Possible Selves on Probation: The Role of Future-oriented Identity Beliefs
in Promoting Successful Outcomes for Adolescents on Probation.

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ABSTRACT

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Probation officers report that motivational processes, such as future-orientation and self-concept, are key factors in program participation and success. This dissertation consists of three studies that explored the role of possible selves, a specific form of future-oriented self-concepts, in promoting successful outcomes for youth who are court-ordered to probation. Using survey and administrative data from the Social Processes in Probation Study (SPPS), the first study explored a hypothesized model of how possible selves characteristics affect adolescent probation outcomes (e.g., probation compliance, recidivism, school engagement). This study found that adolescent possible selves were significantly related to probation outcomes, although not always in the manner expected nor as reported for other adolescent populations. Higher counts of possible selves and their characteristics were consistently associated with poorer outcomes for youth on probation. However, further analyses uncovered a complex network of interactions between the characteristics of possible selves, wherein certain combinations of these characteristics transmitted a mixture of beneficial and risky effects for certain outcomes and under certain conditions.

Building upon the knowledge gained in the first study, the second study examined the relationship between possible selves and probation outcomes within the context of parental support and probation tactics. Three potential pathways were tested: (A) direct effects, independent of external factors; (B) meditated effects on the relationship of external factors on outcomes; and (C) moderated effects on the relationship of external factors on outcomes.

Findings of this study did not support either a mediated or moderated pathway for any of the probation outcomes. However, the data suggest an interaction trend between probation tactics and possible selves for the outcome of rearrests, suggesting that supportive probation tactics may be of importance to lowering risk of rearrest for youth with limited possible selves. For the outcomes of rearrest and of school problems, possible selves had a significant direct effect, even after controlling for perceived parental support and probation tactics.

The final study used a grounded theory approach to examine the process through which possible selves translated into behavioral action for adolescents on probation. The data suggests a process involving four phases of action: *initial goal development*, *creation of identity-driven goals, planned action*, and *sustained progress*. During Phase 1, initial goal development occurs as future-oriented thinking emerges following social interactions about the future. During Phase 2, goals integrate with identities to create motivational synergy, helping youth move toward taking action. During Phase 3, goals translate into planned actions through a specific skill set that involves understanding the pathway and steps needed to achieve the goal. During Phase 4, youth engage in sustained pursuit of progress by accessing resources for support, including help to negotiate short-term versus long-term desires, encouragement that bolstered efficacy beliefs, and accountability that communicated that the youth and their goal mattered. Throughout the process, the presence of role models with whom youth identify were important to the development of goals, plans, and perseverance. Implications for practice and policy with this population are discussed.

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Dedication

To my mother, Jeri Domingo Brewer,

who always encouraged me to ask 'why' and seek out answers,

who taught me by word and example about the meaning of public service

and the importance of living in a way that positively impacts the lives of others.

CHAPTER 1

Introduction

Impulsivity, or the lack of self-regulation, is a strong predictor of juvenile delinquency (Piquero & Tibbetts, 1996; Pratt, Cullen, Blevins, Daigle, & Madensen, 2006). Responses to juvenile delinquency, such as probation, serve to control and regulate behavior; however, they often do so through deterrence models that institute social control via external forces (e.g., incentives and punishments) as opposed to developing effective self-regulation (Piquero & Tibbetts, 1996; Tyler, 2009). Consequently, adolescents already lacking self-regulatory capacities may fail to develop the skills needed to avoid future delinquent behavior.

One aspect of self-regulation is the ability to inhibit or exhibit a behavior, emotion, or reaction in pursuit of a goal (Posner & Rothbart, 2000). Identity-based Motivation Theory proposes that individual desires must be translated into future-oriented identities that contain a clear view of the desired goal and related action strategies in order to successfully self-regulate behavior (Oyserman & Destin, 2010; Oyserman, Johnson, & James, 2011). These future-oriented identities are referred to as *possible selves* (Markus & Nurius, 1986). Evidence suggests that possible selves influence behavior by serving as a standard that individuals compare with their current self (vanDellen & Hoyle, 2008); thus serving as a form of motivational capital.

Probation officers report that motivational processes, such as future-orientation and self-concept, are a key determinant of probationers' program participation and success; consequently, they employ an array of techniques in hopes of increasing probationer's motivation (Schwalbe, 2012). This study sought to increase our understanding of how and when possible selves, a specific form of future-oriented self-concepts, matter to the probation outcomes of adolescents. Understanding the role of possible selves in probation outcomes serves to guide probation

practices by providing evidence for whether probation officers should invest time in helping their probationers to develop possible selves.

Moreover, the study furthers the current research on possible selves in two ways. First, there has been limited research on possible selves within delinquent populations, particularly adolescents on probation. Secondly, current research on possible selves has focused primarily on delineating what possible selves are, with limited attention to the processes by which they operate to influence outcomes; this research extends our understanding of how possible selves translate into behavioral action and the factors that support or deter the pursuit of possible selves.

Research Question

This dissertation investigated the relationship between possible selves and outcomes for adolescents who are court ordered to probation in a series of three studies:

Paper 1 Aim: Using data from the Social Processes in Probation study (SPPS) on a sample of 116 adolescents court ordered to probation in New York State, this paper examines the relationship between adolescent's possible selves and outcomes (e.g., probation compliance, recidivism, school engagement) for adolescents on probation.

Paper 2 Aim: Also using data from SPPS, this paper examines how adolescent's possible selves interact with external factors (e.g., probation tactics, parental support) to affect outcomes for adolescents on probation.

Paper 3 Aim*:* Using qualitative interview data collected from a sub-sample of adolescents who participated in the Social Processes in Probation study, this grounded theory study explores the process by which adolescents on probation pursue or avoid their possible selves and how this process leads to behavioral action.

<center>**Literature Review**</center>

Adolescence and Self-Regulation

Adolescence is a risky time period for many. Within industrialized societies, the greatest threat to youth well-being comes from preventable and often self-inflicted causes (Blum & Nelson-Mmari, 2004). There is emerging evidence that impulsivity, or a lack of self-regulation, is an underlying risk factor in multiple adolescent risk behaviors, including juvenile delinquency (Piquero & Tibbetts, 1996; Pratt et al., 2006).

During adolescence and young adulthood an individual's capacity for self-regulation and future-thinking increases dramatically due to developmental changes (Steinberg, 2008; Steinberg et al., 2009; Steinberg & Monahan, 2007). In infancy, self-regulation revolves around the physiological coordination of sleep and wake cycles and the control of emotions through tasks such as self-soothing; toddlers build upon these achievements as they learn behavioral self-control and compliance, followed by children moving toward ever greater internal self-regulation as they tackle the ability to delay gratification during school age. By time that adulthood is reached, self-regulation has developed into a multi-faceted construct that includes being able to modify how one reacts as well as pursuing tasks related to future oriented goal-setting behaviors (e.g., planning, persistence, environmental management). Brandtstädter (1998) argues that adolescence may be characterized as a time when a personalized future-orientation emerges and is integrated with self-regulation, so that the youth learns to select and act out behaviors that will actualize goals of importance.

Identity-Based Motivation Theory: The Role of Possible Selves in Self-Regulation

Identity-based motivation (IBM) theory (Oyserman & Destin, 2010) proposes that self-concept is a key mechanism through which self-regulation operates. At its core, IBM posits that

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people act in line with their self-concepts, a collection of beliefs that represent everything a person feels and thinks about themselves in relation to the world, including potentially conflicting past, present, and future identities. Self-concepts are multifaceted and comprised of multiple identity components. Yet these components are not necessarily well-integrated, particularly as the way that we see and interpret ourselves changes based on the social context. For example, if a tenth-grader were asked 'who are you?' in a variety of contexts, we might uncover any variety of identities, such as: "I am a good daughter. I want to become an engineer. I am afraid I might fail in school. I expect to be a B+ student this year. I used to want to be a teacher." Each of these content domains trigger a different set of beliefs and standards, cueing a person's readiness to act and to make sense of the world based on identity-relevant norms, values, and behaviors. Which actions are relevant and how to interpret situations depends on which identity is the most salient in that moment. IBM also proposes that individuals prefer identity-congruent lenses and behaviors. When a behavior feels identity congruent, difficulties engaging in the behavior will be interpreted as meaning that the behavior is important, rather than impossible, and effort is meaningful. These attributions have important consequences on engagement in goal planning, subsequent behaviors, and outcomes.

IBM hypothesizes that in order to successfully take action and regulate behavior, desires must be translated into a vision of the new identity that contains a clear view of both the desired goal and the strategies necessary to achieving the goal (Oyserman, Bybee, Terry, & Hart-Johnson, 2004; Oyserman et al., 2011). These personalized forms of the future self-concept are commonly referred to as *possible selves* (Markus & Nurius, 1986). The study of possible selves evolved from Markus and Nurius' work investigating the cognitive structures involved in information processing, specifically the role of self-schema (Markus, 1977; Markus & Nurius,

1986). According to Markus, "self-schemata are cognitive generalizations about self, derived from past experience, that organize and guide the processing of self-related information contained in the individual's social experiences" (1977, p. 64). Self-schemata provide individuals with templates that facilitate quickly sorting through and understanding the ongoing barrage of information experienced. These structures dictate what is perceived, learned, remembered, or inferred by a given situation. When combined together, an individual's various self-schemata form the working self-concept—an ever-shifting array of self-representations and easily accessible self-knowledge that informs our working theory of who we presently are (current self), who we have been (past self), and who we may become (possible self).

Individuals generate both positive future expectations for themselves (expected selves) as well as negative expectations about who they fear becoming (feared selves). There is some evidence that possible selves influence behavior by serving as standards or references that individuals then compare to their current self (vanDellen & Hoyle, 2008). Motivation for behavioral change arises from discrepancies between who we are currently and who we want to be in the future (perceived behavior and the end state). Based on this theory, individuals will try to minimize the discrepancy between the current self and the hoped-for self, while maximizing the distance between the current and feared self.

The strategies developed for pursuing possible selves act as the link between the imagined possible self and behavioral action. Although there has been limited research on the role of strategies used to pursue possible selves, two school-based studies of adolescents from ethnic minority and high poverty households suggest that the quality of the adolescent's strategies for attaining their possible selves plays a significant role in maintaining motivation (Oyserman, Bybee, & Terry, 2006; Oyserman et al., 2004). Consequently, it is likely that youth

who possess vague, overly general possible selves that lack clear behavioral strategies may have difficulty sustaining self-regulation because this constellation of possible selves does not provide a specific picture of the goal nor a roadmap for how to successfully reduce the discrepancies between current and future possible selves (Oyserman et al., 2004).

Collectively, possible selves and their attached strategies in combination with efficacy beliefs (Bandura, 1991) and other aspects of future expectations (e.g., hopefulness) have been proposed as a form of motivational capital, providing resources for achieving behavioral change (Clinkinbeard & Zohra, 2012; Suomi, 2004). Intervening with adolescents to engage possible selves through clearly articulating goals, improving balance between positive and negative possible selves, and increasing self-regulated pathways to attaining those goals has been shown to have positive effects on academic engagement (e.g., improved grades, time spent on homework, class participation). Possible selves interventions may also hold promise for helping vulnerable youth in other contexts; however, far less research has been done to understand how and when engaging and developing possible selves may link to increasing other types of positive outcomes, such as decreasing delinquency.

Possible Selves and Delinquency

Research indicates that there are differences in the possible selves of delinquent and non-delinquent youth. As compared to their non-delinquent peers, delinquent adolescents often lack positive possible selves, particularly those related to educational and career aspirations, report fewer "balanced" pairs of possible selves, and are more likely to report negative expected possible selves (Clinkinbeard & Zohra, 2012; Newberry & Duncan, 2001; Oyserman & Markus, 1990a).

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Oyserman and Markus (1990a) examined the possible selves of 238 adolescents from inner-city Detroit, who varied by degree of official delinquency (public school, placed in an alternative school, placed in a group home, or placed in a state training school). The study found that delinquent youth were more likely to report negative expected possible selves—being alone, depressed, or a substance abuser—than non-delinquent youth. Additionally, delinquent youth focused their fears on continued involvement in crime or substance use, whereas non-delinquent youth feared achievement-related events, such as doing poorly in school.

Oyserman and Markus (1990a) hypothesized that motivation for goal achievement increases when youth possess a positive possible self that is paired with a negative possible self in the same domain (e.g., hoping to graduate high school and fearing doing poorly in school), thus they expected that the most delinquent youth would exhibit the least balance in their possible selves. Oyserman and Markus' findings support these hypotheses, indicating that only 37% of delinquent youth reported at least one balanced pair of possible selves compared to 81% of non-delinquent youth. In a follow-up to the initial interviews, Oyserman and colleague collected self-reported delinquency behavior during the three months since the initial interviews for the public school and community placed youth (the least delinquent groups). They found that youth reporting the least balance in possible selves were more likely to report delinquent behaviors during the interval between interviews. Newberry and Duncan (2001) report similar findings from their survey of 418 high school students. They found that the number of expected and feared possible selves accounted for 21% of the variance in self-reported delinquency.

Although research on the possible selves of delinquent adolescents have focused almost exclusively on describing goal content, there is some indication that these adolescents also struggle with generating strategies to pursue their future selves. A qualitative study of 10

incarcerated boys reported finding very few strategies for attaining expected selves and avoiding negative selves (Abrams & Aguilar, 2005). Similarly, a recent study of incarcerated adolescents found that 40% of youth could not generate a concrete strategy (i.e., a strategy that could be replicated by another person) for achieving their expected selves and close to half (48%) could not articulate a concrete strategy for their feared selves (Clinkinbeard & Zohra, 2012).

Existing research has established a relationship between possible selves and delinquency, but there remain several gaps. Despite numerous studies on possible selves over the past 25 years, only a handful of studies have involved delinquent populations (i.e., Abrams & Aguilar, 2005; Clinkenbeard & Murray, 2012; Clinkenbeard & Zohra, 2012; Newberry & Duncan, 2001) since the initial delinquency studies in the early 1990s (i.e., Oyserman & Markus, 1990a, 1990b; Oyserman & Saltz, 1993). As mentioned earlier, most of these studies have concentrated on describing the count and content of delinquent youth's possible selves with little attention to the strategies reported in connection to the possible selves. Moreover, within the wider literature on possible selves relatively few studies have examined how possible selves lead to behavioral change, concentrating instead on describing what possible selves are and their key properties (e.g. content, valence, time frames). Finally, although around 60% of adolescents involved with the juvenile justice system are court ordered to probation (Snyder & Sickmund, 2006), none of the studies examining the possible selves of delinquent adolescents have focused on youth on probation nor have they examined how possible selves may interact with external factors to promote or hinder successful probation outcomes.
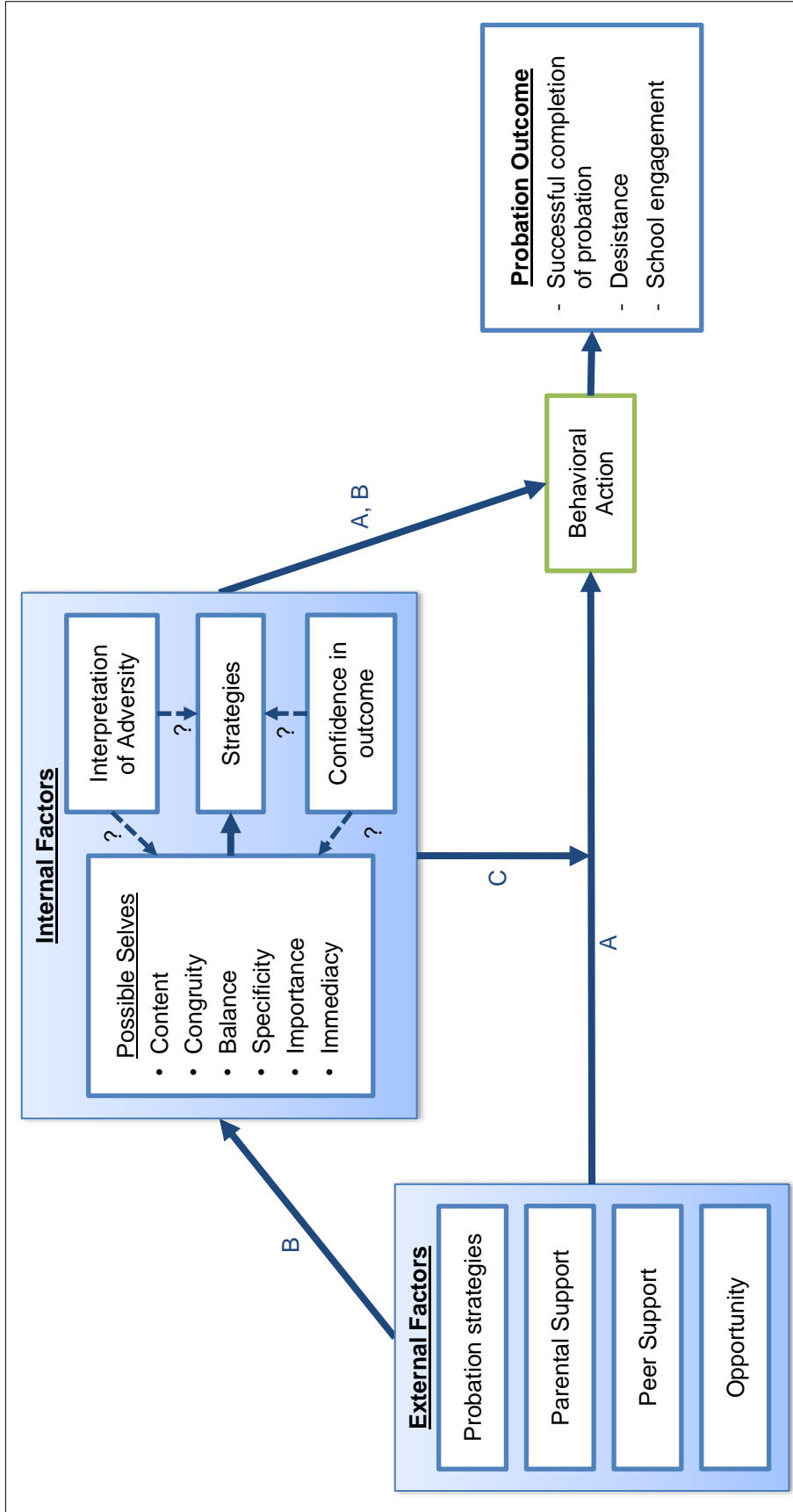
Figure 1.1 Proposed model for how possible selves relate to probation outcomes.

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Proposed Theoretical Model

Figure 1.1 proposes a model explaining how possible selves influence behavioral action and, ultimately, key outcomes for adolescents who are court ordered to probation, such as successful completion of probation conditions, desistance from continued delinquency, and school engagement. The box labeled 'Internal Factors' presents the relationship between key aspects of the adolescent's future-oriented self-concept, including the quality of imagined future identities (possible selves), the strategies developed to attain or avoid a possible self, confidence in one's ability to attain or avoid the future self, and interpretation of adversity or difficulty. An adolescent's array of possible selves dictates who they believe they are able to become. Important aspects of possible selves include the range of content (e.g., academic-related, relationship-related, etc.), whether an identity 'fits' with the other important identities, the balance between positive and negative possible selves, the specificity or clarity of the imagined self (e.g. 'successful' vs. 'a college graduate'), the relative importance of a particular possible self as compared to other possible selves, and the immediacy attached to the possible self that is based on a youth's assessment of how near or far the future state may seem (e.g., for youth required to meet their Probation Officer twice per week, the future self who is 'off probation' may be experienced as very immediate, while the 'high school graduate' self may seem far off to a student entering the 10th grade).

Hypothetically, an individual's possible selves influence behavioral action (and, consequently, outcomes) insofar as they are mediated by the strategies being used to attain positive selves or to avoid negative future selves. Like possible selves, strategies may differ in quality, with the ideal strategy being concrete, action-oriented, something the individual can affect themselves, and relevant to the end goal. Two factors moderate the effect of strategies on

outcomes in this model: (1) the level of confidence a youth has about whether they will be able to attain or avoid a possible self, and (2) how the youth interprets experiences of difficulty. Alternatively, it might be that level of confidence and/or interpretation of difficulty may operate through causing a revision of the possible self rather than altering strategies, or a perhaps through a combination of the two.

Several external factors specifically related to the adolescent's legal context are likely to influence probation outcomes, such as the strategies used by the adolescent's probation officer, level of parental support, level of peer support, and the presence of delinquency opportunities for the adolescent. As suggested by the model, possible selves and external factors may work together in a few different ways to influence adolescent success or failure while on probation. One possibility is that possible selves directly affect probation outcomes independently of the external factors (path A). Alternatively, possible selves may serve to mediate the relationship between external factors and outcomes (path B). Another path suggested by the model is that the external factors remain instrumental to probation outcomes, but possible selves serve to moderate the relationship, increasing positive outcomes when in the presence of certain supports (path C).

Overview of Research Design and Methodology

This dissertation investigated the theoretical model presented above through three studies. The first study (Chapter 2) uses survey and administrative data from the Social Processes in Probation Study (SPPS) to examine the relationship between adolescent's possible selves and outcomes (e.g., probation compliance, recidivism, school engagement) for adolescents on probation (path A). The paper addresses three main questions: 1) What characteristics of possible selves predict success or failure on probation? 2) Do characteristics of

strategies or confidence in attainment change the relationship between possible selves and outcomes? and 3) Does the relationship between possible selves and outcomes differ based on youth demographics or legal history? The second study (Chapter 3) uses SPPS data to ask the question: Within the adolescent's legal context, do possible selves have a direct effect on probation outcomes independent of external factors like probation interventions or parental support (path A), or do they function to mediate (path B) or moderate (path C) the relationship between external factors (e.g., probation tactics, parental support) and probation outcomes? The final study (Chapter 4) employed a grounded theory approach using data from follow-up interviews to be conducted with SPPS participants to answer the question: What is the process through which adolescents on probation pursue or avoid their possible selves?

Background on Social Processes in Probation Study

Studies 1 and 2 use survey and administrative data collected on 116 adolescents on probation as part of the Social Processes in Probation Study (SPPS); Study 3 uses data from audio-recorded follow-up interviews with a subsample of SPPS participants. SPPS is a longitudinal study that examined the interpersonal processes between youth on probation and their probation officers. The full SPPS study used a purposive sampling strategy and consists of 155 adolescents, aged 12 to 18, who were court-ordered to probation supervision at the Brooklyn office of the New York City Department of Probation Juvenile Operations Division. A survey measure collecting information about adolescent's possible selves was introduced after recruitment began; consequently, the 31 adolescents who did not complete this measure will not be included in the sample for the proposed study.

Youth and their families were recruited to the study between April 2012 and May 2013 through one of three routes. In the first recruitment pathway, *disposition approach*, adolescents

and their parents were approached by SPPS interviewers immediately following the court proceedings where the adolescent was adjudicated to probation. Because disposition proceedings, wherein an adolescent might be ordered to probation, occurred in three separate courtrooms, at times simultaneously, the study was not able to approach all potential participants immediately following disposition. Consequently, a second recruitment pathway, *loglist approach*, was developed. As part of the loglist approach, the probation department provided a list of adolescents adjudicated to probation on a weekly basis. Any participants on the list who had not been approached at disposition were instead recruited in the probation waiting room at their first appointment with their probation officer following adjudication to probation. Youth and parents recruited via the disposition or loglist approach completed the baseline survey immediately after completing assent/consent. The final recruitment pathway, *waiting room approach*, recruited adolescents as they were in the probation office waiting room for an appointment with their probation officer. As adolescents were typically not accompanied by their parents at these appointment, those assenting to participate in the study did not complete the baseline assessment until after their parent or guardian had given both verbal and written consent to their participation. While adolescents recruited via the disposition (26%; n = 32) or loglist (15%; n = 19) approach had just been adjudicated to their current probation case, those recruited via the waiting room approach (59%; n = 73) could be at any point in their probation case.

Eligibility criteria for the study included adolescents who were: (1) between 12 and 15 years old at the time of the offense, (2) adjudicated delinquent by the court, (3) court-ordered to general probation (standard supervision) or enhanced supervision probation (intensive supervision program for adolescents who would otherwise be placed in a residential facility), and

(4) fluent in English. Adolescents who were excluded from the study included those court ordered to alternative probation programs and those who are wards of the state.

Adolescents participating in the study completed a series of six surveys over the course of two months (see Appendix 1.1 for a breakdown of survey items). Parents also completed a survey at baseline. Participants were compensated with a gift card for each interview completed ($10 at baseline and final interview; $5 at all other interviews). All procedures for the SPPS study received approval from Columbia University's Institutional Review Board.

Further data was collected through administrative data collected at baseline and 12 months following the close of data collection in September 2014. The administrative data consisted of investigative reports and probation case notes. The investigative reports are completed by the probation department prior to adjudication and are used by the Court in decision-making about the appropriate disposition of the case. These reports contain a range of assessment information gathered by interviewing relevant parties (e.g., youth and caregivers); report information includes demographics, details on the current offense, prior legal history, bio-psycho-social risk and protective factors (e.g., family composition and living situation, school engagement, extra-curricular activities, substance use, risk behaviors, and physical and mental health). Once a case is adjudicated to probation, probation officers are required to maintain detailed case notes. These case notes include records of any actions taken on the case (e.g., court proceedings, violations of probations, records searches for new arrests) as well as details on all contacts with the youth, their caregivers, and various collateral contacts (e.g., school personnel and service providers).

Conclusion

Thirty-one million youth are under juvenile court jurisdiction and approximately 63% of youthful offenders are placed on probation (Hockenberry & Puzzanchera, 2017). It is imperative to understand how to intervene in ways that equip delinquent youth succeed, not only in completing probation, but to grow into thriving adults. Probation officers are uniquely positioned as an adult responsible for helping youth engaged in risk behaviors to change. Working with adolescents on probation to develop their possible selves may equip youth to improve probation outcomes and provide goal-building skills that carryover to promote success in multiple domains of life. First, however, we need to build an understanding of how, when, and for whom possible selves matter to probation outcomes.

CHAPTER 2

The Effect of Possible Selves on Adolescent Probation Outcomes

In 2014, the U.S. juvenile court system handled approximately 975,000 cases and had over 31 million youth under juvenile court jurisdiction (Hockenberry & Puzzanchera, 2017). Probation is the most frequently imposed sanction for adolescents who are adjudicated delinquent, with 63% of these cases placed on probation. Consequently, probation officers play a central role in the juvenile justice system. Probation officers are an amalgam of correctional officer and social worker, tasked with the complex job of balancing a mandate to enforce the law and provide accountability while also promoting rehabilitation.

Among the invention strategies used by probation officers, youth's level of motivation has been cited as a key factor in participation and success while on probation (Schwalbe, 2012). One approach that may hold promise for increasing intrinsic motivation is by engaging youth's possible selves, which combine thinking about the future with goal setting behaviors. Existing research has established a relationship between possible selves and delinquency (Abrams & Aguilar, 2005; Clinkinbeard & Murray, 2012; Clinkinbeard & Zohra, 2012; Newberry & Duncan, 2001; Oyserman & Markus, 1990a; Oyserman & Saltz, 1993; Pierce, Schmidt, & Stoddard, 2015; So, Voisin, Burnside, & Gaylord-Harden, 2016). However, few studies have examined the possible selves of probation-involved adolescents and whether they are related to probation outcomes.

Understanding Possible Selves

Possible selves are theorized as instrumental in the regulation of behavior (Markus & Nurius, 1986; Oyserman, 2007, 2009; Oyserman & James, 2011). Individuals carry multiple

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possible selves, providing various representations of who they might become in the future. These representations of future states serve to provoke and facilitate actions relevant to bridging the gap between one's current state and desired outcome. In contrast to past and current selves, the future self has not yet occurred, rendering possible selves more flexible and less constrained by plausibility. Consequently, possible selves differ in their ability to influence current behavior. The current body of research on possible selves has identified several important characteristics that potentially contribute to a possible self's motivational efficacy, including content, specificity, valence, balance, and specificity.

The content of one's possible selves is theorized to prime an individual for action, serving as a map that integrates experiences, self-knowledge, and strategies that may be easily triggered when relevant situations arise (Cross & Markus, 1994). Much of the extant research on possible selves focuses on the overall number and the breadth of content domains represented by an individual's possible selves (Anthis, Dunkel, & Anderson, 2004; Brown & Diekman, 2010; Dunkel & Anthis, 2001; Markus & Nurius, 1986; Oyserman & Markus, 1990a). Studies examining possible selves frequently produce a count of possible selves, expected selves, and negative selves, both overall and specific to a given content domain. The rationale behind examining counts of possible selves is that an individual will report a higher frequency of possible selves in domains that are more salient to their self-concept. The number of possible selves attached to a domain signals the relative importance of that content area as compared to areas with fewer or no possible selves. In theory, the higher counts of possible selves reported by an individual in a certain domain should correspond to greater attention and motivation in that domain. Additionally, the overall diversity of an individual's possible selves may act as a source of resilience (Carson, Madison, & Santrock, 1987; Dunkel & Anthis, 2001; Markus & Nurius,

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1986), particularly during adolescence when identity formation and exploration is a key

development task (Brandtstädter, 1998; Erikson, 1968; Wigfield & Wagner, 2007).

Beyond content domain, possible selves may be classified based on their valence.

Positive or *approach* possible selves are the desired selves that an individual pursues or hopes to

achieve (e.g., "high school graduate"). Negative or *avoidance* selves are the unwanted

representations that the individual seeks to avoid becoming or fears becoming in the future (e.g.,

"high school dropout"). Although both approach and avoidance selves are still unattained states,

research suggests that approach selves are frequently more abstract when compared to avoidance

selves (Ogilvie, 1987). This difference may be a consequence of how each type of possible self is

developed. Approach selves are often based on observations of others, resulting in an idealized

version of life and ideas about what life could potentially be like (Abrams & Aguilar, 2005;

Ogilvie, 1987). The unwanted avoidance selves are thought to arise from negative personal

experiences and, consequently, are more concretely grounded in reality.

Much of the research suggests that approach selves have a protective effect, improving

behavioral performance, motivation, and confidence, while avoidance selves may increase

vulnerability, resulting in poorer behavioral performance when taking action (Hoppmann,

Gerstorf, Smith, & Klumb, 2007; Knox, Funk, Elliott, & Bush, 2000; Markus & Nurius, 1986;

Ruvolo & Markus, 1992). Ruvolo and Markus (1992) examined the impact of possible selves on

effective performance in undergraduate women and reported improved effort and perseverance

for subjects when they provoked success-relevant approach possible selves rather than failure-

relevant avoidance possible selves. Similarly, Hoppman and colleagues (2007) found that

domain-specific approach selves, but not avoidance selves, were associated with engaging in

related activities among older adults. Some researchers speculate that approach selves are more

behaviorally activating because, by definition, they involve moving toward or achieving a goal, and thus easily translate to the construction of more efficient strategies and increased optimism and perceived efficacy during pursuit; in contrast, the nature of avoidance selves revolve around suppressing action, rendering them less readily activated and likely to provoke negative affect and a lowered sense of control or efficacy (Hooker, 1992; Hoppmann et al., 2007).

However, a handful of studies suggest the importance of avoidance selves in behavioral action, citing a push/pull relationship between approach and avoidance selves. The unwanted avoidance selves may fuel motivation for change, acting as a strong push factor particularly when the distance between the current self and avoidance self is uncomfortably close (Carver, Lawrence, & Scheier, 1999; Ogilvie, 1987). Further studies suggest a motivational synergy when approach and avoidance possible selves exist in the same domain (Ogilvie, 1987; Oyserman & Markus, 1990a, 1990b). Oglivie (1987) posited that the motivational power of avoidance selves arises when the unwanted self informs the goals of a corresponding approach self. This grouping of *balanced* possible selves may strengthen motivation through providing youth with a positive goal to strive after, coupled with a clear view of the consequences associated with failing to achieve the goal (Oyserman & Fryberg, 2006). Balance in possible selves may further function to guide individuals in selecting more appropriate strategies, filtering out actions that promote gaining a desired self but fail to avoid the unwanted self and vice versa. For example, a youth with a desired self of having a lot of friends will likely choose different strategies to gain popularity when this self is offset by an unwanted self of their friend's parents disapproving of them.

Specific, concrete possible selves may be more behaviorally activating than abstract or vague selves. The possible selves reported by study participants vary in terms of richness and

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clarity of the imagined self—abstract selves are more conceptual and vague in nature and typically reference traits or emotional states (e.g., 'successful') whereas concrete selves are more elaborate and contain specific detail (e.g., 'a college graduate') (Cross & Markus, 1994; Rathbone, Salgado, Akan, Havelka, & Berntsen, 2016). Few studies have explicitly compared outcomes for specific versus abstract selves, however several studies suggest that as possible selves expand in elaboration and detail, they become increasingly actionable resulting in better outcomes (Hoppmann et al., 2007; Oyserman et al., 2004; Oyserman, Terry, & Bybee, 2002).

Strategies & Confidence: Linking Possible Selves to Action

Strategies provide an important link between an individual's possible self and necessary behavioral action (Oyserman et al., 2011). Even the most clear, detailed, and actionable possible self is not sufficient in itself to provoke behavior. Rather, the self must be linked to a *strategy*, a plan containing a series of actionable steps to guide current behavior. Despite the theoretical importance of strategies, most studies of possible selves measure strategies solely in terms of presence (e.g., count of reported strategies) (Oyserman, Gant, & Ager, 1995; Oyserman et al., 2011). Few studies assess the quality of reported strategies or how the quality may impact the relationship between possible selves and behavioral action.

Similarly, limited research has focused on the role confidence in attaining the possible selves. Adolescents who believe that they are likely to obtain their positive possible selves evidence higher self-esteem compared to those who lack such confidence in attainment (Knox, Funk, Elliot, & Bush, 1998). A prior study conducted with a 212 high school students asked students to rate the likelihood of each reported possible selves using a seven-point bipolar Likert scale (Knox et al., 1998). Knox and colleagues reported an average likelihood score of 5.52 for expected selves and of 3.30 for feared selves.

Possible Selves and Demographic Characteristics

Possible selves are deeply influenced by social context. Socio-economic and cultural norms provide feedback about the range of possibilities accessible to 'people like us' (Elmore & Oyserman, 2012; Shepard, 2004). Prior research has explored differences in possible selves based on gender, race and/or ethnicity, and age.

Existing research suggests that differences between boys and girls exist for negative, but not positive, selves and for strategy generation. Knox and colleagues (2000) examined gender differences in the possible selves of a sample of primarily Caucasian adolescents. Girls perceived their feared selves as more likely to occur compared to boys. Girls also reported more feared selves connected to relational and interpersonal functioning, while boys' feared selves concerned occupation, general failure, and inferiority. Further studies suggest that girls' possible selves are more sensitive to feedback from their social context, such as incorporating other's outcomes in revising their own possible selves, than boys (Kemmelmeier & Oyserman, 2001). Several studies reported no gender differences in positive possible selves (Aloise-Young, Hennigan, & Leong, 2001; Leondari, Syngollitou, & Kiosseoglou, 1998; Oyserman et al., 1995) A more recent study of the school-focused possible selves of 284 eighth graders from low-income communities found that boys generated fewer strategies compared to girls (Oyserman et al., 2011).

Possible selves content has been studied among European American, African American, Native American, Asian American, and Hispanic groups of adolescents. Oyserman and colleagues (1995) reported that Black undergraduate students had fewer balanced possible selves in the domains of school and work compared to their White peers, although there was no difference between the groups for the overall balance across possible selves. However, this literature is primarily exploratory with studies focusing on a single group, rendering direct

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comparisons between racial and ethnic identity groups difficult. Although extant research

examines the role of demographic characteristics in possible selves, few studies have explored

the associations between possible selves and characteristics related to legal history. Pulling these

various aspects together, Figure 2.1 presents a hypothesized model for how the qualities of

possible selves interact with strategies to affect adolescent probation outcomes.

Q4.
Attainment confidence

Q2 & Q3
Strategies
- Presence
- Quality

Q3A. **Q3B.** **Q2.**

Q1.
Possible Selves
- Specificity
- Valance
- Content
- Balance

Q5.
Youth Characteristics

Age

Gender

Race/ethnicity

Legal history

Risk level

Behavioral Action

Outcome
- Recidivism
- Probation compliance
- School engagement
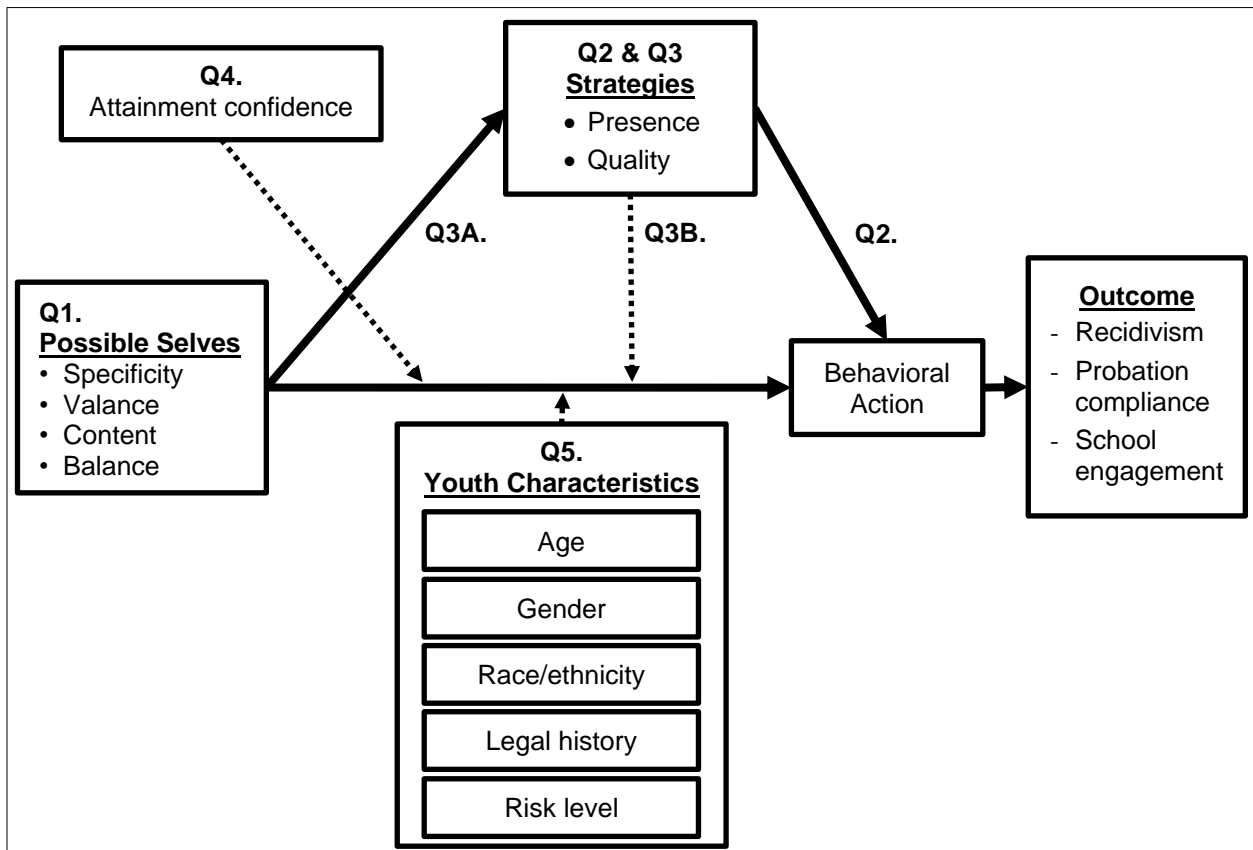
Figure 2.1. Hypothesized model for how possible selves relate to probation outcomes.

