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Dana Margaret Prince

“I’m afraid I won’t make it to 19”: Longitudinal Development and Impact of Future Orientation  
on Health Risk Behaviors among African American and Latino Young Men

Dana Margaret Prince

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Reading Committee:

Paula Nurius, Chair

Lynne Manzo

Marina Epstein

Deborah Gorman-Smith

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University of Washington

**Abstract**

“I’m afraid I won’t make it to 19”: Longitudinal Development and Impact of Future Orientation on Health Risk Behaviors among African American and Latino Young Men

Dana Margaret Prince

Chair of the Supervisory Committee:

Paula Nurius

School of Social Work

How young people conceptualize and cognitively represent their futures— as full of positive potential or constraints and negative possibilities—bears influence on their developmental trajectories. Future orientation is demonstrated to be associated with a range of health risk behaviors and outcomes. Further, positive future orientation shows promise as a protective factor for children growing up in contexts of adversity. The central focus of this dissertation is to investigate how African American and Latino young men envision their overarching future possibility and the consequences of blunted future perspective on indicators of their well-being. The Chicago Youth Development Study (CYDS), a longitudinal prospective cohort study, serves as the foundation for this dissertation research.

I begin by examining the longitudinal multidimensional structure of future orientation, including positive future expectations and expected threats to future safety as two important domains of future orientation for young men of color. Next, I examine the longitudinal relationships between the multidimensional future orientation constructs and two important indicators of adolescent health and functioning – substance use and involvement in delinquent behaviors. Finally, I take a mixed-methods approach to investigate the content, prevalence, and changing trends over time of future fears described by African American and Latino young men from early adolescence through emerging adulthood.

Findings advance our understanding of the structure of future orientation longitudinally, and support a latent construct approach to future orientation. The findings illustrate that in the case of expectations, it is both positive appraisals and expected threats to survival that matter for young men of color. Further, categorical autoregressive cross-lagged structural models show that future orientation has important effects on youth substance use and involvement in delinquent behavior, over time, both of which in turn decrease positive orientation and increase expectation of threats

to future safety across adolescence. Similarly, low positive expectations for the future and increased expected threats to future safety continued to predict involvement in risk behaviors. Longitudinal qualitative content analysis reveal three primary themes in young men's discussion of future fears across an eight year period: 1) survival, safety, and security, 2) "making it," and 3) family wellness and fatherhood. Chronic and pervasive fears related to death/dying emerged as the most frequently discussed fear. Understanding young men's future fears in their own words offers a valuable and underrepresented perspective in future orientation research, which can influence social justice advocacy and inform social service providers' work.

Taken together, this research addresses several important gaps in the current literature on future orientation, risk behavior, and marginalized youth. In doing so, it involves research and service response implications germane to social welfare in terms of supporting healthy development for historically marginalized and underserved youth.

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## DEDICATION

“It seems, only one rule applies, to all our dreams—

They will not fly except in open sky.

A fenced-in dream

Will die.”

-Zilpha Keatley Snyder

This dissertation is dedicated with love and respect to the many young women and men I had the honor to work with in West Philly. Their stories, struggles, and triumphs inspired this work, and fuel my continued dedication to fight for the dreams of all young people.

And to my daughter, Naomi Ruth Prince. You are my why and you are my how.

## INTRODUCTION

How young people conceptualize and cognitively represent their futures— as full of positive potential or constraints and negative possibilities—bears influence on their developmental trajectories. Adolescence is marked as a developmental period when future-thinking (or future orientation) becomes increasingly salient. Future orientation includes self-relevant cognitions of enduring goals, aspirations, hopes, fears and threats that function as a framework and guide for individual identity development (Markus & Nurius, 1986). For adolescents, a foreshortened view of the future, or belief that “I might not be here tomorrow,” contributes to increased risky health behaviors (Rothman, Bernstein & Strunin, 2010; Borowsky, Ireland & Resnick, 2009; Burton, Obeidallah & Allison, 1996) and involvement in delinquent behaviors (Corte & Szalacha, 2010; Brezina, 2009; Caldwell, 2006) underscoring the importance of future orientation as a potential change mechanism for intervention and prevention efforts to promote healthy youth development.

In addition, truncated life expectancy may contribute to hopelessness and a subsequent stunting of a young person’s ability to take initiative, imagine and pursue goals, and persist towards desired future aspirations. Prevalence rates of the belief in premature death reported by adolescents are significantly over-inflated when compared with actual rates of early death (Jamieson & Romer, 2008). A recent study conducted using the National Longitudinal Study of Adolescent Health found that 1 in 7 youth endorsed the belief that they had a 50% chance of living to age 35 (Borowsky, Ireland & Resnick, 2009). Low adolescent perceived survival expectations are more prevalent in males, racial/ethnic minorities, urban-dwelling youth and youth who receive public assistance (Duke, Skay, Pettingell & Borowsky, 2009). Youth who endorse fatalistic beliefs in early to mid-adolescence are less likely to be in school, employed, in

the military and less likely to have a high school diploma in young adulthood (Duke, et al, 2011). Evidence suggests the consequences of fatalistic beliefs in adolescence extend into adulthood, predicting lower educational attainment and socioeconomic status (Nguyen, Hussey, Haplern, et al, 2012). The implications of truncated life expectancy for adolescent health and well-being warrant future investigation.

The central focus of this dissertation is to investigate how African American and Latino young men envision their overarching future possibility and the consequences of blunted future perspective on indicators of their well-being. The Chicago Youth Development Study (CYDS), a longitudinal prospective cohort study, serves as the foundation for this dissertation research. I begin by examining the multidimensional structure of future expectations using a latent construct approach. This is the first psychometric work conducted on the Future Expectations Questionnaire. Next, I examine the longitudinal relationships between the multidimensional future orientation construct and two important indicators of adolescent health and functioning – substance use and involvement in delinquent behaviors. This is the first longitudinal analyses and test of the reciprocal effects hypothesis to be conducted. Finally, I take a mixed-methods approach to investigate the content, prevalence, and changing trends over time of future fears described by African American and Latino young men from early adolescence through emerging adulthood. I then investigate the relationship between fears qualitatively described and the multidimensional future orientation construct. This is the first longitudinal analysis of the future fears of young men of color across this developmental period. Before describing each of these analyses in detail, I will provide a brief overview of conceptual and measurement approaches to future orientation, including the grounding of this aspect of identity in social cognitive processes.

Three primary approaches to future orientation include conceptualization grounded in theories of human motivation and goal setting, self-theory, and personality research. Across these disciplinary approaches, terminology for future orientation differs, including possible selves, time perspective, and time orientation. Human motivation research investigates the “subjective construction” of future orientation in relation to future planning, goal-setting, and aspirations (Nuttin, 1984; Nurmi, 1991). Self-theorists define future orientation in terms of an individual’s possible selves, or self-relevant cognitions of enduring goals, aspirations, hopes, fears, and threats that function as a framework and guide for individual identity development (Markus and Nurius 1986). Possible selves may also be viewed as motivational resources, which function to regulate and motivate individual behavior (Aloise-Young, Henningan, and Leong 2001; Oyserman, Bybee, and Terry 2006; Nurius, et al. 2006). Finally, personality research conceptualize future orientation using the term “time perspective,” understood to be a stable personality characteristic assessed by a typology (past-positive, past-negative, present-hedonistic, present-fatalistic, and future-oriented) of an individual’s preferred orientation towards time. In this sense, time perspective differs from a possible selves approach to future orientation in that personality traits are considered intrinsic to the individual, whereas possible selves are developed, elaborated and drawn into working play through social cognitive processes that emerge from person-environment interactions. Hence, the role of socio-physical contexts of development is inherently central to the possible selves conceptualization of adolescent future orientation. Finally, future expectations are conceptualized in two overarching ways: the “prospective life course” approach, focusing on tasks, or goals for the future, and the “exist” category, consisting of concerns for self, other significant relationships, and societal issues (Seginer, 2008). Positive task-oriented future expectancies, typified by domains of

work/occupation, school, and family formation, for example “getting a job,” “finishing school,” or “getting married,” are linked with behavior regulation and emotional wellbeing (Seginer; 2005; 2008). The “exist” category of future expectations encapsulates non-specific emotions, moods, or states, for example “being happy” or “having a healthy and prosperous life.” These kinds of self-beliefs tap into the self-enhancing, versus self-regulatory functions of future orientation. Each of these conceptual approaches and subsequent measurement strategies towards future orientation will be discussed in more depth below.

According to action theory (Nuttin, 1984), future orientation involves three basic processes: 1) *motivation*, or the individual content of future investments or goals, 2) *planning*, including how individuals plan to realize their goals, and 3) *evaluation*, which reflects an assessment of how realistic the individual perceives their future goals to be. These three processes are conceptualized as a system whereby meeting goals builds up a positive self-concept in that arena, which in turn influences how subsequent goals are determined. Next, the successful ability to plan for and meet goals reflects on one’s self-evaluation. Self-evaluation of the causes for success or failure also feedback to how the individual will approach the goals they set in the future (Nurmi, 1991). Current research on human motivation illustrates how positive future orientation, including positive expectations, aspirations, and positive affect serve a regulatory and motivational function for individuals. The presence of positive affective-cognitive representations of self in the future may guide individuals towards goal-congruent behaviors, and assist in avoiding behaviors that may lead the individual “off track” (Cross & Marcus, 1994). Personal goals provide both the fuel for individual motivation towards self-actualization as well as cognitively encoding a sense of purpose to guide or regulate current behaviors in ways that

will connect the present self with the aspired-to future self (McInerney, 2003; Taylor, Neter, & Wayment, 1995).

Weak self-regulatory capabilities have been evidenced in youth with negative self-concepts in a variety of domains, such as academics (Hoyle & Sherrill, 2006; Roesen & Lau, 2002). In this way, positive future orientation represents how goals or aspirations become internalized, shifting from external to intrinsic source motivation, with significant implications for goal persistence in the face of setbacks and roadblocks (see Koestner, Lekes, et al, 2002, for meta-analysis). Conversely, a lack of or very rudimentary self-schema in a particular domain means that a young person will be less inclined to recognize their ability within that domain, or adopt steps necessary for completing tasks associated with it (Cross & Marcus, 1994). The lack of positive future expectations is thus an important area of consideration for healthy youth development. Without the requisite scaffolding of positive future expectations, or goals, combined with procedural knowledge and skills to move towards them, the motivational power of future orientation cannot be accessed.

*Social cognitive underpinnings of adolescent possible selves.* Research on adolescent possible selves investigates how diverse groups of young people cognitively represent his/her future in terms of aspired-to, hoped-for, or feared/avoided future selves. Possible selves, including those depicting who one aspires to be or is afraid of becoming, develop through basic social cognitive process of experiencing, interpreting, and storing in memory self-referent cognitions, including symbolic meanings, beliefs, and emotions. Self-defining memories are, in a sense, the 'building blocks' of self-concept. Existing memory structures influence what we perceive and how we make meaning of in-the-moment information. Memories that are vivid (positive or negative) and distinct or elaborated, (i.e. highly developed and associated with other

similar memories), will be more readily activated and drawn into working memory. Much of this process becomes automated, so that one shifts from one ‘working’ model of self to another unconsciously. Over time, accrued experiences will elaborate self-concepts into more complex and dense memory structures (Nurius, 1993).

Consider, for example, how a young person may develop a feared self such as “becoming an alcoholic” or “being in jail.” As experiences with family members, peers, or social institutions accrue, a young person may begin to develop a sense of him- or herself as successful in making safe choices, or avoiding problematic peers. Support from parents, or other respected adults could contribute to a positive sense of future. Other cues could contribute to feared selves including witnessing substance use at home or in the community, or knowing friends and family members who ended up “in trouble.” Chronic personal experiences of being stigmatized, for example persistent demeaning comments or negative appraisals about being “no good” or “destined for trouble” from care-givers and significant adults may also contribute to the feared self. As individuals are biased to identify and make meaning of contextual cues that ‘fit’ with pre-existing conceptions of self; a young person who fears ending up in jail will be more likely to pay attention to and make meaning of contextual cues related to that feared self.

*Motivational and regulatory functions of possible selves.* An individual’s possible selves are theorized to possess motivational and self regulatory functions with three distinct components: valence of the contents of one’s possible selves; elaboration, including strategies for attaining positive or aspired-to future selves; and discrepancy between current and future selves. These aspects of possible selves are associated with a range of behaviors including substance use, depression, and school engagement/achievement outcomes (Aloise-Young, Hennigan, & Leong, 2001; Oyserman, Bybee, & Terry, 2006; Oyserman & Fryberg, 2006;

Strauman, 2002). These three distinct components are theorized to impact behavior in specific ways.

First, the content and valence (positive or negative) of adolescent possible selves matter. For example, in a study of tobacco and alcohol use among early adolescents (grades six through eight), there was a significant relationship between positive future expectations and decreased likelihood of heavy substance use (Aloise-Young, et al., 2001). Second, elaboration of possible selves, including the linking of content with procedural knowledge for achieving desired selves or avoiding feared ones. The presence of aspired-to future selves elicits actions to move individuals toward actualizing their goals. This is especially true of possible selves that are well elaborated and contain prescriptive information compared with more abstract possible selves. For example, in a middle school-based randomized control trial with low-income, minority youth, Oyserman, Bybee, and Terry (2006) found that when well-elaborated academically based possible selves (e.g. ‘be a college student’) contained cognitive information about how to reach the desired self (e.g. ‘I hope to be a better student and therefore I must pay attention in class’), they exerted stronger motivation and regulation influence on student behavior. The regulatory action (If-Then) served to guide and direct behavior in tangible ways to move toward the hoped-for self. Finally, possible selves also elicit regulatory behavior when current self is compared against a potential future self. This is especially true for feared future selves. When the discrepancy between current self and feared future self is significant and potential resources to avoid the feared future self are made available, individuals are significantly more likely to adopt behaviors to avoid that self (vanDellen and Hoyle 2008).

*Measurement of adolescent possible selves.* Measurement in this area relies on open-ended responses to prompts such as “Next year I expect to be...” or “Next year I want to avoid

being...” In addition, youth may be instructed to write down behaviors or strategies they are currently using/not using to attain/avoid future selves (Oyserman, Bybee, Terry, & Hart-Johnson, 2004). Open ended responses are generally categorized by content (e.g. academic aspirations, interpersonal relationships, or career expectations) and valence (positive versus negative). Measurement of possible selves varies widely by study. Youth may be instructed to write down expected selves, hoped for selves, feared selves, or any combination therein. In this way, possible selves focuses on individually-specific content (e.g. “I expect to graduate from high school,” or “I expect to drop out of school”) alongside the presence (or lack of) behavioral strategies to achieve hoped-for, expected or feared selves (e.g. “I will attend class and do my homework”). Measurement work in this area points to the importance of density (number), content, and valence of adolescent future selves across a range of adolescent behaviors and outcomes.

*Personality approach to future orientation.* Personality researchers conceptualize future orientation as a stable personality characteristic linked to how an individual approaches future planning and avoidance of risk. This research centers on the concept of time perspective, or an individual’s preferred orientation to the past, present, or future. A typology of time orientations includes past-positive, past-negative, present-hedonistic, present-fatalistic, and future-oriented (Zimbardo & Boyd, 1999). Individuals are theorized to adopt a preferred orientation with potential implications for behavioral decision making. For example, an individual who is more present-hedonistic oriented may be able to enjoy the present-moment without dwelling on future anxieties or past worries, but may also have difficulty delaying gratification or setting realistic goals for the future. Whereas individuals may demonstrate a preference or stronger inclination towards one time orientation, the concept of balance is theorized to capture an individual’s

ability to adapt or shift from one time orientation to another within a given set of circumstances. Balance is thus conceptualized as an adaptive strategy to maximize successful or health- and wellness promoting actions and outcomes (Keough, 1999).

A growing body of literature examines the influence of time perspective on a range of youth risk behaviors such as early on-set substance use (Wills, Sandy & Yaeger, 2001), alcohol use (Robbins & Bryan, 2004; Keough, 1999), tobacco use (Keough, 1999; Henderson, 2006), illicit drug use (Apostolidis, Fieulaine & Soule, 2006) and risky sex (Keough, 1999; Aronowitz & Morrison-Beady, 2003). For example, in a college-based sample of young adults, Henderson (2006) found both present time hedonistic and present time fatalistic perspectives to be significantly associated with risk behaviors. In a middle-school based sample of youth, future orientation was inversely associated with substance use whereas present orientation was positively associated with substance use. Further, present-orientation was related to higher levels of anger and negative affect, including anxiety and depression, which also impacted youth substance use (Wills, Sandy & Yaeger, 2001). The relationship between present orientation and negative affect is particularly interesting, and points to the importance of “warm” versus “cold” cognitions in relation to future orientation and risk behavior.

*Measurement of Future Time Perspective.* The most widely used measure of time perspective is the Zimbardo Time Perspective Inventory (ZTPI) (Zimbardo & Boyd, 1999). Extensive measurement work has been done on this standardized scale designed to assess for individual variation or preference for specific time orientations. Repeated exploratory and confirmatory factor analyses over a five year period resulted in five factorially distinct subscales tapping into a typology of time perspectives each with demonstrated acceptable psychometric properties including internal and test-retest reliability (Boyd & Zimbardo, 2005).

Past-negative reflect generally pessimistic views of the past, represented by items such as “I think about the bad things that have happened in my life.” In contrast, post-positive orientation reflects a generally positive view of the past, represented by items like “It gives me pleasure to think about my past.” Present-hedonistic reflects a pleasure-seeking, risk-taking perspective on the present. This factor is represented by items like “Taking risks keeps my life from becoming boring.” Present-fatalism reflects a hopeless or helpless attitude, represented by items like “My life path is controlled by forces I cannot influence.” Finally, the future scale represents a ‘general future orientation’ representative of items such as “I am able to resist temptations when there is work to be done.” Unlike the present-oriented factors, future orientation is reflective of an ability to delay gratification, and strive towards future goals (Boyd & Zimbardo, 2005). This research points to the multidimensionality of future orientation, a finding that should be carried over into new measurement work in this area, as done in this dissertation research.

This research builds on the strong foundation of research that establishes positive future orientation as a resiliency resource for youth, especially youth who face multiple forms of marginalization. Conceptual and measurement work points to the importance of taking a latent construct approach to future orientation, and in particular inclusion of perceived threats to future safety. This safety dimension is especially relevant to young men of color residing in low-income urban neighborhoods. Thus, the first paper extends previous research to examine future expectations as a multidimensional latent construct using a community-based sample of African American and Latino adolescents growing up in low-income neighborhoods. Previous measurement work on this scale has not been conducted; nor has the multidimensional structure of future expectations been tested over multiple points in time in adolescence. The aims of paper one are three fold: First, to test the hypothesized multidimensional nature of positive and

negative future expectations as distinct constructs; second to test the reliability of the hypothesized two factor model of future expectations across six time points from early adolescence to emerging adulthood, and finally, to test whether there are significant differences by ethnic group in how young men experience future orientation.

In the second paper, I test the hypothesis of a reciprocal or self-reinforcing relationship between both future orientation factors and two important indicators of adolescent functioning: substance use and involvement in delinquent behaviors. A growing body of literature examines the association of future orientation with a range of adolescent risk behaviors such as early on-set substance use (Wills, Sandy & Yaeger, 2001), alcohol use (Robbins & Bryan, 2004; Keough, Zimbardo, & Boyd, 1999), tobacco (Keough, et. al., 1999; Henderson, 2006), illicit drug use (Petry, Bickel, & Arnett, 1998; Apostolidis, Fieulaine & Soule, 2006), and involvement in antisocial and delinquent behaviors (Corte & Szalacha, 2010; Brezina, 2009; Caldwell, 2006). Researchers have called for longitudinal studies to examine how these relationships unfold over time. In paper two, I undertake such an analysis. Using autoregressive categorical structural equation modeling, I investigate the longitudinal relationships between both expected threats to safety and positive future expectations with substance use and involvement in delinquent behaviors. This paper seeks to shed light on the direction, and persistence, of these relationships across the developmental period of adolescence.

Finally, in the third paper, I apply a mixed methods approach to investigate the content, prevalence and changing trends over time of future fears described by young men from mean age twelve through mean age nineteen. I then examine how fears described qualitatively relate to the two factor model of future expectations. Domains of future orientation are especially critical to understand in relation to marginalized youth, as domain-specific future orientation content is

reflective of both personal experiences and the larger social realities and concerns that young people hold. Previous research has established several domains of future orientation particularly salient amongst adolescence: academics/education, career/occupational, family, interpersonal, personal well-being, and world affairs such as war and peace (Gillies, 1989; Greene, 1986; Nurmi, 1990). However, these broad categories were originally developed from research on majority White middle class youth.

Examining the future fears of minority young men offers a window into the social and psychological landscapes of their inner lives, including potential insight into the struggles or challenges they may face. For urban young men of color, fears related to dying, violence, or poverty represents a significant area of concern, with potential implications for health and well-being across adolescence into adulthood. Moreover, highlighting the future fears of these young men as discussed by participants themselves offers the potential to center youth voice; what these young men have to say about their future worries and fears matters. Future fears are a powerful representation of psychological health, tapping into perceptions of basic security and wellness in the present as well as beliefs about future prospects. Understanding young men's future fears in their own words offers a valuable and underrepresented perspective in future orientation research, which can influence social justice advocacy and inform social service providers' work. Further, a longitudinal approach may shed light on the enduring presence – or absence—of specific content in a young person's psyche about who they will be in the future, and further, to illuminate trends over time in self-described future fears. This is especially important in a group of young men who may experience multiple forms of marginalization based on race, class, and place of residence.

Taken together, this research addresses several important gaps in the current literature on future orientation, risk behavior, and marginalized youth. In doing so, it involves research and service response implications germane to social welfare in terms of supporting healthy development for historically marginalized and underserved youth.

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## **CHAPTER 1.**

### **THE MULTIDIMENSIONALITY OF FUTURE EXPECTATIONS**

#### 1. Introduction

Current U.S. census data indicates a 15% increase in the adolescent population, and the Census Bureau projects that by 2020 nearly 50% of American children from birth to nineteen years old will belong to a racial or ethnic minority group (Census Bureau, 2004). In addition, increasing numbers of children in the United States are growing up in conditions of high poverty. In 2000, the official national child poverty rate, a highly conservative measure of economic hardship, was 17%. Between 2000 and 2010, the number of American children living in poverty increased by nearly 30%, from 12.2 million to 15.7 million children. Moreover, African American children are nine times as likely to grow-up in a high poverty census tract neighborhood compared to White children; Latino children are six times more likely (Annie E. Casey, 2012). Despite these rapidly changing demographics, especially among children and youth, the majority of developmental research continues to focus on majority White samples of youth (McLoyd, 1998). In the field of measurement, scholars have called for a research investigating the psychometric properties of measurement instruments used in research with adolescence focusing on whether there are differences based on racial and ethnic group membership (Harachi, Choi, Abbott, Catalano, & Bliesner, 2006). Much of the research on racial and ethnic minority youth lacks the initial step of determining construct and measurement equivalence in key measures that are later used to predict a variety of adolescent behaviors and outcomes. Addressing these concerns in measurement will aid in strengthening the predictive validity of instruments used in the study of healthy adolescent development.

This research uses data from the Chicago Youth Development Study (CYDS) to test the psychometric properties of a theorized multidimensional latent construct of future orientation

from early adolescence through emerging adulthood. CYDS is a prospective longitudinal study of risk for school failure, antisocial behavior and violence among inner-city African American and Latino young men. The sample provides a unique opportunity to examine the structure of future orientation during adolescence and the transition to adulthood in a population that experiences increased risks while often being under-represented in longitudinal studies (Gorman, Henry, & Tolan, 2000).

### 1.1 Future Orientation in the Context of Adversity

How adolescents cognitively imagine their futures—including positive expectations, hopes, or aspirations and expected hardships threat and fears—is demonstrated to impact a variety of risk behaviors and outcomes (Borowsky, Ireland, & Resnick 2009; Wills, Sandy & Yaeger, 2001). Future orientation shows promise as a resource to promote resiliency amongst adolescents growing up in contexts of adversity. Resiliency in children and youth is widely understood as the ability to adaptively cope with adverse life experiences and obtain positive outcomes (Garmezy, 1985, 1991; Rutter, 1987; Masten, 1989; Masten, Best, & Garmezy, 1990). Earlier studies have linked positive future expectations with increased resiliency in samples of youth growing up in poverty (Werner & Smith, 1992). Wyman, Cowen, Work, and Kerley (1993) investigated the correlates of positive future expectations with aspects of children's social and emotional adjustment among a sample of young urban adolescents who had experienced four or more stressful life events. Cross-sectional analyses revealed significant relationships between positive future expectations and affect regulation, self-esteem, perceived competence, and social-emotional and academic functioning between the ages of 9.5-11.5 years. In longitudinal follow-up, positive future expectations at time one positively predicted greater social-emotional functioning and higher internal locus of control two to three years later (Wyman, et. al., 1993).

