how attractive I look.

15. I will not have to worry about bad things happening to me.

16. Most everyone who knows me will like me.

17. I will feel good about my abilities.

18. I will be relatively free from sickness.

19. The things I like will be similar to what other people like.

20. I will have enough money to buy everything I want.

21. I will overcome the challenges that life presents me.

22. I will help the world become a better place.

23. I will have a job that pays well.

24. I will "fit in" with others.

25. I will be physically healthy.

26. I will keep up with fashions in clothing and hair.

Appendix I

Positive and Negative Affect Schedule (PANAS)

The following set of questions asks about how you have felt over the past week. Please indicate the

extent to which you have experienced each item over the past week using the scale below.

1= Very slightly or not at all
2 = A little
3 = Moderately
4 = Quite a bit
5 = Extremely

1. Enthusiastic
2. Interested
3. Determined
4. Excited
5. Inspired
6. Alert
7. Active
8. Strong
9. Proud
10. Attentive
11. Scared
12. Afraid
13. Upset
14. Distressed
15. Jittery
16. Nervous
17. Ashamed
18. Guilty
19. Irritable
20. Hostile

PA = 1-10
NA = 11-20

Appendix J

Brief COPE

There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. Please use the scale below for your responses.

1= I usually don't do this at all.
2= I usually do this a little bit.
3= I usually do this a medium amount.
4= I usually do this a lot.

1. I concentrate my efforts on doing something about the situation I'm in

2. I take action to try to make the situation better

3. I try to come up with a strategy about what to do.

4. I think hard about what steps to take.

5. I try to see it in a different light, to make it seem more positive.

6. I look for something good in what is happening.

7. I accept the reality of the fact that it happened.

8. I learn to live with it.

9. I make jokes about it.

10. I make fun of the situation.

11. I try to find comfort in my religion or spiritual beliefs.

12. I pray or meditate.

13. I get emotional support from others.

14. I get comfort and understanding from someone.

15. I try to get advice or help from other people about what to do.

16. I get help and advice from other people.

17. I turn to work or other activities to take my mind off things.

18. I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.

19. I say to myself, "this isn't real."

20. I refuse to believe that it has happened.

21. I say things to let my unpleasant feelings escape.

22. I express my negative feelings.

23. I use alcohol or other drugs make myself feel better.

24. I use alcohol or other drugs to help my get through it.

25. I give up trying to deal with it.

26. I give up the attempt to cope.

27. I criticize myself.

28. I blame myself for things that happened

Appendix K

General Qualitative Questions

1. Looking back over your life, has anything negative come out of your experience with the juvenile justice system? Please explain.

2. Looking back over your life, has anything positive come out of your experience with the juvenile justice system? Please explain.

3. How important is it for you to have a sense of meaning or purpose for your life? Can you share with us what types of experiences increase your sense of meaning or purpose?

4. Did you receive treatment or therapy while you were incarcerated? Did you feel this was helpful? Why or why not?

Appendix L

Table L.1. Means (and standard deviations) for proportion of population (categorical variables) and means and standard deviations (for continuous variables) in each cluster by demographic variable.