Study Aims

This study explored the relationship between adolescent's future-oriented identity beliefs

(possible selves) and outcomes (i.e., rearrests, probation compliance, and school engagement) for

adolescents on probation. Specifically, we examined the following questions based upon the

model portrayed in Figure 2.1:

Q1. What aspects of adolescent's possible selves are associated with probation outcomes?

Q2. What characteristics of adolescent's strategies for pursuing possible selves are associated with probation outcomes?

Q3. Is the relationship between possible selves and probation outcomes mediated (3A) or moderated (3B) by characteristics of the adolescent's strategies?

Q4. Is the relationship between possible selves and outcomes moderated by the adolescent's confidence in whether they will be able to attain/avoid their possible selves?

Q5. Is the relationship between possible selves and outcomes moderated by other youth characteristics (e.g., gender, age, race/ethnicity, prior criminal justice history, risk level)?

Methods

Study Sample

The sample consists of 121 adolescents from the SPPS study who completed at least one Possible Selves Questionnaire (PSQ). The majority of participants were recruited to the study via the waiting room approach (59%; n = 71), with 27% (n = 33) recruited through the disposition approach, and 14% (n = 17) through the loglist approach. Consequently, 41% of the sample (n = 50) were recruited at the beginning of their probation period.

Although 126 SPPS adolescents in total completed the PSQ, 10 cases were removed from the dataset. Three youth were dropped from the data as they entered probation as a "Person in

Need of Supervision" or PINS case, a designation indicating that the youth did not enter the court system due to a delinquent or criminal act, but rather because their legal guardian or another authority is seeking court invention as they are unable to control the youth's behavior. One case was removed from analyses when an administrative review showed that parental consent and youth assent forms could not be located. The study team did not receive administrative data for the remaining six cases. These cases were removed from the analyses as they did not contain key variables required to impute missing data.

Measures

Adolescent outcomes

This study examined the relationship between possible selves and three main outcomes: recidivism, probation compliance, and school problems. All three of these measures were assessed through data extracted from probation officer case notes and investigation reports (INR) from the Department of Probation (received at baseline and 12-months following the close of recruitment). These data were coded by a team of trained research assistants to extract information from the case notes, including indicators of continued legal involvement, probation compliance, and school-related issues.

Recidivism was measured as total count of arrests following completion of the Possible Selves Questionnaire. To create this variable, each participant's arrest history was reconstructed based on information from the probation case notes and the INR records. Using Excel, we performed a search to identify all notes containing words related to "arrest" We reviewed these notes to extract the date of arrest; notes containing only the phrase "no new arrest" were excluded from review. Next, dates of potential arrests were compared across the participant's notes and with INR records to identify distinct arrest events that occurred for the participant.

Then, we generated a total count of arrests occurring after the date of PSQ survey collection. Two variables were created – a total count of times the participant was rearrested and a dichotomous variable capturing whether any re-arrest had occurred (0: none; 1: one or more arrest).

The outcome of *probation compliance* was measured along three dimensions: failed probation end status, VOP status, and VOP filed. The variable *failed end status* indicates that the youth has failed to complete probation, with the youth being referred back to the family court due to re-arrest, remand, or violations of their probation requirements. While on probation, if an adolescent repeatedly fails to meet the conditions of probation, their probation officer may file a Violation of Probation (VOP) petition with the Court. The VOP process culminates with a hearing before a judge, who then determines whether the youth is guilty of violating the terms of their probation (VOP status). Two variables were created to measure *VOP petitions* – a total count of petitions filed and a dichotomous variable indicating whether the youth had at least one petition filed against them. *VOP status* captures the number of times that the youth was adjudicated to VOP status while on probation; this measure was also recoded into a dichotomous variable (0: never received VOP status; 1: at least one VOP status during probation). These three domains were combined to create a dichotomous variable, *probation compliance*, indicating the presence of a compliance issue.

School engagement was measured across four domains: attendance problems, school behavior problems, failing school, and school suspensions. These variables were created through a review of the probation officer's case notes for the youth following the date when the Possible Selves Questionnaire was administered. Participants differed in the total number of case notes; consequently, the raw count of notes referencing problems in each area was adjusted based on a

count of the total notes where school was coded as a topic of discussion ($\alpha = .82$). The resulting

ratio captures the overall proportion of school problems in each domain. In addition, a composite

variable, *school engagement problems*, was derived by taking the ratio of total problems across

all school domains to total number of notes concerning school. *Attendance problems* captures

the ratio of notes indicating that the youth had unexcused absences from school, was late, or cut

at least one class ($\alpha = .82$). *School behavioral problems* measured the ratio notes indicating that

the youth was experiencing problems at school, other than those related to attendance or

academic performance ($\alpha = .56$). *Failing school* measured the ratio of notes indicating poor

academic performance by the youth, namely failing out of one or more classes ($\alpha = .78$). Due to

the distribution, *school suspensions* ($\alpha = .70$) was measured as a dichotomous variable indicating

whether the youth was suspended or expelled from school during the study period; all regression

models for school suspensions included the total number of school notes as a control variable.

Possible Selves Questionnaire

Data on possible selves was collected as part of the SPPS baseline and 2-month follow-up

surveys using the Possible Selves Questionnaire (PSQ) (Oyserman, 2005), a standardized

measure consisting of a structured interview that has been used with both normative and

delinquent adolescent populations (Oyserman et al., 2004; Oyserman & Markus, 1990a;

Oyserman & Saltz, 1993). The PSQ consists of two sets of questions asking adolescents to report

up to four expected selves ("Next year, I expect to be…") and four feared selves ("Next year, I

want to avoid…") (see Appendix 2.1).

Attainment/avoidance strategies for each possible self were assessed using a follow-up

question asking whether participants were "doing something" to achieve or avoid that possible

self. Where the participant responded yes, they were prompted to further describe their strategies for achieving or avoiding the future self.

Coding Process for Possible Selves and Strategies

Content analysis was used to code the data from the PSQ to create several variables assessing the quality of participant's possible selves and strategies. Coding for the possible selves variables and the strategies variables was completed by two research assistants who separately coded all variables as described below. Appendix 2.2 contains the coding guide and instructions. The first author provided training and supervision to the raters throughout the coding process to ensure consistency and reliability. When differences in coding emerged, we discussed each case to reach a consensus on which code to use.

Possible Selves Variables

Variables capturing characteristics of participant's possible selves (content domain, count of possible selves, valence, balance) created from the PSQ data include:

Total possible selves. A variable containing the number of possible selves reported by the participant was created to capture the total number of possible selves generated by the participant (range: 0 – 8).

Valence. Possible selves were coded according to their valence (0: *avoidance*, 1: *approach*). As discussed earlier, approach possible selves are the desired selves that the youth wanted to achieve in the future (e.g., 'pass 10th grade') and avoidance selves are the unwanted selves that the youth wanted to avoid in the future (e.g., 'getting in trouble'). Following coding of participants' individual possible selves, we created two summative variables: (1) total count of reported approach possible selves (range: 0 – 8), and (2) total count of reported avoidance possible selves (range: 0 – 8). Although expected possible selves usually have an approach

valence and feared selves an avoidance valence, based on my own past experience and the

studies of others (Aloise-Young et al., 2001; Oyserman & Fryberg, 2006), some adolescents

report negatively-valanced future selves within the expected or desired category (e.g., 'I don't

want to be in jail') and vice versa. Consequently, coded valance was used to differentiate

possible selves rather than the categories of expected and feared.

Specificity. Possible selves were coded dichotomously as either specific (the goal does

not need further definition; detailed, precise, there is enough information to observe that the

action has been accomplished) or as vague (the goal is overly general and/or needs more

definition in order to clearly understand what is being done or to determine whether it has been

achieved). Two variables were derived based on this coding scheme. First, a total count of

specific possible selves reported by the youth. Then, the percentage of the youth's total number

of reported selves that were specific.

Content domain. Possible selves were coded for content domain according to established

criteria (Oyserman, 2005; Oyserman & Markus, 1990a); the domains include: *school-related*,

job, *other achievements* (e.g., sports), *interpersonal relationships*, *personal growth*, *living*

circumstances, *physical health*, and *non-normative behavior*. For example, a stated goal of 'To

pass 10th grade' would be classified with 'Domain: Pro-social, Sub-domain: School'; a stated

goal of 'to not get arrested again' would be classified as 'Domain: Non-normative, Sub-domain:

Delinquency.' Similar to other studies (Clinkinbeard & Zohra, 2012), these categories were

expanded and modified as needed to appropriately assess the possible selves domains present for

the current population.

Balance. Possible selves were coded as *balanced* when a participant had an approach

possible self that was offset by a countering avoidance self (i.e., approach self: "respecting

others", avoidance self: "Not to swear at my friends") (Oyserman & Markus, 1990b). A total count of balanced selves was created (range: 0 – 4).

Attainment/Avoidance Strategy Variables

Participant's strategies were examined along two dimensions: total strategies reported and self-regulatory strategies. In cases where the respondent did not have a goal, strategies were coded as not present.

Self-regulatory strategies. As mentioned above, the quality of the strategies linked to possible selves is an understudied subject. For this study, self-regulatory strategies are conceptualized as a latent variable existing on a continuum, indicated by the presence of behaviorally activating aspects in the strategy's content and relationship to the future goal. The behavioral activation of reported strategies was measured by coding reported strategies for the presence of nine characteristics suggested by prior studies and the theoretical literature: relevance to goal, effectiveness, central actor, strategy valence, concreteness (Clinkinbeard & Murray, 2012; Clinkinbeard & Zohra, 2012), specificity, time, location, and clear action. These items were then combined to create a cumulative self-regulatory strategies scores (theoretical range: 0 – 9; see Appendix 2.3 for psychometric analyses). Table 2.1 below details the definitions for each of the items included in the scale.

Table 2.1.

Domains and Definitions of Items Comprising the Self-Regulatory Strategies Variable.

Domain	1: Behaviorally activating	0: Not behaviorally activating
Relevance: *Is the strategy closely connected or appropriate to addressing the stated goal?*	Strategy is clearly connected to the goal and appropriate	Strategy does not logically connect to the goal or is inappropriate
Effectiveness: *Is the strategy likely to achieve the stated goal?*	Strategy will likely result in achieving or making progress toward the goal	Strategy is unlikely to achieve or move closer to the goal
Central actor: *Who does the strategy place the as the main actor?*	Strategy indicates youth as a primary action-taker	Strategy indicates someone or something other than youth is responsible for action
Strategy valence: *Does the strategy involve doing something (approach) or not doing something (avoid)?*	Strategy involves trying to do something	Strategy involves trying to avoid or stop doing something
Concreteness: *Would you be able to replicate this strategy without gaining more information or greater detail about the steps?*	Strategy is clear and detailed enough to put into action; little or no need for further detail or clarification to understand how to replicate	Strategy is ambiguous and cannot be replicated without substantial clarification
Specificity: *Overall, is the strategy vague or specific?*	Strategy does not need further definition; it is detailed, precise, there is enough information to observe that the action has been done	Strategy is general and/or needs more definition in order to understand what is being done or to determine whether it has been achieved
Time: *Is there any indication of when the goal is complete (time, frequency, duration)?*	Strategy provides at least one indication of when it is being done; this can include a timeframe, duration, or frequency	Strategy is completely detached from any sense of when it takes place
Location: *Is there any indication of where the strategy is done?*	Strategy provides at least one indication of the place where the participant takes action	Strategy is completely detached from any sense of where the action takes place
Action: *Is it clear what is being done to take action?*	Strategy action is clear and specific with enough information to observe that the action has been done	Strategy is general or vague in terms of what action is being taken

Moderating Variables

Confidence in attainment/avoidance for each possible self was assessed using a five-point Likert scale asking participants 'how confident are you that this will happen?' for each expected possible self and 'how confident are you that you will be able to avoid this?' for each feared possible self. Potential responses include: '*definitely will happen*', '*probably will happen*', '*might or might not happen*', '*probably won't happen*', and '*definitely won't happen.*' Participants were asked to indicate the confidence level for each possible self that they reported, resulting in up to four confidence scores for the expected selves and four scores for the feared selves. *Expected confidence score,* was calculated as the mean score across reported expected selves ($M = 2.0$, $SD = 1.1$); *avoidance confidence score* was calculated as the mean score across reported feared selves ($M = 2.0$, $SD = 1.2$). *Total high confidence selves* captures the total number of selves reported at the level of 'definitely will happen' – again, separate variables were created for high confidence expected selves ($M = 1.2$, $SD = 1.0$, range: $0 - 4$ selves) and high confidence feared selves ($M = 1.2$, $SD = 1.1$, range: $0 - 4$ selves).

Demographic variables were collected using administrative data, which included the follow variables: gender, age at start of study, and race/ethnicity. Legal characteristics for the adolescent were assessed across three areas: legal history, probation characteristics, and risk level. *Legal history* variables were derived from two items in the administrative data file: (a) the index charge that resulted in the participants, and (b) the total number of prior arrests. The current charge was recoded into crime type based on a review of the New York penal code. Three domains of crime were used for the analyses: (a) *violent crime* or crimes against persons (e.g., assault, robbery, sexual crimes); (b) *property crime* (e.g., burglary, larceny, theft, criminal mischief); and (c) *other crime*, including public order crimes (e.g., drug possession, prostitution,

possession of weapons), and accessory to crime (i.e., criminal facilitation). *Crime severity* was measured as the legal category of the index crime [0: Juvenile Delinquency (lowest level), 7: Felony A (highest level)]. An additional dichotomous variable was derived based on crime severity capturing whether the youth had committed a felony (0: lesser offense committed; 1: felony committed). *Probation type* captures whether the youth was placed on General Supervision or the Enhanced Supervision Program (ESP), which provides intensive probation to youth who would otherwise be placed in a residential facility. In addition, length of *time on probation* was measured as the time elapsed between the date of adjudication and the date that the youth was admitted to the SPPS study. The study included two risk factors: *prior arrests* and a composite *risk score*. The variable, *prior arrests*, was derived from administrative data and captures the total count of arrests occurring before the index crime. *Risk score* was measured as the cumulative number of risk factors present based on information from the adolescent's investigative report (INR) that is completed by the probation department prior to adjudication; risk factors included: presence of substance use ($\kappa = .86$), presence of problems at home ($\kappa = .64$), presence of problems at school ($\kappa = .72$), presence of anger issues ($\kappa = .68$), presence of prior arrests, age at first arrest, and presence of negative peers.

Data Analysis

Overview

The goals of the analyses were to test the following questions:

1. Are particular qualities of possible selves (*i.e.*, valence, specificity, content, and/or balance) associated with better probation outcomes?

2. Are particular qualities of the strategies used to pursue possible selves (*i.e.*, presence, quality) associated with better outcomes?

3. Is the relationship between possible selves and outcomes mediated or moderated by the presence and quality of the adolescent's strategies?

4. Is the relationship between possible selves and outcomes moderated by the adolescent's confidence in whether they can attain their possible selves?

5. Is the relationship between possible selves and outcomes is moderated by other youth characteristics (e.g., demographics, legal history, risk level)?

We conducted several preliminary analyses prior to examining these questions. First, content analysis was performed on data from the Possible Selves Questionnaire (as described above) to create quantitative variables for analysis and to provide a basic descriptive analysis of the possible selves and strategies used by adolescents on probation. Next, we conducted standard descriptive and visual analyses to examine the distribution of key variables.

Analyses for Questions 1 and 2

Regression analyses were used to examine Question 1 (Are possible selves characteristics associated with probation outcomes?) and Question 2 (Are possible selves strategies associated with probation outcomes?). Rearrest was modelled using negative binomial regression as descriptive analyses indicated over-dispersion, with higher variance and observed zero counts

than expected for a Poisson distribution (Greene, 2008; Hardin & Hilbe, 2014; Hilbe, 2014).

Logistic regression was used to estimate the log odds ratio for binomial outcomes (e.g., probation compliance outcomes, school suspensions). School outcomes, other than suspension, were modelled using OLS regression.

As expected, strong correlations exist between many of the possible selves variables; this also presents a challenge for multivariable modeling in the form of potential multicollinearity. To address this issue, we examined the bivariate associations between the outcome variables and potential predictor variables. Predictor variables that were statistically significantly at an α-level of .10 were retained for further multivariable modeling. Retained predictors underwent further assessment for collinearity during the process of examining regression diagnostics and model specification. We performed supplemental regression analyses as need to understand the interrelationships between collinear predictor variables. Multivariable models for testing study hypotheses were constructed through sequential regressions, which added one variable at a time to assess the influence of each subsequent variable on probation outcomes (Keith, 2015). Statistics from AIC, BIC and likelihood ratio tests were compared across models to assess fit and finalize variable selection (Hilbe, 2014).

Control variables. Due to the nature of the outcome data being dependent on information from case records, administrative control variables were included for these analyses. All analyses of rearrests include length of time between collection of the Possible Selves Questionnaire to the end date of the study as an exposure term. The count of rearrests relies on administrative records. While all youth share the same end date, some youth began the study earlier than others. This resulted in differing lengths of time during which youth are eligible to have an arrest counted in

their rearrest outcome. Including this time interval allowed us to account for differing lengths of exposure.

Probation compliance variables are dependent upon case notes, which capture any attempted probation officer contact with the youth. Hence, the total number of contacts strongly influences our ability to detect any violations of probation. All analyses of probation compliances outcomes, therefore, included total contacts as a control variable.

The school outcome variables are dependent on the youth attending school; thus, youth whose probation period overlaps summer may result in an undercount of school problems relative to youth whose probation period does not include the summer months. Consequently, analysis of school outcome variables included a control variable accounting for the proportion of probation time during the summer months.

Mediation Analyses: Question 3A

The third question examined whether the presence and/or quality of strategies mediates the relationship between possible selves and probation outcomes. We ran simple mediation models to obtain total, direct, and indirect effects estimated simultaneously using regression coefficients (Baron & Kenny, 1986; Fairchild & MacKinnon, 2009; Jose, 2013; MacKinnon, 2008; Vanderweele, 2015).

Figure 2.2 presents a diagram depicting the direct and mediated models and the equations[1] used in testing the models. For each of the equations, i_1, i_2, and i_3 represent the intercepts, and e_1, e_2, and e_3 represent the corresponding residuals. In equation 1, c represents the total effect of possible selves (X) on the outcome (Y). The direct effect of possible selves on

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[1] Please note that the equations presented are for OLS regressions; Negative binomial regressions estimate the $\log(\lambda_i)$ in place of Y, an offset in place of the intercept, and do not include an error term.

the outcome after controlling for strategies (M) is *c'* and the effect of strategies on the outcome is *b* (Eq. 2). The effect of possible selves on strategies is *a* (Eq. 3). Thus, the product of coefficients *a* and *b* from equations 2 and 3 corresponds to the indirect effect.
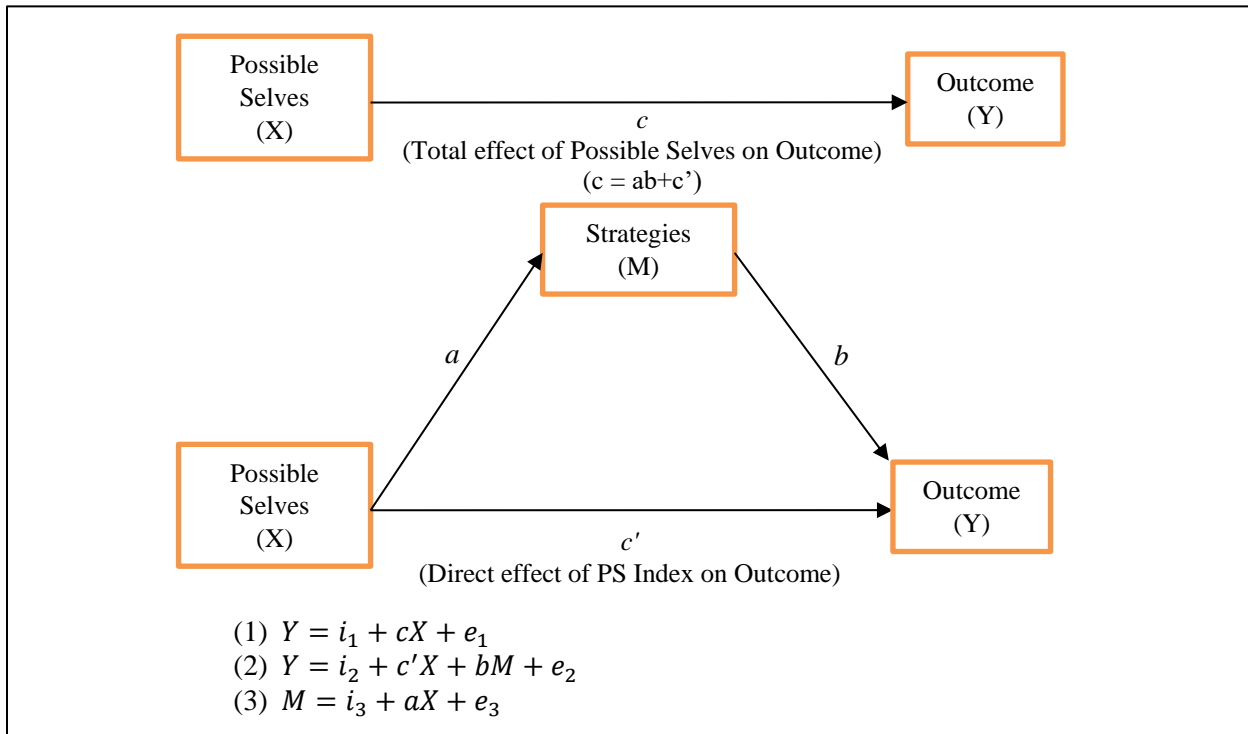
Figure 2.2. Mediation model and regression equations for testing Hypothesis 3.

Due to the small sample size, mediation analyses used the most parsimonious set of possible selves variables. For binary outcomes (e.g., probation compliance, school suspensions), mediation analyses employed the user-created Stata package, binary_mediation (Ender, 2011), with bootstrapped standard errors and bias-corrected accerlated (BC$_a$) confidence intervals (DiCiccio & Efron, 1996). Additionally, outcome variables with negative binomial distribution (e.g., rearrest) were recoded into binary variables to estimate decomposed effects via logistic regression. For continuous variables with normal distributions (e.g., all other school outcomes),

mediation analyses proceeded using the medeff command from the Stata package, mediation (Hicks & Tingley, 2011a, 2011b).

Moderation Analyses: Questions 3B, 4 & 5

Possible selves strategies (Question 3B), confidence in possible selves (Question 4), and youth characteristics (e.g., demographics and legal history; Question 5) were investigated as potential moderators in the relationship between possible selves and probation outcomes. For Question 5, moderation models were fit for each of the demographic variables as well as any legal history variables that were significantly related to the outcomes at $p < .10$.

Moderation analysis proceeded in a two-step process. First, a model was fit for each outcome to examine the main effects for the possible selves characteristics and the potential moderating variable. Then, a second model was fit that added the interaction term to the regression. Finally, when a statistically significant interaction was found, an interaction plot was created using marginal effects to aid in interpretation.

Missing Data

The variable *confidence in attainment* was introduced after the start of data collection and, consequently, is missing for 56% of cases (n=51 complete cases). The mechanism of missingness for this variable is the date of entry into the SPPS study. The original analysis planned to use multiple imputation to address missingness in the attainment variable to preserve the full dataset for analysis. However, following further consultation with a statistician, multiple imputation was not utilized due to the nested nature of the raw data in combination with the high amount of missingness. Consequently, we used the subset of complete cases to complete exploratory analyses for Question 4.

Results

Sample demographics and legal history characteristics are provided in Table 2.2. The average age of the sample was 15.2 years old (*S.D.* = 1.2; range: 9 – 17 years) and 79% of participants were male (*n* = 95). With regard to race and ethnicity, the sample of 78% Black, 12% White, 8% Hispanic, 1% Asian, and 1% multi-racial.

Table 2.2

Distribution of Sample Demographics (N=116)

Variables	*n*	%	*M*	*SD*	Range Min	Max	Missing
Female	26	22%			0	1	*0 (0%)*
Age at probation start			15.1	1.2	9.6	17.3	*0 (0%)*
Race							*0 (0%)*
Black	92	79%					
White	13	11%					
Hispanic	9	8%					
Other	2	2%					

Table 2.3 presents the legal characteristics of the sample, including index crime, probation characteristics, and risk. A majority of participants (64%; n = 74) were court ordered to general probation (standard supervision) and 36% (n = 42) adolescents were placed on enhanced supervision probation (ESP), an intensive supervision program for adolescents who would otherwise be placed in a residential facility. The average time on probation prior to entering the study was 89 days (*S.D.* = 115 days; range: 0 – 616). Most youth (66%; n = 76) had at least one arrest prior to the arrest leading to their current probation episode, with an average of 1.2 prior arrests (*S.D.* = 1.3; range: 0 – 6). The average age at first arrest was 14.3 years (*S.D.* = 1.1; range: 9 – 16).

Table 2.3

Distribution of Legal History, Probation Characteristics, and Risk (N=116)

Variables	*n*	%	*M*	*SD*	Min	Max	Missing
					Range		
Legal History							
Index Crime							
Crime type							*1 (1%)*
Violent	64	56%					
Property	40	35%					
Other	11	9%					
Crime severity			3.1	1.4	0	6	*1 (1%)*
Felony A	0	0%					
Felony B	8	7%					
Felony C	17	15%					
Felony D	14	12%					
Felony E	26	23%					
Misdemeanor A	42	37%					
Misdemeanor B	7	6%					
Delinquency	1	1%					
Probation Characteristics							
Probation type							*0 (0%)*
General	74	64%					
Enhanced Supervision	42	36%					
Total contacts			129.9	78.4	27	397	*0 (0%)*
Time on probation							
Probation served prior to study start (days)			89.0	115.2	0	616	*0 (0%)*
Risk Factors							
Prior arrests	76	66%	1.2	1.3	0	6	*0 (0%)*
Risk score			2.5	1.5	0	6	*0 (0%)*

Table 2.4 below presents descriptive statistics for adolescent probation outcomes. Probation outcomes were examined along three domains: recidivism, probation compliance, and school engagement. Just under half (42%) of the sample had been rearrested at least once following the start of probation. Similarly, 39% of youth had an indicator of problems with compliance to their probation conditions, with 36% having a violation of probation (VOP) petition process initiated against them, 20% proceeding to receive VOP status, and 21% of youth failed to complete probation. Difficulties related to school engagement were more pervasive, with case notes indicating that 88% of youth experienced school-related issues. Most youth (81%) had attendance-related issues (e.g., unexcused absences, cutting class, tardiness) while on probation. In terms of academic performance, 42% of the sample had case notes indicating that they were failing out of one or more classes. More than half of youth (63%), experienced other problem behavior and 33% of youth were either suspended or expelled from school following their initial placement on probation.

Table 2.4.

Distribution of Adolescent Probation Outcomes (N=116)

Variables	*n*	%	*M*	*SD*	Min	Max	*Missing*
Recidivism							
Rearrests	49	42%	1.1	1.9	0	10	*0 (0%)*
Probation compliance issues	45	39%			0	1	*0 (0%)*
VOP petitions	42	36%			0	1	*0 (0%)*
VOP status	23	20%			0	1	*0 (0%)*
Failed end status[a]	27	26%			0	1	*11 (9%)*
School engagement problems	102	88%	.46	.30	0	1.29	*0 (0%)*
Attendance problems	94	81%	.30	.24	0	1	*0 (0%)*
School problems	73	63%	.11	.12	0	1	*0 (0%)*
Failing school	49	42%	.03	.06	0	1	*0 (0%)*
School suspensions	38	33%			0	1	*0 (0%)*

[a] Missing data for end status is due to censoring of study records

Possible Selves Characteristics of Youth on Probation

As a first step in the analysis, we examined the characteristics of youth's possible selves across a number of indicators, including total count, valence, specificity, content domain, and balance across reported selves. The following section presents these findings.

Reported possible selves counts and qualities. Table 2.5 presents the overall count and characteristics of the possible selves reported by the sample. Almost all youth (98%) reported at least one possible self, with a mean number of 4.1 reported selves (S.D. = 1.8). In terms of valence, participants reported slightly more approach selves (52%; *M*: 2.2 selves) as compared to avoidance selves (45%; *M*: 1.9 selves). Examining balance in valence across the constellation of youth's total reported selves provides insight as to whether approach or avoidance selves are more easily accessible to the youth; 38% of the sample reported possible selves that contained more approach selves, 21% contained more avoidance selves, and 41% contained equal numbers of approach and avoidance selves. Although 93% of youth reported at least one possible self that was coded as specific, roughly half (52%; *M*: 2.1) of youth's total reported selves were specific. Valence and specificity in possible selves were associated; 56% of avoidance selves were specific compared to 45% of approach selves, χ^2 (1, *N*=502 selves) = 5.86, *p* = .015.

Table 2.5.

Distribution and Intercorrelations of Possible Selves Characteristics (N=116)

Variables	*M*	*SD*	Range		1	2	3
1. Total reported selves	4.1	1.8	0	8	--		
2. Approach selves	2.2	1.0	0	4	.84***	--	
3. Avoidance selves	1.9	1.1	0	5	.84***	.41***	--
4. Specific selves	2.1	1.2	0	5	.53***	.39***	.50***

* p ≤ 0.05; ** p ≤ 0.01; *** p ≤ 0.001

Possible selves content domains. On average, youth reported possible selves linked to three separate content domains (*M*: 3.5 domains, *S.D.*: 1.5). During the coding process, analysis of the content of reported possible selves resulted in a typology of domains that was similar to prior research (e.g., Oyserman & Markus, 1990a). At the broadest level, reported content was divided between *pro-social outcomes*, which describe selves that fit with normatively defined areas (e.g., schooling, career, relationships), and *non-normative life outcomes*, which included selves related to delinquency and other problem behaviors.

Table 2.6.

Distribution and Intercorrelations of Possible Selves Pro-Social Content Domains (N=116)

Variables	Any reported *n*	%	Total *M*	SD	1	2	3	4	5	6	7
1. Pro-social outcomes	112	97%	2.7	1.5	--						
2. School	79	68%	.9	.8	.43*	--					
3. Job	55	47%	.5	.7	.35*	-.14	--				
4. Achievements	46	40%	.5	.7	.37*	-.20*	.003	--			
5. Relationships	27	23%	.3	.6	.46*	.14	-.03	-.03	--		
6. Personal growth	24	21%	.3	.6	.30*	.01	-.10	-.03	.02	--	
7. Circumstances	13	11%	.1	.4	.30*	-.02	.03	.13	.03	-.12	--
8. Health	9	8%	.1	.3	.28*	-.13	.15	.13	.03	-.02	.07

* p ≤ 0.05

As shown in Table 2.6, most respondents (97%) reported at least one possible self that was related to pro-social life outcomes. Among the pro-social domains, possible selves most commonly involved the domains: school (68%), followed by jobs (47%), and other achievements (e.g., sports; 40%). Less than a quarter of participants reported possible selves related to other pro-social outcome domains, relationships (23%), personal growth (21%), life circumstances or

material things (11%, e.g., "traveling," "owning a BMX"), and health (8%). Due to low occurrence, the content domains of life circumstances and health were not included in further analyses.

Most youth reported at least one possible self that was related to non-normative life outcomes (Table 2.7). Across the negative life outcomes, 66% of youth reported at least one possible self that was related to delinquency. Within the category of delinquency, 59% of youth reported at least one possible self that concerned involvement with the justice system, with incarceration-related selves reported among a greater percentage of the sample than probation-related selves (38% vs. 22% respectively). Only 12% of youth reported any possible selves related to engaging in illegal behaviors, such as "criminal mischief" or "fighting." The other main category of non-normative life outcomes contained possible selves related to problem behavior, with 47% of youth reporting at least one self in this area. Problem behavior was further broken down into the following domains: general problem behavior (28%; e.g., "getting in trouble"), associating with negative peers (16%), substance use (10%), and teenage pregnancy (2%). Based on the distribution of non-normative content areas, further analyses retained the larger categories of non-normative selves, delinquency, and problem behavior.

Table 2.7.

Distribution and Intercorrelations of Possible Selves Non-Normative Content Domains (N=116)

	Any reported		Total		Intercorrelations									
Content Domain	*n*	*%*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Non-normative	100	86%	1.5	.9	--									
2. Delinquency	76	66%	.9	.8	.63*	--								
3. Justice System	69	59%	.8	.7	.57*	.91*	--							
4. Incarceration	44	38%	.4	.5	.40*	.61*	.63*	--						
5. Probation	26	22%	.2	.5	.34*	.60*	.67*	.02	--					
6. Illegal behavior	14	12%	.1	.3	.26*	.31*	-.09	-.03	-.08	--				
7. Problem Behavior	55	47%	.6	.7	.60*	-.20*	-.19*	-.13	-.18	.02	--			
8. General	32	28%	.3	.5	.35*	-.18	-.14	-.10	-.05	-.11	.66*	--		
9. Negative peers	18	16%	.2	.4	.26*	-.15	-.18	-.10	-.22*	.06	.49*	-.06	--	
10. Substance use	12	10%	.1	.3	.40*	.06	.04	-.06	-.01	.19*	.45*	-.04	.07	--
11. Pregnancy	2	2%	.01	.1	.001	-.06	-.05	.02	-.07	-.05	.07	-.08	-.06	-.04

* $p \leq 0.05$.

Balance across reported possible selves. Balanced content pairs indicate that the participant had a positive possible self that was offset by a countering negative self (i.e., positive self: "respecting others", negative self: "Not to swear at my friends"), theoretically providing greater motivational power for the goal area. As shown in Table 2.8, less than half (44%) of the sample reported at least one balanced content pair, with 20% evidencing balance across all reported positive possible selves. Across the content domains, all pro-social domains contained at least one youth who reported a balance pair, with school-related possible selves were the most balanced (16% of youth having at least one balanced pair). The non-normative domains of delinquency and problem behavior also contained balanced possible selves (11% and 6% of youth respectively); for example, a youth reporting an approach self of "completing probation" and an avoidance self of "getting on probation."

Table 2.8.

Distribution of Balanced Pairs across Content Domains (N=116)

	Any reported		Total		Range	
Variables	*n*	%	*M*	*SD*	Min	Max
Total balanced pairs	51	44%	.7	1.0	0	4
School pairs	18	16%	.2	.5	0	2
Personal growth pairs	12	10%	.1	.3	0	2
Delinquency pairs	13	11%	.1	.3	0	1
Probation-related pairs	11	9%	.09	.3	0	1
Incarceration pairs	2	2%	.02	.1	0	1
Job pairs	10	9%	.1	.4	0	2
Other achievement pairs	7	6%	.07	.3	0	2
Relationship pairs	6	5%	.05	.2	0	1
Problem behavior pairs	7	6%	.06	.2	0	1
Circumstances pairs	3	3%	.03	.2	0	1
Health pairs	1	1%	.01	.1	0	1

Possible selves and strategies. The next set of analyses examined the characteristics of the strategies that youth reported using to pursue their possible selves. Most youth (97%) in the sample reported at least one strategy (*M*: 3.6 strategies; *S.D* = 1.8; range: 0 – 8), with strategies present for 86% of reported possible selves on average. Adolescent's reported strategies scored 4.7 out of a possible 9 points (*S.D.*: 1.7; range: 0 – 8.5) on the cumulative self-regulatory strategies score. Pairwise correlations were used to test associations between strategies and possible selves characteristics. Table 2.9 below presents the results of these analyses. Total strategies reported by youth were positively associated with all of the possible selves characteristics. In contrast, only a couple weak correlations were found for possible selves characteristics and the composite score representing the quality of the strategies, including associations with specific selves (*r* = .19, *p* = .04) and school-related selves (*r* = .17, *p* = .08).

Table 2.9.

Correlations for Strategies Variables and Possible Selves Characteristics (N=116)

Variables	Total Strategies	SRS
Total strategies	--	--
Self-regulatory strategies score (SRS)	.40***	--
Possible Selves Characteristics		
Total reported selves	.86***	.07
Approach selves	.76***	.15
Avoidance selves	.68***	-.02
Specific selves	.51***	.19*
Content domain		
Pro-social selves	.76***	.12
School	.30***	.17+
Job	.33***	.13
Other achievement	.36***	.08
Relationship	.34***	-.01
Personal growth	.13	-.12
Non-normative selves	.47***	-.05
Delinquency	.18*	.00
Problem behavior	.40***	-.06
Balanced Pairs	.38***	.10

+ *p* ≤ .10; * *p* ≤ .05; *** *p* ≤ .001.

Possible selves and confidence in attainment. A sub-sample of 51 participants completed an additional measure examining confidence in attaining possible selves (Table 2.10). Across all reported selves, youth averaged a confidence score of 2.2 (SD = 1.1; range: 0 – 5). On average, 56% of the possible selves reported by participants received a high confidence score, indicating that youth endorsed that just over half of their reported selves "definitely will happen." Youth appear slightly less confident in their expected selves (51% endorsed as definite) as compared to their feared selves (61% endorsed as definite). Bivariate correlations of confidence and possible selves characteristic showed a moderate to strong positive relationships with most characteristics.

Table 2.10.

Correlations for Confidence in Attainment and Possible Selves Characteristics (N=51)

Variables	*M*	*SD*	High	Mid	Low	1	2	3
			Confidence Level (% of Selves)					
Confidence score								
1. All selves	2.2	1.1	56%	36%	2%			
2. Expected selves	2.0	1.1	51%	39%	2%	.94***		
3. Feared selves	2.0	1.2	61%	32%	1%	.87***	.87***	
Possible Selves								
Reported selves						.97***	.90***	.84***
Approach selves	2.4	1.0	61%	37%	2%	.85***	.82***	.61***
Avoidance selves	2.4	1.0	59%	39%	2%	.54***	.75***	.88***
Specific selves	2.5	1.0	60%	38%	2%	.87***	.53***	.53***
Content Domain								
Pro-social	2.4	.9	61%	37%	2%	.87***	.78***	.68***
School	2.4	.9	65%	34%	1%	.30*	.24	.24
Job	2.9	.8	55%	44%	0%	.32*	.31*	.18
Achievement	2.9	1.0	63%	32%	3%	.62***	.60***	.61***
Relationship	2.8	1.2	38%	57%	3%	.23	.15	.20
Personal growth	2.5	1.1	62%	38%	0%	.12	.02	.02
Non-normative	2.4	1.0	62%	36%	2%	.54***	.55***	.60***
Delinquency	2.4	.8	61%	36%	3%	.24	.25	.32*
Problem behavior	2.8	1.0	63%	35%	2%	.42**	.42**	.37**
Balanced Pairs	2.6	.8	56%	43%	0%	.38**	.28*	.31*

* *p* ≤ .05, ** *p* ≤ .01, *** *p* ≤ .001

Possible Selves and Rearrest

The following section presents the results of hypothesis testing for each probation outcome: rearrests, probation compliance, and school outcomes. The first set of outcome analyses tested hypotheses related to the probation outcome of rearrest. These analyses examined the following questions: (1) do possible selves characteristics predict number of rearrests? (2) do strategies for possible selves predict rearrests? (3) Do strategies mediate or moderate the relationship between possible selves and rearrest? (4) does the level of confidence in attaining possible selves moderate the relationship between possible selves and rearrests? and (5) do youth demographic and/or legal characteristics moderate the relationship between possible selves and rearrests?