Further, a protective effect was observed suggesting that young adolescents exposed to multiple forms of stress who also possessed a positive view of the future may interpret and react to stressful events differently than those without such an outlook. These findings underscore the potential of positive future expectations as a protective factor for youth growing up in environments where they are exposed to chronic stressors. Future orientation is demonstrated to be associated with a wide range of health risk behaviors in adolescence. At the same time, positive future expectations may serve as a resiliency resource for youth who experience structural disadvantage and subsequent daily stressors. Youth's social identities, where they live, and the kinds of daily interactions they have within social and physical environments, are all important considerations for how they will develop and sustain positive or negative future orientations.

This research extends previous measurement work on an earlier version of the future expectations questionnaire (Wyman et. al., 1992; 1993) developed and tested on a high-risk sample of elementary school children. To my knowledge, no psychometric work has been conducted on the adapted version implemented with older adolescence in the Chicago Youth Development Study. Further, this study takes a latent construct approach to future orientation to test the multidimensionality of two theorized dimensions of future expectations: positive future expectations and expected threats to future safety. Given the sample of young men of color residing in low-income neighborhoods in an urban center, expected threats to safety, including basic survival, is an important dimension to consider. The aims of this study are three fold: First, to test the hypothesized multidimensional nature of positive and negative future expectations as distinct constructs; second to test the reliability of the hypothesized two factor model of future expectations across six time points from early adolescence to emerging adulthood, and finally, to

test whether there are significant differences by ethnic group in how young men experience future orientation.

To begin, I will provide a brief overview of how future orientation has been conceptualized and measured. Next, I will situate the current focus on multidimensionality of future expectations, one dimension of future orientation that is hypothesized to represent the most realistic appraisals youth hold in relation to their future possibility. Finally, I will discuss the current study instrument, an adapted version of the Future Expectations Questionnaire (Tolan, 1990), in relation to previous measurement work conducted on an earlier version by Wyman and colleagues (1992; 1993), followed by the psychometric analysis of this adapted instrument across six waves of the CYDS study.

## 1.2 Conceptual and Measurement Approaches to Future Orientation

Three primary approaches to future orientation include conceptualization grounded in theories of human motivation and goal setting, self-theory, and personality research. Across these disciplinary approaches, various terms, including possible selves and time perspective, are used to describe future orientation. Human motivation research investigates the various cognitive and behavioral components of future planning, including individual aspiration, goal setting, and evaluation of actions taken to meet goals (Nuttin, 1984; Nurmi, 1991). Self-theorists define future orientation in terms of an individual's possible selves, or self-relevant cognitions of enduring goals, aspirations, hopes, fears, and threats that function as a framework and guide for individual identity development (Markus and Nurius 1986). Possible selves may also be viewed as motivational resources, serving a self-regulatory function to move individual's towards desired or hoped-for selves and away from feared or negative ones (Aloise-Young, Henningan, and Leong 2001; Oyserman, Bybee, and Terry 2006; Nurius, et al. 2006).

Finally, personality research conceptualize future orientation in terms of an individual's preferred "time perspective," understood as a stable personality characteristic assessed by a typology (past-positive, past-negative, present-hedonistic, present-fatalistic, and future-oriented) of an individual's intrinsic orientation towards time. In this sense, time perspective differs from a possible selves approach to future orientation in that personality traits are considered intrinsic to the individual, whereas possible selves are developed, elaborated and drawn into working play through social cognitive processes that emerge through on-going interactions between the person and their social and physical environments. Each of these conceptual approaches and subsequent measurement strategies towards future orientation will be discussed in briefly below.

### 1.3 Motivation, Behavior Regulation and Possible Selves

Current research on human motivation illustrates how positive future orientation, including positive expectations, aspirations, and positive affect serve a regulatory and motivational function for individuals. The presence of positive future aspirations and hopes may guide individuals towards goal-congruent behaviors, and assist in avoiding behaviors that may lead the individual "off track" (Cross & Marcus, 1994). Personal goals provide both the fuel for individual motivation towards self-actualization as well as cognitively encoding a sense of purpose to guide or regulate current behaviors in ways that will connect the present self with the aspired-to future self (McInerney, 2003; Taylor, Neter, & Wayment, 1995).

Weak self-regulatory capabilities have been evidenced in youth with negative self-concepts in a variety of domains, such as academics (Hoyle & Sherrill, 2006; Roesen & Lau, 2002). In this way, positive future orientation represents how goals or aspirations become internalized, shifting from external to intrinsic source motivation, with significant implications for goal persistence in the face of setbacks and roadblocks (see Koestner, Lekes, et al, 2002, for meta-

analysis). Conversely, a lack of or very rudimentary self-schema in a particular domain means that a young person will be less inclined to recognize their ability within that domain, or adopt steps necessary for completing tasks associated with it (Cross & Marcus, 1994). The lack of positive future expectations is thus an important area of consideration for healthy youth development. Without the requisite scaffolding of positive future expectations, or goals, combined with procedural knowledge and skills to move towards them, the motivational power of future orientation cannot be accessed.

Adolescent possible selves are associated with a range of behaviors including substance use, depression, and school engagement/achievement outcomes (Aloise-Young, Hennigan, & Leong, 2001; Oyserman, Bybee, & Terry, 2006; Oyserman & Fryberg, 2006; Strauman, 2002). For example, in a study of tobacco and alcohol use among early adolescents (grades six through eight), there was a significant relationship between positive future expectations and decreased likelihood of heavy substance use (Aloise-Young, et al., 2001). However, whereas the presence of aspired-to future selves may elicit actions to move individuals toward actualizing their goals, the motivational power of possible selves that are well elaborated and contain prescriptive information compared with more abstract possible selves will be especially potent. For example, in a middle school-based randomized control trial with low-income, minority youth, Oyserman, Bybee, and Terry (2006) found that when well-elaborated academically based possible selves (e.g. 'be a college student') contained cognitive information about how to reach the desired self (e.g. 'I hope to be a better student and therefore I must pay attention in class'), they exerted stronger motivation and regulation influence on student behavior.

#### 1.4 Measurement of Adolescent Possible Selves

Measurement in this area relies on open-ended responses to prompts such as “Next year I expect to be...” or “Next year I want to avoid being...” In addition, youth may be instructed to write down behaviors or strategies they are currently using/not using to attain/avoid future selves (Oyserman, Bybee, Terry, & Hart-Johnson, 2004). Open ended responses are generally categorized by content (e.g. academic aspirations, interpersonal relationships, or career expectations) and valence (positive versus negative). Measurement of possible selves varies widely by study. Youth may be instructed to write down expected selves, hoped for selves, feared selves, or any combination therein. In this way, possible selves focuses on individually-specific content (e.g. “I expect to graduate from high school,” or “I expect to drop out of school”) alongside the presence (or lack of) behavioral strategies to achieve hoped-for, expected or feared selves (e.g. “I will attend class and do my homework”). Measurement work in this area points to the importance of density (number), content (aspirations, expectations, and fears) and valence (positive or negative) of adolescent possible selves.

*Personality approach to future orientation.* Personality researchers conceptualize future orientation as a stable personality characteristic linked to how an individual approaches future planning and avoidance of risk. This research centers on the concept of time perspective, or an individual’s preferred orientation to the past, present, or future. A typology of time orientations includes past-positive, past-negative, present-hedonistic, present-fatalistic, and future-oriented (Zimbardo & Boyd, 1999). Individuals are theorized to adopt a preferred orientation with potential implications for behavioral decision making. For example, an individual who is more present-hedonistic oriented may be able to enjoy the present-moment without dwelling on future anxieties or past worries, but may also have difficulty delaying gratification or setting realistic goals for the future. Whereas individuals may demonstrate a preference or stronger inclination

towards one time orientation, the concept of balance is theorized to capture an individual's ability to adapt or shift from one time orientation to another within a given set of circumstances. Balance is thus conceptualized as an adaptive strategy to maximize successful or health- and wellness promoting actions and outcomes (Keough, 1999).

A growing body of literature examines the influence of time perspective on a range of youth risk behaviors such as early on-set substance use (Wills, Sandy & Yaeger, 2001), alcohol use (Robbins & Bryan, 2004; Keough, 1999), tobacco use (Keough, 1999; Henderson, 2006), illicit drug use (Apostolidis, Fieulaine & Soule, 2006) and risky sex (Keough, 1999; Aronowitz & Morrison-Beady, 2003). For example, in a middle-school based sample of youth, future orientation was inversely associated with substance use whereas present time perspective was positively associated with substance use. Further, present time perspective was related to higher levels of anger and negative affectivity, including anxiety and depression, which also impacted youth substance use (Wills, Sandy & Yaeger, 2001). The relationship between present orientation and negative affect is particularly interesting, and points to the importance of "warm" versus "cold" cognitions in relation to future orientation and risk behavior.

*Measurement of Future Time Perspective.* The most widely used measure of time perspective is the Zimbardo Time Perspective Inventory (ZTPI) (Zimbardo & Boyd, 1999). This 56-item instrument was developed in a college-age sample of students (mean ages 16.5-23.6) (Zimbardo & Boyd, 1999). Repeated exploratory and confirmatory factor analyses over a five year period on college age samples resulting in five factorially-distinct subscales tapping into a typology of time perspectives each with demonstrated acceptable psychometric properties including internal and test-retest reliability (Boyd & Zimbardo, 2005). These subscales include past-negative (a negative or aversive orientation), past-positive (a positive and nostalgic orientation), present-

hedonistic (a pleasure-seeking, instant gratification orientation), present-fatalistic (a pessimistic or fatalistic orientation), and future (a future, goal-oriented orientation).

Zimbardo and Boyd have reported internal consistency estimates for subscale scores based on Cronbach's alpha ranging from 0.74 to 0.82. The structural, predictive, convergent, and discriminant validity of the ZTPI have been examined and the authors have concluded this instrument to be a valid and reliable measure (Zimbardo & Boyd, 1999). The five subscales tap into the multidimensional nature of future orientation, and are not meant as necessarily exclusive dimensions. ZTPI is one of the few multidimensional measures of future orientation that is currently used in research with adolescents. However, some questions remain as to the validity of this scale for diverse adolescent populations; one critique of the measure is that the future subscale focuses solely on positive or goal-oriented orientation to the future, neglecting negative future views (Worrell & Mello, 2007). While the ZTPI has strengths, including the multidimensional approach to conceptualizing and measuring future orientation, further purposive attention in measurement to both positive and negative future outlooks within the developmental period of adolescence could strengthen the conceptual and predictive validity of the approach.

*Multidimensionality and future expectations.* Recent scholarship has called for a renewed focus on the multidimensionality of future orientation in research with adolescents (Spisma, Ickovics, Lin & Kershaw, 2010). As noted above, measurement and operationalization of future orientation varies widely across studies, including time perspective, and the number, content, and valence of possible selves. Still other studies rely on single-item measures of future orientation such as aspirations or expected early death (e.g. endorsing a single item such as "I do not believe

I will live past age twenty”). Spisma, et. al. (2010), advocate for a multidimensional or latent construct approach to future orientation focusing on expectations.

Future expectations may reveal more concretized and realistic beliefs about the future compared to aspirations or hopes. While both are important components of future orientation, research on the aspirations-expectations gap, particularly in regards to educational attainment among marginalized youth, points to the ways that individual’s expectations include realistic appraisals of forces or factors that lay beyond the individual’s control, and which may pose a threat or barrier to achieving aspired-to or hoped-for future selves (Cook, Church, Ajanaku, Kim, & Cohen, 1996; Mickelson, 1990). For example, in cases where racial/ethnic minority youth hold high educational aspirations, their expectations of educational attainment are lower, reflective of appraisals of structural barriers, lack of supports, or financial obstacles to accessing higher education. In a study of ninth grade Mexican-American adolescent’s educational and occupational future selves, participants reported significantly higher educational aspirations than expected or feared educational outcomes (Yowell, 2002). This further illustrates the dimensional differences in hoped-for versus expected future self concept. Future expectations is thus a promising area to focus on, as this domain may represent the most realistic view a young person holds about their future possibility.

At the same time, a latent construct approach allows for a multidimensional operationalization of future expectation that taps into multiple salient components of the construct. As previously discussed, future orientation includes both cognitions about oneself in the future across a variety of domains (e.g. school, career/work, family/friends), as well as affective evaluations of one’s future life (e.g. being happy). It also contains aspects of time perspective relevant to beliefs in fatality or blunted future perspective. Thus, inclusion of both

perceived threats/fears about the future and positive expectations that tap into multiple domains of life is an approach to future orientation research that holds significant promise in terms of understanding how dimensions of this multidimensional construct differentially impact risk behaviors.

## 2. Methods

The current study uses data from waves one through six of the Chicago Youth Development Study (CYDS) to test the psychometric measurement properties, including invariance testing by race, of the future expectations questionnaire (Tolan, 1990). The Future Expectations Questionnaire (Tolan, 1990) administered in CYDS, and upon which this research is founded, is based on an instrument originated by Wyman and colleagues (1992, 1993) for the Rochester Child Resilience Study (RCRS), a study of psychosocial health and functioning in children grades four through six recruited from inner-city schools (n=656).

The psychometric properties of Wyman, et al.'s future expectations scale were originally tested on a sub-sample of children from the RCRS who met criteria for high stress exposure, characterized as having a parent who reported four or more stressors on the Life Events Checklist (Work, Cowen, Parker, & Wyman, 1990). Children were also screened at baseline for overall adjustment using three parent and teacher measures. Children were then divided into two groups "stress adverse," (SA) including children who ranked on the lower third on two of the three adjustment screens, as well as no higher than the middle third on the other adjustment screen. Children were considered "stress resistant" (SR) if they ranked in at least the top third of two of the three adjustments screens and not lower than the middle third on the other. Following these criteria, a total of 147 children (75 in the SR group; 72 in the SA group) were included in the study. The final sample included boys (n=75) and girls (n=61), 45% of whom were African

American, 12% Hispanic, and living in households where the mean monthly family income was \$600-\$900. Parents in this sub-sample reported an average of 9.04 life stressors, roughly twice as many as those in the larger sample. As part of the overall study, children were administered a six-item Future Expectations measure. Six positively phrased items assessing future expectations were rated on a 5-point scale of likelihood (1= not at all, 5= very much). Cronbach's alpha coefficient for the combined scale was 0.70 (Wyman, et. al., 1993).

Tolan (1990) adapted this questionnaire for use in CYDS. To my knowledge, no previous psychometric work has been conducted on this adapted version of the Future Expectations Questionnaire. The adapted questionnaire involves nine positively worded questions about youth's perception of themselves in the future (five years ahead). Items capture both positive future expectations across a variety of domains, including self-efficacy (handling problems), prosocial relationships with family and peers, and sense of holistic well-being. In addition, two items within the questionnaire capture fears about future safety and survival.

The CYDS adapted questionnaire differs from Wyman, et al. (1992, 1993) in several key ways. First, it includes two new questions that tap into expected threats to future safety ("I will be alive and well" and "I will be safe and out of danger"). Second, tapping into prosocial relationships and support, it includes an additional question "My parents will be proud of me." Other items: "have a happy life," "have an interesting life," "handle problems that come up," "Have friends and people that care about me," and "handle problems in school or work," are similar to items in the Wyman and colleagues' scale (small wording changes were made with each item, for example changing "How sure are you that you can handle your schoolwork when you get older?" to "I am sure that I can handle work or school").

This study extends previous research to examine future expectations as a multidimensional latent construct using a community-based sample of African American and Latino adolescents growing up in low-income neighborhoods. Previous measurement work on this scale has not been conducted; nor has the multidimensional structure of future expectations been tested over multiple points in time in adolescence. The aims of this study are three fold: First, to test the hypothesized multidimensional nature of positive and negative future expectations as distinct constructs; second to test the reliability of the hypothesized two factor model of future expectations across six time points from early adolescence to emerging adulthood, and finally, to test whether there are significant differences by ethnic group in how young men experience future orientation.

## 2.1 Study Design and Sample

Beginning in 1991, the Chicago Youth Development Study has continued with eleven waves of data collection over the course of early adolescence into young adulthood. Study recruitment and sampling procedures are detailed elsewhere (Gorman-Smith, Tolan, Zelli & Huesmann, 1996; Gorman-Smith, Tolan, Henry, & Florsheim, 2000). Study participants are African American (53.7%) or Latino (42.7%) young men living in economically distressed inner-city neighborhoods in Chicago during the time of the study. Sixty two percent of study participants live in single-parent homes, nearly half (47.6%) of the families have a total income below \$10,000 per year, and nearly three-quarters (73.5%) have incomes below \$20,000 (Gorman-Smith & Tolan, 1998; Gorman-Smith, Tolan, Henry, & Florsheim, 2000). The current study utilized data from waves 1 through 6 for young men. Sample size per wave ranged from 338 (wave 1) to 248 (Wave 3). After Wave one, over 90% of participants were interviewed at each succeeding wave. Analyses on the measurement model at each wave included only those

participants who were present during that wave. Sample size by wave as follows: Wave one N=338, wave two N=286, wave three N=248, wave four N=254, wave five N=259 and wave six N=228. At wave one, participants ranged in age from 10-15 years with a mean age of 12.33. Subsequent waves were collected when participants were, on average 13, 14, 15, 18 and 19 years of age.

#### 2.1.1. Study attrition

Previous research has addressed participant attrition. For example, Gorman-Smith and colleagues (2002) conducted over twenty comparisons between non-continuing and continuing participants and found no significant differences on a range of measures of delinquency and anti-social behavior, with the exception of teacher report of aggression at wave one, with continuing participants having slightly lower ratings of aggression. The difference accounted for 2% of the variance in teacher aggression ratings and therefore negligible bias in attrition on these characteristics is presumed. For the purposes of this study, analysis of individuals missing after wave one showed no relationship with future self-concept.

## 2.2 Measures

Items were taken from the Future Expectations Questionnaire (Tolan, 1990) administered at each wave of the study. Previous measurement work on this measure has not been conducted. Youth were asked to think about the future, five years ahead. They were then prompted: "Thinking about you and the future, how well do you think each of these things fit you... When I think about the future..." This prompt was followed by eight positively worded items, such as "I will be able to stay safe and out of danger," and "I will be alive and well," (See Table 1). Responses were rated a 5-point Likert-type scale (*1=not at all likely 2=Maybe likely but probably not, 3= Could go either way, 4=Very likely, not absolute, 5=definitely will*).

### 2.3. Statistical Analysis

To determine construct item reliability, inter-item correlations and cronbachs' alpha were tested using SPSS 15.0. Next, Mplus 7.0 was used to perform a confirmatory factor analysis relative to the future self-concept construct. All measurement development was conducted on wave one of the data, and then tested for consistency at waves two through six. Full Maximum Likelihood (FIML) estimation was used to account for missing data (Kline, 2005) in Mplus. FIML has been demonstrated to appropriately handle data that is missing at random (Enders, 2010). Model estimates were based on the weighted least squares likelihood estimator for use with ordinal categorical data. ) A two factor model consisting of "positive future expectations" and "threats to future safety" was hypothesized, to be confirmed in the measurement portion of the model. Due to the nature of the response categories, data were treated as ordered categorical in the confirmatory factor models. Finally, once confirmatory models were established as well-fitting, invariance testing was conducted to examine construct invariance between African American and Latino youth participants at wave two.

## 3. Results

### 3.1. Descriptive

I begin with a preliminary analysis of the psychometric properties of the future expectation measure. Common approaches to determine instrument reliability include internal consistency and test-retest. The test-retest method involves multiple administrations of the same instrument to the same group of people to assess consistency and reliability. One strength of this approach is the use of the same group of participants which theoretically eliminates potential confounding due to heterogeneous sampling (Hendrickson, Massey & Cronan, 1993). Table 2 presents the frequencies, means and standard deviations for each item in the Future Expectations

Questionnaire at each wave. Means were high across waves (range 3.42-4.41). Response scales differed slightly by each wave. At the wave one and two, no participant endorsed a “1” (“Not likely at all”) for the item “My parents will be proud of me.” In addition, at wave two, no participant endorsed a “1” for the item “My life will be interesting.” Although the response distribution was poor at waves one and two, it improved through each wave. In subsequent analyses described below, confirmatory factor analysis was conducted initially at wave one and then re-tested at waves two through six. This approach was taken to establish the internal consistency and reliability of the future expectations measure over time.

For the total sample at waves one through six, internal consistency values for future orientation were found to be satisfactory. A correlation table of inter-item correlations at wave one is shown in table 3; as expected all items are significantly positively associated. Cohen’s *d* effect sizes are small ranging from 0.02-0.14. Cronbach’s alpha for all eight items is 0.73 indicating satisfactory internal consistency.

### 3.2. Confirmatory Factor Analysis

First order confirmatory factor analysis is used to test a theorized multidimensionality of the future orientation construct. In this approach, theory guides the a priori specification of a model including both the number of factors and their correspondence with specific indicators. I specified the model as a two-factor latent construct representing adolescent future expectations. Two indicators “I will be alive and well” and “I will be safe and out of danger,” were set-up to load onto the first hypothesized factor “*expected threats to future safety.*” The remaining six items, including “I am sure that I can handle work or school,” “I think I will have friends and people that care about me,” “I will have a happy life,” “My life will be interesting,” and “My

parents will be proud of me,” were set-up to load onto the second hypothesized factor “*positive future expectations*.” Items were not allowed to cross-load.

Common fit indices for confirmatory factor analysis were used to assess overall model fit including the chi-square fit statistic, TFI, CFI, RMSEA, and discriminant validity. The chi-square fit statistics tests the overall fit of the hypothesized (or specified) model against the covariance matrix assuming no relationships between variables. If the chi-square statistic is not significant, the null hypothesis (that there are no significant differences between the hypothesized model and the covariance structure) is rejected. Thus, a non-significant p-value is desired; however, as the chi-square statistic is sensitive to sample size, a significant value does not necessarily mean that the overall model is poor. In assessing model fit, it is important to consider multiple indices together, as well as the theoretical and predictive validity of the model. The Tucker-Lewis Fit Index (TLI) is another relative fit index that tests the specified model against the base-line model. This fit statistic is positively valued so that higher values indicate better model fit. The Comparative Fit Index (CFI) is an incremental fit index that measures the relative improvement of the specified model against the independent model. The root mean square error of approximation (RMSEA) is scaled from 0 to 1 with higher scores equated “worse” model fit. This fit statistic is sensitive to both sample size and complexity; as these two factors increase, so do degrees of freedom in the model which may result in smaller RMSEA. Thus, simple models, where fewer relationships are specified may have higher (or “worse”) RMSEA scores. Finally, a set of variables assumed to measure different factors shows discriminant validity when the correlations between factors is not too high. In this case, high correlation between the two hypothesized latent factors would indicate a single, common factor and question the study hypothesis of multidimensionality (Kline, 2011).

Overall strong model fit indices would support the hypothesized two factor model. Due to the nested nature of the data, a one factor model, whereby all eight indicators were set-up to load onto a single, one-dimensional latent construct was then assessed. If the overall model fit indices for the two-factor solution were better fitting than the one-dimensional model, support for the theorized model would be evidenced. In addition to overall model fit, factor loadings for each item on its theorized factor must be assessed. Strong, statistically significant loadings (of 0.5 or higher) of the item on the factor indicate good factor structure. All measurement development was tested using wave one of the data, and then checked for consistency across waves two through six.

In the measurement model for wave one, all factor loadings were acceptable, ranging from 0.46-0.74 and loaded significantly ( $p < 0.000$ ) on the appropriate theorized construct<sup>1</sup>. Fit indices were good. The  $\chi^2$  was non-significant (25.37 (13),  $p = 0.21$ ) thus the null hypothesis (that there are no significant differences between the specified model and base-line model) is rejected, indicating good model fit of the hypothesized two-factor model. The comparative fit index was (CFI) = 0.99, the Tucker-Lewis Fit Index (TLI) = 0.98, and the RMSEA = 0.05, indicating overall strong model fit (Hu & Bentler, 1999). Between-factor correlation was 0.73 indicating significant overlap between factors but also adequate discriminant validity (Kline, 2011). Figure 1 shows the measurement model for the two-factor future orientation construct at wave 1. This measurement model was tested against a one dimensional measurement model with all indicators

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<sup>1</sup> One additional item “I am sure I can handle the problems that might come up” was theorized to load onto the second factor “positive future expectations.” However, this item cross-loaded onto the first factor “expected threats to safety” at subsequent waves. CFA model fit indices without this item were as strong as with the item included. Thus, for theoretical validity, the item was dropped from the analysis at each wave.

loading on one construct. Fit indices (chi-square statistic, CFI, TLI, and RMSEA) were worse with the one dimensional model compared to the two dimensional model.