	Consistent Low Satisfaction	New Perspective	Recovery	Consistent Moderate Satisfaction	Consistent High Satisfaction	F	p
Race							
(REM = 1; White = 0)	0.69(0.47)	0.72(0.45)	0.69(0.48)	0.88(0.33)	0.67(0.58)	0.86	.356
Education							
(MS/HS = 1; College = 0)	0.65(0.49)	0.27(0.48)	0.25(0.45)	0.59(0.51)	0.00(0.00)	0.92	.340
Gender							
(Female = 1; Male = 0)	0.18(0.39)	0.30(0.46)	0.19(0.40)	0.06(0.24)	0.33(0.58)	0.77	.381
Type of First Offense							
(Other = 1; Person = 0)	0.68(0.48)	0.56(0.50)	0.75(0.45)	0.79(0.43)	0.50(0.71)	0.58	.448
Marital Status							
(Partnered = 1; Single = 0)	0.52(0.51)	0.52(0.51)	0.88(0.34)	0.33(0.49)	0.67(0.58)	0.00	.962
Employment							
(Employed = 1; Unemployed = 0)	0.35(0.49)	0.16(0.37)	0.13(0.34)	0.18(0.39)	0.33(0.58)	0.92	.340
Perceived childhood social class							
(Upper = 1; Lower = 0)	0.05(0.22)$_a$	0.18(0.39)$_a$	0.75(0.45)$_b$	0.20(0.41)$_{ac}$	0.67(0.58)$_{bc}$	9.82	.002
Perceived current social class							
(Upper = 1; Lower = 0)	0.00(0.00)$_a$	0.33(0.48)$_b$	0.69(0.48)$_{cd}$	0.40(0.51)$_{bc}$	1.00(0.00)$_d$	12.12	.000
Income							
(High = 1; Low = 0)	0.00(0.00)$_a$	0.33(0.47)$_b$	0.67(0.49)$_c$	0.13(0.35)$_{ab}$	0.67(0.58)$_{bc}$	4.92	.029
(Not religious = 1; religious = 0)	0.35(0.49)	0.18(0.39)	0.13(0.34)	0.13(0.35)	0.33(0.58)	1.47	.229
Geographic region							
(Other = 1; W + MW = 0)	0.04(0.21)	0.14(0.35)	0.19(0.40)	0.29(0.47)	0.00(NA)	3.59	.061
Months incarcerated for first	26.65(62.22)	17.33(50.12)	10.13(17.31)	6.57(12.13)	276.00(NA)	0.03	.859
Number of juvenile charges	4.33(5.46)	3.40(2.85)	2.63(1.93)	2.71(2.80)	3.00(2.83)	2.37	.127
Number of adult charges	8.73(6.85)	4.85(6.11)	2.77(4.36)	12.35(24.18)	0.50(0.71)	0.19	.668
Months incarcerated juvenile	40.21(47.98)$_a$	25.33(40.21)$_{ab}$	11.73(15.22)$_b$	12.00(14.23)$_b$	13.50(19.09)$_{ab}$	6.38	.013
Months incarcerated adult	135.59(108.71)	94.27(109.46)	31.93(60.95)	75.41(95.85)	138.00(195.16)	3.75	.056

Current age	35.91(11.07)	35.76(10.02)	33.69(10.22)	33.29(14.48)	31.00(14.14)	1.03	.312
Age at first incarceration	13.70(2.75)	14.36(3.14)	15.29(1.11)	15.18(2.27)	NA(NA)	2.73	.103
Number of incarcerations (juv)	6.24(7.66)$_a$	3.35(4.12)$_b$	2.60(2.72)$_b$	2.21(1.58)$_b$	1.00(0.00)$_{ab}$	7.29	.008
Hours worked per week	35.59(17.49)	36.15(15.82)	36.43(6.91)	35.77(8.75)	45.00(7.07)	0.17	.681

Note: To adequately capture statistical significance, variables were separated into dichotomous groups. These are: Race (Racial and ethnic minority (Black, Latinx, Multiracial, and Native American) vs. White; Education (MS/HS (middle school or high school) vs. College (college or advanced degree)); Gender (trans or nonbinary participants were removed due to small *n*; male vs. female); Type of offense for which first adjudicated (person vs. other(drug, property, or "other"); Marital status (single vs. married or partnered/dating); Employment status (employed vs. unemployed); Perceived social class in childhood (lower class (lower class, working class, lower-middle class) vs. upper class (middle class, upper-middle class)); Perceived current social class (lower class (lower class, working class, lower-middle class) vs. upper (middle class, upper-middle class, upper class)); Combined annual household income (high ($60,000-200,000+) vs. low ($0-59,999), based on the median household income in the United States at time of analysis); Religious identity (religious (religious, spiritual, both religious and spiritual) vs. not religious or spiritual); and Geographic region (west and Midwest vs. other (Northeast, Southeast, Southwest). Continuous variables above include: Time incarcerated for first offense (months), Number of juvenile charges, Number of adult charges, Total number of months incarcerated as a juvenile, Total number of months incarcerated as an adult, Current age, Age at first incarceration, Number of separate times incarcerated as a juvenile, and Hours worked per week.

Means in the same row that share a subscript do not differ significantly (*p* < .05). (degrees of freedom (*df*) for the F tests for the numerator is the number of categories minus 1; *df* for the denominator ranges from 64 to 102).