Question 1: Do possible selves characteristics predict rearrest?

The first question examined the relationship between specific qualities of possible selves (e.g., content, valence, balance) and rearrest. Initial modeling using Poisson regression indicated a high degree of overdispersion in the rearrest variable. Thus, negative binomial regression with a robust variance estimator was used to model count of rearrests (Greene, 2008; Hilbe, 2014). This outcome is limited to rearrests that occurred during the period between the Possible Selves Questionnaire survey and the end of the study period. As a result, the period of time during which an arrest could occur varies across the sample ($M = 1.8$ years, $S.D. = .3$, range: $1.3 – 2.1$ years). To adjust for this difference, length of time in the study was specified as an exposure variable for all rearrest regression models.

Table 2.11.

Means and Standard Deviations for Possible Selves Characteristics by Rearrest (N=116)

	No rearrest (n=67)		Rearrested (n=49)		Wald $\chi^2(1)$[a]	RR
	M	SD	M	SD		
Total reported selves	3.9	1.5	4.4	2.0	6.11*	1.23
Approach selves	2.2	1.0	2.2	1.1	1.55	1.20
Avoidance selves	1.7	.9	2.2	1.2	8.45**	1.43
Specific selves	1.8	1.1	2.5	1.3	12.12***	1.42
Content domain						
Pro-social selves	2.6	1.4	2.8	1.7	2.51	1.18
School	.9	.8	1.0	.9	.67	1.20
Job	.5	.6	.6	.7	.45	.90
Achievements	.4	.6	.5	.8	1.10	1.27
Relationship	.3	.5	.3	.6	1.44	1.33
Personal growth	.2	.6	.3	.5	3.87*	1.65
Non-normative selves	1.3	.8	1.7	1.0	6.46**	1.39
Delinquent	.8	.7	1.0	.8	.55	1.18
Problem behavior	.6	.7	.7	.7	1.42	1.27
Balanced Pairs	.7	.9	.8	1.0	1.94	1.24

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. [a] Analyses use NB-P regression (nbregp) with robust variance estimator for predictor on total rearrests; all models include ln(years in study) as an exposure variable.

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Preliminary analyses of the possible selves variables indicated strong correlations between a number of variables, and thus the potential for multicollinearity problems. As a first step in modeling, bivariate analyses were used to identify which possible selves characteristics to retain for further modeling (see Table 2.11). Three possible selves characteristics predicted rearrests: total reported possible selves (RR = 1.23, Wald $\chi^2(1)$=6.11, p=.01), avoidance selves (RR = 1.43, Wald $\chi^2(1)$=8.45, p=.004), and specific selves (RR = 1.42, Wald $\chi^2(1)$=12.11, $p<$ .001). In addition, two content domains were associated with rearrests: personal growth selves (RR = 1.65, Wald $\chi^2(1)$=3.87, p=.05) and non-normative selves (RR = 1.39, Wald $\chi^2(1)$=6.46, p=.01). After further examination for collinearity, the combined effects of possible characteristics were modelled using negative binominal regression.

Table 2.12.

Negative Binomial Regression Model of Total Possible Selves and Specificity on Rearrests

	Model A.		Model B.		Model C.	
Variables	B	IRR	B	IRR	B	IRR
Total reported selves	.21*	1.23	-.36+	.70	-.46+	.63
Reported selves squared			.06**	1.06	.07**	1.08
Total specific selves						
% of specific selves					.01*	1.01
Constant	-1.38**		-.29		-.55	
Wald χ^2	6.11*		19.33***		21.45***	
df	1		2		3	
AIC	334.32		332.51		327.64	

Note: Analyses use NB-P regression (nbregp) with robust variance estimator; model includes *ln(years in study)* as an exposure variable. IRR: Incidence rate ratio.

As shown in Model B in Table 2.12, we found a statistically significant model for both the linear term and the quadratic term of reported selves, Wald $\chi^2(2) = 19.33$, $p < .001$. We plotted the marginal effects for the quadratic model to aid in interpretation (Figure 2.3). The plot reveals a curvilinear relationship between total reported selves and rearrest, wherein each additional possible self reduced the risk of rearrest. However, this protective effect dropped off after the point of a youth reporting approximately four selves; after this point additional selves increased the risk of rearrest. In Model C, we added a term for the percentage of reported selves that were specific. We found a parallel positive relation as for each 10% increase in the percentage of specific selves, adolescents were expected to be rearrests approximately 10% more often (IRR $= 1.01$, RSE $= .006$, $z = 1.98$, $p = .048$).

Figure 2.3. Marginal effects of total reported selves on rearrests.

Table 2.13 provides further insight into this relationship by separating the effect of total reported selves on rearrests by the valence and specificity of the reported selves, Wald $\chi^2(4) =$ 23.92, $p < .001$ (Model C). Statistically significant associations were found for the quadratic function of approach selves (Linear term: IRR = .36, RSE = .21, $z = -1.76$, $p = .078$; Quadratic term: IRR = 1.26, RSE = .15, $z = 1.98$, $p = .048$), avoidance selves (IRR = 1.53, RSE = .19, $z = $ 3.46, $p = .001$), and the percentage of specific selves (IRR = 1.26, RSE = .22, $z = -1.62$, $p = $ .022).

Table 2.13.

Negative Binomial Regression Model of Possible Selves Valence and Specificity on Rearrests

Variables	Model A.		Model B.		Model C.	
	B	IRR	B	IRR	B	IRR
Approach selves	.003	1.003	-.87+	.42	-1.02+	.36
Avoidance selves	.36**	1.43	.40**	1.49	.42***	1.53
Approach squared			.18+	1.20	.23*	1.26
Specific selves (%)					.01*	1.01
Constant	-1.24**		-.52		-1.26	
Wald χ^2	8.47*		11.24**		23.92***	
df	2		3		4	
AIC	334.23		333.90		329.76	

Note: Analyses use NB-P regression (nbregp) with robust variance estimator; model includes *ln(years in study)* as an exposure variable. IRR: Incidence rate ratio.

Figure 2.4 presents the marginal effects of approach selves and avoidance selves on rearrest. Expectation of rearrest increased with each addition avoidance selves that was reported, suggesting that the risk related to higher levels of reported selves is driven by the number of avoidance selves. In contrast, the addition of approach selves decreased expectation of rearrest

and provided a protective effect against the risks related to avoidance selves. Interestingly, youth with the lowest predicted number of rearrests were those who reported two approach selves in combination with no more than one avoidance self.
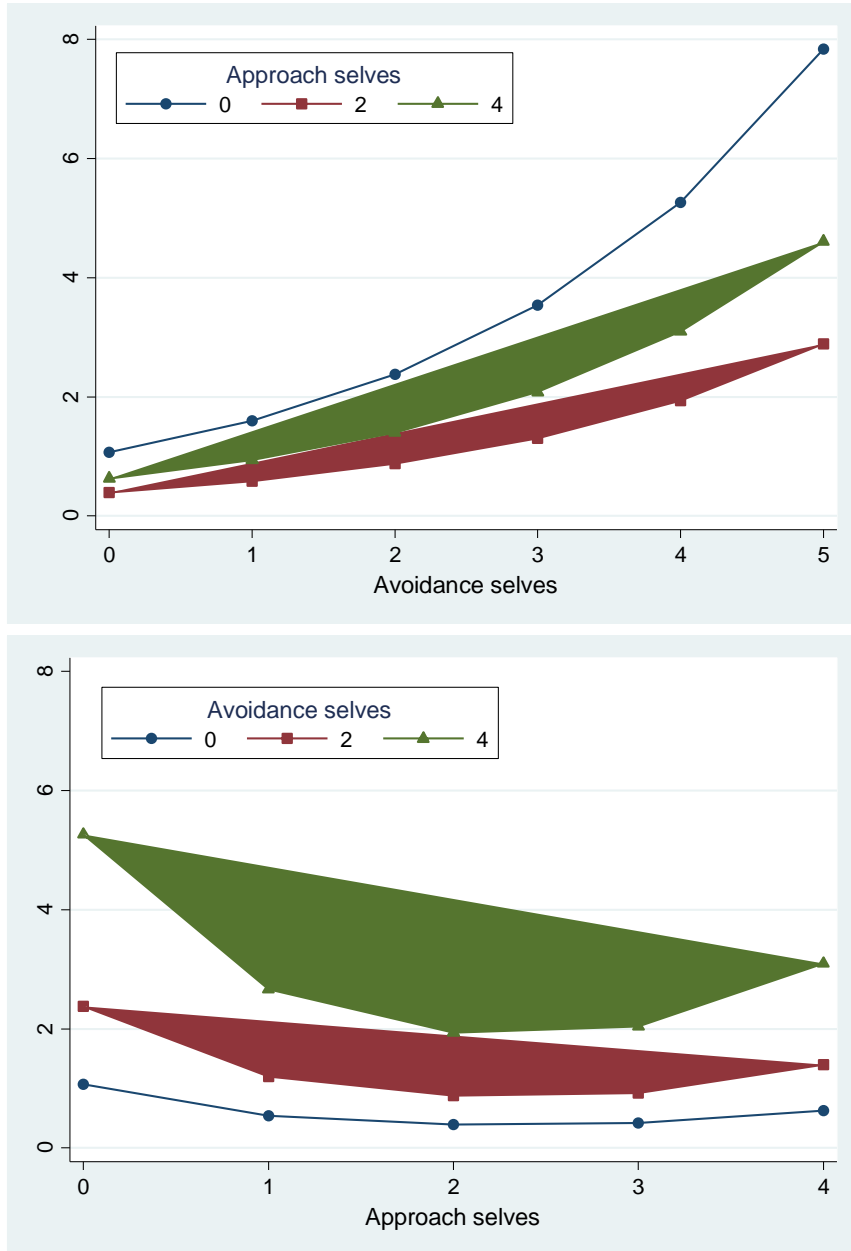
Figure 2.4. Marginal effects of possible selves valence on rearrests.

Question 2: Do strategies for possible selves predict rearrests?

The second hypothesis proposed that the strategies reported for pursuing possible selves would be associated with better outcomes for adolescents on probation. However, as presented in Table 2.14, the total number of strategies reported predicted rearrest, with adolescents expected to be rearrested approximately 18% more often for each additional reported strategy after adjusting for exposure, Wald $\chi^2(1) = 3.93$, $p = .047$. A statistically significant bivariate relationship was not found between the mean self-regulatory strategies score and rearrest, Wald $\chi^2(1) = 0.40$, $p = .529$.

Table 2.14.

Negative Binomial Regression of Possible Selves Strategies on Rearrests (N=116)

| | No rearrest | | Rearrested | | | |
| | (*n=67*) | | (*n=49*) | | Model 1 | Model 2 |
Variables	*M*	*SD*	*M*	*SD*	IRR	IRR
Total strategies	3.4	1.56	3.8	1.92	1.18*	
					[1.002, 1.39]	
Self-regulatory strategies score	4.8	1.79	4.6	1.62		.93
						[.77, 1.15]
Constant					.33**	.86
Wald χ^2					3.93*	.40
df					1	1
AIC					336.40	339.27

* $p \le .05$; *Note*: Brackets contain the 95% CI; analyses use NB-P regression (nbregp) with robust variance estimator; all models include *ln(years in study)* as an exposure variable.

Question 3: Do strategies mediate or moderate the relationship between possible selves and rearrest?

The third set of analyses for rearrest examined whether the relationship between possible selves and rearrest was mediated through strategies (Table 2.15). In the interests of parsimony, analyses retained total reported possible selves as the possible selves predictor for the mediation analysis. The first mediation model, we fit a logistic regression model for the risk of rearrest involving main effects while allowing for modification of the effect of possible selves by total strategies; a linear regression model was fitted to estimate the effect of possible selves on strategies. However, based on the p-values and 95% confidence intervals, there is insufficient evidence to reject the null hypothesis. Thus, neither presence or quality of strategies emerged as mediating the effect of possible selves on risk of rearrest.

Table 2.15.

Mediation Analysis of Strategies on Possible Selves on Presence of Rearrests (N=116)

Effects	Total Strategies				Self-regulatory Strategies			
	Coef.	SE	z	p	Coef.	SE	z	p
Total indirect (*a*b*)	.02 [-.31, .46]	.19	.11	.91	-.01 [-.08, .01]	.02	-.32	.75
Direct (*c'*)	.15 [-.34, .57]	.23	.64	.52	.17 [-.04, .36]	.10	1.68	.09
Total effect (*c*)	.16 [-.07, .36]	.11	1.51	.13	.17 [-.04, .36]	.10	1.60	.11
Total effect mediated	.131				-.037			
Ratio of indirect to direct	.151				-.035			
Ratio of direct to total effect	1.151				.965			

Analyses use logistic regression with bootstrap standard errors and BC_a confidence intervals.

We ran additional analyses to test whether strategies moderated the relationship between possible selves and rearrest. Model 1 in Table 2.16 shows the results of the regression models

examining presence of strategies. While no main effects were found, the interaction between total reported selves and total strategies was significant (IRR = 1.09, RSE = .04, z = 2.56, p = .010). The second set of models tested the role of self-regulatory strategies; we did not find support for that the self-regulatory strategies score moderates the relationship between possible selves and rearrest (Table 2.16, Model 2).

Table 2.16.

Negative Binomial Regression Models of Possible Selves and Strategies on Rearrests (N=116)

Variables	Model 1		Model 2	
	A. Main IRR	B. Interaction IRR	A. Main IRR	B. Interaction IRR
Total reported selves	1.28 [.90, 1.81]	.92 [.52, 1.62]	1.22* [1.04, 1.44]	1.36 [.83, 2.22]
Total strategies	.96 [.67, 1.36]	.75 [.43, 1.31]		
Selves X Strategies		1.07*** [1.03, 1.10]		
Self-regulatory strategies (SRS)			.92 [.76, 1.10]	1.005 [.60, 1.68]
Selves X SRS				.98 [.87. 1.10]
Constant	.25**	.74	.38+	.26
Wald χ^2	5.98*	30.52***	6.27*	7.36+
df	2	3	2	3
AIC	336.24	334.84	335.52	337.31

+ $p \le .10$; * $p \le .05$; ** $p \le .01$; *** $p \le .001$. *Note*: Brackets contain 95% confidence intervals; all analyses use NB-P regression (nbregp) with robust variance estimator for predictor on total rearrests; all models include *ln(years in study)* as an exposure variable

Figure 2.5 provides the interaction plot for the moderating effect of total strategies on the relationship between possible selves and rearrest. Both reported selves are plotted at the

following levels: low (2 selves), average (4 selves), and high (6 selves). Because the number of

strategies is dependent on the number of selves, predicted arrests are not presented for

combinations where the number of strategies exceed the number of selves. Examining the plot,

for youth reporting a low or average number of selves, the predicted number of arrests decreased

as the number of strategies increased. The opposite effect is present at a high number of reported

selves, with increasing numbers of rearrest predicted as youth reported more selves with a

strategy present.
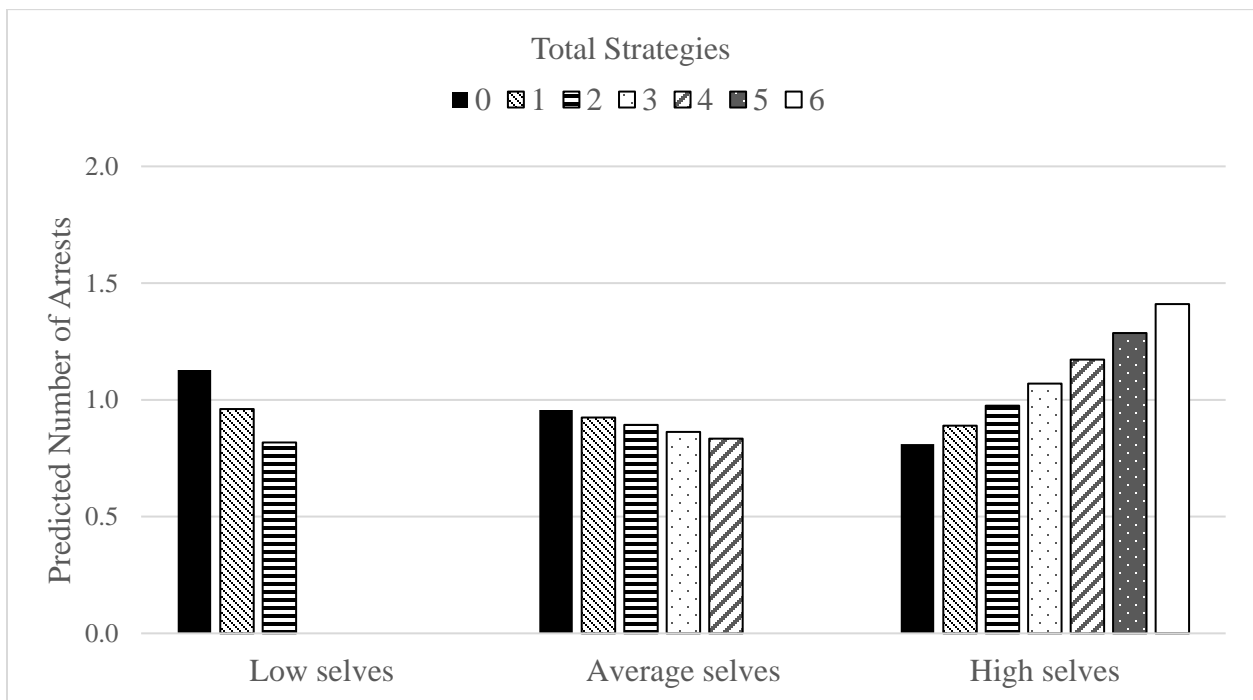
Figure 2.5. Marginal effects of possible selves on rearrests adjusted by total strategies.

Question 4: Does the level of confidence in attaining possible selves moderate the relationship between possible selves and rearrests?

The next set of analyses provides an initial exploration of whether confidence in attaining the desired possible self plays a role in the relationship between possible selves and rearrests. As discussed earlier, this analysis was completed with a subset of youth (n=51) who completed an additional item asking them to rate their perceived likelihood of attaining their reported selves.

Table 2.17.

Possible Selves Confidence Score by Rearrest (N=51)

Variable	No rearrest (n = 27)		Rearrested (n = 24)		IRR	Wald $\chi^2(1)^a$	p
	M	SD	M	SD			
Overall confidence score							
All selves	2.1	.89	2.4	1.28	1.37	4.82	.03
Expected selves	1.9	.95	2.2	1.26	1.33	5.49	.02
Feared selves	1.7	.92	2.3	1.39	1.33	6.03	.01

[a] Analyses use NB-P regression (nbregp) with robust variance estimator for predictor on total rearrests; all models include ln(years in study) as an exposure variable.

Bivariate analyses found statistically significant relationships for all confidence variables, (see Table 2.17). A positive relationship was detected between confidence in attaining possible selves and rearrest, regardless of the type of possible self that was reported – expected or feared. As confidence in attainment increased, the expected number of rearrests also increased. These variables were retained for further moderation analyses.

Table 2.18.

Negative Binomial Regression Models of Possible Selves and Attainment Confidence on Rearrests (N=51)

	Model 1		Model 2		Model 3	
	A. Main	B. Interaction	A. Main	B. Interaction	A. Main	B. Interaction
Variables	IRR	IRR	IRR	IRR	IRR	IRR
Total reported selves	1.01	1.09	1.11	.96	.97	.92
Confidence in all selves	1.34	.54				
Reported selves X Confidence (all selves)		1.09**				
Confidence in expected selves			1.13	.72		
Reported selves X Confidence (expected)				1.08**		
Confidence in feared selves					1.38	.88
Reported selves X Confidence (feared)						1.06*
Constant	.42	.88	.43	.85	.51	.82
Wald χ^2	5.55$^+$	20.12***	4.77	22.51***	6.24*	22.54***
df	2	3	2	3	2	3
AIC	167.60	166.39	167.63	166.95	166.68	166.61

$^+ p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. *Note*: Brackets contain 95% confidence intervals; all analyses use NB-P regression (nbregp) with robust variance estimator for predictor on total rearrests; all models include *ln(years in study)* as an exposure variable.

Due to the reduced sample size for analysis, we used the most parsimonious possible selves model—total reported selves—for the moderation analyses. Table 2.18 presents results for multiple regression models testing the moderating effect of mean confidence score for all selves (Model 1), expected selves (Model 2), and feared selves (Model 3) on the relationship between number of reported selves and rearrests. Model 1 tested the hypothesis that the overall mean confidence score moderates the relationship between total reported selves and rearrests. The first model examined the main effects of two variables: total reported selves and the overall mean confidence score (Table 2.18, Model 1A). The main effects model did not significantly predict rearrest, Wald $\chi^2(2) = 5.55$, $p = .062$. Next in Model 1B, the interaction term between reported selves and confidence was added to the regression model, Wald $\chi^2(3) = 20.12$, $p = .0002$. While neither of the main effects were associated with rearrest, the interaction term was found to be a statistically significant predictor of rearrest (IRR = 1.09, RSE = .04, $z = 2.56$, $p = .010$). Similar results were found for Models 2 (expected confidence score) and 3 (feared confidence score), with statistically significant effects present only for the interaction terms.
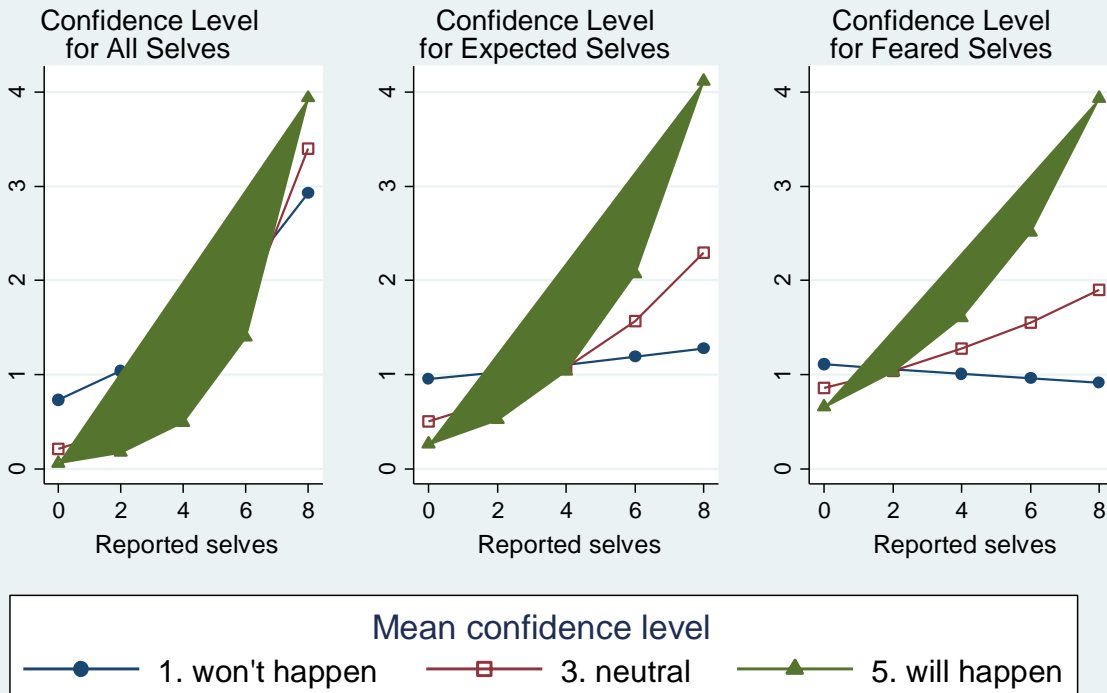
Figure 2.6. Marginal effects of possible selves on rearrests adjusted by attainment confidence.

Figure 2.6 displays the interaction plots for Models 1B, 2B, and 3B. For youth reporting fewer possible selves, higher confidence appears to have a protective effect, lowering the expected number of rearrests. In contrast, higher numbers of reported selves, particularly when in combination with high confidence levels predicted an increase in the expected number of rearrests.

Table 2.19.

Negative Binomial Regression of Possible Selves and Confidence on Rearrests (N=51)

Variables	A. Main effect only	B. Interaction effect
	IRR	IRR
Reported selves	.95	1.03
Mean Confidence		
Expected selves	1.04	.80
Feared selves	1.37	.92
Interaction: Expected x Feared		1.11*
Constant	.51	.79
Wald χ^2	6.50+	26.83***
df	3	4
AIC	168.67	168.26

Note: All analyses use NB-P regression (nbregp) with robust variance estimator for predictor on total rearrests; all models include *ln(years in study)* as an exposure variable.

A final regression model, presented in Table 2.19, explored the interaction between level of confidence in expected selves versus feared selves, Wald $\chi^2(4) = 26.83$, $p < .001$. Similar to Models 1 – 3, no significant mains effects were found, but a statistically significant interaction effect was found between confidence in expected selves and confidence in feared selves (IRR = 1.11, RSE = .05, $z = 2.20$, $p = .028$). Examining the interaction plot reveals an interesting relationship between rearrest and the confidence level based on the type of possible selves reported (Figure 2.7). Holding the number of reported selves at the mean, youth reporting high confidence in their expected selves but lower confidence in feared selves were expected to be rearrested 30% less often. Conversely, high confidence in both expected and feared selves increased risk, with youth expected to be rearrested 3.9 times more often when reported selves is set at the mean.
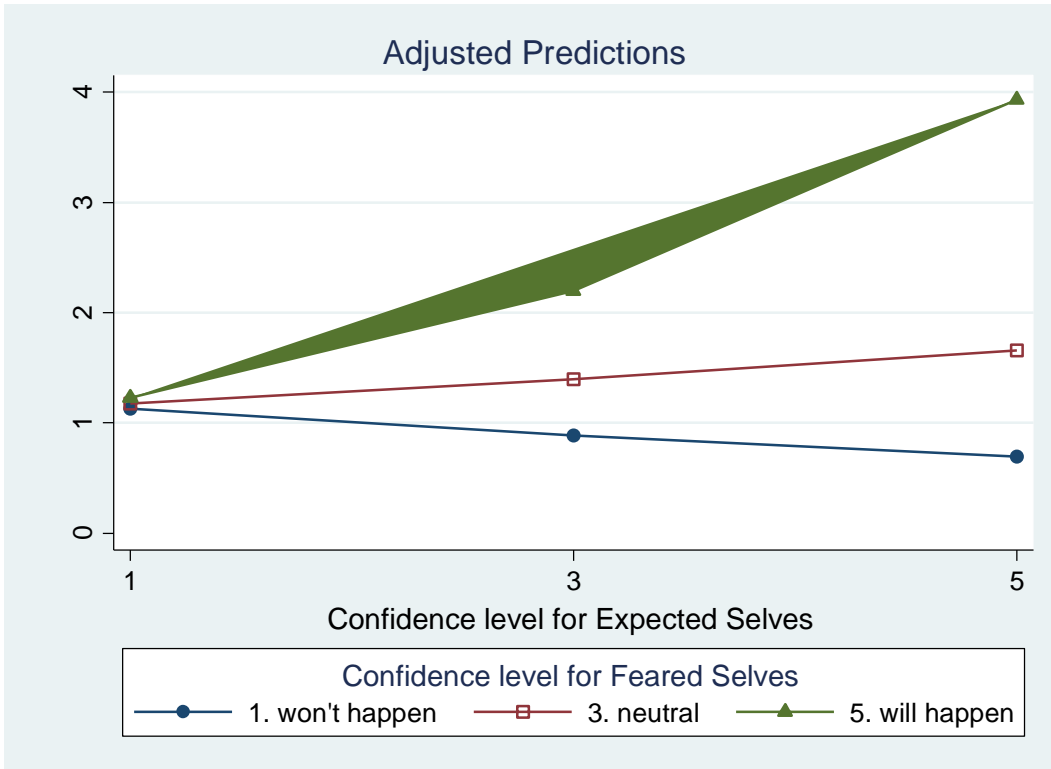
Figure 2.7. Marginal effects of confidence in expected selves and feared selves on rearrests at mean reported selves.

Question 5: Do youth demographic and/or legal characteristics moderate the relationship between possible selves and rearrests?

The final set of analyses related to the probation outcome of rearrest, examined whether the relationship between possible selves and rearrest was moderated by any of the variables for youth demographics or legal history. As with prior modeling, bivariate analyses using negative binomial regressions were conducted to test the effect of each potential predictor variable on rearrest (see Table 2.20).

Table 2.20.

Means and Standard Deviations for Youth Characteristics by Rearrests (N=116)

Variable	No rearrest (n=67)		Rearrested (n=49)		Wald $\chi^2(1)^a$	p
	M	SD	M	SD		
Demographics						
Female (%)	25%		18%		4.31	.04
Black (%)	75%		86%		1.97	.16
Age (years)	15.1	1.32	15.2	.95	2.84	.09
Index Crime						
Crime type						
Violent	58%		53%		.40	.53
Property	32%		39%		1.09	.30
Severity level	3.1	1.45	3.1	1.40	1.34	.25
Felony-level offense	53%	.50	61%	.49	2.09	.15
Probation characteristics						
Enhanced Supervision	36%	.48	37%	.49	1.17	.28
Prior days on probation	27.6	27.09	24.1	36.68	.20	.65
Risk Factors						
Prior arrests	1.0	1.12	1.6	1.46	6.11	.01
Risk score	2.3	1.57	2.7	1.42	2.60	.11

[a] Analyses use NB-P regression (nbregp) with robust variance estimator for predictor on total rearrests; all models include ln(years in study) as an exposure variable.

Both gender and prior arrests were identified as significant predictors of rearrest. Moderation models were run for each of the demographic variables as well as prior arrests. To test for moderation, two regression models were conducted for each potential moderator. The first model included the main effect variables: total reported possible selves and the youth characteristic variable; the second model included both the main variables and the interaction

term. A statistically significant moderation model was only found for gender, but not any other

youth characteristics.

Table 2.21.

Negative Binomial Regression of Possible Selves and Youth Characteristics on Rearrests

	Main Effects	Interaction Effects
Variables	IRR	IRR
Total reported selves	1.23*	1.15
Female	1.02	.20
Selves X Female		1.44*
Constant	.25**	.34*
Wald χ^2	6.33*	14.58**
df	2	3
AIC	338.32	339.44

$^+ p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. *Note*: Analyses use NB-P regression (nbregp) with robust variance estimator for predictor on total rearrests; all models include *ln(years in study)* as an exposure variable.

Table 2.21 presents the moderation analyses of effect of gender on possible selves and

rearrests. Results indicated that there were no main effects for the interaction model. However,

the interaction term was significant (IRR = 1.44, RSE = .26, $z = 2.01$, $p = .045$), indicating that

gender does moderate the effect of possible selves on rearrest. An examination of the interaction

plot in Figure 2.8 revealed a positive relationship between possible selves and rearrest, but the

number of reported selves was more strongly related to an increased expectation of rearrest for

females than for males.
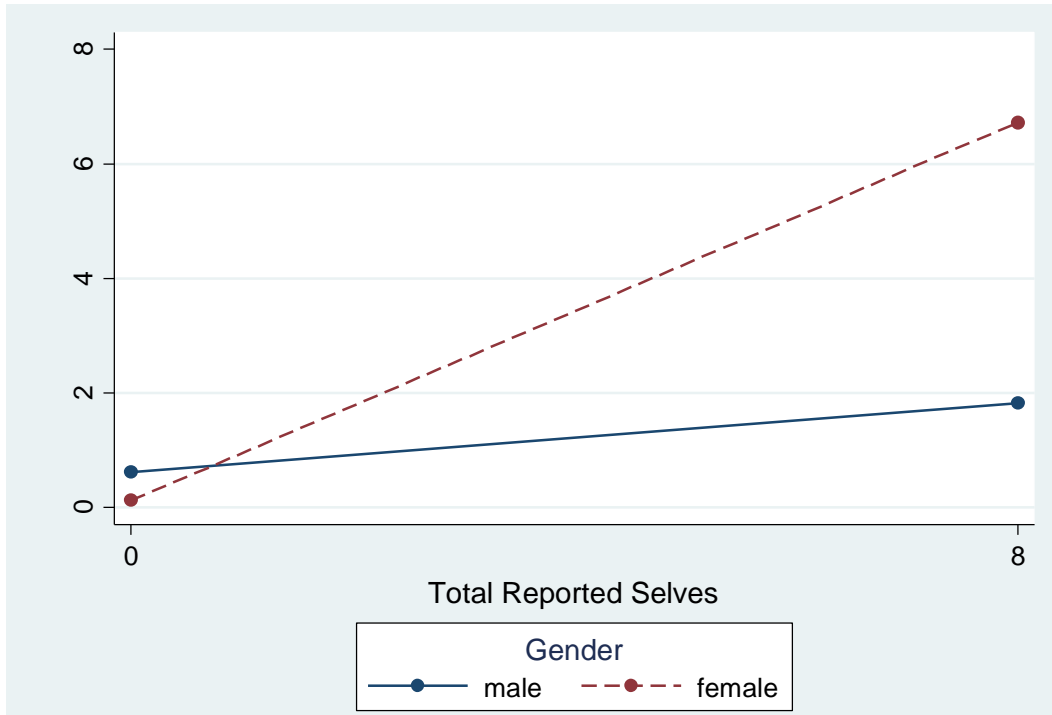
Figure 2.8. Marginal effects of reported selves on rearrests by gender.

Possible Selves and Probation Compliance

The next set of analyses examine the hypotheses related to the probation outcome domain of probation compliance. Probation compliance was examined across four indicators: (1) any probation compliance issues indicated, (2) youth failed to complete probation (failed end status), (3) a violation of probation (VOP) petition was initiated during probation, and (4) youth entered VOP status during probation.

Question 1: Do possible selves characteristics predict probation compliance?

Table 2.22 presents the results of the bivariate logistic regression models with possible selves characteristics predicting each of the four probation compliance indicators. A statistically significant relationship was found between achievement selves and probation compliance issues, χ^2 (2, N = 116) = 23.64, p < .001. For youth who reported a possible self that was related to achievements other than school or jobs, the odds of a probation compliance issue were 62.5%

lower than when youth did not report this type of possible self (B = -.98, SE = .46, OR = .375, *p* = .035). We found a similar association for the odds of receiving VOP status (B = -1.18, SE = .59, OR = .307, *p* = .046).

Table 2.22.

Logistic Regression for Possible Selves Characteristics by Probation Compliance Outcomes.

	Any Issues	VOP Petitions	VOP Status	Failed End
Total reported	.94	.94	1.00	1.01
Approach	.82	.80	.86	.89
Avoidance	1.02	1.06	1.15	1.14
Specific	.96	.88	1.04	1.03
Content domain				
Pro-social	.87	.89	1.01	.90
School	.73	.61	.80	.75
Job	.87	.77	.49	1.04
Achievements	.37*	.47+	.31*	.96
Relationship	1.15	1.38	2.04	.80
Personal growth	1.77	1.60	.94	1.48
Non-normative	1.12	1.09	.49	.98
Delinquent	1.06	1.05	.54	1.31
Problem behavior	1.49	1.61	1.45	1.23
Balanced pairs	1.61	1.45	3.25*	1.67

* p ≤ .05. Note: All models control for total contacts.

The presence of at least one balanced pair of possible selves was associated with greater likelihood of VOP status, χ^2 (2, N = 116) = 17.60, *p* < .001. For youth whose possible selves included at least one balanced pair, the odds of receiving VOP status was 3.2 times greater than when youth did not report any balanced pairs (B = 1.18, SE = .52, OR = 3.24, *p* = .025). No other statistically significant associations were found between possible selves characteristics and any of the probation compliance indicators.

Question 2: Do strategies for possible selves predict probation compliance?

The next set of analyses examined whether possible selves strategies were associated with probation compliance issues. As presented in Table 2.23, there were no statistically significant relationships found between probation compliance and either total number of strategies nor self-regulatory strategies score.

Table 2.23.

Odds Ratios for Strategies on Probation Compliance Outcomes

	Any Issues	VOP Petitions	VOP Status	Failed End
Total strategies	.94	.93	1.01	.91
Self-regulatory strategies	.95	.90	1.01	.87

All models use logistic regression and control for total probation contacts.

Question 3: Do strategies mediate or moderate the relationship between possible selves and probation compliance issues?

The next set of analyses examined whether strategies mediate or moderate the relationship between possible selves and any of the probation compliance outcomes. Mediation analyses failed to find sufficient evidence to support strategies as acting as a mediator between possible selves and any of probation compliance outcomes. In addition, further analyses did not provide any evidence of strategies as moderating the relationship between possible selves characteristics and probation compliance.

Question 4: Does the level of confidence in attaining possible selves moderate the relationship between possible selves and probation compliance?

Next, we conducted exploratory analyses of whether confidence in attainment moderates the relationship between possible selves and probation compliance. As shown in Table 2.24,

bivariate analyses found no statistically significant relationships between any of the confidence variables and probation compliance outcomes. Further exploration of confidence attainment as a moderator between possible selves and probation compliance did not yield any significant models.

Table 2.24.

Logistic Regression Models of Attainment Confidence and Probation Compliance (N=51)

	Any Issues	VOP Petitions	VOP Status	Failed End
	OR	OR	OR	OR
Confidence score				
All selves	.71	.71	1.10	.82
Expected selves	.67	.67	1.11	.74
Feared selves	.72	.72	1.06	.76

$+ p \leq .10$; $* p \leq .05$; $** p \leq .01$. *Note*: All models control for total contacts.

Question 5: Do youth characteristics moderate the relationship between possible selves and probation compliance?

The final group of analyses examined whether any of the youth demographics or legal history variables moderate the relationships between possible selves characteristics and probation compliance issues. Table 2.25 presents results of logistic regression analyses examining the effect of the potential moderator variables on probation compliance outcomes. Risk score was significantly associated with the presence of a probation compliance issue (OR = 1.38, p = .030) and with failed end status for probation (OR = 1.39, p = .048). Prior arrests was also associated with failed end status (OR = 1.41, p = .040). Analyses proceeded to test for moderation of possible selves and probation outcomes for all demographic variables as well as the legal history variables that were significant at $p < .10$. However, analyses yielded no statistically significant models, and thus, no evidence of moderation by any youth characteristics in the relationships between possible selves and probation compliance.

Table 2.25.

Youth Characteristics by VOP Status (N=116)

Variable	Any Issues	VOP Petition	VOP Status	Failed End
Demographics				
Female	1.36	1.62	1.58	.78
Black	1.54	1.71	1.57	1.43
Age	1.04	.99	.95	.87
Index Crime				
Crime type				
Violent	.91	1.22	1.37	.70
Property	1.61	1.12	.93	1.73
Severity level	.85	.92	.98	.96
Felony-level offense	.65	.73	.77	1.10
Probation characteristics				
Enhanced Supervision	1.91	1.99	1.40	1.35
Prior days on probations	.86	.65	.38+	1.39
Risk Factors				
Prior arrests	1.25	1.19	1.02	1.41*
Risk score	1.38*	1.18	.95	1.39*

$+ p \leq .10$; $* p \leq .05$; $** p \leq .01$. *Note*: All models control for total contacts.