The two-factor measurement model was then replicated at waves 2 through 6. Standardized factors loading, unstandardized loadings, standard errors and model fit indicators for each wave are shown in Table 4. Across each wave, factor loadings were high and significant ( $p < 0.000$ ) and ranged from 0.56 to 1.00. The two factor model was tested against the one dimensional model across all waves of data. Model fit indices for the two factor model were consistently better fitting of the data than the one factor model (chi-square range = 18.87 -52.78) across all waves. The overall range for the fit indices across waves are as follows: Comparative Fit Index (CFI) = .97-.10, the Tucker-Lewis Fit Index (TLI) = .95-.98, and the RMSEA = .04-.01. Although the RMSEA is above the desired range in waves 4, 5, and 6, overall fit indices within these waves indicate a good model fit. As previous researchers have argued, model fit indices must be evaluated as a composite whole, not as individual items, as models are sensitive to sample size, and number of degrees of freedom (Kline, 2011). Additionally, the theoretical basis for confirmatory factor analyses in general must be taken into consideration in terms of model evaluation (Schermelleh-Engel, Moosbrugger, & Müller, 2003; Weston & Gore, 2006). Overall, model fit indices indicate good fit between the model and the observed data across time. No post-hoc modifications were indicated from the analysis.

### 3.2.1. Test-retest Reliability

Latent factors significantly correlated with like factor across each wave of data with few exceptions; positive future expectations and expected threats to safety did not always significantly correlate with one another. In addition, expected threats at wave 1 did not correlate with expected threats at wave 3; expected threats at wave 5 did not correlate with expected

threats at wave 6. Overall, the positive future expectations latent construct demonstrated stronger correlational patterns across the six waves (see table 5).

### 3.2.2. Invariance Testing

Testing the question of construct equivalence between racial groups was the last set of analyses conducted. As discussed previously, construct equivalence involves four distinct levels: conceptual (does the construct mean the same things between groups?), functional (does the construct relate to behavior/outcomes in the same ways?), item (the construct has the same meaning across groups using a specific measurement instrument), and scalar (construct is measured on the same metric between groups, and a particular score, or magnitude reflects an equivalent meaning) (Harachi, et. al., 2006). Due to the nature of using secondary data analysis for this study, only the latter forms of construct equivalence, functional, item and scalar, were assessed.

Invariance testing was conducted to determine that the two-factor structure of the Future Expectation Measure fit the data equally well for African American and Latino participants. Invariance testing was conducted at wave two of the study. The rationale for this choice is two-fold, first, although there were no significant differences in attrition between participants based on future self-concept, there were approximately one hundred participants who never returned after wave one. Wave two of the study thus represents the majority of the sample that continued to participate in additional waves of data collection. Second, in further analyses investigating the relationship between future self-concept and risk behaviors, wave one is used as control data. Future orientation is modeled first at wave two, thus for the purposes of this research, establishing invariance at wave two is a necessary pre-requisite for further analytic work.

The first goal was to establish functional invariance, also referred to as configural invariance (Vanberg & Lance, 2000). In this first step, a fully unconstrained multi-group confirmatory factor analysis is run whereby all model parameters are allowed to be estimated freely, thus allowing for factor loadings, model fit indices, and inter-correlations between latent factors for each group (in this case African American and Latino participants) to be established. Next, the constrained model is run whereby factor loadings and variances are constrained to equal to test for statistical differences in the magnitude of parameters, to establish metric invariance. If there are no significant difference in the parameters of the model between groups configural invariance is established (Harachi, et. al., 2006). Finally, the intercepts in the model are constrained to equal to test scalar invariance, or whether there are significant differences in the means of the construct based on race. No significant differences in the magnitude of the construct by group membership established this level of measurement invariance.

I followed the steps laid out by Barbosa-Leiker et. al. (2012) to examine the freely estimated (configural) model and the fully constrained (scalar) model for measurement invariance. Weak factorial invariance is considered to be the baseline minimum of construct invariance when examining covariance relations (Little, Preacher, Selif, & Card, 2007). To determine weak construct invariance, the freely estimated model assumed configural invariance, meaning that no parameters were constrained by ethnic group. Fit indices for the configural model indicated good fit:  $\chi^2=108.87(52)$   $p<0.000$ , RMSEA=0.088, CFI=0.96, TLI=0.95. Weak invariance having been established, the next step involved testing for strong invariance in the scalar model. In this model, both factor loadings and item intercepts were constrained to be equal between ethnic groups. Model fit indices for the fully constrained model indicated good model fit:  $\chi^2=124.98(80)$ ,  $p=0.001$ , RMSEA=0.063, CFI=0.97, TLI=0.97. Finally, there was no significant

detriment of model fit when using a chi-square significant test of different ( $\chi^2=27.65(28)$ ,  $p=0.48$ ), thus indicating strong model invariance by race.

#### 4. Discussion

This study establishes support for the multidimensional nature of future expectations from early adolescence through emerging adulthood. Across six time points (mean ages twelve through 19 years), test-retest confirmatory factor analyses support a two factor structure of “positive future expectations” and “expected threats to future safety.” These findings suggest that “positive” and “negative” future expectations are not simply opposite ends of the spectrum of a single construct, rather, there are conceptually distinct beliefs at play that may, in turn, differentially affect risk behavior and health outcomes for young people.

It is particularly noteworthy that findings support the factor reflecting young men’s expectations to encounter threats to their physical safety and actual survival within a relatively short time frame of five years. The importance of this domain of future expectations links up with research on truncated life expectancy showing that one in seven youth believe they have a 50/50 change of living to age thirty-five (Borowsky, Ireland & Resnick, 2009). Further, belief in premature death is more prevalent in males, racial and ethnic minorities, urban-dwelling youth, and youth who receive public assistance (Duke, Skay, Pettingell & Borowsky, 2009). Thus, tapping into young men’s expectation to face threats to their safety is a critical dimension of future orientation to capture. Indeed, youth who hold beliefs in an early death in mid-adolescence are less likely to be in school, employed, in the military and less likely to have a high school diploma in young adulthood (Duke, et al, 2011).

The added dimension of expected threats to safety is relevant to this group of young men who may face greater exposure to neighborhood and community violence. For example, one

study of African American eighth grade students found that the combination of exposure to community violence and daily hassles, including experiencing racism, was significantly associated with both internalizing and externalizing behaviors (Li, Nussbaum, & Richards, 2007). Chronic exposure to external threats and hassles may impact future orientation as well; resulting in increased expectation of threats to one's future safety and well-being. This speaks to the phenomenon of the slow erosion of wellbeing and optimism for young men of color based on everyday experiences of discrimination, highlighting the corrosive qualities of racism and prejudice. Further, it is possible that different components of future expectations, positive or expected threats, may influence health and important youth outcomes in different ways. Test-retest confirmation of the multidimensionality of the Future Expectations Questionnaire across six time points sets the stage for future research that can test the differential impact of these factors on youth risk behavior.

Next, attention to between-group differences in psychometric testing is an important contribution of this research. Scholars argue for more purposeful attention especially to racial or ethnic group differences in measurement work with adolescents. The assumption that measures are "tapping in" to the same underlying construct for diverse adolescent groups is erroneous; recent research examines how significant group memberships such as race or ethnicity may affect measurement equivalence (Rosay, Gottfredson, Armstrong & Harmon, 2000). In this study, strong measurement invariance was established for the two-factor model of future expectations; no significant differences in the structure or magnitude of this model were detected. Thus, positive future expectations and expected threats to future safety is representative of the underlying structure of future expectations for both African American and Latino young

men in this sample. Taken together, these findings hold promise for future research attending to the future orientation of young men of color residing in urban centers.

#### 4.1. Limitations

Despite the promising implications of this research, limitations remain. First, secondary data analysis of the Chicago Youth Development Study was used for this psychometric investigation of the Future Expectations Questionnaire. Data were not originally collected for this purpose, and therefore, the study is limited in terms of the ability to test for convergent reliability with other like measures. Further, domain-specific future expectations, e.g. academic, interpersonal, or career, are not included. Next, the sample consisted of only males. Research on gender differences in possible selves of adolescent have found significant differences in the frequency of future fears, with girls reporting more future fears in the interpersonal domain (e.g. getting divorced, being alone, not having children) than their male counterparts (Anthis, Dunkel, & Anderson, 2004; Knox, Funk, Elliott, & Bush, 2000). Other research has reported increased hopelessness, higher expectations for early death, and lower positive expectations among males (Brolland, 2003; Mello & Swanson, 2007; Duke, Skay, Pettingell & Borowsky, 2009). Clearly, gender plays a significant role in shaping how a young person views their future possibilities, and further research is warranted to test the validity of the Future Expectations Questionnaire for young women. Finally, the sample in the current study consisted of only African American and Latino young men, providing a unique opportunity to examine future expectations among this group. Yet, other research indicates differences in the content, valence, and density of future orientation by racial or ethnic group membership (Kao, 2000; Yowell, 2002). Thus, testing the two-factor structure of the measurement model on other racial/ethnic groups is warranted.

Overall, the nature of the sample is a limitation in terms of generalizing conclusions to a broader population of adolescents.

## 5. Conclusion

Adolescent future orientation, including expectations, is a promising area of research connecting to goal-setting, motivation, and behavioral decision making across a range of important indicators of well-being. This research advances understanding of the structure of future expectations longitudinally, and supports a latent construct approach to future orientation. The findings suggest that in the case of expectations, it is both positive appraisals and expected threats or fears that matter for young men of color. It is possible that different components of future expectations, positive or expected threats, may influence behavior and subsequent health and wellness outcomes for youth in different ways. Test-retest confirmation of the multidimensionality of the Future Expectations Questionnaire across six time points sets the stage for future research that can test the differential impact of these factors on youth risk behavior. For example, do youth with robust positive future expectations exhibit greater resiliency? Do youth with heightened expected threats to future safety exhibit greater likelihood of engaging in risky behaviors? Furthermore, does a multidimensional approach to assessing future expectations strengthen the predictive power of the construct in determining important indicators of adolescent well-being like health risk behaviors and psychosocial functioning? As a potentially mutable resource with the ability to impact a wide range of adolescent behaviors and enhance healthy development, future orientation is especially promising as a component of prevention or intervention efforts with marginalized youth. Understanding the differential impacts of these dimensions of future orientation in relation to risk behavior could be especially

beneficial for youth who exhibit negative, or blunted, future expectations, as they may benefit the most from interventions designed to bolster this aspect of identity.

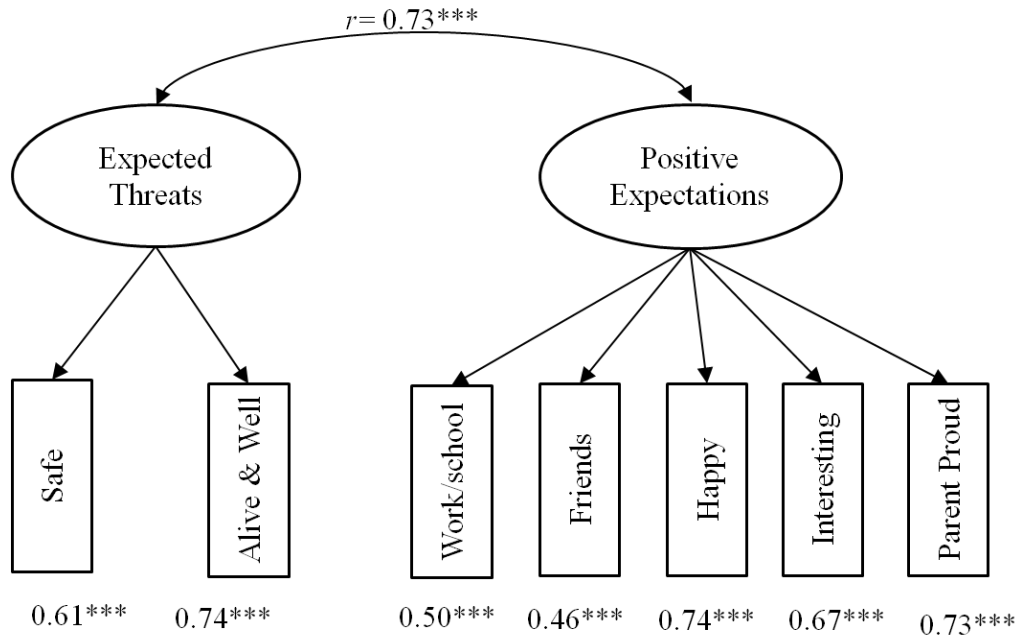


Figure 1.1: Wave One Two Factor Solution Future Expectations

Table 1.1

*Future Expectations Item Frequencies, Means, and Standard Deviations, Waves 1-6***Wave 1 Future Expectations Item Frequencies, Means, and Standard Deviations**

Item	Frequency Response 1	Frequency response 2	Frequency response 3	Frequency response 4	Frequency response 5	Mean, <i>SD</i>	N
I will be able to stay safe and out of danger.	17	56	91	116	58	3.42, (1.11)	338
I will be alive and well.	5	44	80	120	89	3.72 (1.04)	338
I am sure that I can handle work or school.	1	36	53	138	110	3.94 (0.97)	338
I think I will have friends and people that care about me.	2	17	25	127	167	4.30 (0.86)	338
I will have a happy life.	1	15	52	143	127	4.12 (0.85)	338
My life will be interesting	1	27	52	140	118	4.03 (0.92)	338
My parents will be proud of me.	0	12	31	103	192	4.41 (0.80)	338

**Wave 2 Future Expectations Item Frequencies, Means, and Standard Deviations**

Item	Frequency Response 1	Frequency response 2	Frequency response 3	Frequency response 4	Frequency response 5	Mean, <i>SD</i>	N
I will be able to stay safe and out of danger.	11	54	74	99	48	3.42 (1.09)	286
I will be alive and well.	3	29	91	91	72	3.70 (0.99)	286
I am sure that I can handle work or school.	5	25	37	131	88	4.00 (0.97)	286
I think I will have friends and people that care about me.	1	12	21	119	133	4.30 (0.81)	286
I will have a happy life.	1	17	52	117	99	4.04 (0.89)	286
My life will be interesting	0	14	41	124	107	4.13 (0.84)	286
My parents will be proud of me.	0	9	19	97	161	4.43 (0.75)	286

Response code: 1= Not likely at all, 2=May be likely but probably not, 3=Could go either way, 4=Very likely, not absolute, 5=Definitely will

Table 1.1 continued

**Wave 3 Future Expectations Item Frequencies, Means, and Standard Deviations**

Item	Frequency Response 1	Frequency response 2	Frequency response 3	Frequency response 4	Frequency response 5	Mean, <i>SD</i>	N
I will be able to stay safe and out of danger.	10	30	90	92	26	3.38 (0.97)	248
I will be alive and well.	5	32	83	78	50	3.55 (1.02)	248
I am sure that I can handle work or school.	2	17	35	125	69	4.01 (0.88)	248
I think I will have friends and people that care about me.	1	13	26	93	115	4.24 (0.87)	248
I will have a happy life.	1	9	52	98	88	4.06 (0.86)	248
My life will be interesting	2	10	38	105	93	4.12 (0.87)	248
My parents will be proud of me.	2	5	30	81	130	4.34 (0.83)	248

**Wave 4 Future Expectations Item Frequencies, Means, and Standard Deviations**

Item	Frequency Response 1	Frequency response 2	Frequency response 3	Frequency response 4	Frequency response 5	Mean, <i>SD</i>	N
I will be able to stay safe and out of danger.	12	20	90	80	52	3.55 (1.05)	
I will be alive and well.	7	23	87	85	52	3.61 (1.00)	
I am sure that I can handle work or school.	2	18	37	115	82	4.01 (0.91)	
I think I will have friends and people that care about me.	2	8	20	89	135	4.37 (0.82)	
I will have a happy life.	2	14	51	93	94	4.04 (0.93)	
My life will be interesting	1	9	40	96	108	4.19 (0.85)	
My parents will be proud of me.	1	10	34	71	138	4.32 (0.88)	

Response code: 1= Not likely at all, 2=May be likely but probably not, 3=Could go either way, 4=Very likely, not absolute, 5=Definitely will

**Wave 5 Future Expectations Item Frequencies, Means, and Standard Deviations**

Item	Frequency Response 1	Frequency response 2	Frequency response 3	Frequency response 4	Frequency response 5	Mean, <i>SD</i>	N
I will be able to stay safe and out of danger.	3	17	79	96	64	3.78 (0.93)	259
I will be alive and well.	0	13	75	103	68	3.87 (0.86)	259
I am sure that I can handle work or school.	5	4	34	123	93	4.14 (0.84)	259
I think I will have friends and people that care about me.	2	5	17	95	140	4.41 (0.76)	259
I will have a happy life.	1	6	45	102	105	4.17 (0.82)	259
My life will be interesting	2	3	27	97	120	4.27 (0.81)	259
My parents will be proud of me.	2	7	26	92	132	4.33 (0.82)	259

**Wave 6 Future Expectations Item Frequencies, Means, and Standard Deviations**

Item	Frequency Response 1	Frequency response 2	Frequency response 3	Frequency response 4	Frequency response 5	Mean, <i>SD</i>	N
I will be able to stay safe and out of danger.	4	9	38	97	80	4.05 (0.91)	228
I will be alive and well.	1	5	42	83	97	4.18 (0.84)	228
I am sure that I can handle work or school.	2	1	10	90	125	4.47 (0.69)	228
I think I will have friends and people that care about me.	4	2	10	48	164	4.61 (0.77)	228
I will have a happy life.	1	3	18	67	139	4.49 (0.74)	228
My life will be interesting	1	2	14	66	145	4.54 (0.69)	228
My parents will be proud of me.	1	3	12	46	166	4.64 (0.69)	228

Response code: 1= Not likely at all, 2=May be likely but probably not, 3=Could go either way, 4=Very likely, not absolute, 5=Definitely will

<u>Observed Variable</u>	1. Handle Problems	2. Safe/Out of Danger	3. Alive/Well	4. Handle School	5. Caring Relat.	6. Happy	7. Interesting	8. Parents Proud
1. Handle problems that come up	1							
2. Safe & Out of Danger	.38***	1						
3. Alive & Well	.25***	.40***	1					
4. Handle Work/School	.18**	.22***	.25***	1				
5. Friends/Care Relationships	.14*	.15**	.16**	.21***	1			
6. Happy Life	.19***	.29***	.36***	.27***	.23***	1		
7. Interesting Life	.17**	.26***	.25***	.25***	.16**	.45***	1	
8. Parents Proud	.19***	.23***	.34***	.28***	.28***	.38***	.42***	1

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6
Measured Variable	Standardized factor loading (Unstandardized factor loading, <i>SE</i> )					
<b>Factor 1: Future Safety</b>						
I will be able to stay safe and out of danger.	0.61 (1.00, 0.00)	0.76 (1.00, 0.00)	0.80 (1.00, 0.00)	0.82 (1.00, 0.00)	0.87 (1.00, 0.00)	0.85 (1.00, 0.00)
I will be alive and well.	0.74 (1.22, 0.14)	0.85 (1.12, 0.10)	0.83 (1.03, 0.08)	0.86 (1.06, 0.06)	0.84 (0.97, 0.06)	0.89 (1.04, 0.06)
<b>Factor 2: Positive Future Expectations.</b>						
I am sure I can handle work or school.	0.50 (1.00, 0.00)	0.56 (1.00, 0.00)	0.60 (1.00, 0.00)	0.60 (1.00, 0.00)	0.57 (1.00, 0.00)	0.73 (1.00, 0.00)
I will have friends and people that care about me.	0.46 (0.93, 0.12)	0.66 (1.17, 0.12)	0.62 (1.02, 0.10)	0.76 (1.26, 0.09)	0.67 (1.18, 0.11)	0.79 (1.09, 0.05)
I will have a happy life.	0.74 (1.48, 0.14)	0.79 (1.41, 0.13)	0.83 (1.38, 0.12)	0.87 (1.45, 0.10)	0.90 (1.58, 0.10)	1.00 (1.26, 0.05)
My life will be interesting.	0.67 (1.35, 0.13)	0.79 (1.41, 0.13)	0.90 (1.49, 0.12)	0.7 (1.32, 0.09)	0.85 (1.49, 0.10)	0.83 (1.13, 0.06)
My parents will be proud of me.	0.73 (1.47, 0.14)	0.75 (1.341, 0.13)	0.73 (1.20, 0.10)	0.85 (1.41, 0.10)	0.85 (1.49, 0.10)	0.87 (1.20, 0.06)
<b>Model Descriptors</b>						
$\chi^2$ , df, p-value	25.37 (13), p=0.21	28.93 (13), p=0.01	18.87 (13), p=0.13	78.40 (13), p=.000	39.75 (13), p=.000	52.78 (13), p=.000
CFI	0.99	0.99	0.99	0.97	0.99	0.98
TLI	0.98	0.98	0.99	0.95	0.98	0.98
RMSEA (90%CI)	0.0 (0.02-0.84)	0.07 (0.03-0.10)	0.04 (0.00-0.08)	0.14 (0.11-0.17)	0.09 (0.06-0.12)	0.12 (0.08- 0.15)
Inter-Factor Correlation	0.73	0.68	0.69	0.80	0.72	0.87

**Table 1.4**  
*Correlations Between Latent Factors Positive Expectations and Expected Threats, Waves 1-6*

<u>Latent Factor</u>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. W1 Positive Expectations	1											
2. W1 Expected Threats	0.71***	1										
3. W2 Positive Expectations	0.31***	0.19*	1									
4. W2 Expected Threats	0.34***	0.36***	0.68***	1								
5. W3 Positive Expectations	0.42***	0.21*	0.41***	0.26***	1							
6. W3 Expected Threats	0.20**	0.17	0.26**	0.17*	0.69***	1						
7. W4 Positive Expectations	0.17*	0.13	0.38***	0.11	0.55***	0.48***	1					
8. W4 Expected Threats	0.14	0.35***	0.15	0.19*	0.37***	0.55***	0.80***	1				
9. W5 Positive Expectations	0.21**	0.10	0.30***	0.13	0.32***	0.15*	0.33***	0.12	1			
10. W5 Expected Threats	0.15	0.21*	0.28***	0.16*	0.23**	0.32***	0.29***	0.22**	0.72***	1		
11. W6 Positive Expectations	0.24**	0.14	0.26**	0.08	0.15*	0.15*	0.31***	0.17*	0.28***	0.28**	1	
12. W6 Expected Threats	0.14	0.10	0.25**	0.14	0.19	0.21**	0.31***	0.33***	0.10	0.32***	0.86***	1

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CHAPTER 2.  
**THE RECIPROCAL EFFECTS BETWEEN FUTURE ORIENTATION, SUBSTANCE  
USE AND DELINQUENCY**

*I'm done predictin' the future. I'm just goin' with the flow right now...I mean, you [gotta] treat every day like [it's] you're last day...*

-18 year old African American youth in West Philadelphia

### 1. Introduction

African American and Latino youth growing up in high poverty urban environments experience convergent and cumulative risks to healthy development that disproportionately relegate them to poverty, significantly limit their life possibilities, and increase their overall lifetime odds of involvement in risk behaviors (Children's Defense Fund, 2007). For the past two decades, research on the impacts of structural inequalities and contextual factors on psychosocial development and functioning has been a focal area of youth scholars (Jessor, 1993; Ogbu, 1993; Stanton-Salazar & Spina, 2000; Leventhal & Brooks-Gunn, 2000). A significant body of work on contextualized risk and development has focused on youth identity formation; and in particular, the salience of future orientation, or cognitive representations of the future on youth developmental trajectories (Oyserman, 2001).

How young people conceptualize their futures has been demonstrated to be strongly associated with a range of important youth risk behaviors and outcomes including substance use and delinquency (Rothman, Bernstein & Strunin, 2010; Borowsky, Ireland & Resnick, 2009; Burton, Obeidallah & Allison, 1996). Part of the relationship between negative future orientation and health risk behaviors like substance use may be attributed to a stress-coping response. Youth who exhibit negative future orientation—or or the inability to imagine the future at all—may use substances to cope with stress, or avoid negative thoughts and emotions. At the same time, the

theory of future discounting, demonstrates how the expectation of early death amongst youth in high risk environments may lead to a sense of foreshortened or blunted future orientation, and a “living in the moment” mentality. Youth who do not expect to live into adulthood may be more likely to engage in delinquent behaviors, or “discount” the importance of school because investments in the future are not going to “pay off.”

To date, research on adolescent risk behaviors, including substance use and involvement in delinquent acts has relied on cross-sectional studies that limit our understanding of how the relationship between future orientation and risk unfolds over time. Multiple researchers point to the need for longitudinal studies to investigate the developmental processes underlying this dimension of identity, and the relationship between future orientation and risk behaviors across this key developmental period (Aronowitz & Morrison-Beady, 2003; Duangpatra, et al, 2009; Peters, et al., 2005; Gomez, et al., 2010). The current study uses four waves of longitudinal data from the Chicago Youth Development Study (CYDS), a prospective cohort study of the risk of school failure and antisocial behavior among African American and Latino young men growing up in inner-city neighborhoods, to examine the relationship between future orientation, substance use, and involvement in delinquent behaviors from early adolescence through emerging adulthood.