Possible Selves and School Problems

The next section reported findings on the relationship of possible selves to school outcomes. School outcomes were analyzed across a composite measure of school engagement problems and four sub-domains: attendance problems, general school problems, school failures, and school suspensions.

Question 1: Do possible selves characteristics predict **school engagement problems**?

The first question examined the relationship between possible selves characteristics and school problems. Table 2.26 presents initial analyses between the possible selves characteristics and school outcomes using regression analyses to control for summer exposure. Analyses identified statistically significant associations between overall school engagement and percentage of non-normative selves ($B = .003$, SE $= .001$, $p = .017$) and presence of problem behavior selves ($B = .13$, SE $= .05$, $p = .015$).

Table 2.26.

Possible Selves and School Outcomes (N=116)

	All School Engagement Problems	Attendance Problems	Behavioral Problems	Failing School	School Suspensions[a]
	B	B	B	B	OR
Reported selves	.03+	.03*	-.004	.002	.96
Approach selves	.03	.04+	-.01	.004	1.11
Avoidance selves	.04+	.04*	.001	.001	.81
Specific selves	.03	.05**	-.01	-.001	.91
Presence of content					
Pro-social (%)	-.001	-.001	-.001	<.001	1.01
School	.04	.02	-.01	.02*	.92
Job	-.04	.02	-.04*	-.01	.63
Achievements	.03	.05	-.02	.004	.95
Relationship	.01	-.02	.006	.01	2.51+
Personal growth	.09	.01	.06*	.004	.85
Non-normative	.003*	.003*	.001	<-.01	1.00
Delinquent	.06	.03	.03	-.009	.84
Problem behavior	.13*	.11**	.01	-.004	1.40
Balanced Pairs	.008	.03	-.02	.003	.64

+ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$. *Note*: All models control for school-related notes and number of summer months on probation. [a] Logistic regression used to model school suspension.

Similar possible selves characteristics were significantly associated with the sub-domain of school attendance problems: total reported selves ($B = .03$, SE $= .01$, $p = .022$), total avoidance selves ($B = .04$, SE $= .02$, $p = .042$), percentage of non-normative selves (B $= .003$, SE $= .001$, $p = .020$), and presence of problem behavior selves (B $= .11$, SE $= .04$, $p = .010$). For the sub-domain of general school problems (e.g., behavioral problems such as fighting), an association was found for the percentage of non-normative selves ($B = -.001$, SE $= .0005$, $p = .014$), the presence of job-related possible selves ($B = -.04$, SE $= .02$, $p = .052$), and the presence of personal growth possible selves ($B = .06$, SE $= .03$, $p = .026$). For the sub-domain of problems with failing school, an association was found for the presence of school-related possible selves ($B = .02$, SE $= .01$, $p = .028$), and the presence of personal growth possible selves ($B = .06$, SE $= .03$, $p = .026$). No statistically significant associations were found between possible selves characteristics and the sub-domain of school suspensions, although reporting a relationship-related self was marginally significant (OR $= 2.51$, $B = .92$, SE $= .52$, $p = .078$). Statistically significant variables from the bivariate analyses were retained for continued hypothesis testing of mediation and moderation through OLS regression modeling.

Multivariable models of possible selves on school outcomes. We used OLS regression to investigate the combined effects of possible selves characteristics on school outcomes. As shown in Table 2.27, both the number of specific selves reported ($B = .06$, SE $= .02$, $t = 2.53$, $p = .013$) and the presence of selves related to personal growth ($B = .36$, SE $= .13$, $t = 2.87$, $p = .005$) were associated with higher predicted levels of school engagement problems. The interaction term was statistically significant ($B = -.14$, SE $= .06$, $t = -2.43$, $p = .017$), such that the effect of specific selves on school engagement problems differed based on whether the youth's possible selves included a self that was related to personal growth.

Table 2.27.

Multivariable Regression of Possible Selves Characteristics on Overall School Engagement

Variables	Main Effects	Interaction
Total specific selves	.04+	.06**
Any personal growth selves	.10	.36**
Specific X Personal growth		-.14*
Constant	.30***	.25***
F	3.01*	3.83**
df	3, 112	4, 111
R^2	.075	.121

$+ p \leq .10$; $* p \leq .05$; $** p \leq .01$; $*** p \leq .001$. Note: Models control for summer exposure.

Figure 2.9 shows that for youth who did not report a growth-related self, as the number of specific selves increased so did the predicted amount of school engagement problems. In contrast, for youth reporting at least one personal growth self, greater numbers of specific selves were associated with fewer predicted school engagement problems.
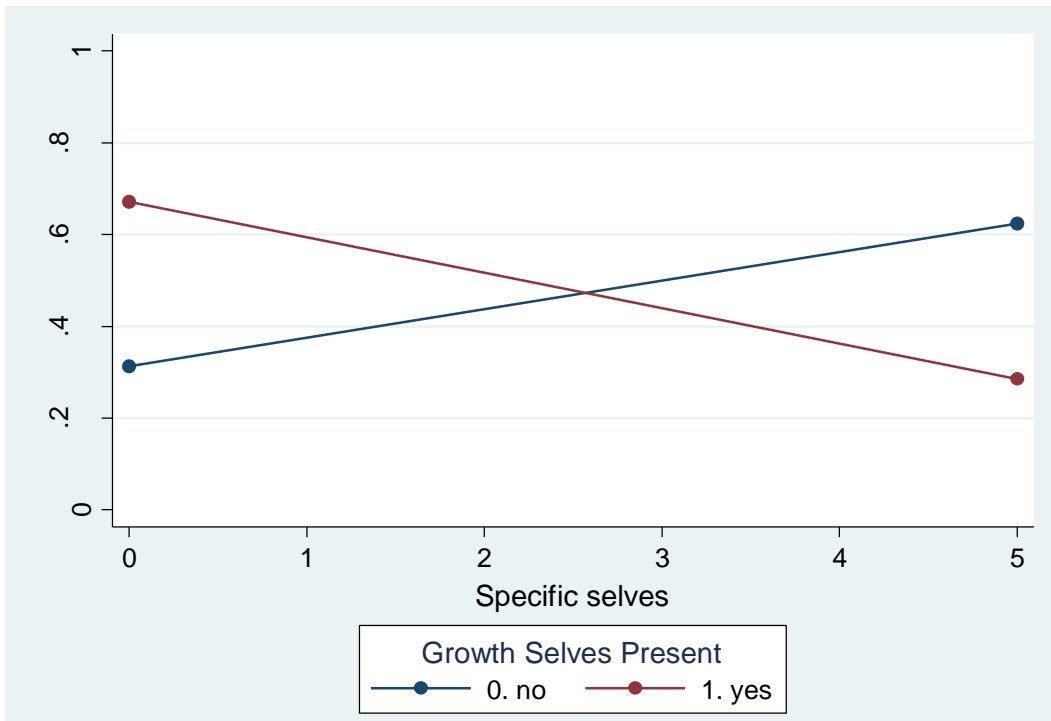
Figure 2.9. Marginal effects of specific selves on school engagement problems by presence of personal growth selves.

Multivariate modeling also revealed an interaction between approach selves and non-normative selves for the sub-domain of school attendance (Table 2.28). A main effect was found for both possible selves characteristics, indicating that increased approach selves ($B = .08$, SE = .04, $t = 2.28$, $p = .025$) and increased non-normative selves ($B = .19$, SE = .06, $t = 3.07$, $p = .003$) were both associated with increased school attendance problems, $F(4,111) = 4.29$, $p = .003$, $R^2 = .134$. Additionally, the interaction between approach and non-normative selves was significant ($B = -.05$, SE = .02, $t = -2.18$, $p = .031$), suggesting that the effect of approach selves on school attendance differed based on the level of non-normative selves.

Table 2.28.

OLS Regression of Approach Selves and Non-Normative Selves on School Attendance (N=116)

Variables	Main Effects Model	Interaction Model
Approach selves	.02	.08*
Non-normative selves	.07**	.19**
Approach X Non-normative		-.05*
Constant	.13*	-.004
F	4.00***	4.29***
df	3, 112	4, 111
R²	.097	.134

*$p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. Models control for summer exposure.

The interaction was plotted at the following levels: low (no selves reported), moderate (two selves reported), and high (four selves reported) (Figure 2.10). Overall, the presence of non-normative possible selves was associated with increased amounts of school attendance problems. At a high level of non-normative selves, greater numbers of approach selves appear to protect against school attendance problems. This protective effect is not present when youth did not report any possible selves related to non-normative behaviors.
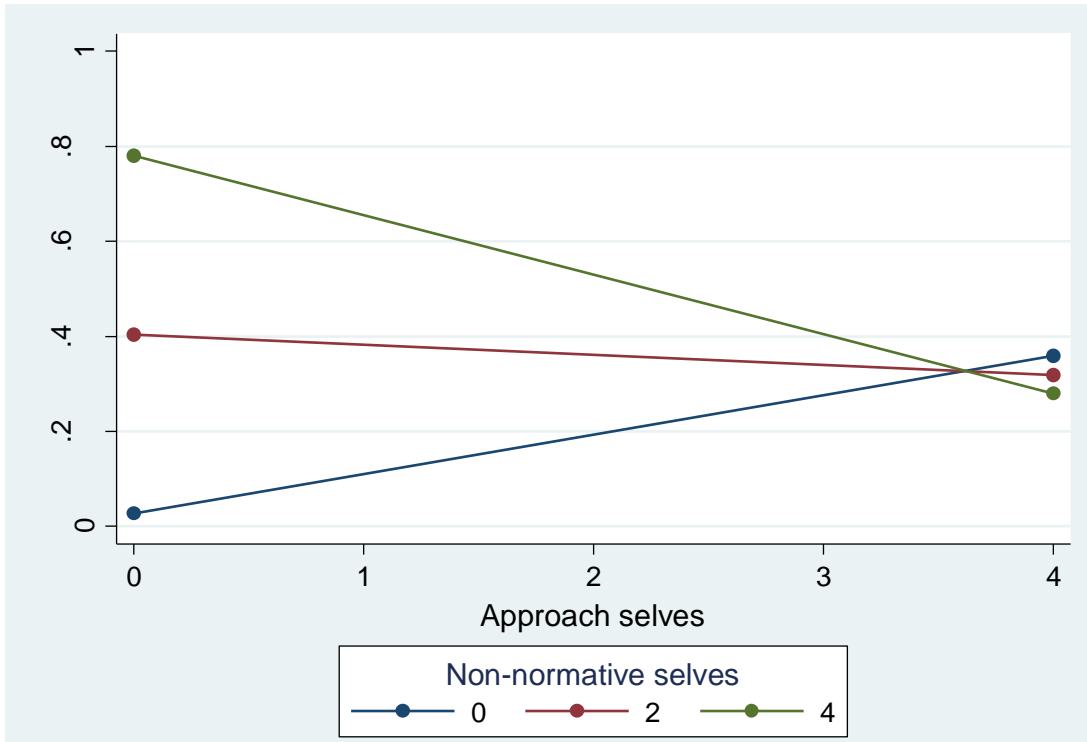
Figure 2.10. Marginal effects of approach selves on school attendance problems by non-normative selves.

Question 2: Do strategies for possible selves predict school engagement problems?

Next, we examined the associations between possible selves strategies and school outcomes. As presented in Table 2.29, the total number of strategies reported was positively associated with attendance problems ($B = .03$, SE $= .01$, $t = 2.41$, $p = .012$). Other associations between strategies and school outcomes did not rise to the level of statistical significance. Further regression models did not find any significant interactions between total strategies and self-regulatory strategies for any of the school outcome domains.

Table 2.29.

Possible Selves Strategies and School Outcomes (N=116)

	All School Engagement Problems	Attendance Problems	Behavioral Problems	Failing School	School Suspensions
	B	*B*	*B*	*B*	*OR*
Total strategies	.02	.03*	-.007	.002	.97
Self-regulatory strategies	.02	.02$^+$	-.01$^+$	.003	1.11

$+ p \le .10$; $* p \le .05$; $** p \le .01$. *Note*: All models control for school-related notes and number of summer months on probation. [a] Logistic regression used to model school suspension.

Question 3: Do strategies mediate or moderate the relationship between possible selves and school engagement problems?

The next set of analyses examined whether strategies mediate or moderate the relationship between possible selves and the domains of school problems. Mediation analyses failed to find sufficient evidence to support strategies as acting as a mediator in the relationship between possible selves characteristics and any of the areas of school problems. However, further analyses did provide evidence of strategies moderating the relationship between possible selves characteristics and overall school engagement problems.

An OLS multiple regression model was fit to investigate whether the relationship between having problem behavior possible selves and school engagement problems depends on the presence of strategies. Findings indicated that higher problem behavior selves ($B = .25$, SE = .10, $t = 2.55$, $p = .012$) and more reported strategies ($B = .05$, SE = .02, $t = 2.00$, $p = .048$) were associated with increased school engagement problems overall (Table 2.30). We found a significant interaction between problem behavior selves and total strategies ($B = -.05$, SE = .02, $t = -2.11$, $p = .037$).

Table 2.30.

Moderation of Problem Behavior Selves on School Engagement Outcomes by Strategies

Predictor variables	Main Effect Model	Interaction Model
Problem behavior selves	.06	.25*
Total strategies	.01	.05*
Problem behavior selves X Strategies		-.05*
Constant	.30***	.19*
F	3.07*	3.49**
df	3, 112	4, 111
R^2	.076	.112

$+ p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. Models control for summer exposure.

An interaction plot was created for the association between problem behavior selves and school engagement problems at the following levels of total strategies: low (-1 SD below the mean), average (mean), and high (+1 SD above the mean). Figure 2.11 suggests that with regard to school engagement problems, higher levels of problem behavior selves are of most risk to youth who report fewer strategies.
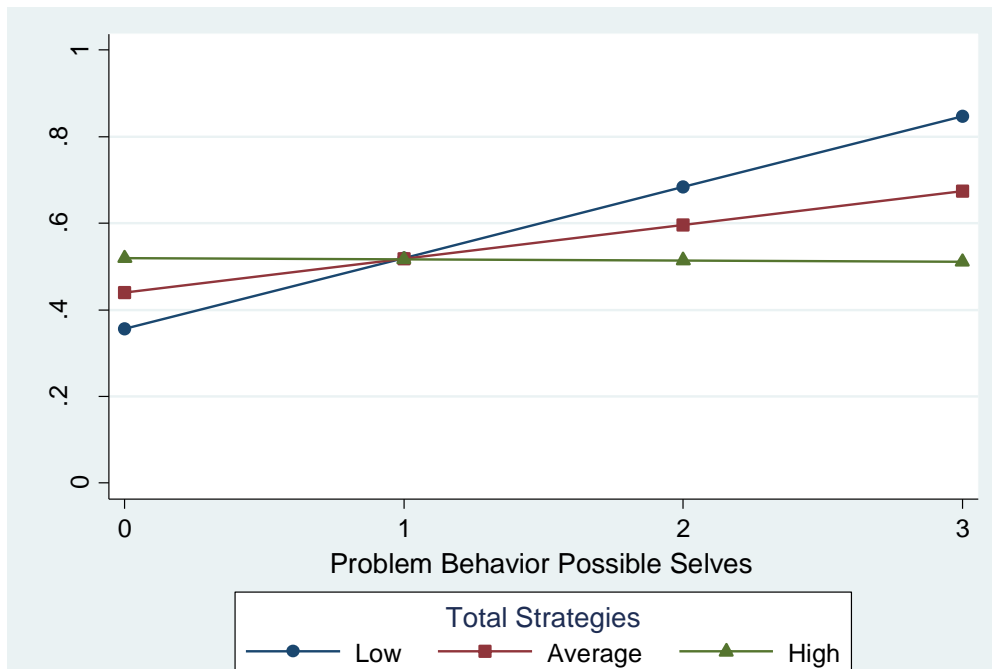
Figure 2.11. Marginal effects of problem behavior selves on overall school engagement problems by total strategies.

A second set of OLS regression models tested the effect of strategies on the relationship between the possible selves characteristics of total specific selves and presence of personal growth selves with overall school engagement problems (Table 2.31). The final regression model (Model C) included main terms—total specific selves, presence of personal growth selves, and an indicator of whether strategies were reported for all selves—and all interaction terms. Significant main effects were found only for the presence of personal growth selves ($B = .55$, $SE = .15$, $t = 3.61$, $p < .001$), but not for specific selves ($B = .06$, $SE = .06$, $t = 1.61$, $p = .110$) or strategies ($B = .09$, $SE = .11$, $t = .78$, $p = .438$). Additionally, two significant interactions were identified: the interaction between specific and personal growth selves ($B = -.14$, $SE = .06$, $t = -2.54$, $p = .012$); and the interaction between personal growth selves and presence of strategies ($B = -.29$, $SE = .13$, $t = -2.13$, $p = .035$).

Table 2.31.

Possible Selves Characteristics on School Engagement Outcomes by Total Strategies (N=116)

Variables	A	B	C
Possible selves characteristics			
Total specific selves	.04	.06*	.06
Personal growth selves present	.10	.36**	.55***
Strategies			
Strategies reported for all selves	.06	.05	.09
Specific X Personal growth		-.14*	-.14*
Specific X Strategies			.01
Personal growth X Strategies			-.29*
Constant	.27***	.22**	.19*
F	2.51*	3.24**	3.06**
df	4, 111	5, 110	7, 108
R²	.083	.128	.165

*$p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. All models control for summer exposure

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To further understand the model, an interaction plot was generated for Model C using adjusted predictions (Figure 2.12). As illustrated in the plots, for youth reporting personal growth selves, increased specific selves corresponded to reduced school problems. This effect is even stronger for youth who are missing strategies for some of their possible selves. In contrast, in the absence of having any personal growth selves, greater numbers of specific selves are associated with higher levels of school problems, regardless of the presence of strategies.

Figure 2.12. Adjusted marginal effects of specific selves on overall school engagement problems by personal growth selves and strategies.

Multiple regression analyses examining possible selves characteristics and the sub-domain of school attendance problems, found two models involving self-regulatory strategies (Table 2.32). Although both of these models found significant main effects for the possible selves characteristics and self-regulatory strategies score, none of the interaction terms were significantly associated with school attendance problems. While self-regulatory strategies are

associated with school attendance, they do not moderate the relationship between possible selves and attendance problems. No significant interaction models were found for any of the other sub-domains.

Table 2.32.

Possible Selves Characteristics on School Attendance Problems by Self-Regulatory Strategies

Variables	Model 1		Model 2	
	A	B	A	B
Specific selves	.04*	.12*		
Non-normative selves			.08***	.14*
Self-regulatory strategies scale	.02	.04*	.03*	.04*
Specific X Self-regulatory strategies		-.02		
Non-normative X Self-regulatory strategies				-.01
Constant	.10	-.01	.03	-.04
F	3.58*	3.33*	5.47**	4.40**
df	3, 112	4, 111	3, 112	4, 111
R^2	.088	.107	.128	.137

$* p \leq .05; ** p \leq .01; *** p \leq .001$. All models adjust for summer exposure.

Question 4: Does the level of confidence in attaining possible selves moderate the relationship between possible selves and school engagement problems?

Next, we examined the role of attainment confidence in the relationship between possible selves and school outcomes for the subset of youth who completed this measure. As a first step, multiple regression models were fit to examine the bivariate associations between attainment confidence and each domain of school outcomes while controlling for summer exposure (Table

2.33). These analyses identified significant associations between overall school engagement

problems and the confidence score for all selves ($B = .08$, SE $= .04$, $t = 2.17$, $p = .035$) and the

score for expected selves ($B = .08$, SE $= .04$, $t = 2.29$, $p = .027$). Similarly, significant

associations were found for school attendance problems and confidence in attainment across all

selves ($B = .09$, SE $= .03$, $t = 3.05$, $p = .004$), across expected selves ($B = .10$, SE $= .03$, $t = 3.47$,

$p = .001$), and across feared selves ($B = .06$, SE $= .03$, $t = 2.27$, $p = .028$).

Table 2.33.

Regression Models of Attainment Confidence and School Engagement Problems (N=51)

	Overall	Attendance Problems	Behavioral Problems	Failing School	School Suspensions
	B	*B*	*B*	*B*	*OR*
Confidence score					
All selves	.08*	.09**	-.01	.002	1.08
Expected selves	.08*	.10***	-.01	.002	.86
Feared selves	.06	.06*	-.001	-.005	.88

$+ p \leq .10$; * $p \leq .05$; ** $p \leq .01$. *Note*: All models control for school-related notes and number of summer months on probation. [a] Logistic regression used to model school suspension.

Multiple OLS regression equations were fit to test whether attainment confidence

moderated the relationship between possible selves and school problems. Only one set of models

emerged as significant, with confidence attainment moderating the relationship between presence

of personal growth selves and overall school engagement problems (Table 2.34). As shown in

Model 1, both reporting a personal growth self ($B = .39$, SE $= .17$, $t = 2.25$, $p = .029$) and higher

attainment confidence in expected selves ($B = .13$, SE $= .04$, $t = 3.02$, $p = .004$) were associated

with increased school problems. Moreover, the interaction term between growth selves and

confidence was found to be a statistically significant predictor of school problems ($B = -.15$, SE

$= .07$, $t = -2.00$, $p = .05$). Similar results were found for Model 2 (confidence score across feared

selves). In contrast, for Model 3 a statistically significant association was only present for the

main effect of confidence score across all selves.

Table 2.34.

Moderation Models for Possible Selves and Confidence on Overall School Engagement

	Model 1		Model 2		Model 3	
Variables	A	B	A	B	A	B
Any personal growth selves	.08	.39*	.08	.37*	.07	.36+
Confidence: Expected selves	.08*	.13**				
Personal growth X Confidence (expected)		-.15*				
Confidence: Feared selves			.05	.10*		
Personal growth X Confidence (feared)				-.14*		
Confidence: All selves					.07*	.11*
Personal growth X Confidence (all)						-.12
Constant	.31**	.22*	.36***	.28**	.30**	.24*
F	2.24+	2.79*	1.33	2.06+	1.94	2.07+
df	3, 47	4, 46	3, 47	4, 46	3, 47	4, 46
R^2	.125	.195	.078	.152	.110	.153

$+ p \le .10$; $* p \le .05$; $** p \le .01$; $*** p \le .001$. All models control for summer exposure.

To further examine the interaction between personal growth selves and confidence score,

two interaction graphs were created using the marginal effects of possible selves on school

engagement by attainment confidence score across both expected selves and across feared selves

(Figure 2.13). For both models, the interaction plot suggests that for youth who do not report

personal growth selves, higher certainty in attainment contributed to risk for school engagement

problems. Alternatively, when youth report at least one possible self that is related to personal

growth, increased confidence corresponded to a slight decrease in risk for school problems,

particularly for confidence in attaining feared selves.
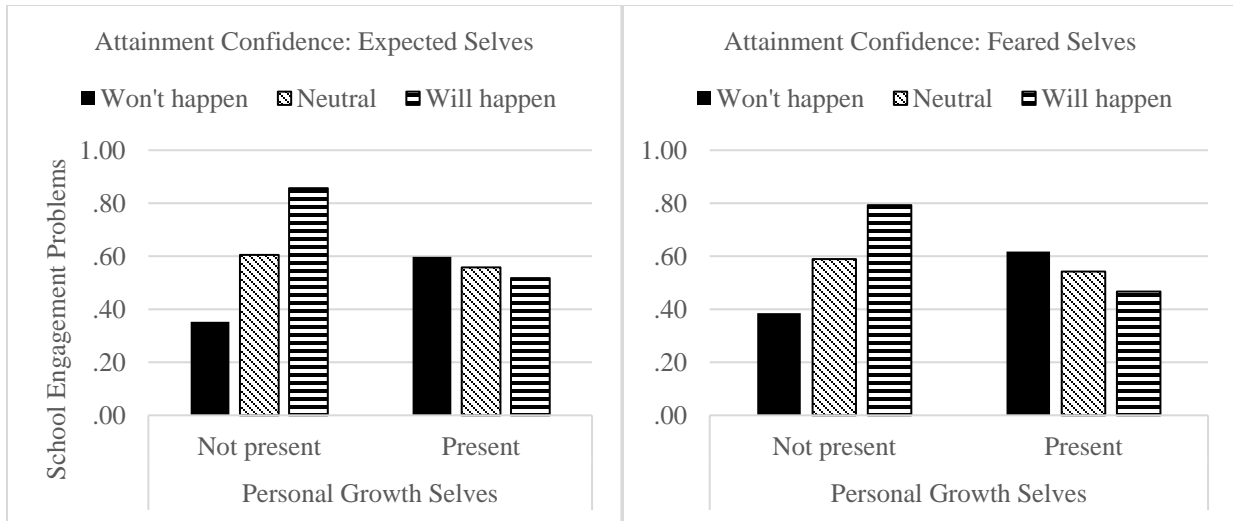
Figure 2.13. Marginal effects of personal growth selves on overall school engagement problems adjusted by attainment confidence for expected and feared selves.

Question 5: Do youth demographic and/or legal characteristics moderate the relationship between possible selves and school engagement problems?

The final set of analyses examined whether the relationship between possible selves and school outcomes was moderated by any of the variables for youth demographics or legal history. As with prior modeling, multiple regression models were conducted to examine the association of each potential predictor variable on the school outcome domains while controlling for summer exposure (see Table 2.35). Across the demographic and legal history variables, several variables were associated with school outcomes. The next section presents the statistically significant moderation models for possible selves and school outcomes.

Table 2.35.

Youth Characteristics and School Outcomes (N=116)

Variables	Overall B	A. B	B. B	C. B	D. OR
Demographics					
Female	.02	.01	-.0001	.001	1.27
Black	.08	.06	.02	-.004	1.42
Age (years)	-.02	.008	-.03**	-.002	.98
Index Crime (N=115)					
Crime type					
Violent	.02	-.003	.001	.01	.98
Property	-.02	-.01	.01	-.02	.98
Severity level	-.03	-.03*	.004	.005	.87
Felony-level offense	-.14*	-.16***	.02	.004	1.24
Probation characteristics					
Probation: Enhanced Supervision	.09	.04	.05*	.005	.25*
Time on probations (years)	-.002	.01	.004	-.02+	.94
Risk Factors					
Prior arrests	.01	.02	-.01	-.008*	.93
Risk score	.05**	.03*	.02*	-.005	1.36+

$^+ p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.
A: Attendance Problems; B: Behavioral Problems; C: Failing School; D: School Suspensions
Note: All models control for school-related notes and number of summer months on probation. [a] Logistic regression used to model school suspension.

Multiple regression models were run to test for moderation of the relationship between possible selves and school outcome. Moderation models were run for each of the demographic variables as well as any legal history variables that were significantly related to school outcomes at $p < .10$. The first set of models examined potential moderation by demographic characteristics—age, gender, and race. All three demographic variables were found to moderate aspects of the relationship between possible selves characteristics and school outcomes. Age was found to significantly moderate the relationship between possible selves and three of the school outcomes: overall school engagement problems, attendance problems, and school

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behavior problems. Additionally, gender significantly moderated the relationship between possible selves and attendance problems. Race moderated the relationship between non-normative possible selves and overall school engagement. No significant moderation models were found for the outcomes of school failures or suspensions.

Table 2.36.

Possible selves and Age on School Outcomes (N = 116)

Variables	Overall		Attendance		Behavior Problems	
	A	B	A	B	A	B
Reported selves	.03+	.49**	.03*	.29+	-.002	.14+
Age	-.03	.09^{+}	.002	.07	-.03**	.01
Reported selves X Age		-.03**		-.02+		-.01*
Constant	.71*	-1.06	.13	-.85	.51***	-.04
F	3.07*	4.08**	2.26+	2.47*	4.01**	4.08**
df	3, 112	4, 111	3, 112	4, 111	3, 112	4, 111
R^2	.076	.128	.057	.082	.097	.128

$+ p \leq .10$; $* p \leq .05$; $** p \leq .01$; $*** p \leq .001$. All models control for summer exposure.

Age was found to be a significant moderator of the relationship between possible selves and school outcomes. The first set of models presented in Table 2.36 show that more reported selves are associated with higher overall school engagement problems ($B = .49$, SE $= .18$, $t = 2.73$, $p = .007$). Additionally, the interaction between reported selves and the youth's age was significant ($B = -.03$, SE $= .01$, $t = -2.58$, $p = .011$). A similar pattern was observed in models of school attendance problems and school behavior problems.
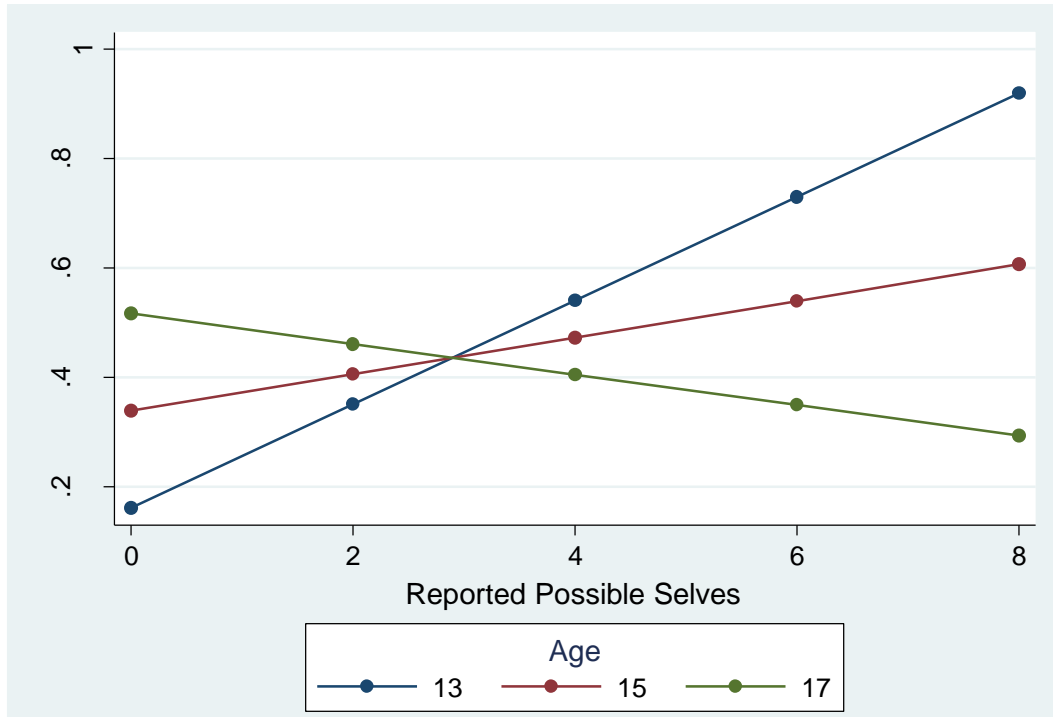
Figure 2.14. Marginal effects of total reported selves on overall school engagement problems adjusted by age.

An interaction plot of the marginal effects reveals that the effect of total reported selves on school engagement problems changes based on age (Figure 2.14). Possible selves appear to gain a protective effect against school engagement problems in older youth. Conversely, for younger youth, a high number of reported selves is associated with greater school engagement problems. With regard to school behavior problems, it is also important to note that after controlling for age, presence of a job-related possible self was no longer significantly associated with school behavior problems ($B = -.03$, SE $= .02$, $t = -1.33$, $p = .187$), $F(3, 112) = 4.63$, $p = .004$, $R^2 = .110$.

Table 2.37.

Possible Selves and Age on Overall School Engagement Problems (N = 116)

Variables	A	B	C
Specific selves	.04+	.06**	.57*
Personal growth selves present	.09	.34**	.37**
Age	-.03	-.02	.04
Specific X Personal growth		-.13*	-.14*
Specific X Age			-.03*
Constant	.69+	.53	-.29
F	2.57*	3.19**	3.38**
df	4, 111	5, 110	6, 109
R^2	.085	.127	.157

$+ p \leq .10$; $* p \leq .05$; $** p \leq .01$; $*** p \leq .001$. All models control for summer exposure.

Age also moderated the effect of the previously identified model of specific selves and growth selves on school engagement problems (Table 2.37). Significant main effects were found for specific selves (B = .57, SE = .26, t = 2.23, p = .028) and the presence of personal growth selves (B = .37, SE = .13, t = 2.94, p = .004) on school engagement problems. The interaction reported earlier between specific selves and personal growth selves remained significant (B = -.14, SE = .06, t = -2.51, p = .014). Additionally, an interaction was found between specific selves and youth's age (B = -.03, SE = .02, t = -1.98, p = .050). Figure 2.15 presents the interaction plots of the marginal effects for specific selves on school engagement problems by age and presence of personal growth selves. The plots suggest that with regard to school engagement, specific possible selves provide the greatest benefit when personal growth selves are present and for older youth.
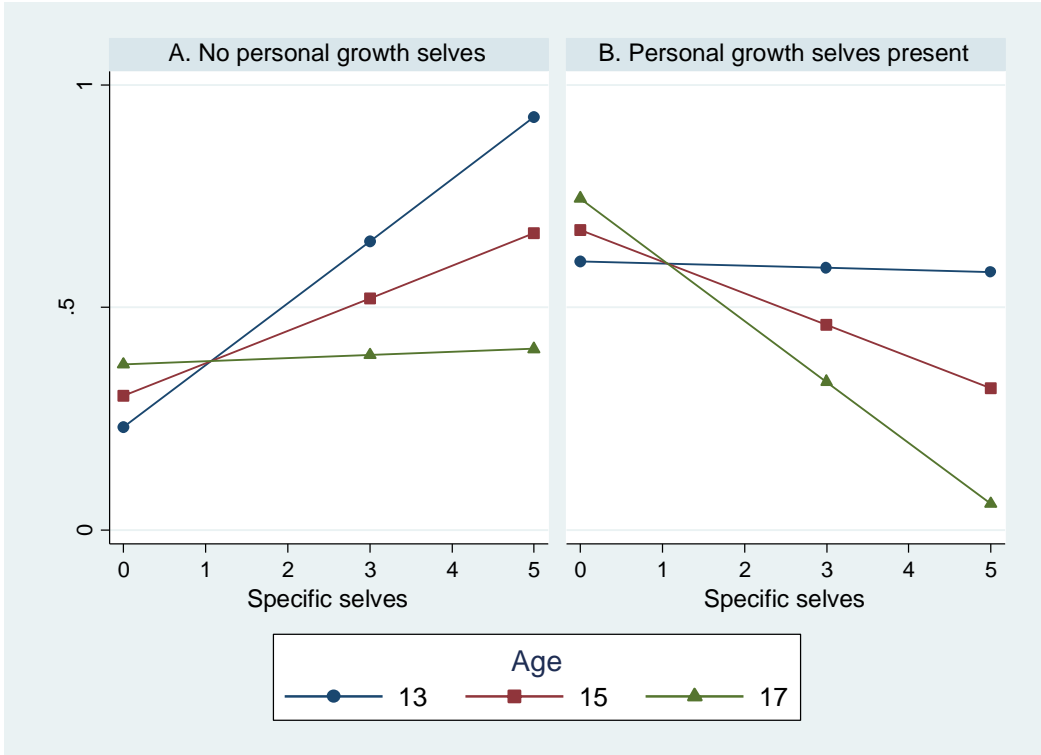
Figure 2.15. Marginal effects of total reported selves on overall school engagement problems adjusted by age and presence of personal growth selves.

Significant moderation was also found with regard to gender and the relationship between reported selves and school attendance problems (Table 2.38). Significant main effects were found such that increased reported selves ($B = .04$, SE $= .01$, $t = 3.16$, $p = .002$) and being female ($B = .30$, SE $= .13$, $t = 2.31$, $p = .023$) were associated with more school attendance problems. The interaction between reported selves and gender was also significant ($B = -.07$, SE $= .03$, $t = -2.31$, $p = .023$).

Table 2.38.

Possible Selves and Gender on Overall School Attendance Problems (N = 116)

Variables	Main effects	Interaction effects
Reported selves	.03*	.04**
Female	.03	.30*
Reported selves X Female		-.07*
Constant	.15*	.09
F	2.34[+]	3.15*
df	3, 112	4, 111
R^2	.059	.102

$+ p \le .10$; $* p \le .05$; $** p \le .01$; $*** p \le .001$. All models control for summer exposure.

The interaction between gender and reported possible selves is shown in Figure 2.16. An examination of the graph indicates that greater reported selves has a protective effect for females regarding school attendance problems. In contrast, for males, increased reported selves are associated with increased school attendance problems.
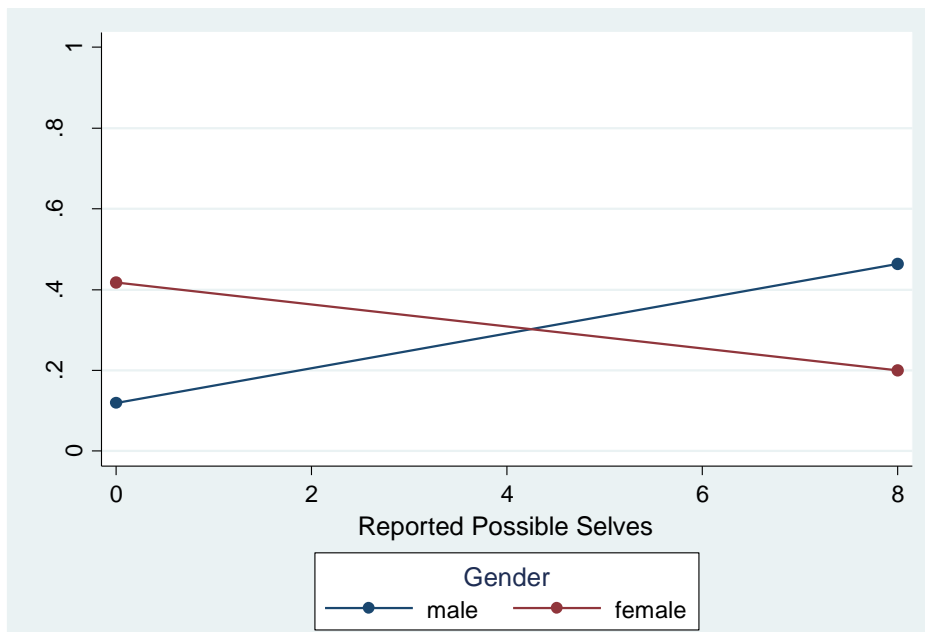
Figure 2.16. Marginal predictions of reported selves on school attendance problems by gender.

Table 2.39 presents results for the multiple regression model testing whether race moderates the relationship between the percentage of non-normative selves and overall school engagement problems. No significant main effects were found. However, the interaction between non-normative selves and race was significant ($B = .01$, SE $= .003$, $t = 2.85$, $p = .005$).

Table 2.39.

Non-Normative Possible Selves and Race on Overall School Engagement Problems (N = 116)

Variables	Main effects	Interaction effects
Non-normative selves (%)	.004**	-.002
Black	.11+	-.22
Non-normative selves X Black		.01**
Constant	.16+	.42***
F	4.56**	5.66***
df	3, 112	4, 111
R^2	.109	.169

$+ p \leq .10$; $* p \leq .05$; $** p \leq .01$; $*** p \leq .001$. All models control for summer exposure.