Examining these relationships across time will help in discerning the longevity and direction of the influence of future orientation on risk behavior. For example, does future orientation predict increased involvement in risk behaviors across this developmental period or is the relationship within-time only? Further, is the relationship bi-directional, with increased involvement in risk predicting negative orientation at the next time point and vice versa? Illuminating the nature of these pathways will deepen our understanding of how this construct

functions, with implications for intervention, such as positive youth development and asset-building programs, that can help young people develop a positive view of the future.

### 1.1. Adolescent Future Orientation in the Context of Adversity

Future orientation encapsulates how individuals cognitively represent the future, including content (hopes, fears, aspirations, expectations), valence (positive or negative affect), and horizon, or how far into the future an individual can imagine. Theoretical conceptualizations of future orientation include time extension (Lessing, 1972), time perspective (Nurmi, 1991; Zimbardo & Boyd, 1999), and possible selves (Markus & Nurius, 1986). A growing body of literature examines the association of future orientation with a range of adolescent risk behaviors such as early on-set substance use (Wills, Sandy & Yaeger, 2001), alcohol use (Robbins & Bryan, 2004; Keough, Zimbardo, & Boyd, 1999), tobacco (Keough, et. al., 1999; Henderson, 2006), illicit drug use (Petry, Bickel, & Arnett, 1998; Apostolidis, Fieulaine & Soule, 2006), and involvement in antisocial and delinquent behaviors (Corte & Szalacha, 2010; Brezina, 2009; Caldwell, 2006).

Across these studies, future orientation is significantly associated with adolescent risk behavior; either as a protective factor (when positively evaluated) or as a risk factor (when negatively evaluated). Recent studies focus on youth considered to be at greater risk for developing negative or blunted future orientations based on membership within multiple marginalized groups, and the consequences of negative orientation for substance use and involvement in delinquent behaviors. At the same time, positive future orientation can be a protective resource for youth growing up in urban poverty (Werner & Smith, 1992; Wyman, Cowen, Work, & Kerley, 1993; Aronowitz & Morrison-Beady, 2003).

## 1.2. Positive Future Orientation: A Resiliency Resource for High Risk Youth

Earlier studies have linked positive future expectations with increased resiliency in samples of youth growing up in poverty (Werner & Werner, 1992). Positive expectations were associated with greater social and emotional adjustment amongst urban early adolescents (ages 9.5-11.5 years) who had experienced four or more stressful life events (Wyman, Cowen, Work, and Kerley, 1993). In longitudinal follow-up, positive future expectations at time one positively predicted greater social-emotional functioning and higher internal locus of control two to three years later (Wyman, et. al., 1993).

More recently, Dubow, Arnett, Smith, & Ippolito (2001) examined the relationship between positive future expectations and risk and protective factors in a mixed-race and gender sample of middle school students (grades six through eight) recruited from inner-city urban schools in the Midwest and found positive future expectations to be associated with fewer problem behaviors, negative peer relationships and higher levels of school involvement, internal resources, and social support. High internal resources and social support predicted increases in positive expectations nine months later. Conversely, problem behaviors and negative peer interactions predicted lower expectations. Finally, low positive expectations at time one predicted significant increase in problem behaviors at time two (Dubow, Arnett, Smith, & Ippolito, 2001).

Part of the relationship between positive future orientation and better psychosocial health may be attributed to the self-regulatory and motivational functions of positive future orientation, including positive expectations, aspirations, and positive affect. Personal goals provide both the fuel for individual motivation towards self-actualization as well as cognitively encoding a sense of purpose to guide or regulate current behaviors in ways that will connect the present self with the aspired-to future self (McInerney, 2003; Taylor, Neter, & Wayment, 1995). At the same time, weak self-regulatory capabilities have been evidenced in youth with negative self-concepts in a

variety of domains (Hoyle & Sherrill, 2006; Roesen & Lau, 2002). In this way, positive future orientation represent an operationalization of how goals or aspirations become internalized, shifting from external to intrinsic source motivation, with significant implications for goal persistence in the face of setbacks and roadblocks (see Koestner, Lekes, et al, 2002, for meta-analysis).

Further, a lack of or very rudimentary self-schema in a particular domain means that a young person will be less inclined to recognize their ability within that domain, or adopt steps necessary for completing tasks associated with it (Cross & Marcus, 1994). The lack of positive future expectations is thus an important area of consideration for healthy youth development. Without the requisite scaffolding of positive future expectations, or goals, combined with procedural knowledge and skills to move towards them, the motivational power of future orientation cannot be accessed. The motivational and self-regulatory functions of positive future orientation may account for the protective effect of positive orientation on healthy youth development. Whereas positive future orientation may serve as a resiliency resource, exerting self-regulatory and motivational capacities to guide youth towards desired or aspired-to future goals, negative future orientation is strongly associated with adolescent risk behavior.

#### 1.2.1. Contextualized Risk and Substance Use

Development of negative and foreshortened future orientation and subsequent involvement in risk behaviors must be understood through a lens of contextualized risk. Young people situated at the intersection of multiple forms of marginalization (social and economic) may be more likely to develop negative future orientations. For example, in a sample of Latino and African American youth attending alternative high schools in Texas, negative future orientation was significantly associated with both self-reported substance use in the past thirty days and self-

reported lifetime substance use (Peters, et. al., 2005). Similarly, Gomez, Thompson, & Barczyk (2010) found that among homeless young adults (ages 18-23) negative future orientation was associated with increased alcohol use. One possible mechanism at play is the relationship between experienced trauma, negative future orientation and substance use. Both homeless youth and alternative school youth experience disproportionately high rates of trauma, which in turn is linked with coping behaviors like substance use (Bender, Ferguson, Thompson, Komlo, & Pollio, 2010; Grunbaum & Basen-Engquist, 1997; Buzi, et. al., 2003).

There is a complex interconnection between trauma, substance use, and negative future orientation which points to the possibility of self-medication, or experiential avoidance, as an explanation for these relationships (Khantzian 1985; 1997). Experiential avoidance includes adopting behaviors to avoid, escape, or numb, unwanted internal experiences or those external conditions that elicit them (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). In this regard, negative future orientation may be both a predictor and outcome of substance use, indicating the possibility of a reciprocal relationship. For example, in a qualitative study of alcohol use among primarily African American and Latino low-income youth in the Boston area, multiple experiences of adverse childhood events was linked with motivations to drink. Further, youth described a sense of hopelessness about the future, and drinking as a means of coping with negative feelings (Rothman, Bernstein & Strunin, 2010).

Using substances as a form of self-medication to escape from chronic stress is especially harmful as this may put young people at greater risk for developing alcohol dependency. Lloyd & Turner (2008) found that cumulative exposure to stressful events significantly increased the odds of alcohol dependence among a diverse sample of urban young adults (ages 20-21) residing in Miami-Dade County, Florida. Both distal and more proximal experiences of stress impacted

this relationship, lending credence to the theory of cumulative stress and further highlighting the unique contribution of earlier experience of stressful life events on later alcohol dependence. In addition, early studies of future orientation amongst alcoholic individuals show differences in time extension, amongst heavy users. Specifically, heavy drinkers tend to exhibit much shorter time perspective, and increased sense of fatalism about the future than social or non-drinkers (Sattler & Pfu-grath, 1970; Smart, 1968). These findings are suggestive of a reciprocal or bi-directional relationship between negative future orientation and substance use. Using substances may contribute to a bleak or pessimistic future outlook, which in turn can reinforce the risk behavior. At the same time, negative future orientation may develop due to complex histories of experienced trauma, chronic stress, or negative childhood events, and in turn, substance use may be adopted as a coping strategy. Longitudinal examination of these relationships would shed light on the directional nature of these relationships.

### 1.2.2. Contextualized Risk, Life Uncertainty and Delinquent Behavior

Other work considers the impact of negative future orientation on involvement in violent and delinquent behavior. For example, in his ethnography of African American young men growing up in inner city Philadelphia, Anderson (1999) reveals how the powerful belief in “no tomorrows” informs in-the-moment decision making. Precisely because the future is uncertain, unknowable, and possibly unattainable, a present-oriented “live hard now” mindset was commonly described by young men in the study. Through adaptation of a “code of the street,” daily maintenance of respect, primarily from one’s peers, is attained through developing a hyper-masculine persona, including demonstrating that one is willing to engage in violence if necessary to maintain respect. This approach to life, termed “living on the edge,” is predicated on the shared experience of believing that early death is inevitable.

Hoffman (2004) finds similar themes of expectation of being shot, assaulted, or killed amongst a sample of youth from Los Angeles and Boston involved in violent delinquent behavior. The omnipresence of violence for these youth led to an expectation in early death, and contributed to decisions to engage in violent acts themselves. This kind of uncertainty in the future, or shortened lifespan estimates, may lead to a “discounting” orientation characterized by an increased willingness to engage in risk behaviors because delayed gratification is meaningless when investments in the future will not “pay off” (Hill, Ross, & Low, 1997). The concept of future discounting is theorized in connection with life history theory, which explains how individual development is sensitive to variation in environment and context, and in turn evaluations of environmental risk and uncertainty are actively internalized by the individual via cognitive, affective, and psychobiological mechanisms (Schechter, 2010). Future discounting has been used as an explanatory theory of youth violence; low future life expectancy leads to future discounting, leading to increased violence, which in turn reinforces low future life expectancy. This “feedback loop” is articulated especially in relation to living conditions characterized by structural disadvantage (Wilson & Daly, 1997). In this way, like substance use, negative future orientation may be both a predictor and outcome of involvement in delinquent activity. Further research is warranted to consider the longitudinal nature of this relationship, and test for the possibility of a mutually-reinforcing, or cyclic, relationship between future orientation and risk behaviors.

### 1.3. Aims of the Current Study

The current study uses data from the Chicago Youth Development Study (CYDS) to examine the directionality and mutually-influencing relationship between future orientation and risk behaviors, specifically substance use and involvement in delinquent activities, across

adolescence, mean ages thirteen to seventeen. CYDS is a longitudinal prospective cohort study of risk for school failure, antisocial behavior and violence among inner-city African American and Latino young men, providing the opportunity to investigate the impact of future orientation on risk behaviors for young people who may experience increased blunting to future expectations based on memberships within multiple marginalized groups. In addition, young men of color living in low-income urban settings who are involved in risk behaviors in adolescence are more likely to experience a cascading effect of early risk involvement on negative social and health outcomes due in to structural disadvantage.

At the same time, as previously discussed, understanding the developmental course of future orientation, and its relationship to risk behaviors, may illuminate important points of intervention, and serve to strengthen understanding of how positive future orientation can function as a protective factor in the lives of youth, especially those who face significant socially constructed barriers to healthy development. This study makes two important contributions to current research on future orientation and risk behavior. First, in using longitudinal data to investigate the nature and direction of these relationships over time; and second, a multidimensional latent variable approach that can test the unique relationships of both positive future expectation and expected threats to future safety on substance use and involvement in delinquent behavior over this developmental period.

Spisma, et. al. (2010), advocate for a multidimensional or latent construct approach to future orientation focusing on expectations. Future expectations may reveal more concretized and realistic beliefs about the future compared to aspirations or hopes. A latent construct approach allows for future expectations to be conceptualized as a multidimensional construct, specifically tapping in to both positive future expectations and expected threats to future safety. As

previously discussed, positive future orientation shows promise as a protective factor or resiliency resource for youth growing up in urban poverty. At the same time, negative future orientation, and more specifically, expected threats to survival and safety is related to increased risk behavior. Thus, both dimensions of future orientation are important to investigate, especially for urban youth. This study seeks to address this gap in the literature by examining the relationship between two theorized aspects of future orientation – positive future expectations and expected threats to future safety – with two important outcomes: substance use and involvement in delinquent behavior over the adolescent years (mean ages thirteen to seventeen).

The four study hypotheses are as follows: First, I hypothesize that significant within-time relationships will be evidenced between risk behaviors (substance use and delinquency) and future orientation (Positive Expectations and Threats to Safety) over this five year period. Specifically, high positive expectations and fewer expected threats to safety will be associated with a less engagement in both risk behaviors. Second, I hypothesize that increased positive future expectations will predict less substance use over time, whereas increased threats to safety will predict more substance use across time. Third, in a similar vein, I hypothesize that increased positive future expectations will predict less involvement in delinquency over time, whereas increased expected threats to safety will predict greater involvement in delinquent behaviors across time points. Finally, I hypothesize a reciprocal, or cyclic, relationship between risk behavior and both aspects of future orientation over time.

## 2. Methods

### 2.1. Study Design and Sample

Beginning in 1991, the Chicago Youth Development Study has conducted eleven waves of data collection over the course of early adolescence into young adulthood. Study participants are African American (53.7%) or Latino (42.7%) young men living in economically distressed inner-city neighborhoods in Chicago during the time of the study. Sixty two percent of study participants live in single-parent homes, nearly half (47.6%) of the families have a total income below \$10,000 per year, and nearly three-quarters (73.5%) have incomes below \$20,000 (Gorman-Smith & Tolan, 1998). Participants were initially recruited from 5<sup>th</sup>-7<sup>th</sup> grade classrooms from seventeen Chicago public schools. After obtaining parental consent, boys (N=1,105) were screened for being at high risk of developing serious aggression based on the Teacher Report Form and the Child Behavior Checklist (administered to parent/guardian). Half the participants were purposefully selected if they ranked in the 90<sup>th</sup> percentile or higher for teacher reported involvement in aggressive behaviors, the remaining fifty percent were randomly selected from participants who ranked lower than the 90<sup>th</sup> percentile (Henry, Tolan, & Gorman-Smith, 2001). Participants were assessed every year for the first four years, and generally every two years after that. After wave one, over 90% of participants were interviewed at each succeeding wave. The current study utilized data from waves 1 (mean age 13) through 5 (mean age 18) for young men. Sample size per wave ranged from 338 (wave 1) to 248 (Wave).

Previous research has addressed participant attrition. For example, Gorman-Smith and colleagues (2002) conducted over twenty comparisons between non-continuing and continuing participants and found no significant differences on a range of measures of delinquency and anti-social behavior, with the exception of teacher report of aggression at wave one, with continuing participants having slightly lower ratings of aggression. The difference accounted for 2% of the

variance in teacher aggression ratings and is therefore no bias in attrition on these characteristics is presumed. Further, analysis of individuals missing after wave one showed no relationship with future orientation.

## 2.2. Measures

*Maternal Income.* Maternal self-reported annual income at wave 1 was used as a measure of socioeconomic status. Item responses on the categorical scale range from 1 = Less than \$5,000 a year, 2= More than \$5,000 but less than \$10,000 a year, 3 = More than \$10,000 but less than \$20,000 a year, 4= More than \$20,000 but less than \$50,000 a year and 5 = more than \$50,000 a year.

*Race.* Race was coded 0=African American and 1=Latino. Youth were categorized as Latino if self-reported race was “Mexican,” “Puerto Rican,” or “Other Hispanic”.

*Children’s Depression Inventory (youth).* Participants completed the 27-item Children’s Depression Inventory (CDI-child report; Kovacs, 1985) designed to assess for a range of behavioral, affective and social symptoms of depression in children aged 8 to 17.

*“Threats to Future Safety” and “Positive Future Expectations.”* Participants were administered the Future Expectations Questionnaire at waves 1 through 5. Participants were asked to think five years ahead and describe expectations across a variety of domains including personal safety and wellbeing, caring relationships (parents, peers), and self-efficacy (handling school/work). Responses were rated a 5-point Likert-type scale (*1=not at all likely 2=Maybe likely but probably not, 3= Could go either way, 4=Very likely, not absolute, 5=definitely will*). For both *Threats to Future Safety* and *Positive Future Expectations* constructs, high levels indicate positive attributes in that domain (i.e., *Threats to Future Safety* items are reverse-coded). Mplus 7.0 was used to perform a confirmatory factor analysis of the future self-concept

construct. Full maximum likelihood (FIML) estimation was used to account for missing data (Kline, 2005). *Positive Future Expectations* is represented by five indicators including “I am sure I can handle work or school,” “I think I will have friends and people that care about me,” “I will have a happy life,” “My life will be interesting,” and “My parents will be proud of me.” *Threats to future safety* is represented by two indicators “I will be safe and out of danger,” and “I will be alive and well.” The data were treated as ordered categorical and the WLSMV estimator was used. The two factor model was evaluated on items in Wave 1 and then tested in subsequent waves. The two-factor model fit the data well: comparative fit index (CFI) across waves ranged from 0.97 to 0.10, the Tucker-Lewis fit index (TLI) = 0.95-0.99, and the RMSEA = 0.04-.014.

*Substance use index.* Past year self-reported use of tobacco, beer/wine/hard liquor, and illegal drugs (including prescriptive drugs, marijuana, crack, cocaine or other illegal hard drugs) was summed. For each substance, responses were dichotomized as 0 for no use and 1 any use in the past year. These responses were then summed into an index of the number of substances used, where 0= no substances in the past year, 1= at least 1 substance in the past year, 2= at least 2 substances in the past year, and 3= at least 3 substances in the past year.

*Delinquency* . A categorical scale for involvement in delinquent behaviors was created using items from the Self-Report of Delinquency (SRD). The scale used in these analyses was previously created by Henry et. al. (2003). The scale categorizes number and type of misdemeanors and/or felonies by severity using eight types of offenses from misdemeanor class C through class A, to felony type 4 through type 1. The scale is coded as 0=no offenses through 4 = multiple offences including serious felonies.

## 2.3. Analytic Approach

### 2.3.1. Autoregressive Cross-Lagged Structural Equation Models

Future orientation is conceptualized as a multidimensional latent construct tapping into both positive future expectations and expectations related to threats to future safety and well-being. Deficits in both facets of future orientation are hypothesized to predict risk behaviors across adolescence. Autoregressive cross-lagged structural models were used to simultaneously address the reciprocal effects of future orientation and substance use, and future orientation and delinquency from waves two (mean age thirteen) through wave five (mean age seventeen) (Curran, 2000). Autoregressive cross-lagged structural models combine an autoregressive pathway component, which estimates the continuity in two or more constructs over time with a cross-lagged component that tests for cross-construct relationship. For example, self-reported substance use at wave two (mean age thirteen) is likely to be related to self-reported substance use at wave three (mean age fourteen) in addition to each subsequent wave. In a similar vein, positive (or negative) future orientation at wave two are each hypothesized to predict positive (or negative) orientation at wave three. Within time relationships between risk behaviors and future orientation are tested in Hypothesis one. In addition, increased fears for future safety and decreased positive future expectations were both hypothesized to predict increased substance use in Hypothesis two and increased involvement in delinquent behaviors in Hypothesis three in subsequent waves of the study. Finally, Hypothesis four outlines reciprocal relationship between risk behavior (substance use, delinquency) and future orientation at a later time (see Figure 1).

In a cross-lagged model, the pattern of effects is conceptually replicated at each time point. Thus, the models simultaneously test the predictive relationship between both aspects of future orientation and risk behavior, and the effects of involvement in risk behavior on future orientation across this developmental period. Base-line data at wave one was used to control for

participants race, maternal income, and depression. A model was first run with future orientation and substance use as the criterion variables, followed by a model with future orientation and delinquency as the criterion variables. Analyses were conducted in Mplus version 7 (Muthén & Muthén) using full information maximum likelihood (FIML) estimation to handle missing data. Model fit indices include the  $\chi^2$ , comparative fit index (CFI), Tucker-Lewis fit index (TLI), and RMSEA.

### 3. Results

#### 3.1. Descriptive Statistics

Frequencies of substance use and involvement in delinquent behavior are displayed in Tables 1 and 2. Overall, self-reported substance use among this sample was low. In waves two through four, approximately 25% of the sample reported using substances (including alcohol, hard liquor, tobacco, prescriptive drugs, marijuana, crack, cocaine, or other illegal drugs) in the past year. In wave five (mean age seventeen), half the sample reported using substances in the past year. Delinquent activities were prevalent, nearly 40% of youth were classified as engaging in delinquent behaviors at wave two and 68% at wave five (mean age seventeen). As expected, participation in both substance use and delinquent behaviors increases with age.

*Correlations.* Examination of the associations between constructs shows expected patterns of relationships (See table 3 for complete correlation matrix). As expected, the substance use was positively correlated across all waves. Similarly, significant positive correlations were found between engagements in delinquent behavior across time. In addition, significant positive correlations were also evidenced between substance use and involvement in delinquent behaviors across time. Next, considering the patterns of relationships between future orientation constructs illustrates positive associations between all latent constructs (positive future expectations and

expected threats to future safety) across time, with a few exceptions. The patterns of relationships between the two future orientation constructs and risk behaviors shows significant relationships in the expected direction. Negative associations were found between race (Latino) and positive future expectations at waves two, three, and four.

### 3.2. Autoregressive Cross-lagged Structural Equation Models

*Substance use.* An autoregressive cross-lagged model was computed first to examine the reciprocal relationships between future orientation and substance use in waves two through five (see Figure one). The model fit the data well, with  $\chi^2(526) = 714.47$ ,  $p = 0.000$ , RMSEA = 0.03, CFI = 0.97, TLI = 0.97. As expected the autoregressive relationships for positive and negative future orientation and for substance use were all significant in the expected direction. Substance use at wave two significantly predicted substance use at wave three, which in turn significantly predicted substance use at wave four, and again from wave four to wave five. Similarly, positive future expectations significantly predicted positive expectations at the next time point, as did expected threats to future safety. Auto-regressive coefficients for substance use were the strongest and ranged from 0.49-0.61, followed by positive future orientation (0.31-0.58) and Threats to Safety (0.28-0.50). In partial confirmation of hypothesis one, Threats to Safety was associated with increased substance use within time at wave two (mean age thirteen). Contrary to hypothesis, Threats to Safety was associated with a decrease in substance use within time at wave four (mean age fifteen). Cross-lags from substance use predicting positive expectations and expected threats to future safety were constrained to be equal since they were not the focus of the study and constraining them did not result in a significant differences in fit ( $\Delta\chi^2(4) = 5.46$ ,  $p = 0.24$ ). Substance use significantly predicted a decrease in positive future expectation and an increase in expected threats to future safety between each wave. Finally, in partial confirmation

with study hypothesis two, high positive future expectations at wave two significantly predicted a decrease in substance use at wave three (between the mean ages of 14 and 15 years).

Conversely, threats to future safety at time four significantly predicted an increase in substance use at wave five (between the mean ages of fifteen and seventeen). This relationship is robust, with a beta coefficient of -0.42. Evidence of a bi-directional or reciprocal relationship was confirmed in this model, consistent with hypothesis four. Depression at time one significantly predicted increased substance use at wave 2 ( $p=0.05$ ). Being Latino significantly predicted decreased positive future expectations at time 2.

*Delinquency.* An autoregressive cross-lagged model was next computed to examine the reciprocal relationships between future orientation and involvement in delinquent behaviors in waves two through five (see Figure two). The model fit the data well, with  $\chi^2(522)= 698.51$ ,  $p=0.000$ , RMSEA=0.03, CFI=0.97, TLI=0.97. As expected, the autoregressive relationships for positive and negative future orientation and for delinquency were all significant in the expected direction. Delinquency at wave two significantly predicted delinquency at wave three, which in turn significantly predicted delinquency at wave four, and again from wave four to wave five. Similar to the previous model, positive future expectations significantly predicted positive expectations at the next time point, as did expected threats to future safety. Auto-regressive coefficients for delinquency were the strongest and ranged from 0.52-0.66, followed by positive future orientation (0.29-0.59) and Threats to Safety (0.26-0.54). In partial confirmation of hypothesis one, Threats to Safety was significantly correlated with increased involvement in delinquent behavior within time at wave three (mean age fourteen) and wave five (mean age seventeen). Delinquency at wave three significantly predicted a decrease in positive future expectation at wave four, and delinquency at wave four significantly predicted a decrease in

positive future expectations and a decrease in the expectations to be safe at wave five. Finally, in accordance with study hypothesis three high positive future expectations at wave two significantly predicted a decrease in delinquency at wave three (between the mean ages of 14 and 15 years). This relationship is robust, with a beta coefficient of  $-0.50$ . High positive expectations at wave three predicted a decrease in delinquency at wave four. Contrary to hypothesis three, more Threats to Safety at wave two predicted less delinquency at wave three. This is likely due to a suppressor effect and is not interpretable. Evidence of a reciprocal relationship in this model confirms hypothesis four. Depression at wave one significantly predicted delinquency at wave two. Being Latino significantly predicted involvement in delinquent behavior and decreased positive future expectations at wave two.