Figure 2.17 provides a visual depiction of the interaction between non-normative possible selves and race. Among youth identified as non-Black, a higher percentage of non-normative possible selves is associated with decreased school engagement problems. The opposite relationship is present for youth identified as Black, with a lower percentage of non-normative possible selves related to fewer school engagement problems.
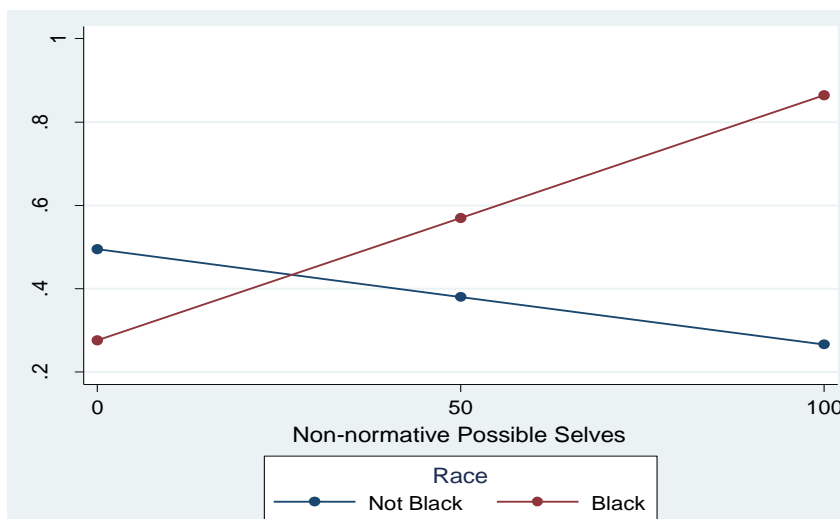
Figure 2.17. Marginal predictions of percentage of non-normative selves on overall school engagement problems by race.

The next set of models examine whether the legal history variables moderated the relationship between possible selves and school outcomes. Statistically significant moderation was found for crime severity level (i.e., felony-level offense), but not for any of the other legal history or risk variables.

Table 2.40.

Avoidance Selves and Crime Severity on Overall School Engagement Problems (N = 115)

Variables	A	B
Felony-level offense	-.13*	-.31**
Avoidance selves	.04	-.01
Avoidance X Felony		.10*
Constant	.38***	.48***
F	4.26**	4.22**
df	3, 111	4, 110
R^2	.103	.133

$+ p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. All models control for summer exposure.

The first model examined whether crime severity level moderated the relationship between avoidance selves and school engagement outcomes (Table 2.40, Model 1). While Model 1 did not find a direct effect for avoidance selves, the interaction between avoidance selves and crime severity was significant ($B = .10$, $SE = .05$, $t = 1.94$, $p = .05$).
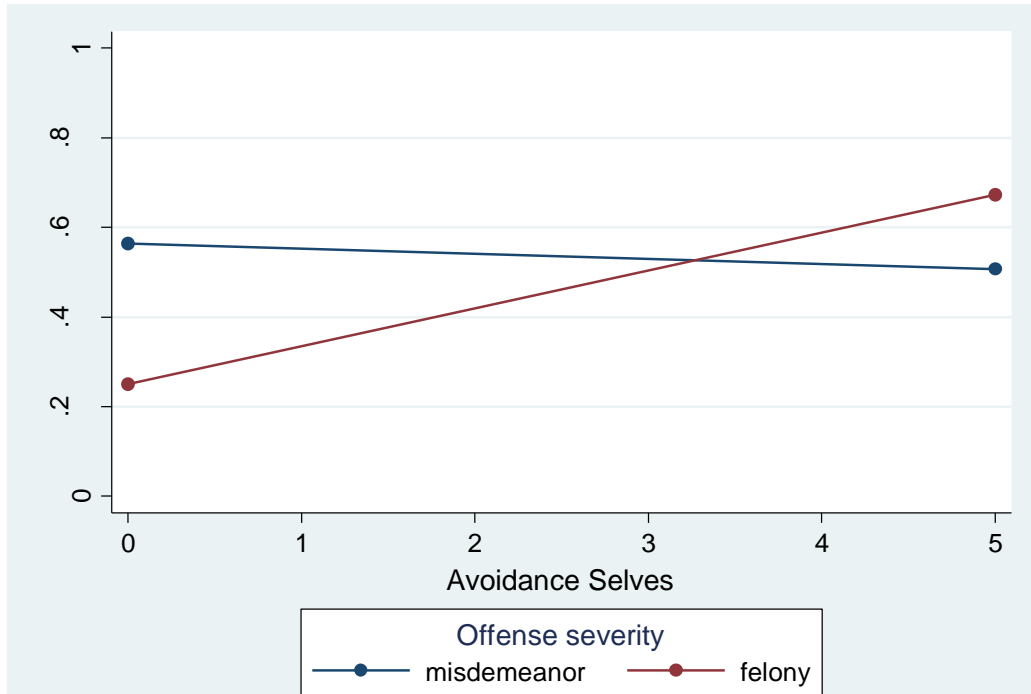
Figure 2.18. Marginal effects of total avoidance selves on overall school engagement problems adjusted by severity of crime.

The interaction plot is shown in Figure 2.18. For youth who have committed a felony-level offense, increased numbers of avoidance selves are associated with higher school engagement problems. For youth who committed a misdemeanor offense, the number of avoidance selves does not appear to affect school engagement problems.

The second significant model the emerged from the analyses examined the relationships between the crime severity and presence of possible selves focused on non-normative problem behaviors on overall school engagement problems. As reported in Table 2.41, a significant main effect was found for the relationship between felony offense and reduced school problems (B = -.26, SE = .07, t = -3.56, p = .001) and the interaction between felony-level and the presence of problem behavior selves (B = .22, SE = .10, t = 2.14, p = .034) were associated with school engagement problems.

Table 2.41.

Problem Behavior Selves and Crime Severity on Overall School Engagement Problems

Variables	Main effect Model	Interaction Model
Felony-level offense	-.15**	-.26*
Problem behavior selves	.14**	.02
Problem behavior X Felony		.22*
Constant	.38***	.43***
F	6.23***	5.97***
df	3, 111	4, 110
R^2	.144	.178

+ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. All models control for summer exposure.

The interaction between offense severity and problem behavior selves is shown in Figure 2.19. The graph indicates that youth who were order to probation due to a felony offense, may be at increased risk of school problems when their possible selves include goals related to problem behavior.
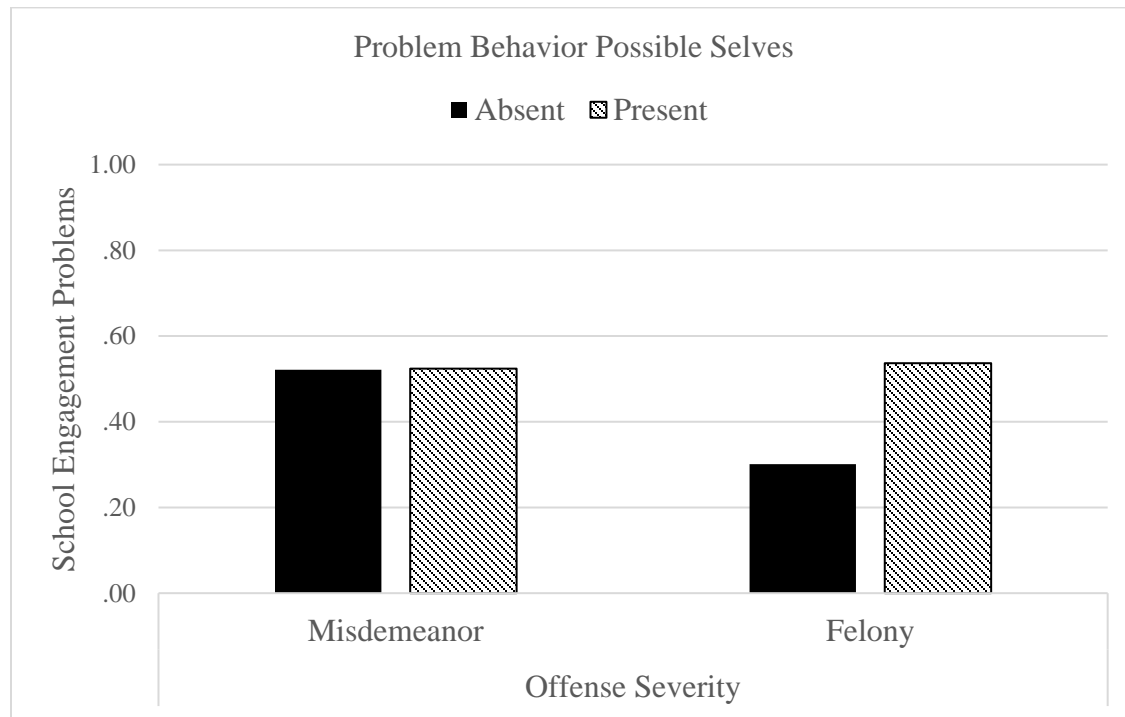
Figure 2.19. Marginal effects of total avoidance selves on overall school engagement problems adjusted by severity of crime.

The final model tested whether offense level acted as a moderator for the prior significant model of specific selves and presence of personal growth selves on school engagement outcomes (Table 2.42). We did not find any significant main effects for the final model (Model C). However, the interaction between specific selves and personal growth selves (B = -.12, SE = .06, t = -2.08, p = .040) and the interaction between personal growth selves and offense severity (B = .29, SE = .15, t = 1.99, p = .049) were associated with school engagement problems.

Table 2.42.

Possible Selves and Crime Severity on Overall School Engagement Problems (N = 115)

Variables	A	B	C
Specific selves	.02	.05*	.04
Personal growth selves	.12+	.38**	.14
Felony-level offense	-.14*	-.14*	-.21+
Specific X Personal growth		-.14*	-.12*
Specific X Felony			.01
Personal growth X Felony			.29*
Constant	.38***	.33***	.37***
F	3.69**	4.35**	3.74**
df	4, 110	5, 109	7, 107
R^2	.118	.166	.197

+ $p \le .10$; * $p \le .05$; ** $p \le .01$; *** $p \le .001$. All models control for summer exposure.

The marginal effects were plotted to better understand the interactions (Figure 2.20). The greatest level of school engagement problems was found for youth committing a felony offense whose possible selves included personal growth selves but few specific selves.
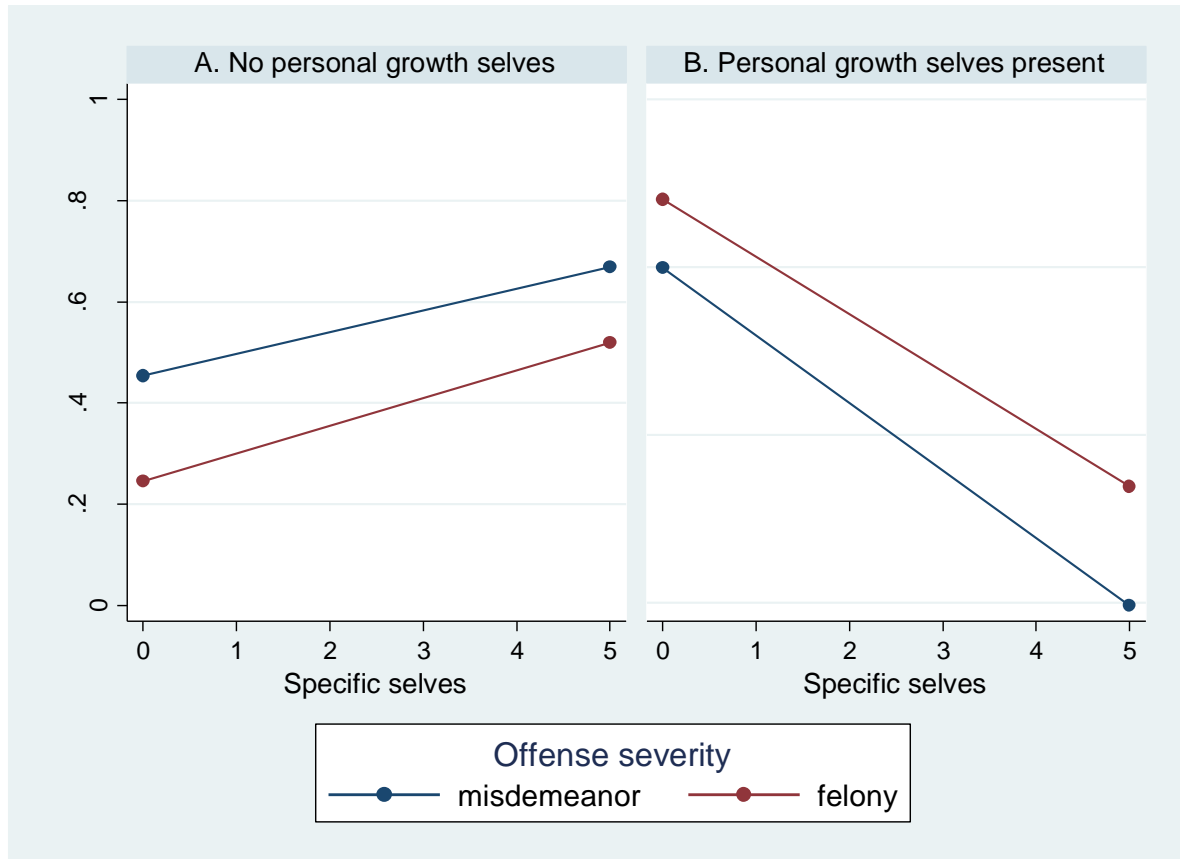
Figure 2.20. Marginal effects of total specific selves on overall school engagement problems adjusted by severity of crime and presence of growth selves.

Discussion

This study was conducted to explore a hypothesized model (presented earlier in Figure 2.1) for how possible selves characteristics affect adolescent probation outcomes. Overall, findings of this study indicate that possible selves do indeed matter to probation outcomes, although not necessarily in the same manner as reported in other adolescent populations. Possible selves are theorized to connect motivation and action, providing a roadmap that is easily triggered and implemented easily when relevant situations occur (Cross & Markus, 1994; Oyserman, Destin, & Novin, 2015). As such, we expected that the presence and quality of an adolescent's possible selves would be associated with better outcomes on probation. Conversely, this study found that higher counts of possible selves and their characteristics were consistently associated poorer outcomes for youth on probation. Deeper exploration reveals complex interactions between various aspects of possible selves and probation outcomes, wherein certain combinations of characteristics are protective under certain conditions for certain outcomes.

As summarized in Table 2.43, this study identified several relationships between possible selves characteristics and probation outcomes, with a mixture of beneficial and risky effects. High numbers of possible selves transmitted greater risk of rearrests, particularly for girls. At closer look, this relationship appears to be driven by the interaction of approach and avoidance selves. At lower levels of avoidance selves, greater approach selves served as a protective factor, reducing expected levels of rearrest. Approach selves also protected against school attendance problems, but only when youth reported high levels of non-normative selves.

Table 2.43.

Summary of Findings for Possible Selves Characteristics and Probation Outcomes

Characteristics	Probation Compliance Problems					School Engagement Problems				
		VOP						Beh.		
	Rearrest	Any	Pet	VOP	Fail	All	Attend.	Prob.	Fail	Susp.
Reported selves	Mixed[1]	--	--	--	--	Protect[2]	Protect[3]	--	--	--
Approach selves	Protect[4]	--	--	--	--	--	Protect[5]	--	--	--
Avoidance selves	Risk	--	--	--	--	Risk[6]	Risk	--	--	--
Specific selves	Risk	--	--	--	--	Protect[7]	Risk	--	--	--
Content domain										
Pro-social selves	--	--	--	--	--	--	--	--	--	--
School	--	--	--	--	--	--	--	--	Risk	--
Job	--	--	--	--	--	--	--	Protect	--	--
Achievements	--	Protect	Protect	Protect	--	--	--	--	--	--
Relationship	--	--	--	--	--	--	--	--	--	--
Personal growth	Risk	--	--	--	--	Risk[8]	--	Risk	--	--
Non-normative selves	Risk	--	--	--	--	Risk	Risk[9]	--	--	--
Delinquent	--	--	--	--	--	--	--	--	--	--
Problem behavior	--	--	--	--	--	Risk[10]	Risk	--	--	--
Balanced Pairs	--	--	--	Risk	--	--	--	--	--	--

[1] Quadratic function, 2-3 selves protect, more than 5 selves increases risk; interaction with gender, females at higher risk when selves are high; [2] Interaction with age, more selves protect for older youth; [3] Interaction with gender, more selves protect for females; [4] Interaction with avoidance, approach protects when avoidance is low; [5] Interaction with non-normative selves, approach selves protect when non-normative selves are present; [6] Interaction with crime severity, avoidance selves increase risk for youth committing a felony-level offense; [7] Interaction with personal growth selves and age, specific selves protect when personal growth selves are present, particularly in older youth; [8] Interaction with specific and crime severity, personal growth selves without specific selves increase risk for youth committing a felony-level offense; [9] Interaction with race, non-normative selves increase risk for Black youth and decrease risk for all other groups; [10] Interaction with crime severity, problem behavior selves increase risk for youth committing a felony-level offense.

Prior research posits that balanced pairs of possible selves support positive outcomes (Oyserman & Markus, 1990a, 1990b), with balance defined by the presence of approach and avoidance selves within the same content domain. However, our study suggests that it is the overall balance of avoidance to approach possible selves, independent of content-domain, that impacts the outcomes of probation-involved youth. For this study, balance based upon content was only associated with an increased risk of receiving VOP status. The discrepancy between prior studies and the current finding may be explained by study population. Only 44% of our sample reported any balanced content pairs. This is in line with the level of balance reported for other studies (e.g., Oyserman and Markus (1990a) reported content balance as present in 37% of delinquent adolescents versus 81% of non-delinquent adolescents). Our study examined differences in outcomes between youth who are already delinquent, whereas studies reporting positive effects of content balance on delinquency compared differences between delinquent and non-delinquent youth.

Specificity in possible selves was linked to negative outcomes for rearrest and for school. This finding is in contrast with intervention studies with the general adolescent population that suggest that greater elaboration and detail in possible selves leads to increased actionability and results in better outcomes (Oyserman et al., 2004; Oyserman et al., 2002). This difference may be related to the nature of which possible selves are elaborated. The School-to-Jobs intervention was conducted as an after-school program and focused on helping youth define highly specific approach possible selves (Oyserman et al., 2002). Within our study, youth reported a greater number of specific avoidance selves (56%) as compared to specific approach selves (45%). In other words, youth on probation were more likely to have actionable goals for what to avoid, yet lack actionable goals for what to pursue. Further support for this explanation comes from an

exception to our findings—when in conjunction with personal growth selves, specific selves acted as a protective factor against school problems. This suggests that helping youth on probation to develop specific selves related to personal growth may have a beneficial effect on outcomes, particularly school-related outcomes. Further research on the impact of specificity in connection to other aspects of possible selves is warranted.

Higher numbers of possible selves appear to be of benefit in protecting against school problems for older youth, with the greatest benefits for older youth who reported a self that was related to personal growth and more specific possible selves. In contrast, more possible selves were associated with greater risk in younger youth. This finding is in line with current perspectives on cognitive development. Research on narrative identity theory offers a potential explanation for the age-based benefits of possible selves (McAdams & McLean, 2013; McLean, 2005; McLean, Breen, & Fournier, 2010). Narrative identity theory proposes that during early adolescence identity narratives are drawn primarily from stories and fantasies. Cognitive development, including advances in meaning-making ability and socio-emotional processing, in combination with a growing range of experiences during adolescence enable youth to revise these make-believe identities and construct identities that are more realistic and actionable. For those serving youth on probation, this suggests that working with younger adolescents to develop and refine their possible selves may help to improve school outcomes.

Much of the literature on possible selves focuses on the benefits of academic possible selves during adolescence. Possible selves containing positive school-related identities have been linked to academic achievement and prosocial behavior, particularly in high-risk populations (Oyserman et al., 2006; Oyserman et al., 2011) Surprisingly, we found no protective relationships between school-related selves and probation outcomes, rather school-related selves

predicted higher levels of failure in school. Like findings on specificity within possible selves, this discrepancy may be connected to the overall quality of participants' possible selves. Studies comparing delinquent and non-delinquent youth observed that delinquent youth lacked positive academic possible selves when compared to non-delinquent youth (Clinkinbeard & Zohra, 2012; Newberry & Duncan, 2001; Oyserman & Markus, 1990a). Our study focused on outcomes for delinquent youth; probation conditions typically include mandates related to school attendance and performance and, consequently, heavy monitoring of these areas. A majority of the sample (68%) reported at least one possible self that was related to school, but our analysis does not account for potential differences in quality between school-related selves. For example, one youth reported an academic possible self of "*in school*" to be achieved through the strategy of "*going to school*," whereas another youth reported a possible self of "*passing most of my classes*" with the strategies of "*going to school every day, actually trying and doing my work, and trying to improve attendance*." In light of the complex interactions uncovered in this study, further research is needed to understand whether clusters or typologies exist within combinations of possible selves characteristics and how those typologies relate to risk.

Although predictive of a variety of behavioral problems, possible selves were not related to whether youth ultimately failed probation. This finding should be viewed in light of study constraints. Unlike other outcomes, which could occur throughout the course of probation, end status occurred solely when probation completed. Consequently, these analyses include censored data for 11 adolescents; nine of these adolescents were identified as being rearrested and six as having a high level of school engagement problems. As possible selves predict several problems that can lead to a youth failing probation, further research of this connection is warranted.

Table 2.44.

Summary of Findings for Possible Selves, Strategies, and Attainment Confidence on Probation Outcomes

	Probation Compliance Problems					School Engagement Problems				
		VOP						Beh		
	Rearrests	Any	Pet	VOP	Fail	All	Att	Prob	Fail	Susp.
Total strategies										
Direct effect?	Risk	--	--	--	--	--	Risk	--	--	--
Mediation?	--	--	--	--	--	--	--	--	--	--
Moderation?	Mixed[1]	--	--	--	--	Protect[2,3]	--	--	--	--
Self-regulatory strategies										
Direct effect?	--	--	--	--	--	--	Risk	--	--	--
Mediation?	--	--	--	--	--	--	--	--	--	--
Moderation?	--	--	--	--	--	--	--	--	--	--
Attainment Confidence										
Direct effect?	Risk	--	--	--	--	Risk	Risk	--	--	--
Moderation?	Mixed[4,5]	--	--	--	--	--	--	--	--	--

[1] Interaction with total selves, strategies protect when selves are low, increased risk when selves are high;
[2] Interaction with problem behavior selves, strategies protect when problem behavior selves are high;
[3] Interaction with specific and personal growth selves, strategies protect when no personal growth selves are present;
[4] Interaction with total selves: high confidence protects when selves are low, high confidence (esp. in feared selves) increased risk when selves are high;
[5] Interaction with feared confidence, confidence in expected protects when confidence in feared in low.

Strategies, Possible Selves & Probation Outcomes

This study sought to understand how the strategies attached to possible selves interacts with probation outcomes. Similar to our findings on possible selves, reporting more strategies was associated with higher rearrests and higher school attendance problems (Table 2.44). The current study yielded no support for strategies as a mediating the effect of possible selves on probation outcomes. However, strategies were found to moderate the relationship between possible selves and the outcomes of rearrest and school engagement problems. In the domain of rearrest, the number of strategies appears to be protective for youth who reported a low or average number of selves. Conversely, higher numbers of strategies were protective against school problems in the presence of multiple problem behavior selves.

Attainment Confidence, Possible Selves & Probation Outcomes

Confidence in attainment is an understudied aspect of possible selves. This study suggests that attainment confidence plays an important role in moderating the relationship between possible selves and probation outcomes. We found that youth were less confident in their expected selves as compared to their feared selves. However, high levels of confidence were not necessarily predictive of better outcomes. For youth reporting few possible selves, high confidence protects against risk of arrest. But high confidence became a risk factor when combined with a high number of reported selves, particularly feared selves. This suggest a gap between youth's beliefs about avoiding undesirable behaviors and their actual ability to act. Further exploration of this connection is needed to understand what underpins this relationship. Several possibilities exist. For example, youth who are overconfident in achieving avoidance selves may engage in problem behaviors due to misjudging risk. Alternatively, overconfidence may cause youth to neglect seeking advice or help from others to avoid further justice-system

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involvement. Two important factors should be considered when interpreting the results for attainment confidence. First, prior research indicates that possible selves are sensitive to social context (Oyserman et al., 2015). Thus, this difference may be driven by collecting responses while youth were in the probation office. Second, the findings on confidence assessment are drawn from a smaller sub-sample of youth ($n = 51$), and thus, should be considered exploratory in nature. Despite the small sample size, the effect of attainment confidence was large enough to be detected as a potential risk for rearrest and school problems. Future research on possible selves of court-involved youth should include measures assessing attainment confidence to better understand the role of confidence in goal pursuit.

Limitations

Several limitations need to be kept in mind when considering this study's findings, particularly those related to potential measurement issues. Several approaches have been used to assess possible selves, including both open-ended questionnaires and close-ended inventories. We chose to use the open-ended Possible Selves Questionnaire, allowing participants to report self-generated identities as opposed to choosing from a pre-existing list. However, because possible selves are contextually driven and socially cued, collecting surveys at the probation office likely primed participants to report identities relevant to probation that may not be triggered in settings where youth engage in outcome-related behaviors (e.g., school, neighborhood).

The outcome variables for this study are drawn from administrative data recorded by probation officers, and thus, prone to several potential problems. While based on two administrative sources, case notes and investigative reports, the measure of rearrests is prone to undercounting. First, we cannot detect new arrests made in other jurisdictions nor those

occurring in cases transferred out of the probation system due to aging into adult system or the case being transferred to a higher level. Second, while opportunity to be rearrested is accounted for by length of time in study, this adjustment does not account for time spent in settings, such as secured detention, where delinquent and/or criminal behavior may result in a new charge, but not a new arrest. Limitations of the administrative data also shaped the study's ability to assess school outcomes, as case notes noted when problems occur, but did not necessarily document school progress. As a result, this study was unable to examine the relationship of possible selves to positive school outcomes, such as higher GPA.

Lastly, this study relies on observational data rather than a randomized design. The lack of a counterfactual framework poses limitations to drawing causal inferences, particularly those related to mediation. Causal interpretation of direct and indirect effects from mediation analyses is predicated on the assumption that there is no unmeasured confounding of the possible selves-outcome relationship nor the strategies-outcome relationship (Vanderweele, 2015). However, the lack of a counterfactual design limits the capacity of this study to control for confounding and, in turn, limits the ability to draw strong conclusions about mediation.

Conclusion

Despite these limitations, this study provided important insight to the complex interactions that exist among possible selves of adolescent who are court-ordered to probation. Based on our findings, youth on probation would benefit from interventions designed to foster possible selves. We propose the following guidelines for practice:

➢ Guideline #1: *More is not better*. Focus on developing two or three possible selves.

➢ Guideline #2: *Emphasize the possibility.* Focus on envisioning clear desired goals ("what I want to be") instead of on goals about what to avoid ("what not to be").

➢ Guideline #3: *Grow and achieve.* Focus on elaborating identities and goals related to personal growth and to pro-social achievements.

➢ Guideline #4: *Goals need strategies.* Focus on helping youth to develop skills for building concrete steps and action plans to achieve their goals.

Study findings support the need to consider possible selves when working with adolescents on probation to change behavior. However, when considering how to best incorporate this information into probation practice, further research should consider the impact of possible selves on probation outcomes within the context of other mechanisms at play during probation, such as intervention methods used by probation officers and the family context.

CHAPTER 3

Possible Selves in Context: Investigating the Effect of

Parental Support, Probation Tactics, and Possible Selves on Probation Outcomes

Within the juvenile justice system, probation serves as a community-based alternative to incarceration. In 2014, just over 60% of delinquent youth were court-ordered to probation (Hockenberry & Puzzanchera, 2017), rendering it the most frequently imposed sanction of the juvenile justice system. Underlying juvenile probation is a proposition that by receiving community-based intervention rather than incarceration, youth at risk of continued criminal behavior may instead become productive community members.

Deficits in self-regulation is an underlying risk factor in multiple adolescent risk behaviors, including juvenile delinquency (Piquero & Tibbetts, 1996; Pratt et al., 2006). For adolescents involved with justice systems, the lack of a positive future orientation that includes clear goals may increase the likelihood of continued engagement in risk behaviors. *Possible selves* refer to the future-oriented ideas that we carry about who we hope, expect, or fear becoming in the future. Possible selves and their attached strategies in combination with efficacy beliefs and other aspects of future expectations (e.g., hopefulness) have been proposed to serve as a form of motivational capital, providing resources for achieving behavioral change (Clinkinbeard & Zohra, 2012; Suomi, 2009). There exists some evidence that possible selves influence behavior by serving as standards or references that individuals then compare to their current self (vanDellen & Hoyle, 2008). Motivation for behavioral change arises from discrepancies between who we are currently and who we want to be in the future (perceived behavior and the end state). Based on this theory, individuals will try to minimize the

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discrepancy between the current self and the hoped-for self, while maximizing the distance between the current and feared self.

A growing body of research links possible selves characteristics with delinquency and probation outcomes, such as recidivism and school problems (Abrams & Aguilar, 2005; Clinkinbeard & Murray, 2012; Clinkinbeard & Zohra, 2012; Wainwright, Nee, & Vrij, 2016). However, as stressed by a large body of theory and research, development exists within a complex series of interactions between an individual and their environment (Bandura, 1991; Bronfenbrenner & Morris, 2006; Cicchetti & Curtis, 2007; Cicchetti & Rogosch, 2002; Dodge & Pettit, 2003; Sameroff, 2010; Sampson & Laub, 2005). Thus, the influence of possible selves on probation outcomes must be considered in light of central external factors, such as the role of probation officers and of parents.

During the process of probation, delinquent youth are supervised by probation officers who play a variety of roles, ranging from monitoring youth behavior to case management activities, such as connecting youth to services. Within the mandate to monitor and report youth behavior while facilitating rehabilitation, probation officers integrate multiple approaches for working with delinquent youth (Miller, 2015; Schwalbe & Maschi, 2009, 2011). Scholarship differentiates probation strategies into two main categories: (1) confrontational tactics that seek to deter noncompliant behavior through enforcement-oriented methods, and (2) supportive or client-centered tactics that seek to rehabilitate behavior through therapeutic and interpersonal means (Griffin & Torbet, 2002; Hsieh et al., 2015; Hsieh et al., 2016; Miller, 2015; Schwalbe, 2012; Schwalbe & Maschi, 2011; Steiner, Roberts, & Hemmens, 2003). Studies have reported a mixture of benefits and risks associated with the use of confrontational tactics and of supportive tactics. Punitive tactics have been associated with increased technical violations, yet fewer

counts of delinquent offenses (Vidal & Woolard, 2017). Lipsey's (2009) meta-analysis of characteristics related to effective intervention for juvenile recidivism indicated that therapeutic inventions (e.g., counseling, skill building) had the strongest reduction of recidivism. Non-therapeutic interventions based on monitoring also reduced recidivism, although to a lesser degree. However, Lipsey found that interventions based on deterrence (e.g., emphasizing negative consequences of criminal behavior, such as "scared straight" programs) and discipline (e.g., imposed structured regimens, such as boot camps) showed a small net increase in recidivism. Overall, research into the relative benefits of confrontational versus supportive tactics suggests that youth are best served when probation officers use an integrated approach that incorporates both categories of tactics (Miller, 2015; Skeem & Manchak, 2008).

Parental support is considered an important predictor of probation success (Maschi, Schwalbe, & Ristow, 2013; Mullins & Toner, 2008; Vidal & Woolard, 2017). The impact of parenting on both delinquent and prosocial behaviors is well-documented (Dembo et al., 2000; Loeber & Stouthamer-Loeber, 1986; Sampson & Laub, 2005). Parental support plays a role in encouraging motivation to change and providing resources needed for desistance (Garfinkel, 2010; Gavazzi, Yarcheck, Rhine, & Partridge, 2003; Panuccio, Christian, Martinez, & Sullivan, 2012; Vidal & Woolard, 2017). Research has found that encouragement from family members to follow court mandates and engagement in treatment service increases the likelihood of adolescent's success on probation (Gavazzi et al., 2003). However, less is known about the mechanisms by which parental support translates into youth outcomes; one potential path is through affecting an adolescent's possible selves.

Research suggests the importance of possible selves when working with adolescents on probation to change behavior. Studies have demonstrated that possible selves are highly sensitive

to the social milieu and that they are malleable (Elmore & Oyserman, 2012; Oyserman & James, 2011; Oyserman et al., 2002). Yet little is known about how mechanisms at play during probation, such as intervention methods used by probation officers and parental support, may influence adolescent possible selves or whether that influence, in turn, leads to differences in probation outcomes. Understanding how and under what conditions key actors in the lives of delinquent youth, such as probation officers and parents, may affect possible selves in ways that lead to improved outcomes is needed to inform policy and practice. As shown in Figure 3.1, three pathways are proposed to explain how possible selves influence probation outcomes within the context of parental support and the tactics used by probation officers:

Path A: Possible selves have a direct effect on adolescent outcomes independent of external factors.

Path B: Possible selves mediate the relationship between external factors and adolescent outcomes.

Path C: External factors have a direct effect on adolescent outcomes, but this effect is moderated by possible selves.
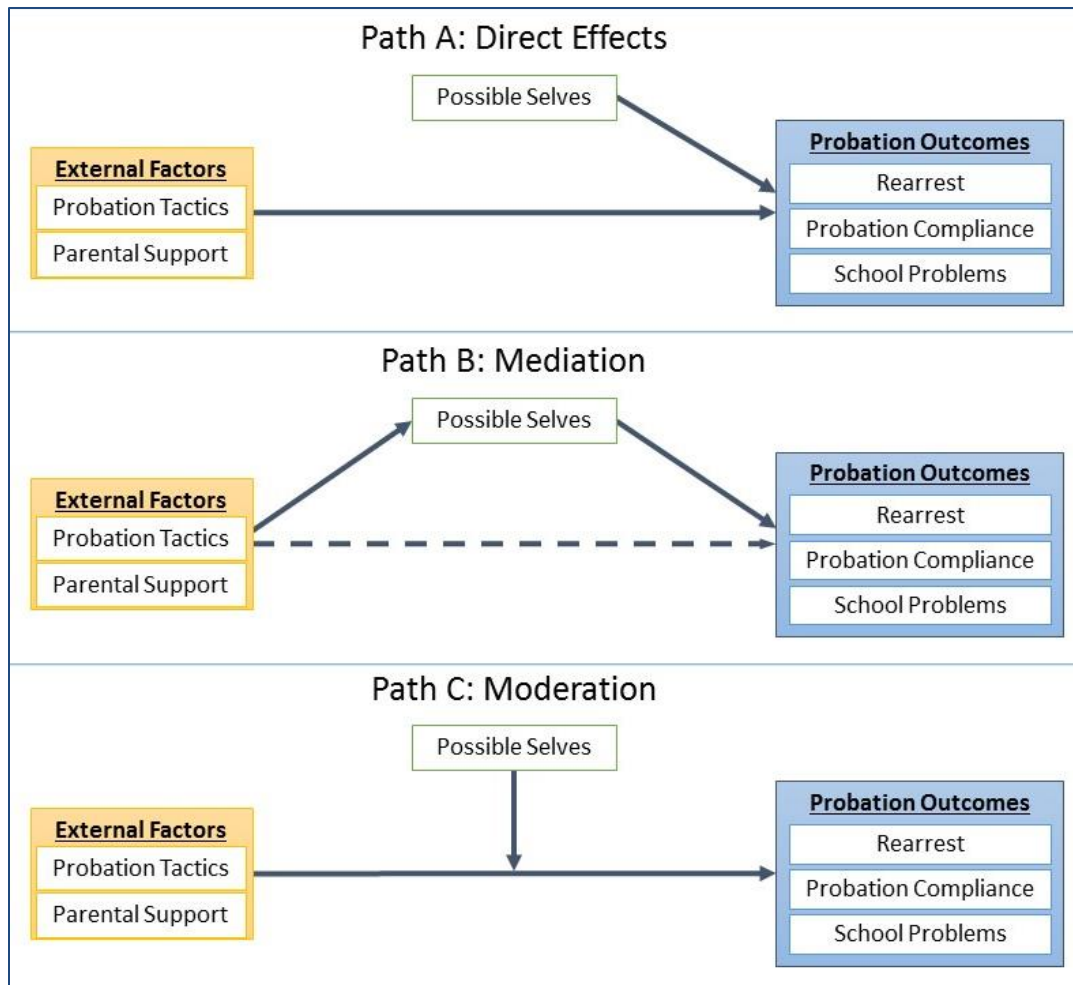
Figure 3.1. Potential models for the relationship between possible selves and probation outcomes in the context of external factors.

The current study examines each of these paths (direct effects, mediation, and moderation) to better understand how adolescent's possible selves interact with external factors (e.g., probation strategies, parental support) to affect outcomes for adolescents on probation.

Methods

This study uses survey and administrative data collected as part of the Social Processes in Probation study (SPPS). SPPS used purposive sampling to recruit 155 adolescents who had been court-ordered to probation. Following recruitment to SPPS, youth completed several survey

interviews administered by trained research assistants; surveys included measures collecting information on youth's possible selves, perceived level of parent support, and tactics used by their probation officers. Administrative data, in the form of investigative reports and probation case notes, were obtained for each youth at baseline and 12 months following the close of study recruitment.

Sample

The sample for the current study consists of 116 adolescents who completed the Possible Selves Questionnaire as part of SPPS. Participants were 15.1 years old on average (SD = 1.2; range: 9 – 17 years) and 78% were male (*n* = 90). Data on race/ethnicity was included in administrative files, with 79% of youth identified as Black, 11% as White, 8% as Hispanic, and 2% as other. Slightly more than half (57%) were ordered to probation for a felony-level offense, with 64% of participants placed on standard probation and the remaining 36% placed in the Enhanced Supervision Program, an intensive form of probation that serves as an alternative to residential placement. In terms of their legal history, 34% of the sample had no prior arrests, 35% had one prior arrest, and 31% had multiple prior arrests (*M* = 1.2, *SD* = 1.3, range: 0 – 6).

Measures

The study examined three domains of probation outcomes: rearrest, probation compliance, and school problems. All outcome variables were extracted from administrative data collected from the Department of Probation. *Rearrest* was measured as total count of arrests following completion of the Possible Selves Questionnaire (*M* = 1.1, *SD* = 1.9, range: 0 – 10).

Probation compliance was measured as a dichotomous variable indicating whether the youth had repeatedly failed to meet conditions of probation at any point (*n* = 45, *39%*, 0: no, 1: yes). Compliance issues were coded as yes if probation case notes indicated either: (1) the youth

failed to complete probation (referred back to family court due to rearrest, remand, or other violation of requirements), or (2) the probation officer initiated a Violation of Probation (VOP) process (the official reprimand process used when a youth is failing to meet probation requirements).

School Problems. We coded the case notes for four types of school problems, including: attendance problems (α = .82), behavioral problems (α = .56), failing school (α = .78), and school suspension (α = .70). We also coded all instances in which school was discussed by probation officers with youths (α = .82). *School problems* was measured as a composite variable capturing the ratio of total count of school problems to the total number of case notes where the probation officer indicated that school was discussed (*M* = .46, *SD* = .30, range: 0 – 1.3). Note, that because case notes may simultaneously report problems in multiple areas (e.g., truant and failing), it is possible the total number of school problems to exceed the total number of case notes discussing school.