#### 4. Discussion

The current study examines the reciprocal relationship between future orientation and substance use and delinquency from mean ages thirteen through seventeen using longitudinal data from a sample of urban low-income young men of color. Autoregressive cross-lagged structural models show that future orientation has important effects on youth substance use and involvement in delinquent behavior, both of which in turn decrease positive orientation and increase expectation of threats to future safety across adolescence. Similarly, low positive expectations for the future and increased expected threats to future safety continued to predict involvement in risk behaviors. These effects are observed across adolescence even after controlling for youth depression, race, and income. Youth with positive future orientation were less likely to use substances or be involved in delinquent behaviors from ages thirteen through seventeen, suggesting an enduring protective function of this aspect of self-identity across adolescence. In addition, differences in the pattern of relationships between positive future

expectations and expected threats to future safety with substance use and involvement in delinquency lend support to a multidimensional approach to future orientation research with adolescents. It is possible that differences in the patterns of relationships between future orientation and substance use, versus future orientation and involvement in delinquent behavior may indicate different mechanisms by which future orientation can exert influence on risk behavior.

#### 4.1. Longitudinal Effects of Future Orientation on Substance Use and Delinquency

Previous research has established an association between future orientation and risk behaviors in diverse samples of youth (Peters, et. al. 2005; Gomez, Thompson & Barczyk, 2010; Duke, et. al., 2009; Bolland, 2003; Chen & Vazsonyi, 2013). Results from this study confirm the within-time relationship of future orientation with substance use and delinquency, and extend findings to confirm the hypothesized longitudinal nature of these relationships. Findings support the reciprocal effects hypothesis of a negative reinforcing cycle in the relationship between future orientation and both substance use and involvement in delinquent behavior. The enduring nature of this relationship underscores the importance of future orientation for prevention and intervention efforts to support healthy adolescent development. Such implications will be discussed below.

#### 4.2. Multidimensionality in Future Orientation Research: Positive Expectations and Expected Threats

A reciprocal relationship was evidenced between substance use and decreased hopeful future expectations across time, beginning at age 13. This finding supports the hypothesis of a mutually-reinforcing negative relationship between substance use and negative future outlook. In this sense, early substance use contributes to a negative future perspective, evidenced in lower

positive future expectations, which in turn reinforces substance use. This finding sheds light on earlier studies of the association between substance use and future orientation, as well as studies of increased hopelessness and shortened future time extension among substance using adults (Wills, Sandy & Yaeger, 2001; Robbins & Bryan, 2004; Keough, 1999).

The self-enforcing cycle of negative future orientation and substance use holds implications both for prevention and intervention efforts with adolescence. Research with both adults and adolescent substance users has found that developing a hopeful and positive future perspective is important in terms of treatment outcomes. For example, in a study of pre-treatment and treatment-involved substance using adults, associations were found between willingness to change, belief in treatment effectiveness, and positive future orientation, suggesting the added-value of future orientation to motivate behavior change. For those participants with a positive future orientation, motivation to change and engagement in treatment was enhanced (Ekendahl, et. al., 2007). In a qualitative study of urban adolescents who participated in a brief treatment program for substance use, youth exhibited a new awareness of self, an increased ability to appropriately identify and access social networks for on-going support, and hopeful future self-narratives. The presence of hopeful future orientation after treatment points again to this aspect of self-identity as a target for intervention (Mason, Malott, & Koper, 2009). Such studies are suggestive of the self-regulatory and motivational function of positive future orientation in relation to behavior change.

To my knowledge, this study is the first developmental and longitudinal analysis of the cross-associations between substance use and future orientation across adolescence. Further, the changing nature of the dimension of future orientation involved in predicting substance use changes over time from positive expectations between mean ages thirteen and fourteen to

expected threats to safety between mean ages fifteen to seventeen. This finding indicates that it is not only positive expectations that matter for youth substance use, but also whether a young person expects to be alive, safe and out of danger in the future. The importance of multidimensionality of future orientation was evidenced again in the model predicting involvement in delinquent behavior.

The implications for significance of expected threats as a key part of future orientation within this group of young men points to a few possible theories. It is possible that increases in these negative future expectations may be representative of accumulated first or second-hand experiences with violence. Exposure to community violence, including witnessing violent crimes, experiencing physical assault, or multiple deaths of friends or loved one may be disproportionately experienced by young men of color growing up in low-income neighborhoods (Hoffman, 2004; Anderson, 1994). Developmentally, as young men approach age eighteen, they may experience heightened exposure to race and gender based stereotyping, including harassment by law enforcement (Rich & Grey, 2005), which may contribute in part to the predictive component of future orientation changing to expected threats. Evidence of the self-medication hypothesis may also come into play here.

For example, in a study of interpersonal violence among forty-nine African American and Latino young men in the Boston area, Rich & Grey (2005) found 65% of participants met the diagnostic criteria for post-traumatic stress disorder. Qualitative analyses revealed 67% of participants using marijuana and 84% of participants using alcohol as a means to numb pain and cope. The linking of experiences of interpersonal violence, or trauma, with increased fears of future safety and use of substances as a coping mechanism, or experiential avoidance is thus implied. Within this sample of young men, slightly more than half of young men surveyed at

waves two, three and four reported between one and four direct or indirect experiences of violence (including a family member arrested, robbed or attacked, a non-family member beaten, times witnessed a violent crime, times witnessed someone shot or killed, and times having been a victim of a violent or non-violent crime). At wave five, mean age seventeen, nearly sixty-three percent of young men sampled reported directly experiencing or witnessing between one and four acts of violence. Further investigation into the relationships between experienced or witnessed violence, future orientation, and substance use is needed to understand how these could factors interrelate.

Another possible explanation for the role of expected threats to safety influencing substance use may involve a combination of increased experienced threats to personal safety and well-being coupled with increasing exposure to higher risk situations, and associations with fatalistic peers or negative school contexts. A few recent studies have considered the associations between other factors in a young person's social environment, fatalism, and risk behaviors including the role of school climate (Chen & Vazsonyi, 2013) and peer group fatalism (Haynie, Soller, & Williams, 2014). For example, Haynie, et. al. (2014) found evidence of an association between peer fatalism and risk behaviors including drug use and none-violent delinquency after controlling for neighborhood, school, and individual level factors. Thus, peer affiliation may be another avenue to explore in terms of understanding this link.

Finally, whereas expected threats to safety did not predict involvement in delinquent behavior across time, significant within-time relationships were evidenced at wave two (mean age thirteen) and wave five (mean age seventeen). This finding may lend additional support to the theory of future discounting, and subsequent in-the-moment decision making based on a belief in future uncertainty. It is also possible that beliefs in a limited future and subsequent

involvement in delinquent behaviors in the present contribute to detriments in educational, occupational, and subsequent socioeconomic status found in other research on fatalism in adolescence and adult outcomes (Duke, et. al., 2009).

Taken together, findings from this study illustrate the importance of a multidimensional approach to future expectations and consider the cumulative and unique impact of positive future expectations, and expected future threats on substance use and involvement in delinquent behaviors across adolescence. Investigation of dimensionality reveals the differential importance of both aspects of future orientation on these risk behaviors over the adolescent years, and reiterates the importance of expectations in prevention and intervention efforts with high risk youth.

#### 4.3. Implications for Practice

Findings from this study present several important implications for prevention and intervention. In this study, positive future expectations were an enduring contributor to lowered engagement in both substance use and delinquency across adolescence, exerting unique contributions in the presence of expected future threats. This finding connects to previous work on resilience among younger adolescents adaptive strategies in the context of poverty. Wyman et. al. (1993) examined the relationship between stressful life experiences and adolescent adjustment in a sample of 4<sup>th</sup> through 6<sup>th</sup> grade children living in low SES urban neighborhoods. Among children who had experienced four or more stressful life events, including poverty, violence, family separation, and death/illness, positive future expectations was a discriminating factor between resilient versus stress-affected children.

Interventions aimed at reducing substance use or involvement in delinquent behaviors, particularly among youth growing up in the context of poverty, may benefit from purposeful

attention to developing this aspect of self-identity, especially in early adolescence. Indeed, in terms of involvement in delinquency, results indicate that low positive future expectations at age thirteen significantly predicted involvement in delinquent behavior at the next time point; and thereafter, a mutually-reinforcing cycle emerged for this outcome. This finding points to the importance of bolstering this aspect of future orientation in middle school, or specifically targeting the transitional time point into high school. Programs that support positive youth development and asset-building may have an impact here. Developing a positive and hopeful future perspective is considered a key developmental asset. Research examining the developmental trajectories of early adolescents (grades seven through nine) found that hopefulness about the future was the strongest predictor of positive developmental outcomes. Youth who held hopeful future views were less likely to be in the depressed or involved in risk behaviors than those with diminished future perspectives (Schmid, et.al., 2011). In another study, Oman and colleagues (2004) found that youth who possessed one of nine developmental assets, including positive future aspirations, were 1.5 to 3 times less likely to report substance abuse than youths who did not have any of the nine assets.

Findings here also connect with work by Oyserman and colleagues of a middle-school based intervention to build elaborate and positive academically-based future selves amongst middle school students in low-income neighborhoods. In a randomized controlled trial, students in the intervention achieved significantly higher GPAs, standardized test scores, and lower absenteeism. They were also twice as likely to advance on-time to ninth grade as control youth. Effects were sustained after one year, with intervention youth achieving higher GPAs and experiencing less depression (Oyserman et al., 2006). Whereas structural inequality plays a significant role in shaping the experiences of youth growing up in urban poverty, as well as their

futures, individual future orientation is malleable, and can be shaped and enhanced through purposeful interventions. Through strategies that pay attention to linking well-elaborated future expectations with problem-solving, persistence, and other strategies for attainment, future orientation can be developed as a resource to bolster the resiliency capabilities of youth growing up in urban poverty.

The intersection of race, socioeconomic class, and gender is another important facet of this research, which holds implications for intervention. Young men of color, and especially African American and Latino young men, as well as youth living in poverty are significantly more likely to believe they will not live to old age compared to white, middle-income youth. Blunting in future perspective evidenced in youth of color is an important dimension of inequality in young people's lives. Future orientation captures aspects of current identity, but projects these into the future. Significant differences in the expectation to live a full, healthy, productive life evidenced in youth who occupy multiple marginalized identity spaces has real implications for how such youth think about and make decisions in the present. Visioning of future possibility is grounded in socio-cultural representations of what youth may become. For African American and Latino young men, pervasive and pernicious negative messages from dominant culture influence beliefs about future possibility. Thus, as others have argued, attention to the ways in which race, class, and gender intersect to inform future imagining is critical to intervention work aimed at bolstering adolescent future orientation. These findings illustrate the importance of building a positive vision of self, including the belief that one will be safe, alive, and well is a powerful intervention strategy.

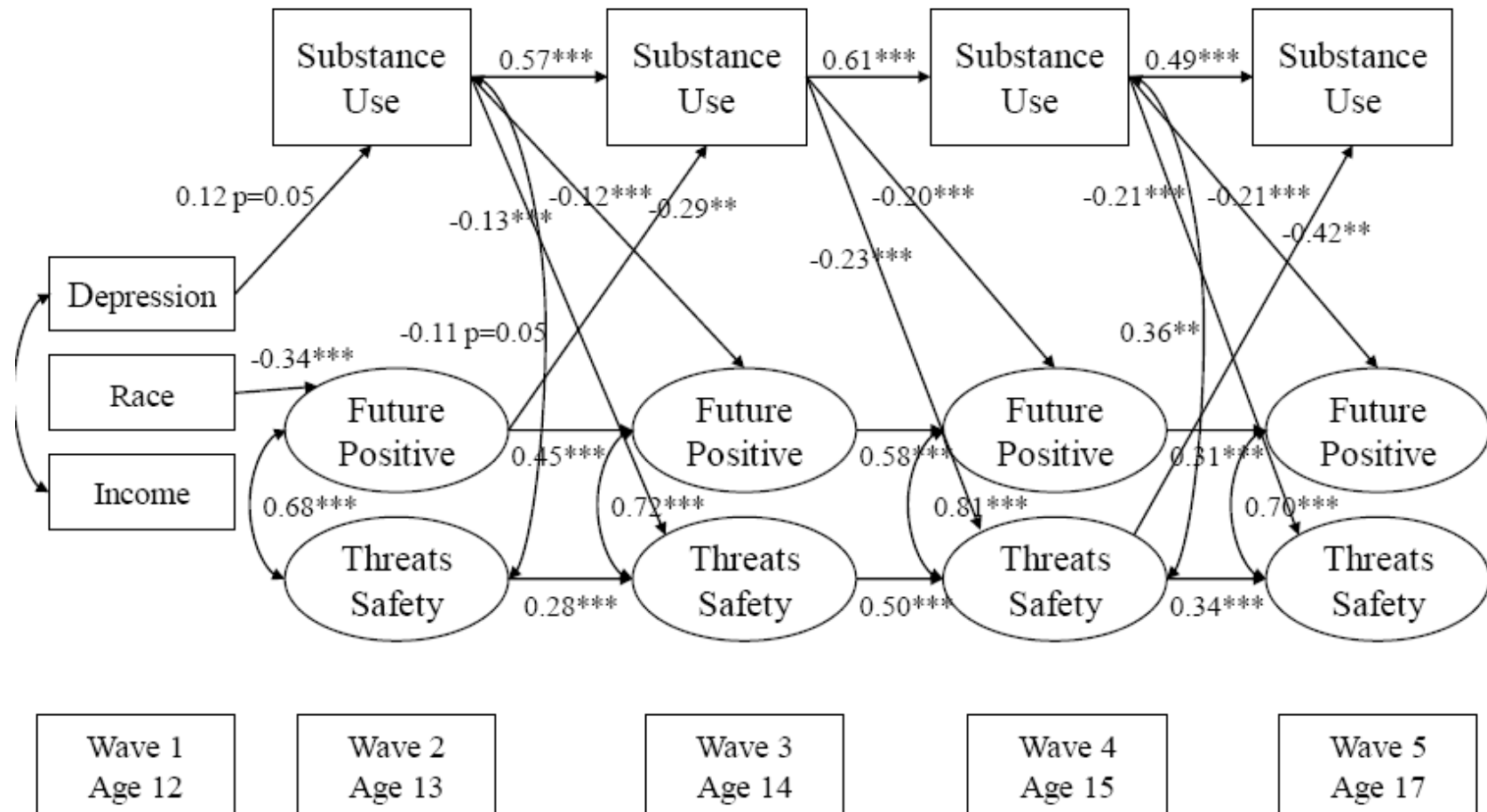


Figure 2.1: Measurement Model of Future Orientation and Substance Use across Adolescence

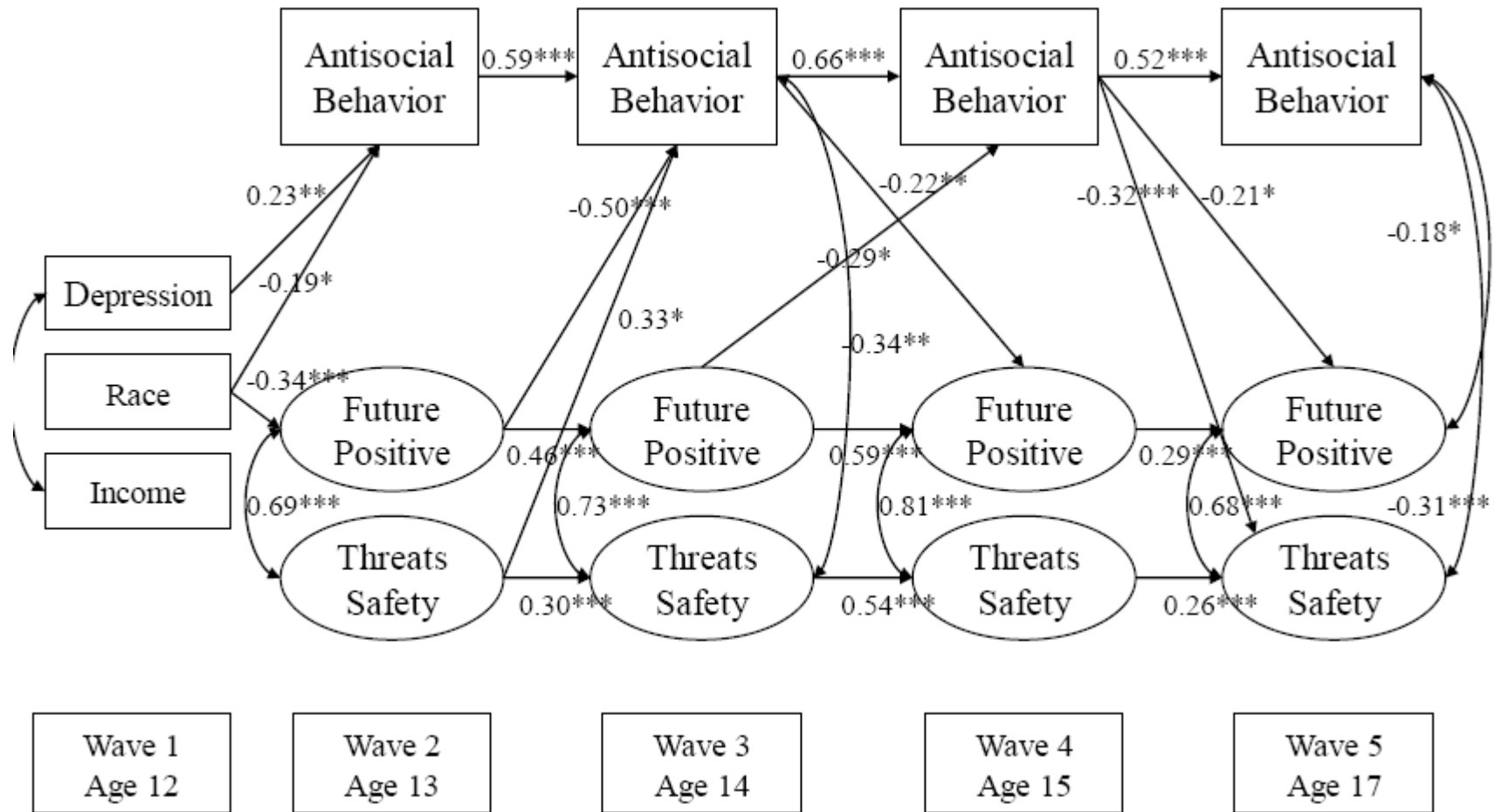


Figure 2.2: Measurement Model of Future Orientation and Delinquency across Adolescence

Table 2.1

*Frequencies of Self-Reported Substance Use in Past Year, Waves 2-5*

	No Substance Use Past Year	1 Substance Used in Past Year	2 Substances Used in Past Year	3 Substances Used in Past Year	Total N
Wave 2 (Age 13)	190	78	14	5	287
Wave 3 (Age 14)	167	47	24	10	248
Wave 4 (Age 15)	157	49	28	20	254
Wave 5 (Age 17)	71	62	83	43	259

Table 2.2

*Frequencies of Delinquent Behavior in Past Year, Waves 2-5*

	No Delinquent Behavior Past Year	Level 1 Delinquency	Level 2 Delinquency	Level 3 Delinquency	Level 4 Delinquency	Total N
Wave 2 (Age 13)	167	39	31	28	22	287
Wave 3 (Age 14)	127	41	23	24	33	248
Wave 4 (Age 15)	122	49	27	31	25	254
Wave 5 (Age 17)	84	55	43	47	30	259



Table 2.3 Continued

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	
<i>11. T4 Substance Use</i>																			
-0.07	0.02	-0.14	-0.13	-	0.203	-0.13	-0.11	-0.13	0.46*	0.65*	1								
				**	**				**	**									
<i>12. T5 Substance Use</i>																			
-0.00	-	-0.05	-0.01	-0.11	-0.13	-0.10	-	0.28**	0.39**	0.41**	1								
	0.19*						0.21**	*	*	*									
<i>13. T2 Delinquent</i>																			
-0.01	-0.02	0.00	-0.04	-0.03	0.00	-0.10	-0.20*	0.44**	0.39**	0.23**	0.10	1							
							*	*	*										
<i>14. T3 Delinquent</i>																			
-0.16*	0.01	-0.19*	-0.18*	-	0.30**	-	-0.15*	-	0.53**	0.71**	0.52**	0.19*	0.60**	1					
				*	*	0.24**	*	0.21**	*	*	*	*	*						
<i>15. T4 Delinquent</i>																			
-0.14	-0.05	-	-	-	0.28**	-	0.32**	-0.17*	-	0.44**	0.53**	0.71**	0.22*	0.41**	0.62**	1			
		0.20**	0.27**	*	*	*	*	*	0.24**	*	*	*	*	*	*				
<i>16. T5 Delinquent</i>																			
-0.12	-0.13	-0.10	-0.10	-	0.19**	-0.18*	-	0.30**	0.44**	0.22**	0.32**	0.28**	0.61**	0.39**	0.44**	0.45**	1		
				*	*	*	*	*	*	*	*	*	*	*	*	*			
<i>17. Income</i>																			
0.04	-0.01	0.01	-0.09	0.01	0.00	0.08	0.08	0.10	0.11	0.12	0.00	-0.04	-0.03	-0.06	0.0	1			
															1				
<i>18. Race</i>																			
-	0.32**	-0.13	-	0.25**	-0.06	-0.19*	0.08	-0.04	0.09	0.09	0.14	0.03	-0.19*	-0.21*	0.01	0.06	-	0.35**	
*	*		0.25**														0.0	*	1
																	4		
<i>19. Depression</i>																			
-0.12	-0.03	-0.08	0.07	-0.04	-0.05	-0.07	-0.06	0.10	0.13*	0.18**	0.08	0.21**	0.20**	0.24**	0.1	-0.04	-0.02	1	
															0				

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**CHAPTER 3.**  
**“ABOUT SURVIVING, THAT’S MY BIGGEST WORRY”: A LONGITUDINAL  
EXAMINATION OF FUTURE FEARS**

*“I’m afraid I won’t make it to 19.”*

-14 year old Puerto Rican Participant

1. Introduction

African American and Latino boys growing up in urban poverty experience cumulative and convergent risks to healthy development. In 2005, 34% of African American children and 28% of Latino children were living in poverty compared to 10% of White children (U.S. Census Bureau, 2005). African American and Latino youth, and boys in particular, are suspended and expelled from school at disproportionately higher rates compared to White peers (Townsend, 2000; Skiba, Michael, Nardo, & Peterson, 2002), and are more likely to be held back a grade level (U.S. Department of Education, 2003; U.S. Census Bureau, 2005). Further, they are disproportionately represented in the juvenile justice system. Whereas youth of color represent only 39% of the overall adolescent population, they represent 60% of committed juveniles (U.S. Department of Justice, 2005; U.S. Census Bureau, 2003). Despite these daunting statistics, it is important to recognize that many young men of color growing up in urban poverty are able to navigate adolescence and the transition to young adulthood successfully. Research on protective factors or resiliency resources demonstrates the positive impact of personal and collective assets on youth psychosocial functioning and outcomes, particularly amongst marginalized youth populations (Stanton-Salazar & Spina, 2000).

Future orientation, including hopes, aspirations, fears and expectations, shows promise as one such resiliency resource for minority youth growing up in high risk contexts. Early research has linked positive future orientation with positive psychosocial functioning among younger

adolescents who have been exposed to multiple stressful life events (Wyman, 1992). More recently, negative future orientation has been linked with increased substance use among inner-city, and “high risk” samples of youth, suggesting that developing a positive future orientation may buffer these health risk behaviors (Peters, et. al., 2005; Gomez, Thompson, & Barczyk, 2010). Despite these promising findings, the majority of future orientation research has been conducted on middle-class White samples of youth (McCabe & Barnett, 2004). Thus, relatively little is known about the content of minority male’s future orientation, or how trends in content discussed by young men shift over the developmental period of adolescence. The current study uses a mixed method approach grounded in six waves of longitudinal data from the Chicago Youth Development Study (CYDS), a longitudinal prospective cohort study of risk for school failure, antisocial behavior and violence among inner-city African American and Latino young men, (Gorman-Smith & Tolan, 1998) to investigate the content, prevalence, and changing trends of African American and Latino young men’s future fears from early adolescence into emerging adulthood.

### 1.1. Future Orientation among High Risk Youth

Earlier studies have linked positive future expectations with increased resiliency in samples of youth growing up in poverty (Werner & Werner, 1992). Positive expectations were associated with greater social and emotional adjustment amongst urban early adolescents (ages 9.5-11.5 years) who had experienced four or more stressful life events (Wyman, Cowen, Work, and Kerley, 1993). In longitudinal follow-up, positive future expectations at time one positively predicted greater social-emotional functioning and higher internal locus of control two to three years later (Wyman, et. al., 1993). Further, a protective effect was observed suggesting that young adolescents exposed to multiple forms of stress who also possessed a positive view of the

future may interpret and react to stressful events differently than those without such an outlook. These findings underscore the potential of positive future expectations as a protective factor for youth growing up in environments where they are exposed to chronic stressors.

More recently, Dubow, Arnett, Smith, & Ippolito (2001) examined the relationship between positive future expectations and risk and protective factors in a mixed-race and gender sample of middle school students (grades six through eight) recruited from inner-city urban schools in the Midwest. At baseline, high positive future expectations were associated with less problem behaviors and fewer reported negative peer influences, and higher levels of school involvement, internal resources, and social support. At a follow-up nine months later, high internal resources and social support predicted increases in positive expectations. Conversely, youth who reported frequent negative peer influences and more problem behaviors at time one had significantly lower positive expectations nine months later. Further, low positive expectations predicted a significant increase in problem behaviors at the nine month follow-up (Dubow, Arnett, Smith, & Ippolito, 2001).