Possible selves were measured using the Possible Selves Questionnaire (Oyserman, 2005), a standardized structured interview that has been used with both normative and delinquent adolescent populations (Clinkinbeard & Zohra, 2012; Oyserman et al., 2004; Wainwright et al., 2016). Participants were asked to list up to four expected selves and four feared selves. As described in prior analyses (see Chapter 2), all responses were counted and coded for content. Based on our prior analyses, two possible selves variables were used in this study: (1) *total report selves*, which captures the number of possible selves responses for each participant (*M* = 4.1, *SD* = .1.8, range: 0 – 8), and (2) *achievement selves*, a dichotomous variable indicating that

the adolescent reported at least one possible selves related to pro-social achievements (e.g., sports, extra-curricular activities; $n = 46$, 40%, range: $0 – 1$).

   Probation tactics. As part of the surveys, adolescents were interviewed after meeting with their probation officer and asked to indicate whether their probation officer had used any of 13 specific practices during the meeting. The practices reported on were either supportive tactics ($M = .57$; $SD = .29$; Cronbach's $\alpha = .74$; e.g., "Did your probation officer offer you a reward or incentives for following your probation conditions?", "…try to understand how you feel about your situation?", "…brainstorm ways to make it easier to meet your probation conditions?") or confrontational tactics ($M = .47$; $SD = .30$; Cronbach's $\alpha = .71$; e.g., "Did your probation officer remind you about the consequences of not completing your probation conditions?", "…confront you about not doing what you were supposed to do?", "…threaten to return you to court or place you in detention?"). Probation tactics were measured using a variable assessing the balance between supportive and confrontational tactics used by each participant's probation officer during probation meetings ($M = .10$; $SD = .31$; Cronbach's $\alpha = .79$; Range: -1 to 1); positive scores indicate that the probation officer used a greater use of supportive tactics and negative scores indicate a greater use of confrontational tactics.

   Parental support was measured through a scale assessing adolescent-reported parental involvement in and monitoring of probation ($M = 5.51$; $SD = 1.23$; range: 1–7; Cronbach's $\alpha = .834$). The parental support scale is derived as the average of eight questions asking participants how often their parent(s): "…talk to you about probation?", "…remind you to complete your probation conditions?", "…ask you how you are doing with your probation conditions?", "…report rule violations to your PO?", "…tell your PO about your needs or problems so that you can get help?", "…tell your PO when you are doing well?", "…agree with your PO?", "…and

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your PO are on the same side?" All questions are on a 7-point scale ranging from a response of '*Never*' to '*Always*.'

Control variables. Demographic characteristics (i.e., gender, race, age) and legal history (i.e., felony offense, prior arrests, and risk score) were measure using administrative data collected at baseline. *Risk score* is a composite measure based on the cumulative number of risk factors present in the initial investigative report that is completed by the probation department prior to adjudication; risk factors included: substance use ($\kappa = .86$), problems at home ($\kappa = .64$), problems at school ($\kappa = .72$), anger issues ($\kappa = .68$), presence of prior arrests, age at first arrest, and presence of negative peers ($M = 2.5$, $SD = 1.5$, range: $0 - 6$).

Data Analysis

This analysis sought to examine the relationship by which possible selves predicts probation outcomes (e.g., rearrest, probation compliance, school problems) in the context of external factors (e.g., probation compliance, perceived parental support). Specifically, we tested three potential pathways for each outcome: (1) the direct effect of possible selves on outcomes, independent of external factors (Path A); (2) the mediation effect of possible selves on the relationship between external factors and outcomes (Path B); and (3) the moderation effect of possible selves on the relationship between external factors and outcomes (Path C). Prior to hypothesis testing, we performed basic descriptive and visual analyses to examine variable distributions, assess for outliers, and ensure necessary test assumptions were met (e.g., linearity).

For each probation outcome, we used sequential multiple regression to estimate direct, indirect, and moderation effects. All models included youth demographics (gender, race, age) and risk factors (prior arrests, risk score) as control variables. Models predicting probation compliance controlled for the total number of probation contacts. Models predicting school

problems included two additional control variables: felony-level offense, which was identified as a significant predictor of school problems during prior analyses, and summer exposure. Summer exposure adjusts for time during the probation period that occurred during summer months when youth were not in school.

Step 1. After estimating the control model, the first step fit a regression model containing external factors. Because we were interested in two external factors—perceived parental support and probation tactics—we conducted three sets of analyses wherein Set A included perceived parental support, Set B included probation tactics, and Set C included both external factors.

Step 2: Estimating Path A and Path B. At the second step of the sequence, we entered the possible selves terms. This allowed us to examine both Path A (direct effect of possible selves) and Path B (indirect effect of possible selves). The direct effect is the estimate obtained for possible selves after controlling for the effect of external factors on the outcome. The indirect or mediated effect of possible selves on the relationship between the external factors (probation tactics and parental support) and the outcome is obtained through observing the amount of change in the estimate for the external factors when possible selves is added to the model. While a number of variables were coded to capture various characteristics of youth's reported selves (e.g., valence, specificity, content), our prior analyses indicated that the total number of possible selves reported is strongly correlated with the key characteristics of possible selves that were predictive of the probation outcomes of rearrest and school problems. Consequently, we used *total reported selves* as a measure of possible selves in most analyses. For the outcome of probation compliance, prior analyses found a significant relationship with presence of achievement selves, but not with total reported selves; thus, we substituted achievement selves in these models.

Step 3: Estimating Path C. In the final step, we added the interaction terms between possible selves and the external factors. Including an interaction term permits us to test Path C, whether possible selves moderates the relationship of external factors and probation outcomes.

The order in which Possible Selves Questionnaires (PSQ) were administered relative to the other surveys varied during the course of the SPPS study. This presents a potential threat to the mediation analyses (Path B) as possible selves were collected prior to collecting data about probation tactics for 85% of cases (n=105). In 76% (n = 93) of cases the PSQ was administered after the adolescent had begun meeting with their probation officer. Cases with multiple reports on probation tactics (*n* = 60, 52%) show a relatively high level of consistency across reports, with an average of 71% agreement between time 1 and time 2 collection across all tactics items. As there is evidence that the reported tactics used by probation officers remain stable over time, it is reasonable to treat possible selves reported after the adolescent has begun probation as a potential mediating variable in the analysis.

Missing Data

The key variables for this study were individually assessed for their degree of missing data. The variables were also assessed using logistic regression (1: missing; 0: not missing) to understand patterns and predictors of missingness. We identified two variables as missing data: *perceived parental support* was missing data for 19% of cases (*n* = 22) and *probation tactics* was missing 29% of cases (*n* = 34). In order to preserve the full sample and reduce the potential for bias resulting, we used multiple imputation to address the missing data (Graham, 2009; Schafer & Graham, 2002). There is evidence that MI performs well in samples as low as N = 50, even when large amounts of data are missing (Graham & Schafer, 1999). Imputation models were generated using the MI procedure in Stata and included: (1) all variables in the analysis,

including interaction terms, and (2) other SPPS variables that were thought to be correlated with the true values of the missing data or the probability of data being missing.

Results

Correlations between the key predictor variables (perceived parental support, probation tactics, and possible selves) are shown in Table 3.1. Bivariate analyses found a statistically significant positive relationship between probation tactics and total possible selves ($r = .26$, $p = .019$). Perceived parental support was not significantly associated with either possible selves or probation tactics.

Table 3.1.

Intercorrelations of Parental Support, Probation Tactics and Possible Selves

Predictor Variables	n	Parental Support	Probation Tactics	Total Selves
Perceived parental support	94	--		
Probation tactics	82	-.04	--	
Total reported selves	116	-.14	.26*	--
Any achievement selves	116	.12	.16	.32***

*$p \le .05$; *** $p \le .001$.

Rearrest

We fit a three sets of sequential negative binomial regression models to test the effects of possible selves on rearrests in the presence of: (A) perceived parental support, (B) probation tactics, and (C) both perceived parental support and probation tactics (Table 3.1). To predict rearrest, we entered the external factors at step 1, the possible selves terms at step 2, and the interaction between possible selves and external factors at step 3. All models included youth characteristics (i.e., gender, age, race, prior arrests and risk score) as control variables This allowed us to test the effect of possible selves once external factors are accounted for in the model. As prior analyses found evidence of a curvilinear relationship between possible selves and rearrests, step 2 included both the linear and quadratic terms for total possible selves.

Table 3.2.

Negative Binomial Regression of External Factors and Possible Selves on Rearrest

Variables	A. Parental Support			B. Probation Tactics			C. External Factors		
	A1	A2	A3	B1	B2	B3	C1	C2	C3
External Factors									
Parental support	1.15	1.21	1.06				1.15	1.22	1.17
Probation tactics				1.19	.98	.22	1.07	.83	.17+
Possible Selves									
Total selves		.80	.63		.78	.79		.78	.71
Total selves sq.		1.05*	1.06*		1.05+	1.04		1.05*	1.04
Interactions									
Support X Selves			1.03						1.01
Tactics X Selves						1.47+			1.50+
F (joint test)	1.52	5.36	.27	.14	4.72	2.92	.84	4.92	1.39
p	.22	.005	.605	.709	.009	.088	.43	.007	.25
F (full model)	2.18*	3.35***	3.12***	1.73	2.93**	5.85***	1.88+	2.66**	4.64***
df	6, 117153.0	8, 84642.0	9, 52838.5	6, 214389.3	8, 414224.8	9, 62477.9	7, 50052.4	9, 46897.5	11, 21628.7

+ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. [a] BIC = 357.69 for model containing only control variables. Note: All models control for: gender, age, race, prior arrests, and risk score; and include *ln(years in study)* as an exposure variable. Estimates shown are incidence rate ratios; N for all analyses is 116, 40 imputations were employed.

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Results of these models provide evidence of a direct relationship between possible selves and rearrest independent of perceived parental support or probation tactics. Across all models, the addition of possible selves in Step 2 was significantly associated with rearrest. The effect of possible selves terms on rearrest was consistent, with the expected number of rearrests reduced by approximately 20-22% with each additional reported self. The positive relationship between the quadratic possible selves term and rearrest indicates that there exists diminishing margins for the protective effect of possible selves. In other words, a turning point exists after which adding more possible selves becomes risky rather than beneficial.

Analyses did not find perceived parental support nor probation tactics to be significant predictors of rearrest (Table 3.2, Models A1, B1, C1); thus, there is no support that possible selves act as a mediator in these relationships. We did find a trend in Models B3 and C3 that suggests the existence of an interaction between probation tactics and possible selves. The interaction term between probation tactics and possible selves was marginally significant for both Model B3 ($B = .39$, $SE = .23$, $IRR = 1.47$, $t = 1.71$, $p = .087$; joint F(tactics, reported selves, interaction) $= 6.43$, $df = 4$, 11359.8, $p < .001$) and Model C3 ($B = .40$, $SE = .24$, $IRR = 1.50$, $t = 1.68$, $p = .094$; joint F(tactics, reported selves, interaction) $= 2.17$, $df = 4$, 3092.0, $p = .070$). These findings suggest that for youth with few possible selves, use of more supportive tactics reduced rates of rearrest; however, as the number of selves reported increased, this protective effect diminished.

Probation Compliance

Table 3.3 presents results of the sequential logistic regression models examining the outcome of probation compliance. All models control for youth characteristics as well as the total number of probation contacts. Step 1 added the external factors (Model A1: perceived

parental support, Model B1: probation tactics, Model C1: perceived parental support and probation tactics); in step 2, we added the possible selves term, and in step 3, we added the interaction between possible selves and external factors. These models used presence of achievement selves for the possible selves variable, as previous analyses indicated that the presence of non-academic achievement selves (e.g., possible selves related to sports, extra-curricular activities), but not the total number of possible selves, predicted probation compliance.

Analyses found probation tactics to significantly predict probation compliance (Model B1: $B = -1.70$, SE = .80, $OR = .182$, $t = -2.13$, $p = .03$). For all analyses, neither adding achievement selves at step 2 nor adding the interaction term at step 3 substantially improved the model. Consequently, there is no evidence to support either moderation or mediation by possible selves on the relationship between probation tactics and probation compliance.

Table 3.3.

Logistic Regression of External Factors and Possible Selves on Probation Compliance

Variables	A. Parental Support			B. Probation Tactics			C. External Factors		
	A1	A2	A3	B1	B2	B3	C1	C2	C3
External Factors									
Parental support	1.15	1.18	1.31				1.20	1.23	1.42
Probation tactics				.18*	.20*	.29	.17*	.18*	.22
Possible Selves									
Achievement selves		.37+	1.33		.43	.45		.41+	2.99
Interactions									
Support X Selves			.80						.71
Tactics X Selves						.36			.44
F (joint test)	.76	3.61	.43	4.54	2.55	.49	2.80	2.76	.57
p	.384	.058	.511	.034	.110	.484	.061	.097	.565
F (full model)	2.53*	2.46*	2.17*	2.98**	2.76**	2.43**	2.54**	2.40*	1.95*
df	7, 130350.0	8, 131335.9	9, 75716.1	7, 44324.5	8, 65317.6	9, 28997.7	8, 22949.7	9, 30701.0	11, 26343.0

+ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. Note: All models control for: gender, race, age, prior arrests, risk score, and total probation contacts. Estimates shown are for odds ratios; N for all analyses is 116, 40 imputations were employed.

School Problems

For the final set of analyses, we tested the effects of possible selves on school problems using sequential multivariable regression modeling. In addition to youth characteristics, all models of school problems adjust for summer months occurring during the probation period as youth are not typically in school during this time. We generated models across three groupings: (A) perceived parental support, (B) probation tactics, and (C) both perceived parental support and probation tactics. As with the prior probation outcome domains, Step 1 consisted of the external factors; step 2 added the possible selves terms (total reported selves and the interaction between possible selves and age); and step 3 added the interaction term between the external factors and total reported selves).

As presented in Table 3.4, we found support of a direct relationship between possible selves and school problems independent of parental support or probation tactics. Across all models, having increased possible selves was associated with higher school problems (Model C2: $B = .51$, $SE = .17$, $t = 3.00$, $p = .003$); this effect was moderated by age (Model C2: $B = -.03$, $SE = .01$, $t = -2.81$, $p = .006$). We also found a significant negative direct effect for probation tactics on school problems (Model C2: $B = -.23$, $SE = .08$, $t = -2.76$, $p = .008$), with increases in the proportion of supportive tactics associated with fewer school problems. Analysis showed no evidence of mediation or moderation.

Table 3.4.

Multivariable Regression of External Factors and Possible Selves on School Problems

Variables	A. Parental Support			B. Probation Tactics			C. External Factors		
	A1	A2	A3	B1	B2	B3	C1	C2	C3
External Factors									
Parental support	-.01	-.01	.006				-.01	-.007	.02
Probation tactics				-.21*	-.23**	-.27	-.21*	-.23**	-.27
Possible Selves									
Total selves		.55**	.58**		.51**	.50**		.51**	.55**
Selves X Age		-.03**	-.04**		-.03**	-.03**		-.03**	-.03**
Interactions									
Support X Selves			-.004						-.007
Tactics X Selves						.01			.01
R2^a	.181	.262	.265	.239	.330	.331	.244	.333	.338
ΔR2	.007	.081**	.003	.065*	.091**	.001	.070*	.089**	.006
F (joint test)	.38	5.69	.12	6.50	6.81	.07	3.28	6.58	.21
p	.541	.005	.727	.013	.002	.799	.042	.002	.811
F (full model)	2.72**	3.51***	3.05**	3.88***	4.78***	4.26***	3.34***	4.21***	3.42***
df	8, 103.7	10, 101.9	11, 100.7	8, 103.7	10, 101.7	11, 100.7	9, 102.4	11, 100.5	13, 98.4

$^+$ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$. ^{a} R2 = .174 for model containing only control variables. Note: All models control for: gender, race, age, felony offense, prior arrests, risk score, and summer exposure. Estimated effects are unstandardized regression coefficients; N for all analyses is 116, 40 imputations were employed.

Discussion

This study sought to understand the role of possible selves on probation outcomes within the context of parental support and probation tactics. We tested three potential pathways through possible selves may affect the outcomes of rearrest, probation compliance, and school problems—direct effects, independent of external factors; meditated effects on the relationship of external factors on outcomes; and moderated effects on the relationship of external factors on outcomes. Our findings failed to find conclusive support for a mediated or moderated pathway in any of the probation outcomes. However, we found a marginally significant interaction between probation tactics and possible selves for the outcome of rearrests, suggesting that supportive tactics may be of importance to lowering risk of rearrest for youth with limited possible selves. Findings support a direct effect of possible selves on both rearrest and school problems. The effect of possible selves on these outcomes remained significant even after controlling for perceived parental support and probation tactics. These findings add to growing evidence that how youth envision and pursue their future is an important component in probation outcomes and a potential point of intervention.

Interpretation of the findings should consider two important limitations of the study design. First, with a sample size of 116 adolescent the study lacks power to detect smaller effects. The lack of power may be further compounded when combined with relatively blunt measures of key variables. The outcome of probation compliance was assessed as a static indicator variable based on official designation of a compliance problem; as such, the variable captured only the most severe levels of noncompliance. Further, our measures of parental support and probation tactics used overall composite scores rather than a more nuanced approach. Zhu, Tse, Cheung, and Oyserman (2014), the lone study on parental support and

possible selves, found a correlation between perceived parental support and the quality of possible selves within a general population of high school students in Hong Kong. However, they reported difference in the relationship based on the type of parental support—perceived socio-emotional support versus perceived pragmatic support. For the current study, parenting behaviors were operationalized as the level of perceived support youth experience as related to probation. Consequently, the lack of a relationship between perceived parental support and findings may be due to a lack of differentiation between key aspects of parental support that influence both the development of possible selves and adolescent behaviors. This issue is also present in the measure of probation tactics, which provided evidence that the balance of supportive to confrontational tactics is associated with adolescent possible selves. What is missing is the ability to uncover the extent to which specific sub-categories of tactics (e.g., offering incentives versus encouragement) are related to possible selves. More in-depth analyses of this relationship could provide important guidance for how probation officers can integrate currently used tactics with leveraging possible selves in support of better outcomes.

A second key limitation of the study arose from inconsistent timing in the administration of the Possible Selves Questionnaire. As a result of this inconsistency, the temporal order between possible selves, probation tactics, and perceived parental support varied across participants. While there is evidence within the literature and the data for the consistency of these variables over time, these differences confound the assessment of mediation. The construct of causality requires that a cause occurs prior to an effect. Clearly demonstrating temporal order is a challenge for all studies involving dynamic psychological variables. The sequence of measuring thought processes and perceptions provides information on the presence of phenomena at the time of collection, but such presence cannot be assumed to establish a

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temporal order. For example, while probation tactics may be measured two weeks prior to measuring possible selves, we cannot rule out whether the same set of possible selves co-existed with or even pre-dated the use of certain tactics without the use of multiple assessments to measure change over time. In light of these limitations, further research is needed to clarify the extent to which possible selves change during involvement with the criminal justice system and whether they are influenced by certain types of probation tactics or parenting behaviors.

Possible selves remain a promising area for creating interventions to support the needs of delinquent adolescents. There is growing evidence to suggest that an adolescent's possible selves influence their probation outcomes, particularly with regard to recidivism and school problems. Interventions helping at risk youth to develop and engage possible selves in school settings have reported positive effects on academic outcomes and behavioral problems (Oyserman et al., 2006). Emerging research suggests that possible selves interventions trigger beneficial changes in planning skills, self-esteem, and self-efficacy beliefs that serve to strengthen self-regulatory processes (Hardgrove, Rootham, & McDowell, 2015; Murru & Ginis, 2010; Owens & Patterson, 2013; Van Gelder, Luciano, Weulen Kranenbarg, & Hershfield, 2015). Working with youth on probation to develop their possible selves may provide a leverage point for increasing positive outcomes.

This study represents a new line of investigation as neither current criminal justice scholars nor social work scholars are examining how probation officers and parents influence adolescent possible selves. Probation officers and parents represent two key actors in the lives of delinquent youth, both of whom research has established as influencing probation outcomes (Lipsey, 2009; Miller, 2015; Vidal & Woolard, 2017). As such, probation officers and parents are likely best positioned to influence the development of possible selves for adolescents on

probation. Intervening with possible selves may provide an avenue for probation officers and parents to work collaboratively with youth. Additional research is needed to understand what tactics, strategies, and supports probation officers and parents can provide to adolescents to promote positive probation outcomes through possible selves. Future research efforts should seek to further disentangle the interplay between possible selves and probation to clarify how probation officers may be able to incorporate tactics that build motivation and action toward successful adolescent outcomes.

CHAPTER 4

From Goal Development to Sustained Progress:

Toward a Process Model for Understanding Possible Selves in Action

Adolescence is a period of significant change and development as individuals transition from childhood into the responsibilities of being an adult. Adolescence also represents a time of increased risk for problem behaviors (Blum & Nelson-Mmari, 2004; Steinberg, 2004). Some behaviors, such as delinquency, hold the potential for negative consequences that can carry over into adulthood.

A key purpose of the juvenile justice system and probation is to help delinquent youth to rehabilitate risky behaviors.   Due to developmental changes, an individual's capacity for self-regulation and future-thinking improves dramatically during adolescence and young adulthood (Brandtstädter, 1998; Steinberg, 2008; Steinberg et al., 2009). Several studies have found that low self-regulation, or self-control, is correlated with increased risk of delinquency and other problem behaviors during adolescence (Moffitt, Poulton, & Caspi, 2013; Piquero & Tibbetts, 1996; Rhodes et al., 2013). Additionally, intervention research demonstrates that improving self-regulation is effective in reducing delinquent behaviors (Piquero, Jennings, Farrington, Diamond, & Gonzalez, 2016).

Self-regulation represents an individual's ability to inhibit or exhibit a behavior, emotion, or reaction in pursuit of a goal (Posner & Rothbart, 2000). Over the course of development in childhood and adolescence, self-regulatory capacities and key tasks change. In infancy, self-regulation revolves around the physiological coordination of sleep and wake cycles and the control of emotions through tasks such as self-soothing; toddlers build upon these achievements as they learn behavioral self-control and compliance, followed by children moving toward ever

greater internal self-regulation as they tackle the ability to delay gratification during school age. By time that adulthood is reached, self-regulation has developed into a multi-faceted construct that includes the modification of reactivity as well as tasks related to future oriented goal-setting behaviors (e.g., planning, persistence, environmental management).

Possible selves are proposed as key factor in the development intention self-regulation. The construct of *possible selves* integrates future-orientation and goal setting with identity beliefs (Markus & Nurius, 1986). At the most basic level, "identity" captures the responses, both implicit and explicit, that are accessed through the question "Who are you?" Within one's self-concept, people carry a multifaceted array of diverse identities developed in through interaction with the social context. The self-concept included identities related to the past (who were you?), present (who am I?), and the future (who will I become?); *possible selves* refers to the future identites contained within the self-concept.

Possible selves research indicates that individuals generate three types of possible selves: (1) who they would like to become, (2) who they believe they can actually become, and (3) who they fear becoming (Markus & Nurius, 1986). Evidence suggests that possible selves serve as a standard of behavior that individuals then compare with their current self (vanDellen & Hoyle, 2008). Motivation for behavioral change develops as individuals seek to minimize the discrepancy between the current self and the hoped-for self, and to maximize the distance between the current self and the feared self. Consequently, the richness of content and specificity of one's possible selves have been linked to sustaining self-regulation, with poor or limited conceptions of the future associated with difficulty in goal pursuit because the imagined future does not provide a specific roadmap to reduce discrepancies between the current self and the future self (Oyserman et al., 2004). Collectively, possible selves and their attached strategies in

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combination with efficacy beliefs and other aspects of future expectations (e.g., hopefulness) are proposed to form a type of motivational capital, providing resources for achieving behavioral change (Suomi, 2009).

There is emerging evidence of the importance of possible selves to probation outcomes. Within general adolescent population, intervening to engage possible selves through clearly articulating goals and developing self-regulating pathways to attaining those goals has been shown to have positive effects on academic engagement (e.g., improved grades, time spent on homework, class participation). However, possible selves intervention have yet to be adapted for juvenile justice settings.

Building successful interventions requires the identification of "malleable mediators" and a clearly defined theory of change (Fraser & Galinsky, 2010; Luthar, 2006). Existing literature on possible selves provides insight into the construct of possible selves – their components and which characteristics are associated with motivating behavior for particular adolescent outcomes – in other words, aspects of *what* possible selves are. Far less is known about the process of *how* possible selves translate into behavioral action. This study used a grounded theory approach to explore the process whereby possible selves and strategies translate into behavioral action and the meaning-making that occurs during the process of pursuing possible selves among adolescents who are court-ordered to probation.

Rationale for Methodology

Qualitative methods are particularly suited for exploring complex details about phenomena, such as thought processes and feelings, that may be difficult to extract through quantitative methods (Strauss & Corbin, 1998). Grounded theory, in particular, is well-suited to studying processes to generate an understanding of the underlying explanations (Creswell, 2007).

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The literature on possible selves has proposed models that hypothesize about the process of moving from identity to action. However, these models are heavily based in cross-sectional quantitative studies seeking to elucidate what possible selves are in terms of counts and content. Such studies may provide a snapshot of the possible self, but they are unable to observe the dynamics between self-concept and action over time, neither are they capable of eliciting the meaning-making that may function to translate ideas to action or inaction. Further, these models are based on general populations and may fail to capture the nuances of how possible selves work for youth involved in the probation system.

Research Participants and Data Sources

The study collected data through in-depth follow-up interviews with 14 adolescents. A purposive sampling strategy was used to recruit from the pool of youth who participated in the original SPPS study ($n = 155$) and had completed a Possible Selves Questionnaire (PSQ); 39 youth (26%) were excluded from recruitment to the follow-up study, with 31 youth that did not complete the PSQ and 8 youth that were in out-of-home settings (e.g., detention or residential treatment). Potential participants were contacted by direct mail and an initial telephone call inviting them to participate in a follow-up interview. Of the 114 eligible families, a total of 19 families (17%) were recruited to the follow-up study; 64 families (56%) were lost to follow-up (e.g., unable to contact via phone, recruitment postcard returned as undeliverable) and 32 families (28%) declined to participate. All interviews took place at the family home and were conducted by the first author. Although parent consent was given, three youth declined to participate in the follow-up interview. During the consent process, two youth showed signs of active psychosis and were deemed unable to provide consent due to their mental state at the time

of the interview. All study procedures were approved by Columbia University's Institutional

Review Board. Youth received a $20 gift card for participating in the interviews.

Fourteen adolescents participated in the follow-up interviews. Table 4.1 provides key

demographics, legal history, and selected risk factors for the youth participating in the qualitative

study. To protect the identity of participants, I assigned each youth a pseudonym rather than

using their real name. Participants ranged in age from 14 – 20 years old, with most between 16 to

17 years old (n=10). On average, 1.5 years had lapsed between the initial collection of the PSQ

and the follow-up interviews. The sample was comprised of nine boys and five girls. In terms of

race and ethnicity, 10 youth identified as Black, with two also identifying as Hispanic, and four

youth identified as White, with three also identifying as Hispanic. During the original SPPS

surveys, caregivers reported on the financial situation of the household. Six youth were in a

household were the parent reported that they were struggling financially. Most participants

(n=10) had no arrests priors to the arrest that resulted in being adjudicated to probation. Youth

entered probation on a range of charges, including adjudication due to property crimes (n = 5),

violent crimes such as assault (n = 4), weapons possession (n = 2); drug possession (n = 1),

sexual misconduct (n = 1), and status crime (n = 1). While only one participant was on probation

due to a drug-related charge, marijuana use was indicated as present for six of the 14 youth.

Reflective of the general probation population, records indicated that six participants had a

mental health diagnosis, including mood disorders, PTSD, ADHD, autism, and oppositional-

defiant disorder. Records further indicate that half of the participants (n = 7) were classified as

requiring special education or having an Individualized Education Program (IEP) in place.

Table 4.1.

Selected Demographics, Legal History, and Risk Factors for Participants

| | Years since | | | | Financial | Legal History | | Youth Risk Factors | | |
Pseudonym	PSQ	Age	Gender	Ethnicity	Situation [a]	Crime	Priors	MH [b]	Drug Use	IEP [c]
01: André	1.2	17	M	B	Breaking even	Drug	2	X	X	X
02: Brooke	1.4	16	F	B	Breaking even	Arson	0			
03: Crystal	.9	16	F	B, H.	Barely making it	Assault	2		X	X
04: David	1.6	16	M	H	Breaking even	Weapons	2			
05: Erica	1.9	15	F	B	--	Status	--		X	X
06: Felipe	1.9	17	M	H	Barely making it	Theft	0		X	
07: Gabe	1.3	16	M	H	Barely making it	Theft	1	X		X
08: Henry	1.5	16	M	W	Barely making it	Theft	2	X		X
09: Isaac	1.8	17	M	B	Can't make ends meet	Theft	0		X	
10: Julie	1.5	16	F	B	--	Robbery	0			
11: Kevin	1.3	17	M	B	Extra money	Assault	1	X	X	
12: Luke	1.3	14	M	B	Breaking even	Weapons	1			
13: Mia	1.7	19	F	B, H	Barely making it	Robbery	4	X		X
14: Nate	2.5	20	M	B	Extra money	Sexual Misconduct	0	X	X	X
TOTAL	M = 1.5		F = 5	Black=10	Extra money = 2	Property = 5	No = 6	No = 8	No = 8	No = 7
N = 14	SD = 0.4		M = 9	White=1	Sufficient = 4	Violent = 4	Yes = 7	Yes = 6	Yes = 6	Yes = 7
				Hispanic=5	Barely adequate = 5	Weapons = 2				
					Inadequate = 1	Drugs = 1				
						Sex = 1				
					Unknown = 2	Status = 1				

[a] Reported in parent survey; [b] Mental health diagnosis present; [c] Individualized Education Plan present

Data Collection Methods

The interviews consisted of semi-structured open-ended questions lasting approximately one hour (see Appendix 4.1 for initial interview guide). The initial interview guide was set up to elicit information about the participant's process in pursuing the possible selves reported to the study team during their earlier SPPS interviews. Specifically, the interview sought to learn about "things that have helped [the participant] make progress or gotten in the way" and included several prompts and potential probes. The guide was designed to allow for the youth to drive the interview, including which possible selves they talk about in more depth. The interview was specifically designed with the possibility that youth may not bring up the probation experience or other important influences of interest during the main portion of the interview. Thus, a further set of prompts were included to explore these areas. I conducted all interviews, which were recorded using a digital recorder. Audio files were sent to a transcription service to convert the recordings to text for analysis and coding. In addition to the interview data, I also reviewed information gathered as part of the original SPPS study, including survey data, administrative case notes, and probation investigation reports (INR).

Data Analysis

Data analysis used three stages of coding, Stage 1: initial/open coding, Stage 2: focused and axial coding, and Stage 3: selective, advanced and theoretical coding (Birks & Mills, 2011; Charmaz, 2006; Corbin & Strauss, 2008), using NVivo 11 software to aid in the process. The analysis process began following the first interview and proceeded in an iterative process of alternating data collection with coding. The initial interview guide was adapted over time based on emerging codes and theoretical sampling. Memos were created following interviews and during analysis to record and develop thoughts related to observations and interactions,

methodological choices, analysis, and theoretical ideas. Open coding was used as the first step in analysis, breaking apart the data to identify important words or phrases in the data and delineate provisional codes and categories. The second step (focused/axial coding) used constant comparison to build on open coding to accomplish two goals: (1) differentiating individual categories and their range of properties and dimensions, and (2) linking categories together to build an understanding of how they intersect and relate. Diagramming was used to develop and clarify conceptual frameworks. Through the initial and intermediate phases of coding, we identified the core categories that became the focus of advanced analysis. At this point, we used selective coding and theoretical sampling to ensure theoretical saturation of the core categories. The final stage of coding focused on theoretical integration and generating theory through advanced coding (e.g., the use of storylines and matrices), and applying theoretical codes, drawn from existing theory.

Theoretical sensitivity

While the original approach to grounded theory was jointly developed by Glaser and Strauss (1967), the two authors have diverged in methodology during subsequent publications (Glaser, 1978; Strauss & Corbin, 1998). A key difference between the Straussian and Glaserian approaches to grounded theory is how they approach the role and timing of reading relevant literature. Unlike Glaser's advocacy of a naïve approach, wherein immersion in the relevant literature is delayed until later stages, Strauss advocates that the researcher develop familiarity with relevant literature during the early stages of the research process in order to cultivate theoretical sensitivity and insight (Heath & Cowley, 2004; Strauss & Corbin, 1998).

As my main area of academic interest and study has been theories concerning the relationship between identity and action, possible selves theory in particular, I come into this

study highly sensitized to the constructs associated with this theory. This prior sensitization results in strengths and weaknesses throughout the study process. Because grounded theory involves allowing theoretical categories and relationships to emerge from the data rather than imposing existing categories, I took several steps to reduce the chance that unrecognized assumptions were biasing the analytic process. First, I sought to consciously recognize and acknowledge my own subjectivity through memoing throughout the data collection and analysis process. As the opportunity arose, I conducted the interviews with co-interviewers who had varying degrees of exposure to possible selves theory to ensure that the information gathered through the interview process remained open to emergent explanations of how identity and behavioral action intersect. As suggested by Corbin and Strauss (2008), I also applied a variety of analytic tools, such as "flip-flopping" and examining language, to distance myself from the technical literature or adherence to conventional thinking during the coding process.

Findings

Figure 4.1 presents the conceptual process model derived from interviews with youth detailing how adolescents on probation translate their possible selves into behavioral action. Four phases of action emerged from the data: (1) initial goal development, (2) creation of an identity-driven goal, (3) translation of the goal into planned actions, and (4) sustained pursuit of progress. While commonalities existed, each phase involved a specific set of skills and social supports. A specific set of barriers to progress emerged for each phase, coupled with differing consequences if youth failed to successfully navigate the current phase and transition through the process. Findings related to each phase are presented in the next section.

	1. Goal Development	2. Identity-Driven Goals	3. Planned Action	4. Sustained Progress
REQUIRED SKILLS	• Future-oriented vocabulary	• Integrating goal with self-concept (i.e., creating a possible self)	• Breaking goals into a series of actionable steps	• Prioritizing immediate vs. long-term desires • Adjusting plans to maximize returns • Adapting plans to unanticipated events
NEEDED SOCIAL SUPPORT	• Role models • Future-oriented conversations	• Role models "like me"	• Help developing plans • Connection to potential resources	• Perspective and problem-solving • Encouragement • Accountability • Successful role models "like me"
POTENTIAL BARRIERS	• Insecurity in basic needs (e.g., food, safety)	• Overdevelopment of feared identities	• Maxims replace steps	• Constrained to past selves • Isolated self-reliance & diminished social networks
RESULT OF FAILURE	• No intentional action • Youth require imposed regulation through deterrence and/or high monitoring	• Truncated progress ("not really me")	• Haphazard progress • Inability to replicate process to other areas of desired development	• Ineffective progress • Unable to sustain progress through challenges

Figure 4.2. Conceptual Process Model

1. Developing Goals: Foundations for Future-Oriented Thinking

The first phase of the possible selves process was the presence of future-oriented thinking and goal development. The interviews suggest that the process of envisioning the future and thinking about goals is socially learned and socio-economically enabled. Youth who failed develop goals presented with low intentional self-regulation, relying instead on imposed regulation and control from others to govern their actions.

Youth participants varied in their capacity to envision and describe their future, with some participants describing clear goals in vivid detail while others struggled to articulate even a rudimentary vision for the future. Participants in these groupings also varied in terms of the time horizon they spoke about, with the struggling youth providing relatively short-term goals compared to youth in the future-oriented/high goal development group. Brooke, age 16, was an exemplar of high goal development; providing the following description of a goal she wanted to achieve,

Y: As a little kid, I was like, "I want to be a teacher. I want to be a teacher." But, my mind changed like, "Oh, you know, I want to do this. I want to be that." But now, like for the past couple years, I've been sayin' I wanted to be a lawyer.

KB: *[How did you decide that's what you wanted to do?]*

Y: I just like, I wanted to be a lawyer, and then when I got involved with the courts or whatever, then I was like, "Yeah, I definitely want to like help people like me, or people that get in trouble, [to] stay out of trouble. So, the person that helped me, they made me look at life different and now I want to help somebody else.

KB: *[Do you have any plans for how to become a lawyer?]*

Y: Since I'm gonna be a senior next year, I started going on college tours. I was a cheerleader before and I was lookin' at goin' to Hofstra University because they're big into cheerleadin', but I also wanted to be a lawyer. So, I went to a college tour and I went to Binghamton University, and I really liked that. So,

I'm tryin' to like do stuff, like get my grades up, do SAT crap and stuff, so I could get into that college 'cause that's my main college I want to go to. …I'm doin' SAT prep so I could take uh, SAT tests 'cause some colleges look at SAT scores and PSATs. So, I'm workin' hard to study for that. And, I actually have a test comin' up May 4th, a SAT.

Gabe, also age 16 but at the other end of the spectrum in terms of goal development, reported the following as a goal he wanted to achieve,

Y: Go to school and pass. Pass the grade.

KB: *[Do you have any plans for how you're going to achieve that?]*

Y: Uh, do my work, go to school every day.

KB: *[Anything else?]*

Y: That's it.

KB: *[Do you have any other goals for yourself?] Silence…*

Y: Uh, I really don't know.

Similar to the hierarchy of needs proposed by Maslow (1943), participants living in situations where their basic needs (e.g., food, safety) were not always met also demonstrated the poorest levels of future-orientation. These differences in youth's levels of future-orientation suggest that initial goal development may be predicated on a basic level of stability. However, this postulation is complicated by the overlap of unstable environments with goal-deficient environment as these same participants reported that they did not talk to anyone, including parents and peers, about what they want for their future nor had they witnessed goal-setting behaviors.

Like language development, thinking about one's future and developing goals appears to involve skills and a vocabulary that are acquired through social interactions and observations. A lack of social interactions about the future was a common thread across participants who struggled to describe their future goals. Conversely, participants' ease in speaking about their future corresponded to reporting at least one person with whom they spoke about their hopes for the future. Youth who had future-oriented interactions described their future in richer detail, elaboration, and confidence as compared to the two- to three-word responses of those who lacked such exchanges. Future-oriented conversations primarily took place within the family context (e.g., parents, older siblings, cousins); a couple youth reported these conversations happening with school personnel (e.g., principal, teacher, counselor), however this was rare and only reported by youth who were also engaging in future-oriented conversations with their family. Conversations about goals or goal development were remarkably absent from youth's interactions with their probation officer. Only one youth reported talking about her goals for the future with her probation officer; most youth described these interactions as tightly focused on staying out of trouble and providing basic updates related to mandated probation conditions.

In addition to future-oriented social interactions, the presence of role models emerged as a factor in the development of goals. Most youth described at least one person who served as a role model, providing a source of inspiration for ideas about future possibilities. Role models ranged from public celebrities (e.g., Kid Cudi, Kendrick Lamar, UFC fighters) to close family members (e.g., older siblings, cousins, parents). Role models appeared to be of most use in goal formation when the youth could access information about the role model's life, including as their pathway to success. In addition to positive role models, a few participants reported negative role models, who provided a vivid example of who they did not want to emulate. It is interesting to

note that all negative role models reported by participants took the form of a parent with whom they had a difficult relationship, most frequently an absent or incarcerated father.

While all participants expressed a desire to avoid repeating probation or being incarcerated, youth displaying low-levels of future-orientation and poor goal development required intervention through monitoring and deterrence methods to change delinquent behaviors. Non-goal setting participants described changes in their behavior as linked to regulation imposed by outside structures, including heavy monitoring by their probation officer (e.g., drug-testing) and court-mandated programs with highly structured routines (e.g., residential treatment or periods of detention). Yet once these structures were removed, the participants struggled to regulate behavior themselves and soon began to fall back to delinquent patterns.

2. Identity-Driven Goals: When Goals Become Integrated with Self-Concept

The second phase occurred when youth incorporated the goal into their self-concept, creating an identity-driven goal. The failure to integrate a goal with self-concept appeared to result in truncate progress, wherein youth easily abandoned action as the goal was classified as "not really me." Youth differed in the extent to which they integrate stated goals into their sense of identity and how this impacted their actions. Three patterns were observed across youth as they talked about the future: (1) unintegrated goals, (2) incongruent goals, and (3) integrated goals (possible selves). Unintegrated goals appeared as goals that were couched in qualifying language. For example, Nate attached the qualifier *for a change* when describing goals related to school and avoiding trouble (e.g., finishing school *for a change*, staying out of trouble *for a change*). This suggests that, while able to generate goals, Nate had not fully incorporated the idea of being "someone who finishes school" or is "not in trouble" into his self-concept. In light of this, it is not surprising that Nate reported little progress toward accomplishing his goals.

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Incongruent goals resulted when a goal conflicted with the youth's self-concept. Similar to Nate, André's narrative displayed a disconnect between his stated goal ("trying to finish school") and his sense of self. However, André's goal and relevant identity existed in clear opposition with each other. When talking about his expectations of himself regarding school, he stated "I don't think I could ever finish, I would never focus. If I sit there, I would be another statistic: People who don't finish school." André had embraced a future version of himself as belonging to the "statistic" of someone who is unable to graduate. Instead of continuing to pursue his initial goal of graduating high school, André decided to get his GED which he frames as in line with his self-concept: "I know if (I go for my GED), all I gotta do is focus on one thing and that's to pass the test—that's my thing." Like Nate, André failed to make progress toward his goal to finish school; however, unlike Nate, the misalignment between André's goal and his self-concept resulted in revising the goal to fit his identity-beliefs.

Mia's narrative provides a stark contrast, revealing the implicit motivation that may arise when goals and identity align and integrate. In the 18 months between the initial survey and the follow up interview, Mia accomplished a high level of progress toward her goals, particularly in the domain of school, successfully graduating high school and starting college. During this interval; she also became a mother. This new role had a profound impact on her identity beliefs, which shifted to focus on being a good mother who is "succeeding enough to make sure my daughter has a better future than I did." In turn, Mia drew on this identity to propel her to new behaviors as failure (e.g., getting in trouble and being incarcerate, not having a good job) was not considered a viable option. We observed that this synergy of goals integrating with identity resulted in higher progress in the identity-driven goals across several participants. Integrated goals appeared most often in the area of staying out of trouble, with youth successfully avoiding

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repeating problem behaviors as they reject the delinquent identity (e.g., "I made a dumb decision [but] I'm not a troubled child," *Brooke on staying out of trouble*).

Although these typologies of integrating goals into the self-concept emerged across and within participants, the extent to which youth's self-concept expanded to take on new identities or adjust current identities in response to a goal was unclear. Few youth described developing new identities within a process. Rather, they mentioned before and after changes to their mindset that they attributed to the black box of "growing up" or "maturing." One narrative (Crystal) suggested that changes to self-concepts developed through experiencing the process of trying on new behaviors paired with role models and/or social messages supporting the new or adjusted identity as congruent to the existing self-concepts and identities.

Like the initial goal development phase, the presence of role models appeared during the process of integrating goals into the self-concept. However, a new category emerged of role model identified as *like me*. Most of the *like me* role models were people with whom the youth had a personal relationship. The *like me* role models consisted of individuals who had achieved success in a relevant area and whom the youth perceived as providing evidence that they too might be able to achieve similar success (*if they can do it, I can do it too*). This new category of role models typically appeared in conjunction with the category of integrated goals, suggesting that they may support the transition from goal to identity-driven goal.

While few participants reported discussing their goals with probation officers, several described conversations where their probation officer invoked a feared possible identity (e.g., being a criminal, being friendless, being a statistic) during efforts to motivate the youth to action. Adolescents responded to this tactic in one of two ways. Some youth responded to the specter of

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the feared self with fierce rejection of this identity that fueled goal pursuit based on a determination to prove the probation officer wrong. In other youth, this tactic appeared to provoke overdevelopment of goals and identities that were based on what not to do and who youth should not be, paired with underdeveloped goals and identities concerning what to pursue. For example, when asked about goals for the future, André, replied, "Not to be in trouble. To live life. That's it." In response to a probe asking him to explain the goal 'to live life", André provided the maxim, "You only got one life - you gotta live it." He was unable to further describe what achieving this goal might look like nor any tangible steps needed to act. In contrast, when I asked André to explain how to "not be in trouble," he replied in elaborate detail as well as laying out several concrete strategies to achieve this. The net effect of this imbalance was a paradoxical effect wherein frequent reminders of what not to do primed youth to focus on undesirable actions and reactions. While these fully develop versions of who not to be seemed to bolster desistence from negative behaviors, youth displaying these imbalances reported little momentum toward positive behaviors.

The exception to this pattern occurred when the probation officer also offered a positive possible identity as an alternative. For example, Isaac explained how his PO called upon their shared racial identity as Black men to motivate Isaac to change. While discussing the need to stay out of trouble, Isaac described how his PO engaged the undesirable identity of the "negative black person" who is "incarcerated, wasting time, and not doing what [he should] do to succeed in life." This identity is positioned as not simply a personal failure, but as "basically showing the world that us black people would never be positive." The "negative black person" identity is juxtaposed with the PO bestowing Isaac with the alternative identity of "having a smart mind, being self-driven, and being able to take action on your own;" the envisioned consequence of

embracing this identity is "you'll be able to get far." An instrumental factor in Isaac's rejection of the "negative black person" identity and adoption of the "you'll get far" identity was the POs own example of embodying this alternative.

> That's how he was; he was self-driven, and …able to take action on his own and not when somebody told him to. That's how he furthered his life and got where he is now… And, I kind of looked at him like, 'Well, you know, you are right. If someone else can do it, that they look up to, he can have a bad side and won't even show it, and if they can do it, why can't we?'

3. Planning Action: Connecting Intention to Behavior

The third phase consisted of translating goals into planned action. The primary skill in this phase involved learning how to break down the desired end into a series of actionable goals. Four groups of youth emerged during this phase: (1) youth who developed a clear action plan, (2) youth who substituted vague maxims for plans; (3) youth who were unable to describe any plans steps to achieving their goals, and (4) youth who did not believe that they needed a plan. A number of participants struggled to produce actionable strategies, reporting a series of vague sub-goals rather than clear actions. Despite having an identity-driven goal, youth who failed to create a clear plan of action made haphazard progress toward their goals, expressing frustration with the process or doubting their ability succeed.

Social supports to help youth to develop plans and connect them to necessary resources became critically important at this juncture. Youth described two types of supports as providing these things—individuals who acted as mentors, usually an older family-member, and programs they participated in through school or through referral by their probation officer. When asked for

specific steps or actions they were taking toward their goals, participants who failed to report a least one support for planning also struggled to generate any clear plans for action.

One phenomenon that appeared to interfere with planning was the presence of maxims. Maxims included slogan-like statements or proverbial sayings such as: "You only got one life – you gotta live it"; "Every day is the way you make it"; "I just gotta keep going"; "I just gotta be strong"; "I just gotta do it." When speaking about the process of pursuing goals, several youth substituted such maxims for reporting actual steps. Analyses indicate that maxims provide a way for youth to suggest an action plan. Yet when asked to further elaborate, youth were often unable to identify specific actions that they would take. The following excerpt, provides an example of this type of exchange:

> KB: *Do you know what you need to do in order to do those things?*
>
> Y: Uh, yeah, step up my game.
>
> KB: *What do you mean by that?*
>
> Y: Do what I got to do in life so I could finish.
>
> KB. *Do you have an idea of what that looks like?*
>
> Y: No, just if I do everything that I got to do, then it be like easy for me.

Additionally, maxims appear to inhabit a space where they are easily retrievable, but not necessarily connected to the self. For example, Nate, age 20, listed out the following steps for finishing school:

> One, keep my attendance up. Two, stay out of trouble for a change (and) stop fighting with everybody. Then, three, stay takin' my psychiatric medication at all times; and four: keep tryin' your best and then you could succeed in life.

In the fourth step, Nate's syntax switched from first person (e.g., *my* attendance) to second person point of view (e.g., *your* best, *you* could succeed), suggesting externalized instructions or guidelines. Examples of externalized imperatives from other youth included phrases such as "you only got one life, you gotta live it" and "you just keep accomplishing everything you want to do."

Data suggests that probation officers as one potential source of these maxims. For example, Mia detailed having a strong relationship with her PO, whom she would proactively seek out for advice. However, when asked whether they discussed steps or strategies to achieve Mia's goals, she replied, "No, he wouldn't tell me no steps. He said it was up to me. It was up to me to succeed. It's about what I want. If I want to do, I got to succeed." Interestingly, while Mia had developed identity-driven goals, she repudiated the need to plan out steps. Instead of planning, she was 'just doing it,' espousing an almost fatalistic belief in the power of her dream with sheer determination or grit leaving no possibility of failure.

Youth who relied on maxims rather than planned action also could not articulate the change process. Rather these participants imbued change with a magical quality, describing the process as something that suddenly happened to them — "I just grew up" or "matured" — rather than being an active participant in the process. These statements are problematic in that they provide little guidance in how to replicate the change process in other areas. Change is positioned as happenstance rather than intentional or controllable. In contrast, the few youth in the planned action category showed a deeper level of insight into their internal processes, such as self-talk, as well as recognition of potential barriers to their progress and resources that they may need to engage to succeed.

4. Pursuing Sustained Action

The final phase that emerged from the data involved sustained progress toward achieving articulated goals. Within the sample, four participants (Brooke, Crystal, David, and Mia) were identified with sustained action in pursuing desired future goals; eight participants (André, Brooke, Crystal, David, Felipe, Isaac, Luke, and Mia) were identified as having sustained action in avoiding unwanted behaviors. The skills required during this phase related to gaining capacity for negotiating between competing priorities and making necessary adjustments to plans for pursuing an outcome. Engagement of several types of social supports, ranging from advice to accountability, were necessary to sustain action toward desired goals over time. In the absence of these factors, youth reported difficulties in continuing progress when faced with challenges such as changing circumstances or unanticipated problems.

Youth described learning to prioritize long-term goals over immediate gratification as a key skill in maintaining progress. "Too much fun" was cited as something that youth recognized as impeding goal progress. During this phase youth gained awareness of necessary trade-offs between in-the-moment desires, such as spending time with friends, and taking action to achieve goals (intentional self-regulation). Learning to delay gratification was portrayed as a process of comparing anticipated rewards and consequences related to each path. Two additional categories of skills coded for this phase were (1) using feedback from mentors to adjust strategies based on their effectiveness, and (2) adapting plans in light of unanticipated events. For example, Crystal described the process of learning to control her anger when frustrated as fraught with struggle as she tried to apply new ways of thinking within the context of varying situations. During this process, Crystal learned that, if she wanted to succeed, she needed to broaden her repertoire of alternative strategies or "B plans" for coping.

We found the following categories of supports related to sustained action: (1) advice, (2) successful *like me* role models, (3) encouragement, and (4) accountability. Advice was connected to developing problem-solving skills in connection to experiences while implementing plans. In addition, youth cited talking with more experienced mentors as crucial to learning to think about the consequences of their decisions in term of prioritizing competing desires. Like Phase 1 and Phase 2, role models showed up as important to this phase as well, although with an additional modification. The role models linked to sustained action were *like me* role models that were successful in a relatable area of achievement and appear to bolster youth's self-efficacy beliefs.

To sustain action, youth reported needing both encouragement and accountability. Youth described encouragement as having someone who actively communicated belief in their ability to succeed. Beneficial encouragement was usually paired with accountability, whereby the support-giver challenged the participant through holding them to an attainable standard while also reminding youth of their capacity to succeed. For example, Brooke's goal was to attend college and become a lawyer; while on probation, she developed a strong mentoring relationship with her high school principal, describing her as a "second mom, at school though." The principal supported Brooke throughout her process of transforming from a failing student into a college-bound student, combining encouragement with accountability. In situations where Brooke questioned her ability and feared failing, the principal was "there like 'You know you gonna do it. I have faith in you.'" Brooke stated that having this type of support motivated her to "want to work hard for the people that's gonna congratulate me when I do good." The principal checked in with Brooke often regarding her progress; when Brooke was veering back toward old school behaviors, the principal leveraged their relationship, refusing to talk to Brooke until she

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had raised her grades back up. Accountability was couched in language suggesting that this mechanism was not simply a checklist of required standards; rather, beneficial accountability communicated invested care and interest in the youth's wellbeing and continued success. Important support-givers were described with similar characteristics across participants; they were someone whom the youth respected and admired, they were available to the youth during times of crisis, and youth frequently referred them to as being like a surrogate parent or older sibling.

Two barriers to action were coded as relevant to this phase—constraining youth to prior negative identities and extreme self-reliance coupled with diminished peer networks. A couple of youth were hindered by a perception that people who were important to their lives, usually a parent, were unable to see or acknowledge ways in which the youth was changing. As a result, youth reported feeling stuck with or bound to older identities that they were in the process of shedding. Data suggests that unless other important social relationships are present to mitigate this effect, youth may revert to the original identity, returning to problem behaviors and patterns. This effect was mainly observe in youth who return home following time in residential care or detention.

Some youth espoused an extreme form of self-reliance that hindered them from seeking help. Consequently, they became cut off from necessary resources for problem-solving and support during the pursuit of goals. Interviews suggested that this phenomenon may arise from youth translating messages that overvalue personal responsibility and self-sufficiency into a belief that they should rely only upon themselves at all times. Youth with extreme self-reliance also reported problematic family bonds, particularly with parents, and limited peer networks.

André and Mia provided exemplars of the self-reliant isolation approach.   In one of the more provocative statements, André equated seeking help on his goals with "cheating on a test. You get the answers from somebody else, but you still don't know it—it's like you did it for nothing…I should figure it out myself. Ain't nobody gonna do it for me; I do it myself." André's insistence on extreme self-reliance distanced him from the resources that he needed to develop a clear and sustainable path to his desired career goal to become a pilot.

Mia also adopted this extreme level of self-reliance insisting that she needs "just help [her]self and push [her]self harder." However, Mia differed from André is two important ways. First, as mentioned earlier, Mia made substantial progress toward her desired goals, graduating high school and beginning college. Second, although Mia denied her current need for help, earlier in the conversation she described actively seeking advice from her PO and how she found that support and encouragement essential to learning how to pursue her goals. Paradoxically, Mia's description of these conversations with her PO provided insight on her move to extreme self-reliance. Mia stated that during these conversations her PO confronted her about her peer group, questioning their loyalty and reliability, while concurrently stressing that Mia was the only one who could make her goals a reality. As she began to recognize the negative influence and inconstancy of her friends, Mia "basically dropped everybody" and stopped trusting people. For Mia, the mindset of relying solely on herself was linked to prior experiences of abandonment and loss where "at the end of the day, that person [I depend on] could be gone today or gone tomorrow…I'm not gonna keep on depending on other people when they're not gonna be there all my life to help."

Minimizing contact with negative peer networks was a common theme across interviews. Multiple youth described conversations where their probation officer questioned the loyalties of

trouble-making friends. Most youth also reported stopping friendships with delinquent peers, however, only a couple youth reported that they were developing new healthy peer relationships. More often the process of separating from delinquent peer networks was accompanied by statements indicating a sense of social isolation, such as "I go to school, I come home, that's it."

Discussion

This study explored the experiences of youth who had been court-ordered to probation as they conceptualized and pursued desired changes in their lives, identifying four phases of action: (1) initial goal development, (2) creation of an identity-driven goal, (3) translation of the goal into planned actions, and (4) sustained pursuit of progress. While these phases build upon each other to describe a scaffolding process connecting goal setting to self-concept to intentional action, the phases appear fluid and transactional in nature rather than exclusionary. Further, as youth carry multiple goals and identities, we observed variation in the phase of different goals both within the adolescent as well as between adolescents. However, once present, the skills attached to each phase tended to be transferred between goal areas.

A wide array of theories exist across several disciplines to explain how thoughts about the future intersect with the intentional control of one's behavior. The model that emerged from our data suggests that for youth on probation intentional behavioral changes arose through complex transactional process between an adolescent's social environment, internalized self-theories and self-perceptions, and experiences over time. This model may be best understood in relation to two existing theoretical models: social cognitive theory (Bandura, 1991) and identity-based motivation theory (Oyserman, 2015).

According to social cognitive theory (SCT), human behavior is driven by dynamic interactions between an individual (cognitive, affective and biological factors), behavioral

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feedback, and the environmental context. Three propositions related SCT's theorized

anticipatory control mechanism are particularly relevant the current study (Bandura, 1989, 1991).

First, *social modeling*, which posits that children learn how to act through observing the

behaviors modelled by others within the social environment and developing a set of standards or

expectations related to behavioral patterns. Second, the inclusion of socio-structural factors that

can function to facilitate or impede behavioral action. Third, that perceived self-efficacy is

required to enable motivation for behavioral change. Our findings on the initial development of

goals and future-oriented thinking as socially-developed and potentially socio-economically

enabled align with SCT principles.

Further, we observed that when adolescents observed successful role models whom they

identified as being "like them," they endorsed statements of personal self-efficacy (e.g., if they

can succeed, I can succeed); where this pattern existed, youth also demonstrated increased effort

and perseverance as they pursued goals. The second phase of our model, *identity-driven goals*,

diverges from SCT in that primacy is given to the integration of goals into the self-concept rather

than to the component of perceived self-efficacy. While perceived self-efficacy is central to

SCT, our analyses positioned self-efficacy as a beneficial by-product arising from confidence in

a potential goal as belonging to the range of identities included in one's self-concept. The

emergence of identity-driven goals (Phase 2) and planned action (Phase 3) are better aligned with

the framework of identity-based motivation theory (IBM).

IBM is an extension of social-cognitive theory that joins SCT with theories on the role

and function of identity-beliefs and self-concept. In the framework of IBM, the concept of

"standards" that are developed through social modeling under SCT, are understood to be part of

the range of identities carried within one's self-concept (e.g., ideal identities). Motivation to act

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remains driven by awareness of discrepancies, although now occurring between the ideal identity (who I want to be) and the current identity (who I am). IBM further postulates that individuals prefer actions that align with identities, suggesting that when a behavior is interpreted as identity congruent, difficulties engaging in the behavior are interpreted as connoting that the behavior is important, rather than impossible, and that effort is meaningful rather than indicating a problem; a potential corollary process to Bandura's conceptualization of self-efficacy. The substitution of *desired identity* for *standards* provides insight to the current study's phase 2 findings on the need to integrate goals with identity statements. Goals provide behavioral guidelines for knowing "what" you should do; yet identity-driven goals unite behavioral guidelines with self-efficacy, knowing "who you are" and acting in line with this knowledge.

IBM also provides insight to the barrier of overdeveloped unwanted identities through invoking feared negative identities. Rather than having constant access to all identities, research indicates the self-concept interacts with memory such that only identities that are relevant to the immediate social and environmental context are triggered to form a working self-concept that influences action and motivation (Elmore & Oyserman, 2012; Markus & Wurf, 1987; Oyserman, 2015; Schmader, Croft, & Whitehead, 2014). This suggests that actively triggering identities through interactions, such as invoking feared identities, may promote how easily that identity is accessed under similar situations. Prior research indicates that triggering an identity (e.g., college-bound) matters to outcomes, not simply because of traits that may be associated with the identity (e.g. smart, hard-working). Rather, accessing the identity triggers a readiness to take action upon a series of related thoughts and behaviors.

The cue of identities and linked behaviors is of high relevance to the final two phases observed in our data—*planned action* and *sustained progress*. During these phases youth move

from thinking about what is desired for the future to actively pursuing behaviors to achieve the

desired end state. This process requires a skill set that involves being able to translate the goal

into a series of required procedures and actions relevant to daily life. Our data found that, like

the goal development phase, the skills of creating an action plan are also learned rather than

automatic. Our results further indicated that few of the youth on probation had acquired this skill

and even fewer progressed into the process of needing to sustain action.

These deficits, in combination with the process identified by this study suggests specific

lessons for those responsible for shepherding adolescents to adulthood, particularly those in

vulnerable and high-risk contexts.

Lesson #1: *Actively engage youth in conversations about their future.* In order to

develop goals, adolescents need to practice talking and thinking about what

they want their future to include. These conversations may be aided by the

use of tools, such as the Possible Selves Questionnaire, and by exposing

youth to potential role models.

Lesson #2: *Focus on linking goals to identities.* In order to help youth build identity-

driven goals, explore the connections that exist between *what youth want*

(goals) and *who youth want to be* (identity). If an adolescent's goal does not

fit with how they view themselves, the goal is unlikely to be achieved

Lesson #3: *Conversations about goals should focus on both what youth want and what*

they do not want for the future. While this is necessary for all youth, the

need to balance focus on both desired and undesired goals is of particular

concern for at-risk youth. Additionally, practitioners need to cultivate an

awareness of the language they use when trying to build up motivation;

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invoking unwanted future identities that detail the consequence of

problematic choices need to be paired with also providing an alternative

desired identity for the youth to pursue.

Lesson #4: *Goals need action plans to succeed*. Like learning how to read a map,

planning is a skill that youth need help to develop. Maxims may be easy to

remember (e.g., just do it). However, youth may just as easily substitute

maxims for strategies, so make certain youth can back up these phrases with

specific steps.

In the context of juvenile justice policy and practice, application of these lessons includes

the following recommendations:

- Train probation officers to incorporate regular future oriented discussions with

  youths as part of the standard routine in working with probationers. Note,

  because there is a specific skill set involved in goal development and planning,

  probation officers may require training to learn these skills before they are able to

  help youth to acquire them.

- Probation offices and agencies should cultivate resources in the community that

  highlight potential role models with whom probationers may identify.

- Several *possible selves* interventions have been developed for the general

  adolescent population, typically for use in academic settings. Juvenile justice

  programming should consider how this programming may be adapted to the

  probation setting.

It is important to note that results of this study the study is limited to the perspectives of youth who were eligible and willing to complete the follow-up interview. Thus, participants represent a specific subset of youth who were able to successfully navigate probation and remain in-community as well as those whose family situation was stable enough for the study team to contact them after more than a year since the last SPPS survey. Further investigations are needed of how these processes apply for youth in less stable situations or whom are becoming more enmeshed with in the justice system. In addition, participants ranged in age from 14 to 20 years old, meaning that most were in mid to late adolescence. Due to the developmental changes between early and late adolescence; further research should be conducted to understand how the process model may need to be adapted for younger youth. We further recommend continued research into the integration of goals and identities as this remains unclear. In light of the strong motivational capital that this integration brought, further research needs to be conducted to unravel mechanisms that trigger this process and guide development of interventions.

CHAPTER 5

Conclusions: The Significance of Possible Selves

to Social Work Practice and Juvenile Justice Policy

Scholars across a wide range of disciplines have studied the concepts of *future-orientation*, the phenomenon of thinking about the future and acting in anticipation of future states, and of *self-regulation*, the capacity for and process by which individuals control their behaviors, emotions, and/or reactions. Consequently, a broad array of literatures and models exist on these phenomena seeking to explain and understand why and when humans exert purposeful control over themselves. This area is of great relevance to helping professions, particularly those working with adolescents to influence or change behaviors. The development and integration of future-orientation with self-regulation during adolescence is an important component of the transition from child to adult (Brandtstädter, 1998). The failure to develop appropriate self-regulation places youth at increased risk for multiple problem behaviors (Blum & Nelson-Mmari, 2004; Rhodes et al., 2013), including juvenile delinquency (Courey & Pare, 2013). The construct of *possible selves* provides a proposed mechanism through which future-orientation combines with identity to promote the development of self-regulation (Hoyle & Sherrill, 2006; Markus & Nurius, 1986; Oyserman, 2007; Stein, Roeser, & Markus, 1998). This dissertation explored the role of possible selves in promoting successful outcomes for youth who are court-ordered to probation through a series of three studies.

Using survey and administrative data from the Social Processes in Probation Study (SPPS), Chapter 2 explored a hypothesized model of how possible selves characteristics affect adolescent probation outcomes (e.g., probation compliance, recidivism, school engagement). This study found that adolescent possible selves were significantly related to probation

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outcomes, although not always in the manner expected nor as reported for other adolescent populations. Higher counts of possible selves and their characteristics were consistently associated with poorer outcomes for youth on probation. However, further analyses uncovered a complex network of interactions between the characteristics of possible selves, wherein certain combinations of these characteristics transmitted a mixture of beneficial and risky effects for certain outcomes and under certain conditions.

Building upon the knowledge gained in Chapter 2, Chapter 3 examined the role of possible selves on probation outcomes within the context of parental support and probation tactics. Three potential pathways were tested: (A) direct effects, independent of external factors; (B) meditated effects on the relationship of external factors on outcomes; and (C) moderated effects on the relationship of external factors on outcomes. Findings of this study did not find support of a mediated or moderated pathway for any of the probation outcomes. However, the data did suggest an interaction trend between probation tactics and possible selves for the outcome of rearrests, suggesting that supportive probation tactics may be of importance to lowering risk of rearrest for youth with limited possible selves. For the outcomes of rearrest and of school problems, possible selves had a significant direct effect, even after controlling for perceived parental support and probation tactics.

Chapter 4 used a grounded theory approach to examine the process through which possible selves translated into behavioral action for adolescents on probation. The data suggest a process involving four phases of action: *initial goal development*, *creation of identity-driven goals, planned action*, and *sustained progress*. During Phase 1, initial goal development occurs as future-oriented thinking emerges following social interactions about the future. During Phase 2, goals integrate with identities to create motivational synergy, helping youth move toward

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taking action. During Phase 3, goals translate into planned actions through a specific skill set

that involves understanding the pathway and steps needed to achieve the goal. During Phase 4,

youth engage in sustained pursuit of progress by accessing resources for support, including help

to negotiate short-term versus long-term desires, encouragement that bolstered efficacy beliefs,

and accountability that communicated that the youth and their goal mattered. Throughout the

process, the presence of role models with whom youth identify were important to the

development of goals, plans, and perseverance.

Implications for Social Work Practice

Overall, these studies support the need to consider possible selves and goal-development

processes when working with adolescents to change behavior, particularly adolescents in

vulnerable and high-risk contexts, such as juvenile justice settings. More specifically, findings

suggest that practitioners actively engage with youth about their future with an aim to develop

two to three clear goals related to who youth want to become.   These interactions should focus

on conversations and activities that help youth to envision richly detailed identity-driven goals

that connect what youth want to accomplish (goals) with who youth want to become (identity).

To be successful, practitioners need to also incorporate skill-building on how to develop concrete

and actionable steps related to pursuing these goals. For example, probation officers should

consider setting aside a portion of their regular meetings with youth to develop and plan for

identity-driven goals the youth wants to achieve. This simple addition may serve to increase

youth motivation to implement positive changes and support development of healthy self-

regulation. Practitioners would likely benefit from the creation of scaffolded brief intervention

tools and/or activities to support such interactions.

Implications for Juvenile Justice Policy

The findings of this study contribute to a broader body of literature on juvenile justice that is concerned with the consequences of juvenile justice systems, interventions, and policies on adolescent development and seeks to improve the long-term outcomes of justice-involved youth. As such, the implications of our findings must be considered in light of prevailing perspectives and theories that inform current juvenile justice policy.

The nature of juvenile delinquency and whether the justice system should respond to delinquent youth through rehabilitative versus punitive approaches has been an ongoing debate since the establishment of the juvenile justice court in 1899 (Mack, 1909). Consequently, juvenile justice policy has shifted over time in response to whichever viewpoint is favored. Currently, juvenile justice practices favor the Risk/Needs/Responsivity (RNR) paradigm.

RNR (Bonta & Andrews, 2007) is a rehabilitative model that proposes that recidivism is reduced by placing the offender in an appropriately matched intervention based on correctly evaluating: (1) risk of recidivism, (2) underlying criminogenic needs, and (3) anticipated responsiveness to a particular treatment approach. Based on the use of risk assessments, RNR divides offenders into three categories based on risk level (*high, moderate, low*). These risk levels are then used to determine the intensity of the response, with the highest intensity interventions reserved for those who fall into the high-risk category; the type of intervention program is determined based on the individual's underlying criminogenic needs (i.e., pro-criminal attitudes, antisocial personality, pro-criminal networks, history of antisocial behaviors, substance abuse, family circumstances, school/work circumstances, and recreational activities).

Findings of our study suggest that youth on probation would benefit from interventions designed to foster desired possible selves. However, the application of our findings within the

RNR paradigm is problematic, namely because RNR focuses solely on criminogenic needs as opposed to developmental needs. This lack of attention to developmental needs may be due to the development of the RNR paradigm in the context of adult corrections. Further, as our results indicate that high attention to undesired identities increased adolescent risk of recidivism, a fundamental disconnect may exist between the RNR model and intervening with justice-involved youth to reduce recidivism.

Implication for Future Research Directions

In addition to practice and policy implications, this research suggests several areas of continued investigation into possible selves. Research on possible selves is hindered by the need to develop better operational definitions and tools for measuring the qualities of possible selves (Hoyle & Sherrill, 2006). As part of this dissertation, we tested new coding approaches to measure dimensions of the possible selves construct, such as specificity, the self-regulatory quality of strategies, and confidence. However, further development of measures and psychometric testing is essential to advancing this body of research.

Much of the existing research on possible selves has focused on understanding how isolated characteristics of possible selves relate to outcomes. In light of the complex patterns of interaction between possible selves characteristics uncovered by the current studies, further research needs to be conducted to understand whether possible selves characteristics join together in distinct clusters or typologies and, if so, how these clusters relate to probation outcomes. In addition, our qualitative findings suggest the need for further research that continues unpacking the mechanisms by which goals are integrated with identities to become active regulatory possible selves.

We suggest that the malleability of possible selves positions this mechanism as a potential point of intervention for adolescents on probation. However, there is paucity of research on how interaction with the justice system may change adolescent possible selves. For example, cross-sectional research has established that the possible selves of delinquent youth differ significantly from their non-delinquent peers, these studies are primarily cross-sectional. The current study found possible selves predicted continued delinquency for youth on probation. However, it is not clear whether youth enter the juvenile justice system with existing deficits in their possible selves which lead youth to pursue delinquency as they seek to define themselves; or, alternatively, if possible selves are negatively impacted by justice system involvement, with delinquent youth readjusting their imagined future in light of involvement with the criminal justice system. These two paths carry separate implications about when and how to potentially intervene to prevent further delinquency. Consequentially, we recommend future research using prospective longitudinal designs that include variables for examining the interaction between possible selves and experiences with the justice system in hopes of detangling the direction of causality.

This research included an examination of whether possible selves mediates and/or moderates the relationship between external factors (e.g., probation tactics, parental support) on probation outcomes. Future research should extend this analysis in three ways: (1) inclusion of more nuanced measures of probation tactics, (2) exploration of how various parenting behaviors influence both adolescent possible selves and probation outcomes, and (3) consideration of other important contextual factors like peer relationships and opportunity structures. Such studies would aid in the development of probation-based interventions and policies that use possible selves to increase resilience and positive outcomes. Identifying factors that influence possible

selves during probation will provide insight as to who is best positioned to leverage possible selves and goal-setting behaviors to improve outcomes for adolescents placed on probation. Finally, and perhaps most important, the findings of this dissertation support moving forward to develop and test interventions using possible selves and goal-setting in an effort to improve adolescent probation outcomes.

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Appendices

Appendix 1.1. Social Processes in Probation Study Data Collection

Survey	Domains collected	Timing
1. Baseline	- Iowa Gambling Task - Attachment scale - Lifestyle and delinquency opportunities scale - Academic self-efficacy - Religious experiences scale - Therapeutic reactance - **1st Possible Selves Questionnaire (PSQ)*a**	Following consent/assent
2. 1-month Follow-up	- Perceived benefits of probation - Attitudes toward probation - Importance of probation beliefs - Perceived peer support of probation - Perceived parent support of probation - Go/No-go test - Wisconsin Card Sort test - Perceptions of fairness - Working alliance inventory - Perceptions of control - Deterrence expectations - **Parental involvement and monitoring***	One month after Baseline survey
3. Probation Tactics	- **Probation Practices Assessment*** - Psychological reactance	Administered 3 times during the probation appointment following the 1-month Follow-up survey
4. 2-month Follow-up	- Perceived benefits of probation - Attitudes toward probation - Importance of probation beliefs - Perceived peer support of probation - Perceived parent support of probation - Go/No-go test - Wisconsin Card Sort test - Perceptions of fairness - Working alliance inventory - Perceptions of control - Deterrence expectations - **Parental involvement and monitoring*** - **2nd Possible Selves Questionnaire* a**	Two months following the Baseline survey
5. Administrative Data	- **Adolescent's date of birth** - **Adolescent's gender** - **Adolescent's race** - **I&R report*** - Date of incident leading to Probation - Date of arrest leading to Probation - **Final charge leading to Probation*** - **Date of placement on Probation*** - **Date of rearrest*** - **Rearrest charge*** - **Rearrest type (Felony/Misdemeanor)*** - Supervision plans - **Compliance reports*** - Chronological entries	Requested at Baseline and 12-months following the close of recruitment (September 2014)

* Measure used in study; a administration of the PSQ varied throughout the course of the study

Who I Want To Be

Each of us has some idea or picture of who we will be or what we will be doing in the future. Looking ahead to next year, what do you expect you will be like or expect to be doing?

2. Next year I expect to be…

P(1) [   ]

P(2) [   ]

P(3) [   ]

P(4) [   ]

3. Are you doing something to be that way?

	Yes	No
P(1)	○	◉
P(2)	○	○
P(3)	○	○
P(4)	○	◉

4. If yes, what are you doing now to be that way next year?

P(1) [   ]

P(2) [   ]

P(3) [   ]

P(4) [   ]

What I Want to Avoid

In addition to expectations and expected goals, we all have images or pictures of what we don't want to be like; what we don't want to do or want to avoid being. Thinking about next year, what are some of the things you are concerned about or want to avoid being like.

5. Next year I want to avoid…

P(5)
P(6)
P(7)
P(8)

6. Are you doing something to avoid this?

	Yes	No
P(5)	○	○
P(6)	○	○
P(7)	○	○
P(8)	○	○

7. If yes, what are you doing now to avoid being that way next year?

P(5)
P(6)
P(7)
P(8)

Appendix 2.2. Possible Selves Coding

Appendix 2.2 details the steps taken in coding possible selves responses. Contents include:

Conceptual and Operational Definitions of Possible Selves Variables

Variable	Range	Definitions			Missing Possible Selves	
		Operational	Conceptual	Theory	Coding	Meaning

Total count (rpsT)	0 – 8	Count of possible selves reported by youth
		➤ sum (ps_pres1, …, ps_pres8 | ps_pres=1)
		  o 0: none reported
		  o 8: total allowed
			Total possible selves reported		0	A possible self was not reported

Valence (Hoyle & Sherrill, 2006; Ruvolo & Markus, 1992)						

Approach selves (vappT)	0 – 8	Count of reported selves coded as positive (approach)
		➤ sum (val1, …, val8 | val=1)
		  o 0: none coded positive
		  o 4: amount expected
		  o 8: total allowed
			Total approach selves reported by youth	Approach selves may have a protective effect, improving performance, motivation, confidence, strategies; source: assumptions, observations	0	An approach self was not reported

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		Definitions			Missing Possible Selves	
Variable	**Range**	**Operational**	**Conceptual**	**Theory**	**Coding**	**Meaning**

Avoidance selves (vavT)	0 – 8	Count of reported selves coded as avoidance
		➢ sum (val1, …, val8 | val=0)
		  o 0: none coded negative
		  o 4: amount expected
		  o 8: total allowed
			Total avoidance selves reported by youth	Avoidance selves may increase vulnerability; resulting in poorer performance; better at predicting current-self states but less readily activated or motivating, source: personal experience	0	An avoidance self was not reported

Percent positive (vappP)	0 – 100	Number of positive selves divided by total reported selves
		➢ (val_ptot/ps_tot)*100
		  o 0: no positive selves
		  o 100: all reported selves are positive
			Percentage of reported selves that are coded as positive	Presence of selves that are positive out of the total number of selves reported by the youth	0%	0% of selves reported were approach

Percent avoidance (vavP)	0 – 100	Number of avoidance selves divided by total reported selves
		➢ (val_ntot/ps_tot)*100
		  o 0: no avoidance selves
		  o 100: all reported selves are avoidance
			Percentage of reported selves that are coded as avoidance	Presence of selves that are avoidance out of the total number of selves reported by the youth	0%	0% of selves reported were avoidance

| Variable | Range | Definitions | | | Missing Possible Selves | |
		Operational	Conceptual	Theory	Coding	Meaning
Specificity (Hoyle & Sherrill, 2006; Oyserman et al., 2004)						
Specific selves (gspT)	0 – 8	Count of reported selves coded as specific ➤ sum (gsp1, …, gsp8 | gsp=1) ○ 0: none coded specific ○ 4: amount expected ○ 8: total allowed	Total specific selves reported by youth	In order for selves to be behaviorally activating, they need to be specific enough to connect to actionable strategies; vague goals may serve to self-enhance but they fail to self-regulate	0	A specific self was not reported
Percent specific (gspP)	0 – 100	Number of specific selves divided by total reported selves ➤ (gsp_tot/ps_tot)*100 ○ 0: no specific selves ○ 100: all reported selves are specific	Percent of reported selves that are coded as specific	Percentage of selves that are specific (more easily behaviorally activating) out of the total number of selves reported by youth	0%	0% of selves reported were specific

| | | Definitions | | | Missing Possible Selves | |
Variable	Range	Operational	Conceptual	Theory	Coding	Meaning
Content						
Total count in domain (*domain*T)	0 – 8	Count of reported selves coded as related to the content domain ➢ sum (domain1, …, domain8 | domain=1) ○ 0: no reported selves related to domain ○ 8: all allowed selves are related to domain	Count of selves related to each content domain	Higher counts represent importance of the domain to the youth's self-concept (multiple identities in domain)	0	A self that is related to that domain was not reported
Presence of selves in content domain (*domain*B)	0 – 1	Indicator of presence of possible self in the domain ○ 0: no selves in domain ○ 1: one or more selves are related to domain	Presence of reported self related to the content domain	Self-concept includes an identity related to this domain	0	No selves related to domain
Percent of selves in content domain (*domain*P)	0 – 100	Number of selves coded in the domain divided by total reported selves ➢ (*domain*_tot/ps_tot)*100 ○ 0: no selves in domain ○ 100: all reported selves are related to domain	Percent of reported selves related to the content domain	Higher counts represent importance of the domain to the youth's self-concept	0%	0% of selves related to domain

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		Definitions			Missing Possible Selves	
Variable	**Range**	**Operational**	**Conceptual**	**Theory**	**Coding**	**Meaning**
Balance						
Total balanced pairs (balT)	0 – 4	Count of pairs where selves related to each content domain ➢ sum(balance1 ,...., balance4) o 0: no balanced pairs o 4: maximum number of pairings available	Higher counts represent importance of the domain to the youth's self-concept		0	No balanced pairs are present
Balanced pairs (balP)	0 – 100	Total balanced pairs divided by total expected selves ➢ (balance_tot/ ps_tot)*100 o 0: no balanced pairs o 4: maximum number of pairings available	Percentage of reported positive selves that are balanced by a negative self	When a positive self is paired with a corresponding negative self in the same domain, motivation increases	0%	No reported expected selves are balanced
Level of Balanced pairs (balC)	0 – 3	Categorical reduction of percentage of expected selves that are balanced o 0: none o 1: some o 2: all	Level of balance across reported selves	Distribution of percentage of balanced pairs across reported selves suggests ordinal categories	0	No reported expected selves are balanced
Any balanced pairs (balB)	0 – 1	Indicator of the presence of at least one balanced pair ➢ sum(balance1 ,...., balance4) o 0: no balanced pairs o 1: at least one pair			0	No balanced pairs are present

		Definitions			**Missing Possible Selves**	
Variable	**Range**	**Operational**	**Conceptual**	**Theory**	**Coding**	**Meaning**
Strategies						
Total selves with strategies (stT)	0 – 8	Count of reported selves with a strategy present ➢ Sum(s1, …, s8) ○ 0: no reported selves have strategies ○ 8: all allowed reported selves have strategies	Count of reported selves where the youth reported a strategy connected to the self	Strategies are needed in order to take action toward realizing the possible selves	0	No strategy reported attached to a reported self
Percentage of selves with strategies (stP)	0 – 100	Number of reported selves with strategies divided by total reported selves ➢ (st_tot/ps_tot)*100 ○ 0: no reported selves have strategies ○ 100: all reported selves have strategies	Percentage of reported selves that have an attached strategy	The proportion indicates how activating (connected to behavioral action) the youth's reported possible selves	0%	No possible selves reported have strategies
Self-regulated strategies scale (srsM)	0 – 9	Mean activating qualities across total reported strategies ➢ mean(sts_tot1, …, sts_tot8) ○ 0: no reported activating strategies ○ 6: all reported strategies coded at max level of activation	Mean score for behavioral activation across youth's reported strategies	Action depends not only on the presence of strategies, but also on whether the strategy is specific enough to be acted upon in terms of the strategy's valence, concrete, and specificity	0	No strategies reported with behaviorally activating qualities

| | | Definitions | | | Missing Possible Selves | |
Variable	Range	Operational	Conceptual	Theory	Coding	Meaning
Confidence						

Confidence variables (c_r1_1-c_r1_8)	0 – 5	Confidence score for individual selves
		➤ Recoded from survey
		  o 0: no reported self
		  o 1: definitely won't
		  o 2: probably won't
		  o 3: might or might not
		  o 4: probably will
		  o 5: definitely will
			Confidence in realizing reported self	Youth's belief about whether they can achieve the future state changes whether and to what degree they take action toward that state	0	The act of reporting no perceived self for the future is assumed to indicate no confidence in obtaining a future self

Mean confidence (conf1M)	0 – 5	Mean scale score across all reported selves for how likely the self is to happen
		➤ mean(c_r1_1, …, c_r1_8)
		  o 0: no reported self
		  o 1: definitely won't
		  o 1: probably won't
		  o 2: might or might not
		  o 3: probably will
		  o 4: definitely will
			Mean confidence in realizing reported selves	Youth's belief about whether they can achieve the future state changes whether and to what degree they take action toward that state	0	The act of reporting you have no perceived identities for the future at all is assumed to indicate no confidence in obtaining a future self

Possible Selves Coding Guidebook

Introduction & Background

Welcome to the Possible Selves Coding File.