Across these studies, positive future orientation is demonstrated to be linked with greater internal resiliency resources, better social and emotional adjustment, and fewer problem behaviors amongst early adolescents growing up in high poverty urban areas. In addition to these positive findings, negative future orientation has also been associated with health risk behaviors among high risk samples of youth (Peters, et. al., 2005; Gomez, Thompson, & Barczyk, 2010; Corte & Szalacha, 2010). For example, negative future orientation was significantly associated with lifetime substance use and substance use in the past thirty days among a sample of Latino and African American adolescents attending alternative high schools in Texas. Thus, future orientation, and specifically the valence (positive or negative) and content of future hopes,

expectations, and fears, matters for youth development, and may be especially beneficial to consider as a point of prevention or intervention for youth growing up in high risk contexts.

### 1.2. Transactional Approach to Future Orientation

A transactional approach to identity formation articulates how self-concept is developed through dynamic interactions between an individual and contexts of daily life. Both social and physical environments are involved in this process; as experiences with meaningful socializing people and places accrue, individuals develop more elaborate cognitions about themselves, including future expectations, hopes, and fears. Thus, the daily contexts and interactions—with *both* people and meaningful places—that youth experience matters in terms of the content and valence (positive or negative) of their developing future orientation (Prince, 2013). For example, research demonstrates a relationship between growing up in concentrated urban poverty and experiencing chronic under- and unemployment amongst neighborhood adults and family members and adolescent's own diminished future expectations in the domain of work and school success (Connell & Halpern-Felsher, 1997; Quane & Rankin, 1998). On the other hand, involvement in prosocial activities with neighborhood groups or organizations and supportive relationships with adult mentors can bolster positive self-concept and positive future expectations among marginalized youth (Quane & Rankin, 2006).

Further, stigmatizing perceptions of neighborhoods that young people reside in can contribute to a blunting of future orientation. For example, amongst institutional administrators working with youth in two similar predominantly Latino, low-income neighborhoods in San Antonio, the presence of a large public housing complex in one of the residential areas resulted in a stark difference in how youth from that neighborhood were perceived, and the subsequent diminishing of expectations, opportunities and services these youth were provided. These youth

were more likely to be steered toward a G.E.D. rather than a traditional high school diploma, and they exhibited lower educational aspirations than youth in the other low-income neighborhood who were perceived as “poor but honest” (Bauder, 2001). Taken together, these findings illustrate how adolescent future orientation develops through on-going interactions with socializing environments, including experiences with both people and physical environments. The content and valence of future orientation is constituted within these interactions, and reflective of the lived experiences of young people.

### 1.3. Domains of Future Orientation

Domains of future orientation are especially critical to understand in relation to marginalized youth, as domain-specific future orientation content is reflective of both personal experiences and the larger social realities and concerns that young people hold. Previous research has established several domains of future orientation that are particularly salient amongst adolescence: academics/education, career/occupational, family, interpersonal, personal well-being, and world affairs such as war and peace (Gillies, 1989; Greene, 1986; Nurmi, 1990). These broad categories were originally developed from research on majority White middle class youth. As discussed, research focused on children and youth living in urban poverty reveals how the content of adolescent future orientation is influenced by a number of social and environmental factors. Domains that warrant further discussion in relation to marginalized youth’s future orientation include survival-related expectations and fears, including early death, academics, and interpersonal domain.

#### 1.3.1. Survival and Safety-Related Future Expectations

Future fears and expectations related to survival, including early death, are especially critical to consider in relation to minority young men growing up in urban poverty. Research on

adolescents living in low-income urban centers, and especially young men of color, indicates that for these youth, expectations of early death are disproportionately high compared to youth who are White and of higher socioeconomic status. For example, a recent study using the National Longitudinal Study of Adolescent Health found that 1 in 7 youth endorsed the belief that they had a 50% chance of living to age 35 (Borowsky, Ireland & Resnick, 2009). Notably, for this study, low adolescent perceived survival expectations were more prevalent in males, racial/ethnic minorities, urban-dwelling youth and youth who receive public assistance (Duke, Skay, Pettingell & Borowsky, 2009). In a study of the content of future expectations, hopes, and fears amongst a majority African American sample of inner-city youth between the ages of thirteen and sixteen (n=238), Oyserman & Markus (1990) found that whereas youth shared similar future hopes and expectations, participants who had previously been engaged in delinquent behaviors reported significantly different future fears. Specifically, youth in community placement, group home, and training school most commonly reported fear of death and fear of becoming a criminal, whereas youth sampled from public schools were more likely to report fear of academic failure. Further, involvement in delinquency significantly predicted greater future fears and less future hopes (Oyserman & Markus, 1990). Findings highlight the domain of survival and safety as an important dimension of adolescent future fears that warrants further investigation. Anticipation or expectation of early death may have serious implications for adolescent health risk behavior and later life outcomes including employment and educational attainment. Youth who describe fatalistic beliefs in early to mid-adolescence are less likely to be in school, employed, or in the military and less likely to have a high school diploma in young adulthood (Duke, et al, 2011). Evidence suggests the consequences of fatalistic beliefs

in adolescence extend into adulthood, predicting lower educational attainment and socioeconomic status (Nguyen, Hussey, Haplern, et al, 2012).

Examining the future fears of minority young men offers a window into the social and psychical landscapes of their inner lives, including potential insight into the struggles or challenges they may face. For urban young men of color, fears related to dying, violence, or poverty represents a significant area of concern, with potential implications for health and well-being across adolescence into adulthood. The Chicago Youth Development Study sample of African American and Latino males provides a unique opportunity to examine future orientation during adolescence and the transition to adulthood in a population that experiences increased risks while often being under-represented in longitudinal studies (Gorman, Henry, & Tolan, 2000). Moreover, highlighting the future fears of these young men as discussed by participants themselves offers the potential to center youth voice; what these young men have to say about their future worries and fears matters. Future fears are a powerful representation of psychological health, tapping into perceptions of basic security and wellness in the present as well as beliefs about future prospects. Understanding young men's future fears in their own words offers a valuable and underrepresented perspective in future orientation research.

Further, a longitudinal approach may shed light on the enduring presence – or absence—of specific content in a young person's psyche about who they will be in the future, and further, to illuminate trends over time in self-described future fears. This is especially important in a group of young men who may experience multiple forms of marginalization based on race, class, and place of residence. As some research suggests, fears related to daily survival and safety may be more prevalent than those related to “normative” domains of future orientation such as academics, career, or interpersonal relationships (Oyserman & Markus, 1990). At the same time,

if, when, and how young men articulate concerns related to academic achievement, intimate relationships, or career and work, among other domains, may provide insight into the role and significance of these aspects of life that mark the transition to adulthood. In addition, the ability to describe changing trends in future fears across adolescence and into emerging adulthood may shed light on important processes at play in the formation of future orientation, as well as points of prevention or intervention to help bolster the positive and hopeful future visioning of marginalized and historically underserved youth.

### 1.3.2. Academically-Based Future Aspirations and Expectations

One of the most researched domains of future orientation involves academic aspirations, expectations and fears. School-focused content may include hopes or aspirations such as to “pass to the next level,” “get good grades,” “graduate from high school,” and “go to college.” School-related content may also include fears such as “failing classes” or “becoming a high school dropout.” The presence of school-focused content is associated with academic goals among White (Anderman, Anderman, & Griesinger, 1999) and African American (Oyserman, Gant, & Ager, 1995) youth. For example, in an intervention trial, developing school-focused content in the future expectations of low-income African American and Latino youth in inner-city urban schools showed significant and longitudinal impact on school engagement, achievement, and grade completion when coupled with procedural knowledge, or realistic strategies, for linking educational aspirations with actions to attain them (Oyserman, Bybee, Terry, & Hart-Johnson, 2004; Oyserman, Bybee, & Terry, 2006).

Whereas the presence of positive academic expectations and aspirations is linked with school success, the presence of feared or negative academic outcomes, such as dropping out or failing, may impact youth in different ways. For example, among Latino youth, fear of school failure

was significantly associated with actual risk of school drop-out (Yowell, 20020). However, other research has shown that the presence of such fears may act as a motivating force, and propel young people to avoid behaviors like skipping school, or not completing homework, that may move them towards that feared self. In this way, both negative, or feared, content (e.g. becoming a high school dropout) and positive content (e.g. aspirations of being a college student) may serve a motivational function for youth. Specifically, youth may adopt behaviors to attain the aspired-to self, or avoid behaviors that may lead them to the less desired or feared self. Further investigation of the relationships between academically-based future fears and actual behaviors could advance understanding of the specific impact of fears on educational outcomes.

### 1.3.2. Interpersonal Future Expectations: Family and Romantic Relationships

The domains of school and occupation are among those most examined in future orientation research with adolescents. Yet other domains, or the absence of them, especially among minority youth are important to consider. For example, in an exploratory study to understand the content of future orientation amongst African American early adolescents living in low-income neighborhoods in Detroit, McCabe & Barnett (2004) reveal that participants described significantly more detailed and optimistic career expectations than interpersonal expectations. In fact, youth in the study did not expect to achieve goals or hopes about family or romantic relationships; roughly a quarter of the sample reported no positive future expectations at all in this domain. No significant differences were found by gender. Findings from this study point to the importance of assessing a range of domains (e.g. career, school, interpersonal, health) of future orientation. The finding that African American boys and girls do not hold positive future expectations in the domain of family and romantic relationships is troubling, with serious implications for future sexual health, intimate relationships, and parenting. It is possible that

exploration of future fears may reveal explanations and further reasoning of fears related to future interpersonal relationships.

## 2. Methods

### 2.1. Current Study

The current study uses a sequential mixed method approach grounded in six waves of longitudinal data from the Chicago Youth Development Study to investigate the content, prevalence, and changing trends of African American and Latino young men's future fears from early adolescence into emerging adulthood. The focus of this research is on the qualitative investigation of future fears discussed by participants over time. To this end, qualitative longitudinal data is first used to investigate the content of future fears from mean ages of twelve to nineteen years. I hypothesize that previously identified domains including survival, academic/school-related fears, career/work-related fears, and family-related fears, would be present in the data. I use an inductive approach to investigate the content of future fears, thus additional domains were expected to emerge based on the participant's responses. Moreover, I hypothesize that survival and safety-related fears will be more prevalent in the discussion of future fears than other types, and further that young men will discuss these types of fears with increasing frequency over time.

In the second phase, I use the qualitative themes generated by the content analysis to investigate the relationship between specific future fear types (e.g. death-related, school-related fears, or fatherhood related-fears) and two measures of future orientation: positive future expectations and expected threats to future safety. It is possible that discussing a specific kind of fear may be correlated with lower positive future expectations or increased expectations to

encounter future threats to survival. Moreover, young men who talk about specific fears, like death, may have lower mean levels of positive future expectations than those who do not.

Taken together, this study contributes a novel examination of young men of color's perceptions of the future, and reveals the magnitude and changing trends of specific types of fears over eight years. Additionally, examining the relationships between future fears qualitatively described by these young men with other measures of future orientation may reveal potential contributors—like fear of death, becoming a father, or going back to jail—to overall positive or negative future orientation. Positive future expectations and expected threats to future safety represent aspects of future orientation with demonstrated relationships to adolescent health risk behaviors (Prince, forthcoming). Thus, understanding how specific future fears relate to future orientation is an important step to future investigations of how certain sub-groups of youth may develop orientations with greater risk of engaging in health risk behaviors.

## 2.2. Study Design and Sample

Beginning in 1991, the Chicago Youth Development Study has conducted eleven waves of data collection over the course of participants' early adolescence into young adulthood. Study participants are African American (53.7%) or Latino (42.7%) young men living in economically distressed inner-city neighborhoods in Chicago during the time of the study. Sixty two percent of study participants live in single-parent homes, nearly half (47.6%) of the families have a total income below \$10,000 per year, and nearly three-quarters (73.5%) have incomes below \$20,000 (Gorman-Smith & Tolan, 1998). Participants were initially recruited from 5<sup>th</sup>-7<sup>th</sup> grade classrooms from seventeen Chicago public schools. After obtaining parental consent, boys (N=1,105) were screened for being at high risk of developing serious aggression based on the Teacher Report Form and the Child Behavior Checklist (administered to parent/guardian). Half

the participants were purposefully selected if they ranked in the 90<sup>th</sup> percentile or higher for teacher reported involvement in aggressive behaviors, the remaining fifty percent were randomly selected from participants who ranked lower than the 90<sup>th</sup> percentile on the same measure (Henry, Tolan, & Gorman-Smith, 2001). Participants were assessed every year for the first four years, and generally every two years after that. After wave one, over 90% of participants were interviewed at each succeeding wave. The current study utilized data from waves one through six. In the current study, sample size by wave is as follows: Wave one n= 338, wave two n=286, wave three n=248, wave four n=254, wave five n=259 and wave six n=228. At wave one, participants ranged in age from 10-15 years with a mean age of 12.33. Subsequent waves were collected when participants were, on average 13, 14, 15, 18 and 19 years of age.

Previous research has addressed participant attrition. For example, Gorman-Smith and colleagues (2002) conducted over twenty comparisons between non-continuing and continuing participants and found no significant differences on a range of measures of delinquency and anti-social behavior, with the exception of teacher report of aggression at wave one, with continuing participants having slightly lower ratings of aggression. The difference accounted for 2% of the variance in teacher aggression ratings and is therefore no bias in attrition on these characteristics is presumed. Further, analysis of individuals missing after wave one showed no relationship with future orientation.

### 2.2.1. Qualitative Data

*Open-ended future fears.* At each interview wave, youth were asked to imagine themselves five years in the future. They were prompted with, “Now I want to ask you to think about the future; where and how you’ll be in five years. Thinking about five years from now, you will be how many years old?” Next the youth was asked, “What do you think you will be doing?”

followed by “What is your biggest worry about the time between now and then?” These questions were open-ended and respondents’ answers were short, between one word (e.g. “dying”) and one sentence (e.g. “That something bad might happen to me or to my family.”) Sample size for respondent’s who answered the open-ended questions for each wave is as follows: wave 1 n= 258 (70% of all that responded in the wave), wave 2 n= 230 (80%), wave 3 n=236 (95%), wave 4 n=242 (95%), wave 5 n=215 (74%), wave 6 n=207(91%). This open-ended short answer data was used in the qualitative analysis.

### 2.2.2. Quantitative Measures

*Future Fears.* Participant responses to the open ended future fears question were dummy coded (1=yes, 0=no) across the ten categories identified in the qualitative portion of the study: death/dying fears, fear of being hurt, gang-related fears, jail-related fears, money-related fears, school-related fears, job-related fears, success/failure-related fears, family-related fears, and fatherhood-related fears. At each wave, participant responses were coded 1 if the fear was present and 0 if it was absent. Each participant was only assigned one fear category; no participant was coded for more than one fear in each wave of data collection. A dichotomous variable was created whereby a participant received a “1” if they had ever reported the fear and a “0” if they had never reported the fear. For fear of death, a mean-based scale was created and then recoded into a dichotomous variable. Participants received a “1” if they had reported fear of death at least 25% of the time and a “0” if they had reported fear of death less than 25% of the time.

*“Expected threats to future safety” and “positive future expectations”.* Two mean-based scales were created to capture two dimensions of future orientation: expected threats to safety and positive future expectations. Youth were asked to think about the future, five years ahead.

They were then prompted: “Thinking about you and the future, how well do you think each of these things fit you...When I think about the future...” This prompt was followed by eight positively worded items. Responses were rated a 5-point Likert-type scale (*1=not at all likely, 2=Maybe likely but probably not, 3= could go either way, 4=Very likely, not absolute, 5=definitely will*). Previous measurement work confirms a two-factor model consisting of *Expected Threats to Future Safety* and *Positive Future Expectations*” to best fit the construct of future expectation within this sample (Prince, forthcoming). Thus, the same constructs were created using mean-based scales for this analysis.

Items for the *Expected Threats to Future Safety* mean-based scale included “I expect to be alive and well,” and “I expect to be safe and out of danger.” Mean-based scales were first created at each independent wave (1-6) and then averaged into an overall “expected threats to future safety” scale (Cronbach’s  $\alpha = 0.57$ ). Items for the “positive future expectations” mean-based scale included “I am sure that I can handle work or school,” “I think I will have friends and people that care about me,” “I will have a happy life,” “My life will be interesting,” and “My parents will be proud of me.” Again, mean-based scales were first created at each independent wave (1-6) and then averaged into an overall “Positive Future Expectations Scale” (Cronbach’s  $\alpha = 0.67$ ).

### 2.3. Analysis

Analysis was conducted in two phases. First, in the qualitative phase, thematic content analysis (Hsieh & Shannon, 2005) was used to code and analyze the short-answer interview responses for waves one through six. In this process I identified codes to represent concepts and themes (Saldaña, 2009). Preliminary codes and categories from wave one were reviewed and validated by one of the principal investigators on the CYDS study. No previous analysis work

had been done using these data. Prevalence of each category by wave was calculated, and these percentages are visually displayed in Figures 1, 3 and 4.

In the second phase, quantitative analyses were conducted to test the hypothesized relationships between future fears described by young men and two dimensions of future expectations: positive future expectations and expected threats to future safety. First, point biserial correlations were run between each dichotomized fear and the two averaged mean-based scales of *expected threats to future safety* and *positive future expectations* to test for relationships between ever having talked about the fear and the two dimensions of future orientation. For those relationships that were significant at the  $p < 0.05$  level or less, the sample was split by type of fear and descriptive statistics were calculated to show the mean-level and standard deviation of positive future expectations and expected threats to safety by type of fear.

### 3. Results

This section presents the research findings. Results for the qualitative thematic analysis of future fears described by young men across six waves of data are presented first. These themes are discussed in order of magnitude from the most frequently talked about to the least. Next, the quantitative results are presented, including the correlations between type of fear discussed and positive future expectations and expected threats to future safety, followed by mean-level of each dimension of future orientation based on type of fear discussed.

#### 3.1. Qualitative Findings

The qualitative findings are presented around themes identified in the content analysis. Themes are ordered from the most frequently discussed theme to least frequent based on percentages both within and across all waves of data. Three primary themes were identified as youth's primary future fears across six waves of interviews from mean ages twelve through

nineteen. Each of the primary themes was then further divided into categories ranging from two to five categories per theme. The three themes included: 1) survival, safety, and security (*categories: death, gangs/drugs, getting hurt, jail/incarceration, and financial stability*); 2) “making it” (*categories: school/education, job/occupation, success/failure*); and 3) family wellness and fatherhood (*categories: family safety & wellbeing, fatherhood*). Table 1 contains a summary of qualitative themes and includes examples of each of the theme categories.

### 3.1.1. Survival, Safety and Security

Across six waves of data, the theme of survival, safety, and security fears emerged as the most prevalent. Across each point in time, fears related to this theme represent the largest proportion of overall fears: 38.7% at mean age twelve, 45.6% at mean age thirteen, 52.1% at mean age fourteen, 52.5% at mean age fifteen, 41.9% at mean age seventeen, and 49.8% at mean age nineteen. Within this theme, five categories of specific concerns emerged including: 1) fear of death, 2) fear of becoming involved in gangs or drugs, 3) fear of getting hurt, 4) fear of going to jail or being incarcerated and 5) money and financial stability. See Figure 1 for proportion of each category presented at each time point. Each of the specific categories of concerns the young men expressed is explored in detail below.

*Fear of Death and Dying.* Within the theme of survival, security and safety, it was fear of early death that was the most discussed category of all by young men at each wave. Illustrative quotes include: “Will I still be alive?” “Getting killed,” “Living to see that day,” “If I’m going to die or not,” and simply but chillingly: “Death.” The fear of death began to be articulated by some young men as early as a mean age of twelve years, with 16.2% reporting fear of death as their biggest worry at that wave one. Just one year later, at mean age thirteen, this number increased to 29.8%, and startlingly, at mean age fourteen, it increased again to 42.4%. At mean

age fifteen, 40.7% of the sample named fear of early death as their biggest worry in the next five years. The proportion of participants reporting fear of early death decreased starting at mean age seventeen with 29.8%, and then continuing to decrease to 26.6% at mean age nineteen. While the fear of death does decline in late adolescence into emerging adulthood, the percent reporting death is remains higher than any other reported fear.

Moreover, the fear of death articulated by these young men is recurrent and has had substantial impact on their daily lives. In the early to mid-adolescent years, youth are discussing death related fears at precariously high rates, and also report thinking about these fears frequently and to the detriment of carrying out basic daily tasks. During waves one through five, between the mean ages of twelve and seventeen, roughly half of youth who described death-related fears as their biggest worry also reported thinking about death or dying “pretty often” or “very often”. Furthermore, during this time span, between a quarter and a third of youth reported that thinking about death or dying interfered with their daily activities “a lot.” This trend begins to decline at wave six, at the mean age of nineteen with a quarter of the young men who report death-related fears stating they think about death “pretty often” or “very often,” and 15% of the young men stating that thinking about death interferes with their daily lives “a lot.” Although this trend in frequency and severity of death-related fears does decline over time, still at wave six one in four young men reports death as their biggest worry, and further report worrying about death often. Figure 2 shows the prevalence rates of frequency and severity of thinking about death for waves one through six.

*Gangs and drug-related fears.* Fear of gangs and drugs emerged as the second category within the theme of survival, safety and security. Responses reflecting fear of gangs and drugs include: “Getting involved in gangs,” “That I will be murdered by gangs,” “Gang bangers,”

“gangs and drugs,” “People hurting me, thinking that I am a gang member.” Fear of becoming involved in gangs or with drugs was reported by 13.4% of the sample at wave one. The proportion of young men reporting this fear declined with each additional wave: 10.5% at wave 2, 5.9% at wave 3, 2.9% at wave 4, and 1.9% at wave 5. No one reported fear of gangs or involvement with drugs at wave 6.

The majority of fears related to gang- and drug-involvement occurred in earlier adolescence at between the mean ages of twelve and thirteen. Young men reported worries about “getting in trouble” with gangs, being targeted, or more commonly, accidentally shot or mistaken for a gang member. As one boy at wave one stated, “I’m afraid that something might happen to me, like I’ll be in the fire of a gang fight while I’m minding my own business.” A young man at wave four, mean age fifteen, said, “There’s a lot of gangs out there, I’m afraid of getting shot.” Gang-specific fears focused on boys’ worries that gang members would try to coerce them into joining their gang, or hurt them if they did not join. For example, at wave one a participant stated “I worry about the gangs because if you don’t join some of them, they’ll kill you.” As noted above, boys also discussed being “caught in the crossfire” and accidentally shot by gang members fighting. The declining trend in gang-related fears corresponds with age. By wave six, no young person discussed gangs as their biggest worry.

*Getting hurt.* The third category of survival and safety concerns involved generalized fears of being hurt or of “something bad happening to me.” Examples of quotes included in this category are “Something might happen to me,” “I might get hurt,” and “That something might happen to me. My safety.” Fears in this category remained low relative to other survival-related fears: wave 1 5.4%, 2.5% at wave 2, 1.7% at wave 3, 3.7% at wave 4, 2.3% at wave 5, and 1.9% at wave 6.

*Jail and incarceration.* Within the fourth category of survival and safety concerns, fears included participant's worries about going to jail, fears related to recidivism, and fear about current incarceration. The frequency of jail-related fears increased with time, especially at wave five (mean age seventeen) with 4.7% of the overall sample reporting jail related fears, and increased again at wave six (mean age nineteen) with 6.3%. For the majority of participants, fears related to jail were reported at only one time point. Participants began discussing the fear of going to jail at wave one. This fear did not emerge in the sample again until wave four (mean age fifteen) at which point two participants were currently incarcerated, and one participant had previously been incarcerated. For this subset of young men, jail-related fears were discussed at multiple time points. For example, one young man who was locked-up at wave four expressed his fear of "getting locked up again" at wave five. Another young man whose fear at wave four was "going back to jail" expressed the same worry two years later in wave six. This trend of enduring jail-related fears continued at wave five with three new young men expressing fears related to their current jail sentences, and reporting jail-related fears again at wave six. Whereas fear of gangs declined with age, fears related to incarceration increased. For example, one young man talks about his fear of "not getting out [of jail]" at waves five and six. In addition, the fear of recidivism was discussed multiple times by young men who had served jail time. For example, at wave six, a participant discussed his fear of "going back to jail," followed by "[I want] freedom. [I got to] wait until my time is up." In addition to the group of young men who had experienced jail time, other young men talked about the fear of "getting locked up" and for a few of these participants, the fear of "ending up in jail" was repeated at multiple waves.

*Financial Stability.* While threats to physical safety and life were prevalent within this sample, financial threat represents another important dimension of survival that the young men

described in the survey. Money-related fears remained low relative to other reported threats to safety/survival across wave 1 through 5. However, economic-related fears increased almost four times from waves 4 (3.3%) to 6 (12.6%). At wave 6, participants reported fears related to financial stability, e.g. “Not being stable in financial ways,” and not earning adequate money to pay bills, care for family, and meet basic needs. As one participant stated, “I’m afraid I will not have enough money to do what I need to do to take care of my family.” Whereas the focus on financial security increases at this age, there is a consistent group of participants who express worries related to money at each time point. For this group of young men, enduring fears around being unable to “make ends meet” illustrates how economic insecurity represents a threat to survival.

### 3.1.2. “Making it”: Fears Related to Education, Occupation and Success/Failure

The second theme to emerge in the open-ended responses involves young men’s concerns about the ability to be successful in their educational and career trajectories. Within this theme, three categories are 1) school and education-related fears, 2) job and occupation related-fears, and 3) success/failure related fears. Across each time point, fears related to this theme represent the second largest proportion of overall fears: 33.8% at wave 1, 32.5% at wave 2, 26.3% at wave 3, 26.4% at wave 4, 22.4% at wave 5, and 17.4% at wave 6.

*School-related Fears.* Discussion of school-related fears declined in prevalence over time, beginning with 20.6% of the sample reporting education or school-related fears at wave one (mean age 12) to only 8.7% of the sample reporting these kinds of fears at wave six (mean age 19). In addition, the content of school-related fears changes, paralleling the shift from high school to post-secondary school during this developmental period. These changes in content are reflected in five sub-categories which emerged under the broader category of school and

educational-related future fears. First, young men worried about passing their classes and attaining good school grades. Examples of quotes within this sub-category include “That I will flunk,” and “That I will have failing grades.” Second, youth discussed fears of dropping out or not completing high school. For example, young men stated “I’m afraid of not making it through high school” and “Not getting a high school diploma.” Third, participants shared fears about not making it to college. Illustrative quotes include “Getting accepted to college” and “That I do not go to college. That I mess it up.” The fourth sub-category relates to financial barriers to accessing college. A subset of youth discussed worries about being able to afford higher education. For example youth stated “[I worry about having] money to pay for college” and “That I will not be able to go to college because of money.” Finally, participants shared concerns about not finishing college. Examples of quotations within this sub-category include “graduating from college” and “finishing college.”

In earlier adolescence, between the mean ages of twelve and fourteen, fears focused on school grades/school performance and high school completion. As one participant in wave one stated, “[I’m worried about] trying to pass to the next level.” The majority of fears revolved around not finishing high school and this continued at the next time point, mean age thirteen, with fears related to passing/grade and not completing high school remaining the most frequently discussed of overall school-related fears. Participants stated similar sentiments as the previous year: “[I’m afraid] that I might not make it all the way through school,” and “[I’m afraid of] dropping out of school.”

Whereas high school completion remained the biggest worry at wave two (mean age thirteen), in addition to drop-out related fears, youth also begin to discuss college-related fears beginning in this wave. Fears revolved around making it into college and worries about how to

financially pay for a college education. As one boy stated “[I’ m worried] that I will not be able to go to college.” For a subset of boys hoping to go on to college, key concerns about making it there persist. At the next two time points (mean ages fourteen and fifteen) discussion of fears related to passing classes and dropping out of high school declines and fears related to college increase. However, this trend shifts again in waves five and six (mean ages seventeen and nineteen). Whereas some young men still share fears pertaining to financing a college education, poignantly, the majority of young men with school-related fears at these later ages are focused on high school completion. This suggests that participants who are reporting school-based fears at later ages (seventeen-nineteen) may be behind their age cohort in the completion of high school. For these young men, not finishing high school is the primary concern.

Taken as a whole, education-related fears illuminate an enduring sense of fear of failure or “not making it.” Youth report enduring fear of high school dropout and in addition, the fear of first “getting in” to college and then “finishing college.” Further, participants share growing concern for the financial viability of higher education as an option. In some cases, the fear of not being able to afford college also includes a glaring lack of knowledge about the costs of attending college at all. For example, in wave six, one young man states his worry about “Getting money to get to school, like getting a grand.” Also of note is the overall trend of decline in school-related fears across this eight year period, especially between the mean ages of fifteen and seventeen when young people are traditionally gearing up to make the transition out of high school and into higher education. At wave six a few participants begin to share concerns about going back to school, or not having received a GED. As one older participant notes, he’s afraid of “Failing in school and in life.”

*Job- and Occupation-related fears.* Overall, the proportion of job-related worries was lower compared to education-related concerns, yet it is still noteworthy that some youth described this as a fear they actively entertained. At wave one 8.5% of youth reported job or career-related concerns. The overall proportion declined across the eight year period, with 5.3% of respondents discussing job-related fears at wave six. Three sub-categories emerged within the larger category of job-related fears: 1) unemployment, including quotes such as “not getting a job” and “no job,” 2) job security, illustrative quotes include s “getting the job I want,” and “getting a good job,” and 3) developing a career, including quotes such as “choosing my career” and “finding the right career choice.” With few exceptions, participants did not specify the kind of work or occupation they aspired to. Fears about unemployment focused on lack of work, or the difficulty in finding and getting a job. A few participants described fears about not meeting specific job aspirations, including policeman, army, working at the post office, and jobs in sales. A subset of participants did differentiate between the fear of not getting “a job” and not getting a “good” job. For example, one participant at wave six (mean age nineteen) stated he was afraid “That I will not have good paying job,” and another participant at wave five (mean age seventeen) stated his biggest worry was “If I end up in a dead end job.” Finally, a few participants expressed concerns about deciding upon a career path, as youth noted at wave one (mean age twelve) his worry was about “Finding the right career choice.” In these cases, young people expressed uncertainty in how to go about deciding on careers, and learning about pathways to specific careers.

*Success/failure related fears.* The final category is fears about success/failure in life overall. Fears in this category represent that smallest in the overall proportion of fears in the theme, ranging between 3.9% and 9.8% across waves. Within this category, three sub-categories emerged, 1) “Making it,” examples of quotes include “If I am going to make it,” “that I fail,” and

“If I am going to be successful or not,” 2) Achieving goal, examples of comments include “Reaching my goal,” “That I will not be able to achieve my goal,” and “Accomplishing goals,” and 3) Motivation, examples of quotes include “If I start slacking off,” and “that I might give up.” At wave one fears related to future success represent young boy’s worries about going down “the wrong path” or making “bad choices” that deter them from positive future goals. At this age, there is sense of worry about how one will “turn out” and if getting into trouble will interfere with future successes. In later waves, beginning at wave two (mean age thirteen) and continuing with additional years, fears reflect a general worry about not “making it.” In this sense, “making it” encompasses a broader sense of success in life, and perhaps, for some, is also related to survival concerns. For example, at wave three (mean age fourteen) one young man states, “[I’m worried] that I might not make it to where I want to go.” This fear is echoed by another participant who notes he doesn’t want to “Be a bum, have no direction.” At this time point, and subsequent years, young men also discuss fears about not reaching goals. For example, at wave four (mean age fifteen), a participant describes his fear “that I [don’t] make my goals and what will happen if I do not make it.” In this category, Goals are discussed in broad unspecified terms. Similar to career-based fears, youth report worries about not reaching goals, but do not articulate specific goals. Interestingly, discussions of motivation, or losing one’s drive, emerge in later years at waves five (mean age seventeen) and six (mean age nineteen). For example, at wave six, a participant notes “[I’m worried] about getting side-tracked from the things I want to do.” Maintaining the ability to persist towards desired goals in the face of obstacles represents an important facet of older participant’s fears. This fear reflects in part the expectation and perhaps previous experience of hardships or barriers to goal attainment that this group of young men grapples with.

### 3.1.3. Fears Related to Family Wellbeing and Fatherhood

The final theme to emerge in the qualitative findings relates to participants' families and developing roles as fathers. Fears related to this theme represent the smallest proportion of overall fears, but like job-related fears, are worth understanding. Fears reported in this theme show a slight curvilinear trend, with 9.7% of the sample reporting family-related fears at wave one (mean age twelve), followed by a decrease by approximately half across waves two through four, and then increase again at wave five to 8.4% of the sample. Finally, at wave six, family-related decrease again to 4.3%. Two categories emerged within this theme. First, youth discuss fears related to family safety and well-being. Examples of quotes within this category are "losing my mother," "I worry about my family being broken up," and "[I worry] that something bad will happen to my family." Second, participants discuss fears related to fatherhood, including becoming a father and caring for one's children. Illustrative quotes for this category include "having kids," "taking care of my son" and "seeing my two little girls grow up." Within the category of family safety and wellbeing, participants describe fears related to parental death, sibling well-being, and overall family safety. Fears related to death of family member are most frequently discussed at wave one (mean age twelve). Several boys described their fear of losing their mom at this early age. Fears related to parental death declined overall across each additional time point, however, young men continued to report more "free floating" fears about "bad things happening" to the family, or worries about the safety of their siblings. For example, at wave two (mean age thirteen), a participant stated "I worry about how my two little brothers are going to grow up." This sentiment was echoed by a participant at wave three (mean age fourteen) who said "I worry about something happening to my brother and sister." In addition to fears about parent and sibling safety and wellbeing, a few youth discussed concerns about the family staying together, or "not being broken up." Taken together, worries about family focused primarily on

the health and wellbeing of caregivers, especially mothers, and on the safety of one's younger siblings.

In addition to family wellness and safety, young men also described fears about their own roles and abilities as fathers. Two sub-categories related to fatherhood emerged. First, participants discussed the fear of having a baby or becoming a father. This fear is discussed at waves one (mean age twelve) and two (mean age thirteen), and then does not emerge in the sample again until wave five (mean age seventeen). In the earlier waves, fatherhood related fears are solely about becoming a father. While this fear does persist, in later years (mean ages seventeen to nineteen), the second sub-category of fears related to providing for, supporting, and raising children emerges. At wave five (mean age seventeen), four participants who were fathers reported concerns about being able to support their children. As one participant stated, “[I worry about] being able to take care of myself and my daughter.” At wave six (mean age nineteen) four different participants who were fathers, or were about to become fathers, expressed similar fears about caring for children. For example, one young man stated, “[I have no worries] for myself, but I think about my children sometimes and their future.” Another participant stated, “In about three months my girlfriend will be having a baby. [I'm worried about] my child.” For some young men, fatherhood, and the responsibilities of caring for and supporting one's children becomes the focal area of concern for the future.

#### 3.1.4 Summary of Trends in Qualitative Findings

Across this eight year period, some interesting themes and trends in future fears emerge. First, the enduring prevalence of survival and safety related fears across this developmental period, especially the alarmingly high and persistent fear of early death at each time point considered. Moreover, the findings that young men who report death-related fears also report

worrying about death frequently and that these concerns interfere with their daily lives. In addition, the persistence of jail-related fears in a subset of young men who have been in prison points to the enduring impacts of incarceration in the future visioning of participants. Next, the trending decline in reporting gang-related fears suggests a developmental process at play whereby younger adolescents are more susceptible to or directly threatened by gang members. Finally, the increased reporting of financial threats to meeting basic survival needs in later adolescence into emerging adulthood illustrates the role of poverty in shaping future perspective.

Second, the overall declining trend in reporting school- and work-related fears across this time span is indicative of how other fears and worries, particularly those related to survival, may take precedent in the lives of these young men. Finally, younger adolescents reported worries about losing a parent, especially fearing the death of one's mom. It is possible that this fear represents yet another threat to survival and safety, as losing one's primary care provider would raise serious concerns about where the youth would live, and who would care for him, alongside the emotional loss. Lastly, in the later waves, young men are becoming fathers and beginning to describe the fears they now have for their children. In many ways, these fears (being able to support one's children, the kind of world the children are growing up in) are an extension, or reproduction of, the fears faced by young men themselves. Next, I will consider how these specific fears, for example the fear of dying or the fear of dropping out of high school, are related to two quantitative measures of future orientation: positive future expectations and expected threats to future safety.

### 3.2. Quantitative Results

The second phase of this study involves examining the relationships between specific fear types described in the qualitative data and two aspects of adolescent future orientation: expected

threats to future safety and positive future expectations. Correlational patterns revealed three significant relationships between type of fear and expected threats to future safety. Reporting fear of death was associated with higher expectations for threats to future safety ( $r=-0.17$ ,  $p=0.001$ ). Describing fears related to education was significantly associated with decreased expectations in threats to future safety ( $r=0.12$ ,  $p<0.05$ ). Finally, fear of gangs and drugs was also associated with decreased expectations in threats to future safety ( $r=0.12$ ,  $p<0.05$ ) (see Table 1 for correlations). Next, descriptive statistics were calculated after splitting the sample by fear of death, school-related fears, and gang-related fears. Youth who reported fear of death had lower mean-levels of expectation to be safe in the future ( $M=3.6$ ,  $SD=0.52$ ) compared to youth who did not report the fear of death ( $M=3.8$ ,  $SD=0.62$ ). Youth who articulated school-related fears had higher mean-level expectation to be safe in the future ( $M=3.7$ ,  $SD=0.53$ ) compared to youth who did not describe school-related fears ( $M=3.6$ ,  $SD=0.62$ ). Finally, youth who described gang-related fears had higher mean-level expectation to be safe in the future ( $M=3.7$ ,  $SD=0.53$ ) compared to youth who did not ( $M=3.6$ ,  $SD=0.62$ ). No significant relationships were found between type of fear and positive future expectations. Figure 5 presents the mean for expected threats to future safety by each type of fear across the six waves.

As hypothesized, reporting fear of death was significantly associated with fewer expectations about being safe in the future (increased expected threats to future safety); and those youth who discussed death and dying related fears had lower levels of expectation to be safe across all eight years. This finding substantiates the claim that fear of early death is one of the contributors to young men's overall negative sense of future safety with implications for the healthy developmental trajectories of these youth. Interestingly, school-related fears were positively associated with expecting to be safe in the future. School-based content in young men's future

fears is thus a promising avenue to explore in further detail. Finally, the finding that gang-related fears also is associated with greater sense of future safety may reveal a more complex phenomenon at play in regards to how gangs function. Taken together, these findings highlight the important relationships between three types of future fears discussed qualitatively by the young men and quantitative measures of future orientation. The implications of these relationships will be discussed in more detail below.

#### 4. Discussion

In this mixed-methods study, longitudinal short answer qualitative data was first used to examine the content, prevalence, and changes over six waves of data collection of the future fears described by urban-dwelling African American and Latino young men. Three themes emerged: *survival, safety, and security*, *“making it”: school, work and future success*, and *family well-being and fatherhood*. Next, the relationships between type of fear and two quantitative measures of future expectations -- “expected threats to safety” and “positive future expectations” -- were examined, yielding three significant relationships with fear of death, school-related fears, and fear of gangs/drugs.

Several important key findings emerged from these analyses. First, the chronic and pervasive prevalence, and increase over time, of fears related to death and dying among these minority youth. In addition, the inverse relationship between fear of death and expectations to be safe in the future, and lower mean-levels of expectations for future safety among youth who report fear of death in a least a quarter of the interview waves. Second, the overall prevalence of fears related to survival, safety, and security remained the most frequently discussed across each time point, underscoring the centrality of survival and safety-related concerns in the lives of these young people. Thirdly, the decrease over time of school-related content, coupled with the finding

that school-related fears are positively associated with expecting to be safe in the future; youth who discussed school or education-related fears at least once also had higher mean-levels of expectations for future safety. Finally, the finding that youth who described fears related to gangs or drugs at least once also had higher mean-levels of expectations for future safety is striking. Youth described gang-related fears in earlier adolescence, the prevalence of these fears decreases over time with no one reporting fear of gangs at wave 6 of the study. This may indicate a more complex social dynamic at play in earlier adolescents whereby gangs are both feared and viewed as a source of potential protection. I will now discuss each of these key findings in greater depth.

#### 4.1. Pervasive Fear of Death

Across early adolescence into young adulthood, the fear of early death is reported the most frequently, with significant growth especially between the ages of thirteen and fifteen years. This is as noteworthy as it is tragic. Within this community sample, the fear of early death is significantly higher than in national samples. In addition, young men are reporting a fear within a relatively short time-frame of 5 years (e.g. a thirteen year old reporting fear of dying before age 18). In other studies that have examined truncated life expectancy, the time frame is longer, e.g. expecting to live to age 30 or age 35. Studies using the National Study of Adolescent Health data (ADD Health) have examined prevalence of the belief in early death among a nationally representative sample of youth. Research has shown the 1 in 7 youth endorse the belief they have a 50/50 chance or less of living to the age of thirty-five (Borowsky, Ireland & Resnick, 2009). Another study of ADD Health found that at wave one, mean age 15.5 years, the premature risk for death was endorsed by 14.3% of all youth. Notably, frequencies were higher for Hispanic participants (n=12.1%) and African American participants (n=18.9%) (Duke, et. al., 2009). In the current study, young men discussed the fear of living to age 18-25 years at alarmingly higher

rates, for instance, 42.2% of the sample reported death related fears at the mean age of fifteen; more than twice the number of African Americans reporting expectation of early death in the national sample.

Moreover, worrying about death and dying remained consistently the most reported fear at each time point for the minority males in this study, with significant increases between the ages of thirteen, fourteen, and fifteen years. Fear of early death constitutes the most direct and serious threat to survival; further fatalistic outlook is associated with a range of negative health risk behaviors. It is possible that in being asked to discuss their “biggest fear in the next five years,” youth automatically respond with the most serious threat of death. At the same time, for a twelve year old or a fourteen year old to consider death as a possibility in the next five years is striking. Fear of death is not a generalized one; it is specific to a very short, and in some ways immediate, time frame. The finding that youth who endorse fear of death have lower mean-levels of the expectation to be safe in the future further strengthens the qualitative findings. Previous research illustrate that expected threats to future safety is significantly associated with increased involvement in delinquent behavior at multiple time points in adolescence, and significantly associated with increased substance use at age thirteen. In addition, blunting of this aspect of future self-concept at age sixteen is significantly predictive of increased substance use at age eighteen (Prince, forthcoming). Therefore, the relationship between chronic reporting of death related fears in the qualitative short answer data with lower mean-levels of expectations for future safety is particularly troubling.

Fear of death and dying remained the most prevalent across each wave of data collection. However, other fears related to safety and security also contributed to an overall sense of insecurity across this developmental period. Within this theme, youth described fears related to

gangs, jail, and financial instability as potential threats to short-term wellbeing, with serious implications for long-term health and wellness. The cognitive manifestation of survival- and safety-based fears may impact longer term health outcomes for these young men. First, gang- and neighborhood-safety related concerns reflect the lived realities of growing up in socio-physical contexts with increased exposure to crime and increased threats to physical wellbeing. In this sense, the fears of getting hurt by a gang member, or staying safe on the streets, are illustrative of larger structural and social inequalities around neighborhood safety. At the same time, cognitive representations of fears related to life and safety may be indicative of coping mechanisms to handle daily or chronic fears of violence or “being messed with.” Youth, particularly young men of color, may develop a “hypervigilant” stance of constant surveillance, and preparation for negative interactions with others, which may in turn contribute to increased psychosocial and physical stress. At the same time, fears about material wellbeing, including financial security, can cause increased psychological stress. Fears of death and dying, and even a sense of the inevitability of early death expressed by some participants, connects with research on hopelessness amongst adolescents living in the inner city. High levels of hopelessness have been shown in a least one sample of predominantly African American urban youth, and associated with increased experience of violence victimization, perpetration, substance use, risky sexual behaviors and injury (Bolland, 2003). The prevalence of survival related fears, and primacy of fears related to death, carry significant public health implications, including heightened engagement in health risk behaviors that reflect a “live hard now, because tomorrow is uncertain” mentality.

#### 4.2. Declining Trend in School-Based Fears

Next, the finding that education and school-related content in future fears diminishes over the adolescent years is concerning. The theory of possible selves illustrates how future-oriented cognitions about self, including aspirations, expectations, and fears, serve as a guide for individual development (Markus & Nurius, 1986). Educationally-based future fears may reflect boys' negative experiences within school or negative appraisals of individual capabilities within this domain. At the same time, the presence of future fears is not necessarily harmful. Like aspirations, fears may act as powerful motivators; youth may adopt behaviors to help avoid a feared self (e.g. "becoming a high school dropout") in the same way that they may adopt behaviors to attain a desired one (e.g. "To graduate from high school" or "To go to college").

The presence of school-related material in this sample was significantly associated with expecting to be safe in the future, and higher mean-levels of this aspect of future expectation. For these young men, simply having school-related content in their ideas for their futures, even if it is negative content ("being a drop out"), is important. The troubling aspect of these findings are that school-based content in future fears shows a declining trend across the adolescent years from between 20-24% in waves one and two (mean ages 12 and 13) to around 17% in waves three and four (mean ages 15 and 16), and less than 10% in waves five and six (mean ages 17 and 19). This decline in school-related fears over the high school period and into college may reflect a blunting, or weakening of educationally-related possible selves during this period. At the same time that youth report less school-related content, there is a marked increase in death-related fears during this period. The decline of school-related fears, and increase in death-related fears holds significant implications for youth development. In an intervention trial designed to develop academically-based future selves coupled with attainment strategies for actualizing academic goals among low-income African American and Latino youth, participants in the intervention

group had significantly better school outcomes than those in the control group (Oyserman, et. al., 2006). Such work demonstrates it is possible to foster the development of academic- or school-related content among adolescents, and moreover, focused attention on developing this area of future self-concept may benefit youth who need additional supports to succeed in school. While purposeful attention to fostering and enhancing school-based content in future self-concept is possible, for young men in this sample, survival-related fears represented a significant and enduring content area. The prevalence of survival related concerns should also be considered by practitioners and youth workers who are engaging with young people.

#### 4.3. Gang-related Fears

Finally, the finding that presence of gang-related fears is significantly positively associated with expected future safety, and higher mean-levels of this aspect of future self-concept amongst those who report gang-related fears was an unexpected finding. However, other research on gang involved youth points to the protective function of gang membership for young people who may experience cumulative risks to development grounded in social and economic marginalization (Wood & Alleyne, 2010). In addition, for youth who are growing up in neighborhoods with higher levels of crime, involvement with a gang may also serve a “self protective” function. Thus, this finding may be indicative of a more complex social phenomenon. Younger adolescents both report fear of gangs, and also may view gang involvement as a pathway to increased future safety. Within the qualitative findings, fears related to gangs- and drug-involvement decreased over time, with no participant reporting this fear at wave six. This may also indicate a developmental change whereby younger adolescents, around the ages of thirteen and fourteen, experience greater incident of being recruited to join gangs.

Youth in this study discuss precariously high rates of fears related to survival between the ages of thirteen and twenty years. Threats to personhood, safety, and life itself represent the greatest proportion of overall fears across this developmental period. School-related fears, when present, represent a positive contributor to future self-concept, yet, school-related content declines significantly across this developmental period. Other fears, including those related to fatherhood, incarceration, and financial stability increase over this period, highlighting these concerns during the transition into young adulthood. The public health implications of these findings are significant, and point to strategies prevention and intervention efforts to support healthy development that account for the lived experiences of youth growing up in the context of adversity.

The design of this study introduces some limitations that warrant discussion. First, this is a secondary data analysis and therefore limited in the ability to explore the qualitative nature of adolescent future fears in depth. The qualitative data available is short-answer responses, thus significantly limiting the ability to conduct a richer contextualized analysis of participant's perceptions of the future, future uncertainty, and the factors that contribute to future fears. In addition, the analysis is limited to future expected fears, which represent only one aspect of adolescent future orientation, and future fears are presented as singular (e.g. the "biggest" future concern) versus multiple responses or "clusters" of fears. At the same time, this study begins to shed important light on the content and extent of future fears among minority male youth, a subset of youth who may experience greater threats to developing positive future orientation. Further, a significant strength of this study lies in the longitudinal nature of the data, and the ability to qualitatively assess, and empirically test, the content, trends of time, and relationships between future fears and quantitative measures of future orientation.

#### 4.4. Implications for Practice

The public health implications of this research are significant. First, the findings of chronic, pernicious, and severely high reporting of death-related fears in a sample of young minority men from early adolescence through emerging adulthood holds implications for effective prevention and intervention efforts. This is especially important in light of the finding that school-related concerns decreases across this period. Expectation of early death, and fears related to violent death may also be associated with a greater sense of hopelessness amongst this group of young men. As Bolland (2003) argues, many interventions aimed at reducing adolescent risk behavior assume that "...the individuals they target can imagine a positive future that can be achieved by engaging in healthy behavior" (156). This assumption may be erroneous for youth who report a chronic and enduring fear of early death; and who simultaneously report that these fears are of a magnitude large enough to disrupt daily activities, and distract them from school, work, or other meaningful pursuits.