Navigation: There are 9 tables and 10 forms included in this file. *The only file you will be inputting information in is named:* **PS Coding Form.** In order to open this form, double click the icon labelled **PS Coding Form** on the Navigation Pane to the left. *You will know you are in the correct form because there is a navigation bar between forms on right side of the screen:* **PS1 Form** through **Balance Form**

Each week you will be assigned a list of Case ID numbers to be completed. For instance, if you are told to complete record 1-20, you must verify that you are in fact completing the correct records. Record numbers are indicated by the field *ID number*, located at the beginning of each coding form. There is a navigation bar at the bottom of the form where you can scroll through records to navigate to the correct case.

Purpose: The Possible Selves Coding File is designed to assess and gather information about characteristics of the possible selves that were reported by a sample of adolescents who are on probation.

Primer on Possible Selves: A key task for all adolescents is exploring the questions 'who am I?' and 'who will I become?' While still in the process of being formed, the answers to these questions motivate daily behaviors and serve as a basis of defining clear goals for themselves. To successfully take action and change behavior, desires must be translated into a vision of the future self that contains a clear view of both the goals and the strategies that will enable youth to become successful adults. These future oriented self-concepts are commonly referred to as *possible selves*.

Expected Possible Selves.

During surveys, participants were asked to report on what they expected they would be like or be doing in the next year (expected possible selves) by completing the phrase: "Next year, I expect

to be…" (p1 – p4). We then asked whether the youth was doing something to be that way

(yes/no) and what they are doing now to achieve the possible self (their strategy).

     Feared Possible Selves. Youth were also asked to think about what they don't want to do

or want to avoid being, and complete the phrase: "Next year I want to avoid…" (feared possible

selves, p5 – p8). Similar to the expected possible selves, youth were further asked whether they

were taking action to avoid the outcome and what strategy they were using to avoid being that

way next year.

     The coding that you will be performing is based on the reported possible selves (p1 – p8)

and their related strategies (p1-8 Strategy).

Section A: Possible Selves Qualities

Variable	Coding & Definition
Valence: Is the possible self positive or negative?	**(1)** <u>*Positive*</u>: youth is trying to achieve something (e.g., graduating high school) **(0)** <u>*Negative*</u>: youth is trying to avoid something (e.g., not failing a grade)
Specificity: Overall, is the goal vague or specific?	**(1)** <u>*Specific*</u>: the goal does not need further definition; detailed, precise, there is enough information to observe that the action has been accomplished **(0)** <u>*Vague*</u>: the goal is overly general and/or needs more definition in order to clearly understand what is being done or to determine whether it has been achieved

Section B: Possible Self Content Domains

There are 6 different categories used to classify various characteristics of a possible self. Each category also contains sub-categories as indicated by numbering and indentation. ***When a sub-category is checked, the broader category must also be checked off***. For instance, a possible self, such as aspiring to 'make better grades', is considered a school-related achievement. Since school-related achievement selves fall under the broader category of achievements – both fields must be checked.

Also, it is important to note that some categories and subcategories will overlap. For example, if a subject reports the following possible self: play on the school volleyball team, the following fields would have to be checked on the coding sheet: Achievement; Sports; Activities in School. Please note that you may need to also look at the strategy for clarification on the possible self.

Content Domain & Definition	Examples
1. *Achievement*: Relates possible selves focused on achievements and accomplishments	Subcategories: school, job, sports, activities in school, activities not in school.
1a. *School*: A subcategory of achievement regarding school-related accomplishments	*Expected*: doing good in school, trying to do good in school, smart, getting good grades, going to the next grade, keep my grades up, more helpful in classroom, honor roll, going to better/new school *Feared*: dropout, flunking out of my classes, having bad grades, dumb, having bad schoolwork, falling behind in class, in trouble in school, suspended, excluded, skipping, in same grade
1b. *Job*: A subcategory of achievement, specifically regarding job-related accomplishments.	*Expected:* working for extra money, finding summer job, working, babysitting, having a job, part-time job; *Feared*: losing my job, without work
1c. *Sports*: A subcategory of achievement, specifically related to sports related activities both in and out of a school setting	*Expected:* playing basketball; training for a sport; being on a team *Feared*: not making a team; losing a game
1d. *Activities in school*: A subcategory of achievement, specifically related to activities in school	*Expected:* basketball team at school, school band, extra-curricular activities, playing sports, on a team, a better basketball player, getting a driver's license *Feared*: not on team, not making cheerleading

Content Domain & Definition	Examples
1e. *Activities outside of school*: A subcategory of achievement, specifically related to activities outside of school	*Expected*: neighborhood or community sports, guitar (or other instrument outside of school), boxing, religious institution *Feared*: not wanting to be home all the time
1f. *Probation success*: A subcategory of achievement, specifically related to successfully completing probation conditions	CODE UNDER Negative/Delinquency/Justice system involvement/Probation
2. *Relationships*: Possible selves related to relationships and social interactions, except with teachers (include this under school)	Subcategories: general interpersonal relationships; family members; peers; romantic partners; children
2a. *General*: Refers to general relationships; interactions with people in everyday life	*Expected*: nice, respectful, better listener, funnier *Feared*: shy, rude, not listening, mean to people, getting into arguments, without someone to turn to
2b. *Family*: Refers to interactions/relationships within family	*Expected*: getting along with parents/relatives, helping around house, better person towards mother, see relatives *Feared*: not listening to parents, mean to sibling/relative, getting into arguments with parent/relative
2c. *Peers*: Refers to interactions and relationships with members of a friend group	*Expected*: having lots of friends/same friends, making new friends, hang with friends more, trying to be accepted at new school, being a better friend *Feared*: enemies with other people, being a follower, being disliked by friends, not making friends, bully, bad to my friends, without friends because of rumors
2d. *Romantic partners*: Refers to interactions and relationships with romantic partners (boy/girlfriend; father/mother of children; hook ups; crushes; romantic interests)	*Expected*: new relationship, continuing an existing relationship *Feared*: breaking up with a boy/girlfriend; fear of being dumped;

Content Domain & Definition	Examples
2e. *Children*: Refers to interactions and relationships with participant's children (if they have children)	*Expected*: Being a good parent; helping support and take care of child; *Feared*: not being present in child's life; not being a good parent; not fulfilling responsibilities; not being able to see child
3. *Personal growth*: Possible selves that reflect a desire to improve personal character traits and sense of self/identity	Subcategories: maturity/independence, character/attitudes
3a. *Maturity*: Refers to growth personal character traits and actions related to being more mature or independent of parents/teachers/institutions. Self-reliance to a degree.	*Expected*: more mature, more responsible, more grown-up, independent, more organized *Feared*: lazy, irresponsible, not trusted
3b. *Character*: Refers to personal growth that focuses on developing character traits and/or attitudes (apart from maturity or independence)	*Expected*: being more open-minded, positive thoughts, positive attitude, to be a good person *Feared*: a bad attitude, silly, greedy, weak mentally, emotional mess, caring about nothing
4. *Health*: Possible selves that related to health and/or appearance	Subcategories: physical health, mental health, appearance
4a. *Physical Health*: Goals pertaining to physical health	*Expected*: Being older; healthy; exercising; stronger *Feared*: not sick, not weak
4b. *Mental Health*: Goals pertaining to mental health	*Expected*: less anxious; feeling calmer; less stressed; feeling confident about life/self, *Feared*: being more anxious/stressed; having those anxieties affect life; feeling incompetent or not confident about life/self, depressed, not taking meds
4c. *Appearance*: Goals related to physical appearance or body	*Expected*: Hair looking different, taller, growing a few inches, handsome, good-looking, losing weight, built *Feared:* ugly, looking too young
5. *Circumstances*: Possible selves related to changes in current circumstances	Subcategories: lifestyle; material things

Content Domain & Definition	Examples
5a. _Lifestyle_: Goals related to participant's living situation	_Expected_: moving to Canada, living somewhere, going places I have never been, traveling _Feared_: being kicked out of house; still living at home
5b. _Material Things_: Goals related to gaining tangible objects or things owned by participant	_Expected:_ own a car, better apartment _Feared:_ homeless, out of money, poor
6. _Negative Outcomes_: Possible selves that suggest a negative outcome Note: any possible self-reported in p1 – p4 that indicates expecting a negative outcome should be checked as negative	Subcategories: delinquency, problem behaviors
6a. _Delinquency_: Outcomes related to delinquent behavior and justice-system involvement	Subcategories: criminal justice involvement (probation; arrest/ incarceration); illegal behaviors
6a1. _Criminal justice involvement_: Outcomes related to further involvement with the criminal justice system	Subcategories: probation-related; incarceration
6a1i. _Probation_: Outcomes related to probation	_Expected:_ off probation, complete probation conditions _Feared_: violating probation; having a negative relationship with probation officer
6a1ii. _Incarceration_: Outcomes indicating being arrested or incarcerated	Being arrested, spending time in jail
6a2. _Illegal behaviors_: Outcomes indicating participation in something illegal but not necessarily being formally reprimanded	Stealing, fighting, selling drugs
6b. _Problem behaviors_: Outcomes to related to negative or problematic habits that a participant may exhibit	Subcategories: General problem behaviors, substance use, sexual risk taking, Negative peers
6b1. _General_: Outcomes related to general problem behaviors, such as being a troublemaker at home; in school; or in community	Being a troublemaker, getting in trouble, exhibiting problematic behaviors at home; behaviors that warrant suspension or detention; arguing with family members; rebelling against house/family rules
6b2. _Risky sex_: Outcomes related to risky sexual behaviors, pregnancy	Unprotected sex; unwanted/unplanned pregnancy; abortion; not taking birth control
6b3. _Substance or alcohol use_: Outcomes related to substance and alcohol use	Taking/using drugs; drinking, drinking too much

Content Domain & Definition	Examples
6b4. *Negative peers*: Outcomes related to spending time with delinquent peers; peers considered negative influences	Hanging with bad peers, spending time with friends who participate in troublemaking or delinquent behavior
7. *Other*: Any goal that does not clearly fit into a pre-defined content category	

Section C: Balance in Possible Selves

Possible selves will be coded as "balanced" when a participant had an expected possible self that is offset by a countering feared self (i.e., expected self: "respecting others", feared self: "Not to swear at my friends")

Variable	Coding & Definition
Strength of Balance Is the positive self balanced by a negative self?	*Balance refers to possessing a positive possible self that is paired with a negative possible self in the same domain.* **(3)** <u>*High match*</u>: the positive self is matched by a negative self in the exact same sub-domain (e.g., school-related positive self: 'hoping to graduate high school,' school-related negative self: 'being a drop out') **(2)** <u>*Medium match*</u>: the positive self has a negative self that is connected in the same overall domain (e.g., peer-related positive self: 'a good friend,' general relationship-related negative self: 'not listening') **(1)** <u>*Low match*</u>: the positive self has a negative self in another domain that seems related (e.g., sports-related positive self: 'on the basketball team,' health-related negative self: 'breaking my ankle again') **(0)** <u>*No match*</u>: there is not a negative self in the same domain

Section D: Strategies

| Variable	Coding & Definition
Count How many strategies are listed?	**(##)** Enter the number of strategies that the participant has listed for pursuing the possible self
Relevance Is the strategy relevant to addressing the stated goal?	*Relevant = closely connected or appropriate* **(1)** <u>*Relevant*</u>: The strategy is clearly connected to the goal and appropriate. **(0)** <u>*Somewhat relevant*</u>: The strategy is somewhat connected to the goal **(-1)** <u>*Not relevant*</u>: The strategy does not logically connect to the goal or is inappropriate.

Variable	Coding & Definition
Effectiveness Is the strategy likely to be effective in achieving the stated goal?	*Effective = successful in producing the desired or intended result* If the person successfully follows this strategy… **(1)** _Effective_: Following these steps will achieve the goal. There are no additional steps that need to be completed beyond what is listed. **(0)** _Somewhat effective_: Following these steps will make progress toward the goal; however, additional steps are required in the process. This includes strategies that are overly general or lacks vital sub-steps. **(-1)** _Not effective_: They are not likely to achieve or move closer to the goal; includes strategies that do not logically connect to the goal
Locus of Control Who does the strategy indicate will be taking action to achieve or avoid the possible self?	**(1)** _Participant only_: The youth is the only implicated in the strategy as taking action (e.g., 'doing my homework') **(0)** _Participant and someone else_: The youth is implicated in the strategy as taking action alongside someone else (e.g., 'I'll work with my probation officer to stay out of trouble') **(-1)** _Someone else_: The strategy indicated that a person or thing other than the youth is responsible for the youth's progress (e.g., 'my parent will talk to the judge')
Behaviorally activating	
Strategy Valence Does the strategy involved doing something (approach) or not doing something (avoid)?	**(1)** _Approach_: the participant is trying to do something (e.g., studying, applying for jobs) **(0)** _Mixed_: there is more than one strategy listed with at least one approach strategy and one avoid strategy **(-1)** _Avoid_: the participant is trying to avoid or stop doing something (e.g., staying off the street, not being annoying)
Concreteness Would you be able to replicate this strategy without gaining more information or greater detail about the steps?	**(1)** _Yes_: strategy is clear and detailed enough to easily put into action; no further detail or clarification is needed to understand how to take action **(0)** _Somewhat_: strategy is mostly clear and detailed, but lacks detail and would need clarification in order to replicate **(-1)** _No_: strategy is ambiguous and cannot be replicated

Variable	Coding & Definition
Overall Specificity Overall, is the strategy vague or specific?	**(1)** *Specific*: the strategy does not need further definition; it is detailed, precise, there is enough information to observe that the action has been done **(0)** *Mixed*: there is more than one strategy listed with at least one specific strategy and one vague strategy **(-1)** *Vague*: the strategy is general and/or needs more definition in order to understand what is being done or to determine whether it has been achieved
Specific to Time Is there any indication of when the goal is complete (time, frequency, duration)?	**(1)** *Yes*: the strategy provides at least one indication of when it is being done; this can include a timeframe (e.g., this semester), a duration (e.g., 20 minutes), or frequency (e.g., every day) **(0)** *Mixed*: there is more than one strategy listed with at least one 'yes' strategy and one 'no' strategy **(-1)** *No*: the strategy is completely detached from any sense of when it takes place
Specific to Place Is there any indication of where the strategy is done?	**(1)** *Yes*: the strategy provides at least one indication of the place where the participant takes action **(0)** *Mixed*: there is more than one strategy listed with at least one 'yes' strategy and one 'no' strategy **(-1)** *No*: the strategy is completely detached from any sense of where it takes place
Specific to Action Is it clear what is being done to take action?	**(1)** *Yes*: the action being taken by the participant is clear and specific with enough information to observe that the action has been done **(0)** *Mixed*: there is more than one strategy listed with at least one 'yes' strategy and one 'no' strategy **(-1)** *No*: the strategy is general or vague in terms of what is being done

Appendix 2.3. Examination of Self-Regulatory Strategies Composite Score

Note: Analyses conducted across selves (long) data (n=531) rather than individual (wide) data (n=121).

Behaviorally activating strategies...
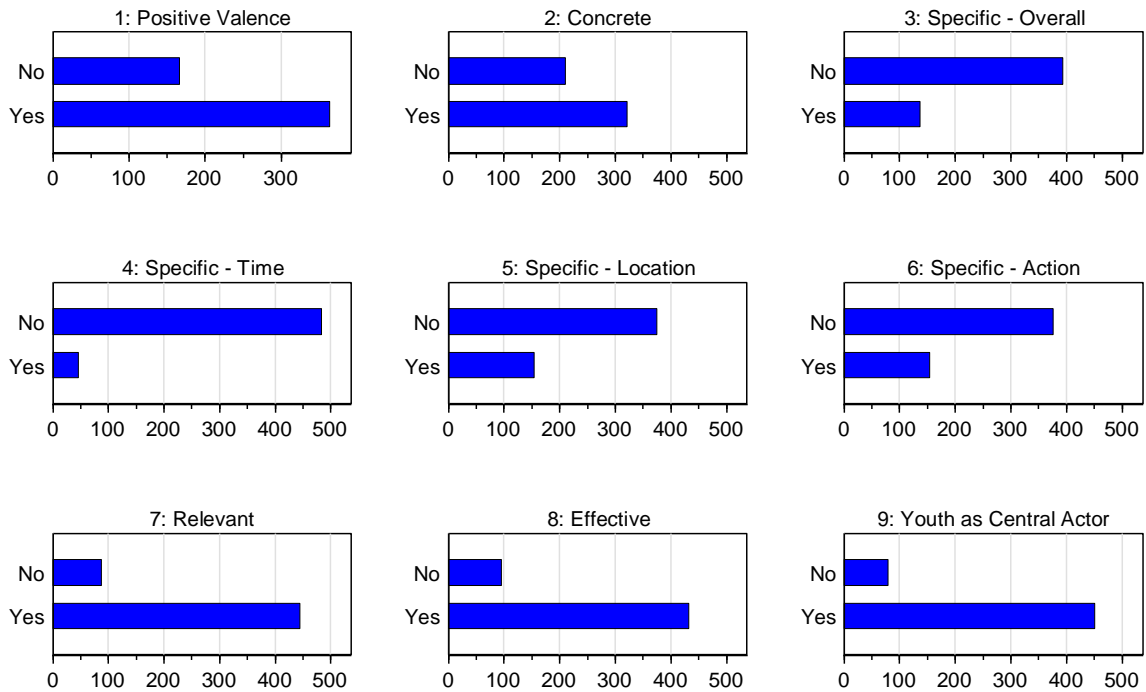
Number of Possible Selves Responses

IRT: One-parameter logistic (1PL) Model

. irt 1pl st1rd st2rd st3rd st4rd st5rd st6rd st7rd st8rd st9rd

Fitting fixed-effects model:

Iteration 0: log likelihood = -2509.5722
Iteration 1: log likelihood = -2503.171
Iteration 2: log likelihood = -2503.1347
Iteration 3: log likelihood = -2503.1347

Fitting full model:

Iteration 0: log likelihood = -2064.2316
Iteration 1: log likelihood = -1856.2826
Iteration 2: log likelihood = -1848.245
Iteration 3: log likelihood = -1848.1401
Iteration 4: log likelihood =   -1848.14

One-parameter logistic model   Number of obs   =   531
Log likelihood = -1848.14

	Coef.	Std. Err.	z	P>|z|	95% Conf. Interval	
Discrim	2.98	.16	19.17	0.000	2.676	3.286
1. Valance	-.44	.07	-6.42	0.000	-.576	-.306
2. Concrete	-.18	.06	-2.84	0.005	-.305	-.056
3. Specific	.75	.07	11.21	0.000	.621	.884
4. Time	1.46	.09	15.51	0.000	1.271	1.639
5. Place	.65	.06	10.04	0.000	.525	.780
6. Action	.66	.07	10.17	0.000	.535	.791
7. Relevant	-1.13	.09	-12.72	0.000	-1.301	-.953
8. Effective	-1.01	.08	-11.92	0.000	-1.18	-.846
9. Actor	-1.23	.09	-13.35	0.000	-1.408	-1.047

Item Characteristic Curves
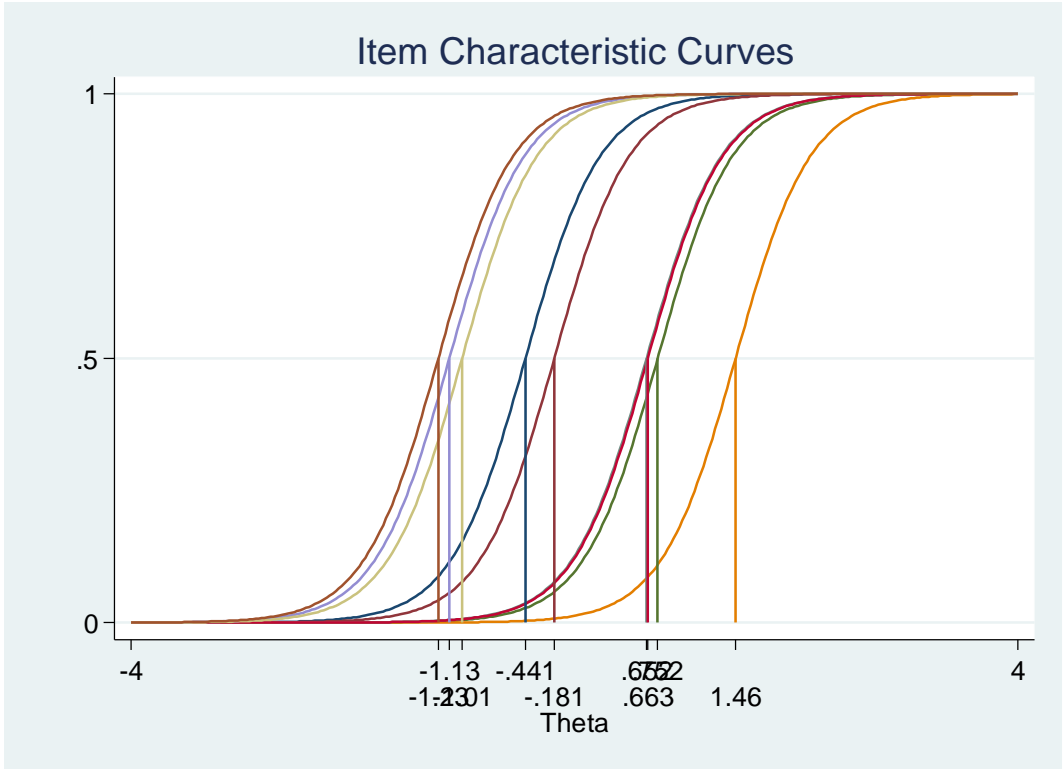
ICC and empirical proportions...
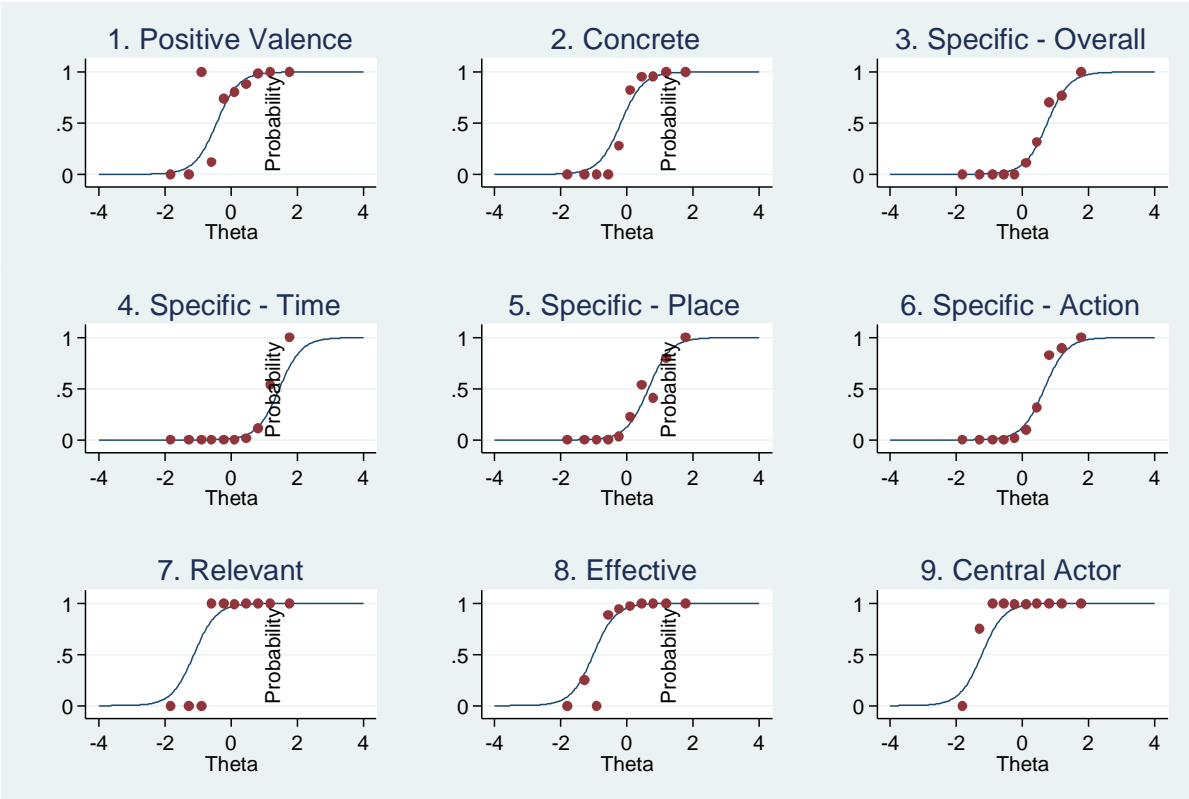
Test Characteristic Curve

Item Information Functions
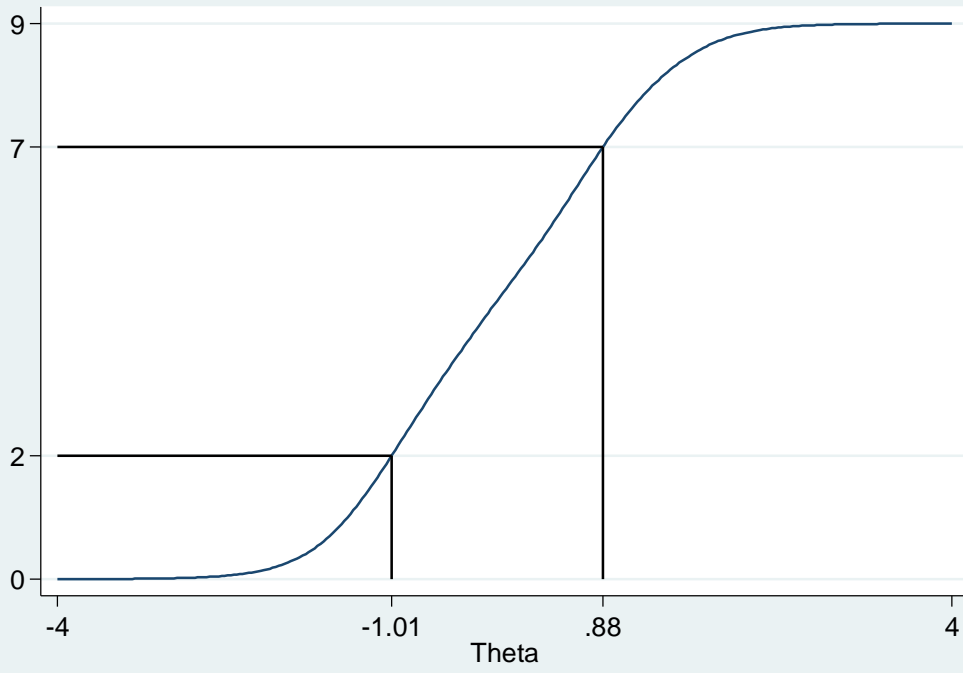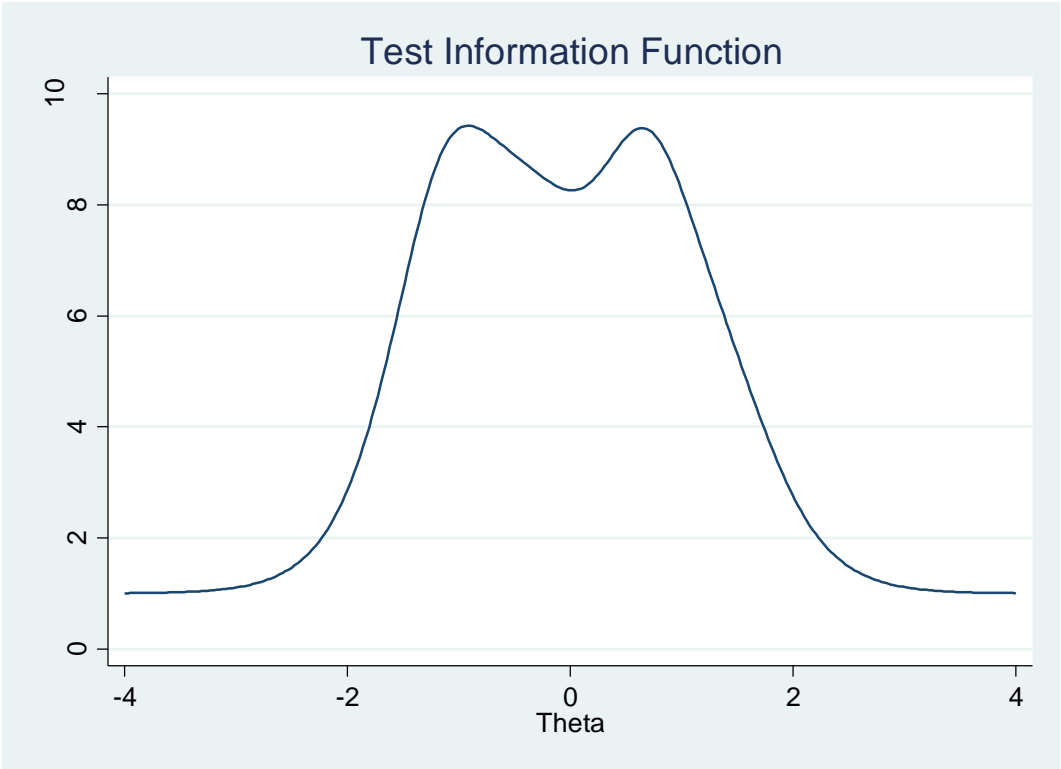
Test Information Function
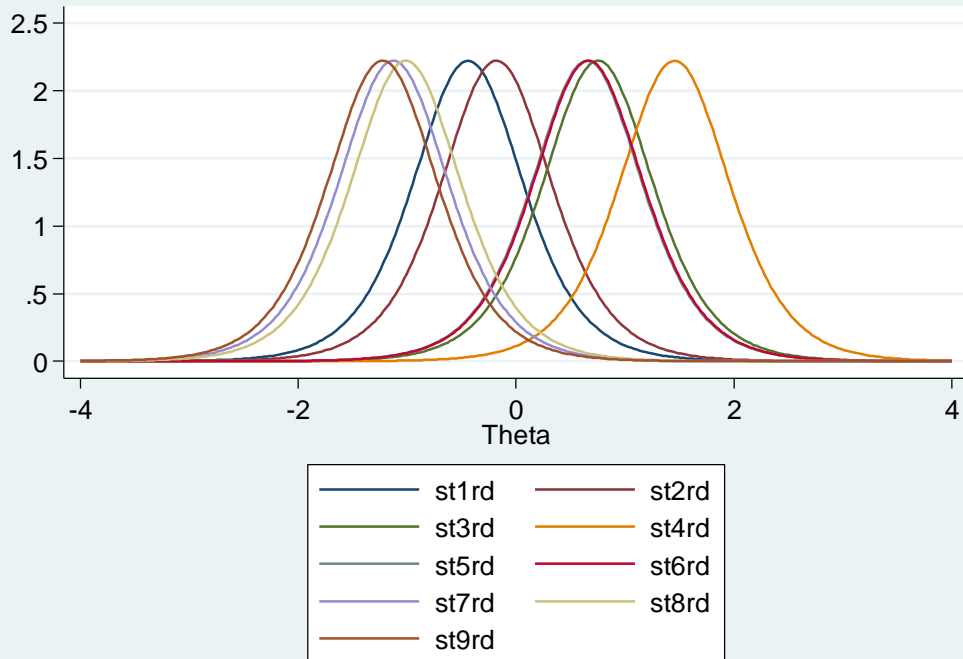
Appendix 4.1. Qualitative Interview Guide

I.   Complete Consent Form

II.   Introduction

Thank you for taking the time to meet with me today. Before we get started, I'd like to take a couple minutes to go over what you can expect during the interview.

As we discussed in the assent form, I am recording the interview today. This helps us to be as accurate as possible, and also allows me to really listen to what you are saying instead of having to focus on taking notes. When I start the recording, I am going to give an id number and today's date – that way we can protect your privacy by not using your full name or any other identifying information in the recording.

The questions I ask will focus on what goals are important to you and how you go about achieving them. I also wanted to be clear that there some things that I will not be asking you about – I will not be asking about any topics that might be really distressing to talk about, such as mental health, suicide, or similar topics. Also, at no point during the interview will I ask directly about any unreported delinquent activities that may have been committed (provide example if necessary…"For example, if you had broken curfew but it had not been reported to the authorities"). You may want to talk about things like this, but that is entirely up to you. And lastly, because we want to protect your privacy, after the recording starts, I am not going ask you for any information that might identifying you or your family, like your last name or your address. Do you have any questions for me before we get started?

III.   Start recording

Read the following to label the interview:

- This is interview id number: [Subject id number].
- Today's date is: [Date (month, day, year) and Time]

IV.   Warm Up

It's been a while since you completed a survey for us. How have things been?

V.   Interview Guide

PSQ FOLLOW UP

Lead in: During the surveys, we asked you about some of the things you expected to be or be doing in the next year and some things that you wanted to avoid being. You mentioned [INSERT List of Possible Selves].

1. Since we last talked, what progress have you made toward achieving and/or avoiding these goals? *Prompt: categorize goal progress [high (completely achieved/avoided), mid (some progress), and low (little to no progress)]*
2. How would you rank these goals in terms of how important they are to you?
3. Have you developed any new goals that you are hoping to achieve? Is there anything else that you want to avoid? *Prompt: content, strategies, importance, what led to creation of new goals*
4. How often do you think about who you want to be in the future?
   Prompt: when, where, if/how this leads to goal setting and/or taking action

PROCESS (Supports/Barriers)

I'd like to learn more about some of the goals that are important to you and the things that have helped you make progress or gotten in the way – what would you like to talk about first?

THINGS THAT HELPED:

5a. Tell me about a goal that was easy to make progress toward achieving.

Prompt to learn more about what was helpful.

- Is there anyone or anything that has been particularly helpful in trying to achieve this goal?

- What was it like for you to have this kind of support?

- How did this support affect or change…

  ▪ …the way you thought about this goal? (before you began working on it? after you began working toward it?)

  ▪ …the way you pursued the goal?

  ▪ …the way you thought about yourself?

THINGS THAT GOT IN THE WAY:

5b. Tell me about a goal that has been really difficult or challenging.
   [alt: Have you run into any difficulties or problems in trying to pursue your goals?]

Prompt to learn more about what was challenging or got in the way.

- Tell me about what happened?

- How did you deal with it?

- What was it like for you to have this problem?

- How did this experience affect…

  ▪ …the way you thought about this goal?

- ▪ …the way you pursued the goal?

- ▪ …the way you thought about yourself?

I'm always curious to learn more about how people think -- you wanted to talk about [*what helped/what was challenging*] first, why did you choose that?

OTHER INFLUENCES

Probe for specific influences that may not have been mentioned in the interview to this point

6. PROBATION: I notice that you have not discussed the role of probation

Role in progress toward their goals

6a. Do you think that being on probation has changed:

- …anything about the way you go about trying to achieve or avoid your goals? In what ways?

- ...the goals you are working towards or avoiding? In what ways?

- ...the way you think about your goals after they have been achieved? In what ways?

Role in identity (thoughts about future, how others think about you)

6b. Do you think that being on probation has changed:

- …the way you think about your future? In what ways?

- …the way you think about who you are? In what ways?

- …the way other's think about you? In what ways?

6c. Which of these goals was your probation officer most concerned about?

7. PARENTS: I notice that you have not discussed the role of your parents

7a. Do you talk with your parents about who you want to be in the future?

- If yes, how have they been helpful or not helpful?

- If no, is there a reason that you haven't spoken with them about this?

7b. Do your parents ever talk about goals or expectations they have for themselves? …that they have for you?

8. INDIVIDUAL: I notice that you have not discussed the role of your own abilities or personality

8a. Is there a specific ability or personality trait that helped you in pursuing your goal? How did it help?

8b. Is there a specific ability or personality trait that prevented you from pursuing your goal? How did it get in the way?