Imagining a positive future is a key developmental asset for all youth. Youth with positive and hopeful future outlooks may be better suited to persist towards life goals in the face of obstacles, and to exhibit a sense of resiliency, or positive adapting coping in the face of life challenges. In order to develop a positive set of cognitions related to the future, youth must first and foremost believe in their ability to survive; to be alive, well, and thriving. The decline in school-based content across mid-adolescence is another important signal with implications for practice and intervention. Intervention work on middle school academically-oriented possible selves shows important impacts of scaffolding the purposeful development of this aspect of self-identity. The transition to high school, and the average ages of thirteen through sixteen saw the

highest increase in reported death related fears coupled with the largest decline in school-based content. While early intervention remains an important area of focus, programs and initiatives targeted specifically at young men during in the transition to high school, and the early high school years may be another area of intervention work.

Finally, implicit in this study is the role of the neighborhood environment on adolescent sense of future and future fears. Fears related to threats to survival, safety, and wellbeing carried an unspoken dimension of community- and neighborhood- experiences centered on perceptions of safety. As one young man stated, “I worry about living because I don’t feel safe outside.” Perceptions of neighborhood conditions, particularly amongst minority groups residing in low-income urban neighborhoods have been consistently linked to psychological distress (Kim & Ross, 2009; Ross & Jang, 2000). Further, the fear of future crime specifically (being targeted or victimized) is associated with higher odds of depression (Evans-Polce, Hulbert, & Latkin, 2013). Further work investigating the relationship between the local physical environment and survival-related future fears as well as the relationship between survival related future fears and mental health would be fruitful lines of inquiry. In addition, further investigations into the linking of future fears with lived experiences of neighborhood could shed light on the meanings of survival based fears amongst this group of young men.

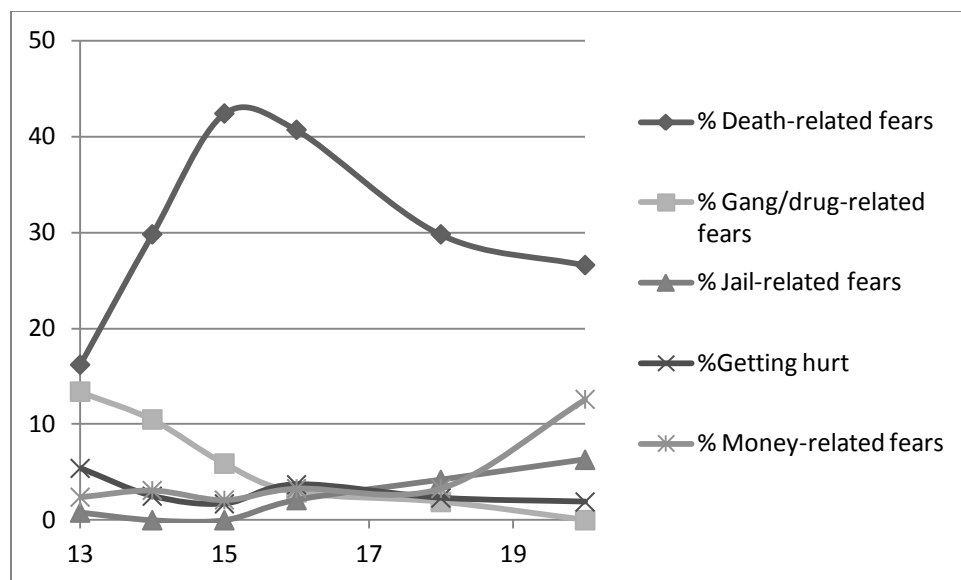


Figure 3.1: Prevalence of Survival, Safety and Security Related Fears, Waves 1-6

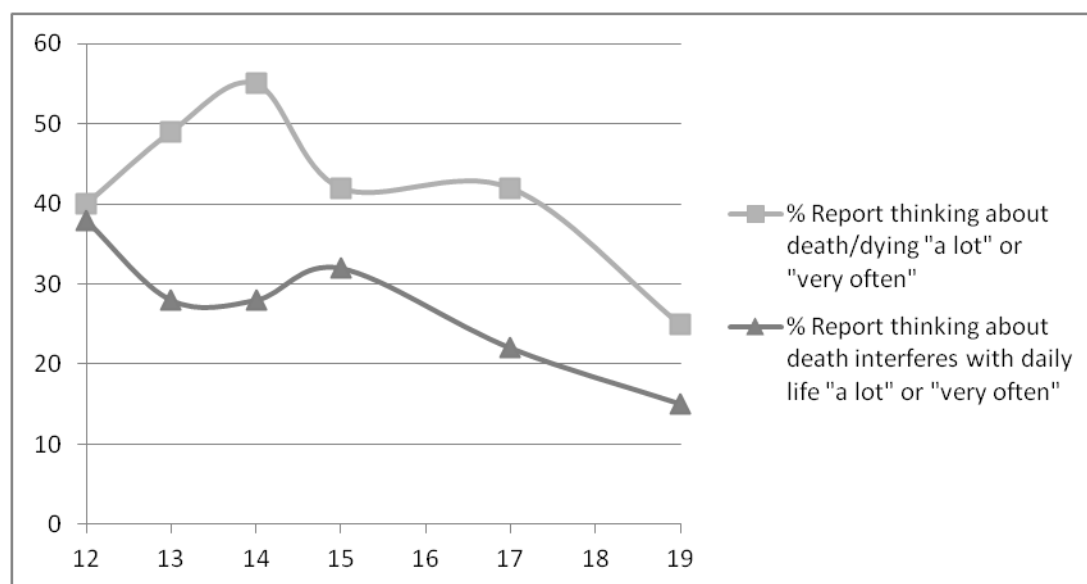


Figure 3.2: Prevalence of Thinking about Fear of Death Often and Thinking about Death Interfering with Daily Activities, Waves 1-6

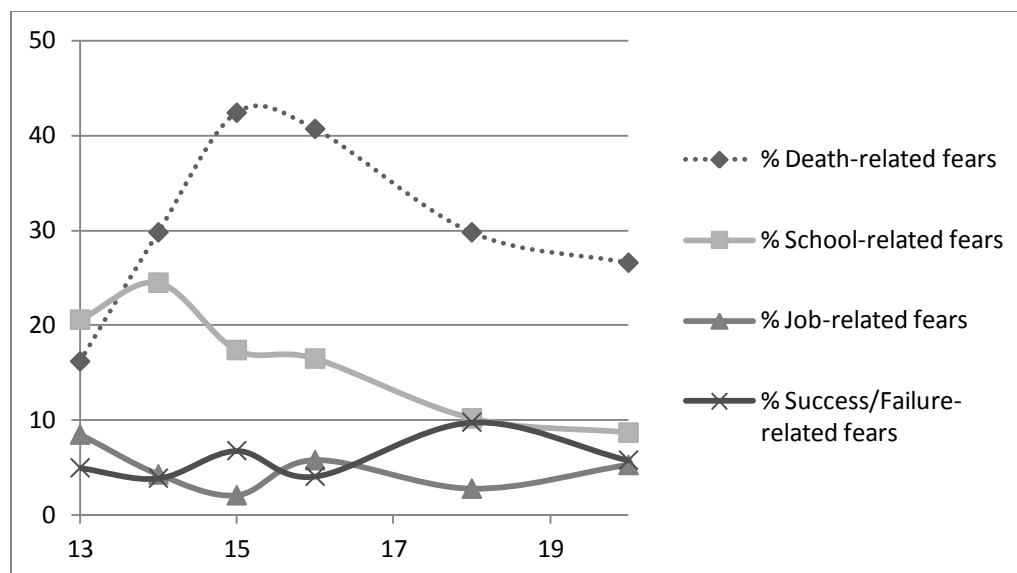


Figure 3.3: Prevalence of School, Job and Success Related Fears, Waves 1-6

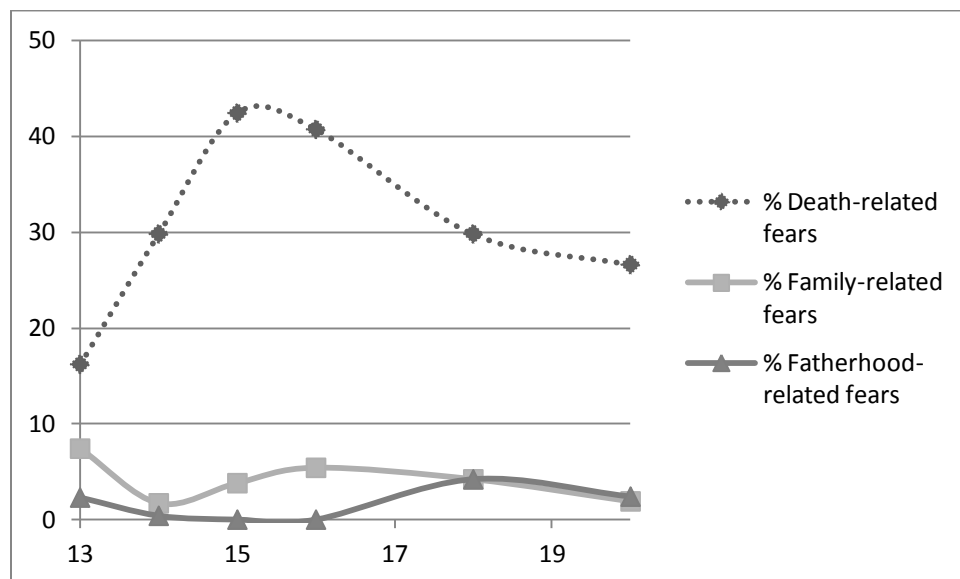


Figure 3.4: Prevalence of Family and Fatherhood Related Fears, Waves 1-6

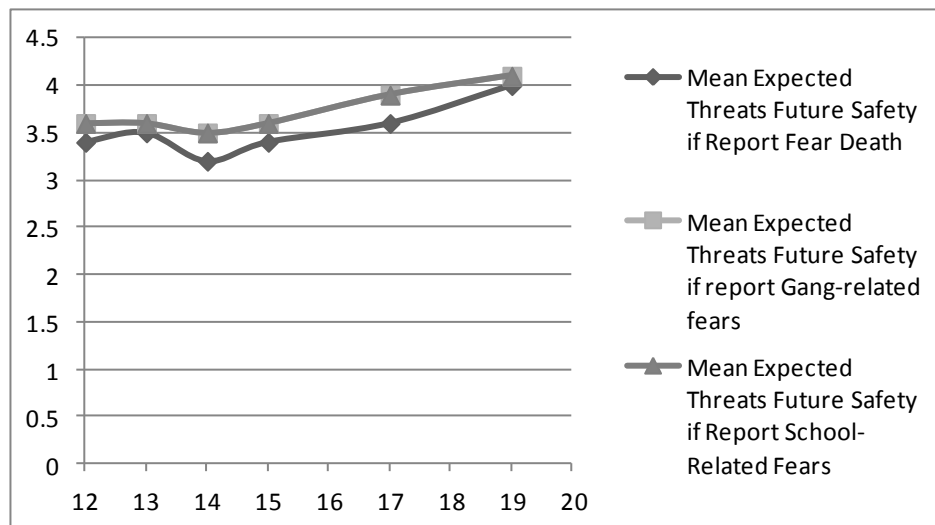


Figure 3.5: Plotted Means for Expected Threats to Future Safety by Fear Type, Waves 1-6

Table 3.1  
Summary of Qualitative Themes

<b>Survival, Safety &amp; Security</b>				
Category	Death/Dying	Gangs and Drugs	Incarceration	Economic Security
Sub-Category	-Murder -Staying alive/Trying to survive -Dying	-Recruited by gangs/join gang -Mistaken for gang member -Problems with gangs	-End up in jail -Getting out of jail -Going back to jail	-Being broke/not able to pay bills -Stability/security
Examples of Quotes	<i>“Will I still be alive in five years?”</i> <i>“Trying to make survive and wondering if I will.”</i> <i>“Getting killed.”</i> <i>“That I am a dead man.”</i> <i>“I won’t make it to 19”</i> <i>“Living because I don’t feel safe outside.”</i>	<i>“That something might happen to me, like be in the fire of a gang fight while I am minding my own business.”</i> <i>“Getting involved with gangs.”</i> <i>“That gangs will bother me.”</i>	<i>“That I’ll get locked up again.”</i> <i>“As long as I stay on the straight and narrow path, and stay out of trouble. I don’t want to go to jail.”</i> <i>“That I don’t catch more time or die here (jail)”</i>	<i>“Financial difficulties.”</i> <i>“Going broke.”</i> <i>“Making enough money.”</i> <i>“That I don’t have enough money.”</i> <i>“Being financially stable.”</i> <i>“Paying my bills.”</i> <i>“Money.”</i>

<b>“Making it”: School and Job Success</b>			
Category	School-Related Fears	Job-Related Fears	Success/Failure
Sub-Category	-Grades/Passing -Dropping out/not completing high school -Not going to college -Financing College -Not completing college	-Unemployment -Job security -Career development	-“Making it” -Achieving goals -Motivation
Examples of Quotes	<i>“Flunking”</i> <i>“That I don’t finish high school.”</i> <i>“Drop out of school.”</i> <i>“Will I make it to college?”</i> <i>“I worry about money for college.”</i> <i>“Not being able to go to college.”</i> <i>“That maybe I won’t get through college.”</i>	<i>“If I end up in a dead end job.”</i> <i>“Getting a good job.”</i> <i>“Getting a job.”</i> <i>“What my occupation will be.”</i> <i>“Not having a job.”</i> <i>“If I’m going to be working or not.”</i>	<i>“That I make my goals and what will happen if I do not make it.”</i> <i>“Not having success in life.”</i> <i>“If I am going to make it.”</i> <i>“Motivation.”</i> <i>“Fulfilling my goals.”</i> <i>“If I am going to make it in life or not.”</i>

Table 3.1 continued

<b>Family Wellbeing &amp; Fatherhood</b>		
Category	Family Safety & Wellbeing	Fatherhood
Sub-Category	-Death of a parent -Sibling Wellbeing -Family health and wellbeing	-Having a baby/Becoming a Father -Providing for Children/Children's wellbeing
Examples of Quotes	<i>"I worry about my mother dying."</i> <i>"My family, I worry that my brothers don't go down the wrong path."</i> <i>"I worry about my family being broken up."</i> <i>"I worry about my family and their health."</i>	<i>"If I have a baby I worry about supporting my child and still achieving my goals."</i> <i>"Being able to support them (wife and child)"</i> <i>"Taking care of my son."</i> <i>"Having kids"</i>

Table 3.2

Correlations between Positive Future Expectations, Expected Threats to Safety and Future Fears

	Fear of Death	School-Related Fears	Gang-Related Fears
1. Positive Future Expectations Mean W1-6	0.01	0.09	0.09
2. Expected Threats to Future Safety Mean W1-6	-0.15**	0.12*	0.12*

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## CONCLUSION

Adolescent future orientation, including expectations, is a promising area of research connecting to goal-setting, motivation, and behavioral decision making across a range of important indicators of well-being. This research advances understanding of the structure of future expectations longitudinally, supporting a multidimensional latent construct approach to future orientation that includes expected threats to future safety. In addition, this research extends previous knowledge drawn from cross-sectional research on the relationship between future orientation and risk behavior, illustrating the enduring, reciprocal nature of these relationships over time. Findings support the reciprocal effects hypothesis of a negative reinforcing cycle in the relationship between future orientation and both substance use and involvement in delinquent behavior.

Taken together, findings from this research illustrate the importance of a multidimensional approach to future expectations, and consider the cumulative and unique impact of positive future expectations, and expected future threats on substance use and involvement in delinquent behaviors across adolescence. Investigation of dimensionality reveals the differential importance of both aspects of future orientation on these risk behaviors over the adolescent years, and reiterates the importance of expectations in prevention and intervention efforts with high risk youth.

Finally, this research is the first to examine the content, prevalence, and changing trends over time of future fears discussed by young men of color longitudinally. Results reveal precariously high, increasing, and enduring presence of death and dying related fears amongst this group of men. Youth in this study discuss precariously high rates of fears related to survival between the ages of thirteen and twenty years. Threats to personhood, safety, and life itself represent the

greatest proportion of overall fears across this developmental period. School-related fears, when present, represent a positive contributor to future self-concept, yet, school-related content declines significantly across this developmental period. Other fears, including those related to fatherhood, incarceration, and financial stability increase over this period, highlighting these concerns during the transition into young adulthood.

Across these three analyses, multidimensional future orientation is established as a significant and enduring component of positive, or blunted, youth development from early adolescence through emerging adulthood. There are two implicit dimensions of this work that warrant consideration here, and hold implications for future research endeavors. The first is the role of the socio-physical environment in the development of adolescent future orientation, and the second is the impact of cumulative stress, including exposure to violence, on future orientation. I will briefly discuss each in turn.

Implicit in this study is the role of everyday social and physical environments in self-identity development. Of particular importance is the role of young men's perceptions of their neighborhood environment as a contributor to blunted future orientation and future fears. As one young man stated, "I worry about living because I don't feel safe outside." Perceptions of neighborhood conditions, particularly amongst minority groups residing in low-income urban neighborhoods have been consistently linked to psychological distress (Kim & Ross, 2009; Ross & Jang, 2000). Further, the fear of future crime specifically (being targeted or victimized) is associated with higher odds of depression (Evans-Polce, Hulbert, & Latkin, 2013). Further work investigating the relationship between the local physical environment and survival-related future fears as well as the relationship between survival related future fears and mental health would be fruitful lines of inquiry. In addition, further investigations into the linking of future fears with

lived experiences of neighborhood could shed light on the meanings of survival based fears amongst this group of young men.

Second, implicit in this work is the role of cumulative stress, including exposure to violence, on future orientation, particularly for young men of color. Chronic exposure to external threats and hassles may impact future orientation as well; resulting in increased expectation of threats to one's future safety and well-being. In this research, young men reported precariously high, increasing, and enduring fears of early death; more than twice the frequency reported by men of color in a national sample. It is possible that increases in these negative future expectations, including fear of early death, may be representative of accumulated first or second-hand experiences with violence. Exposure to community violence, including witnessing violent crimes, experiencing physical assault, or multiple deaths of friends or loved one may be disproportionately experienced by young men of color growing up in low-income neighborhoods (Hoffman, 2004; Anderson, 1994).

The linking of experiences of interpersonal violence, or trauma, with increased fears of future safety and use of substances as a coping mechanism, or experiential avoidance is thus implied. Slightly more than half of young men surveyed at waves two, three and four reported between one and four direct or indirect experiences of violence (including a family member arrested, robbed or attacked, a non-family member beaten, times witnessed a violent crime, times witnessed someone shot or killed, and times having been a victim of a violent or non-violent crime). At wave five, mean age seventeen, nearly sixty-three percent of young men sampled reported directly experiencing or witnessing between one and four acts of violence. Further investigation into the relationships between experienced or witnessed violence, future orientation, and substance use is needed to understand how these could factors interrelate.

Young men of color, and especially African American and Latino young men, as well as youth living in poverty are significantly more likely to believe they will not live to old age compared to white, middle-income youth. Blunting in future perspective evidenced in youth of color is an important dimension of inequality in young people's lives. Future orientation captures aspects of current identity, but projects these into the future. Significant differences in the expectation to live a full, healthy, productive life evidenced in youth who occupy multiple marginalized identity spaces has real implications for how such youth think about and make decisions in the present. Visioning of future possibility is grounded in socio-cultural representations of what youth may become. For African American and Latino young men, pervasive and pernicious negative messages from dominant culture influence beliefs about future possibility. Thus, as others have argued, attention to the ways in which race, class, and gender intersect to inform future imagining is critical to intervention work aimed at bolstering adolescent future orientation. These findings illustrate the importance of building a positive vision of self, including the belief that one will be safe, alive, and well is a powerful intervention strategy.

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## Curriculum Vitae

Dana M. Prince

Curriculum Vitae

## EDUCATION

PhD	<b>University of Washington, School of Social Work</b> <b>Dissertation Title:</b> <i>“I’m afraid I won’t make it to 19”: Longitudinal Development and Impact of Future Orientation on Health Risk Behaviors among African American and Latino Young Men</i>	June 2014
MPH	<b>University of Pennsylvania</b> Specialization: Adolescent social & behavioral health	May 2008
BA	<b>Oberlin College</b> Major: Women and Gender Studies	May 2002

## AWARDS, HONORS, &amp; FELLOWSHIPS

<b>School of Social Work Doctoral Dissertation Award</b>	2013-2014
<b>Project for Interdisciplinary Pedagogy Teaching Fellowship</b>	09/2013-06/2014
<b>General Examination</b> “Who will I be?”: Place, Identity & Future Self-Concept, Pass with Distinction	06/2012
<b>Multidisciplinary Pre-doctoral Clinical Research Trainee</b> National Institutes of Health (NIH)/National Center for Research Resources (NCR) funded Institute of Translational Health Sciences	06/2011 – 08/2013 Summer 2009
<b>National Institute of Mental Health Prevention Research Trainee</b> National Institute of Mental Health funded University of Washington School of Social work Prevention Research Training Program	09/2009-06/2011
<b>Top Scholar Award for Excellence and Innovation</b> University of Washington	09/2008-06/2009
<b>Provost Award for Interdisciplinary Innovation in Research</b> Honorary Mention, University of Pennsylvania	05/2008

## PUBLICATIONS & PRESENTATIONS

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### Peer-Reviewed Publications

Biruk, C., & **Prince, D.** (2008). Subjects, Participants, Collaborators: Reading community in public health literature. *International Feminist Journal of Politics* 10(3).

**Prince, D.** (2013): What about place? Considering the role of physical environment on youth imagining of future possible selves. *Journal of Youth Studies* DOI: 10.1080/13676261.2013.836591.

**Prince, D.**, Adrian, M., Storer, H., Namkung, N., Thompson, K. & Vander Stoep, A. Contextualizing Change-Points in Alcohol Use from Early Adolescence through Young Adulthood. (Accepted: *Social Work Research*)

**Prince, D.** & Nurius, P. The Role of Positive Academic Identity in Promoting School Success. (Accepted: *Children and Youth Services Review*)

### Manuscripts in Process

Nurius, P. & **Prince, D.** Cumulative Stress Implications for Adolescent Health and Academic Success. (Drafting)

**Prince, D.** (Dissertation Work in Progress). Examining the Multidimensionality of the Future Expectations of African American and Latino Young Men across Adolescence into Emerging Adulthood.

**Prince, D.** (Dissertation Work in Progress). Examining the Reciprocal Effects between Future Orientation, Substance Use and Delinquency among African American and Latino young men from Early Adolescence through Young Adulthood.

**Prince, D.** (Dissertation Work in Progress). “About surviving, that’s my biggest worry”: A Longitudinal Examination of the Future Fears of African American and Latino Young Men from Early Adolescence through Emerging Adulthood

### Presentations

#### Professional Meetings & Conferences

**Prince, D.** (January 2014). “I’m Afraid I Won’t Make it to 19”: Prevalence and Correlates of Truncated and Optimistic Future Expectations for African American and Latino Young Men. Symposium, at the 18<sup>th</sup> Annual Conference of the Society for Social Work and Research, San Antonio, TX.

**Prince, D.** Adrian, M., Storer, H., Namkung, N., Thompson, K. & Vander Stoep, A. (May 2013). *Using a Mixed-Methods Approach to Elicit Explanations for Shifts in Adolescents’ Self-Reported Alcohol Use*. Poster session, Society for Prevention Research 21<sup>st</sup> Annual Meeting, San Francisco, CA.

- Prince, D.** (April 2013). *What about Place? Considering the Role of Physical Environment on Youth Imagining of Future Possibility*. Symposium. New Agendas on Youth & Young Adulthood Conference, hosted by the *Journal of Youth Studies*, University of Glasgow, Glasgow, Scotland.
- Prince, D., & Nurius, P.** (January 2013). *Cumulative Stress Implications for Adolescent Health and Academic Success*. Symposium: Adolescent Mental Health, at the 17<sup>th</sup> Annual Conference of the Society for Social Work and Research, San Diego, CA.
- Prince, D.** (May 2012). *Visioning the Future: How Youth Possible Selves Promote Educational Success and Health: Lessons from Practice and Research*. Symposium. 6<sup>th</sup> Annual Healthy Schools Summit, Seattle, WA.
- Prince, D., & Nurius, P.** (January, 2012). *Youth Positive Academic Identity as a Promising Factor in Promoting School Success*. Symposium: Promoting Academic Outcomes amongst High School and College Students, at the 16<sup>th</sup> Annual Conference of the Society for Social Work and Research, Washington, DC.
- Prince, D., Sousa, C., Herrenkohl, T, et al.** (January, 2011). *Abuse and stress in childhood and adolescence: direct and mediated effects of chronicity on later depression*. Symposium: Child maltreatment: Lessons from the Lehigh study, at the 15<sup>th</sup> Annual Conference of the Society for Social Work and Research, Tampa, FL.
- Prince, D.** (May 2010). *Listen to Me: Findings from a focused ethnography exploring the lived contexts of Black youth in West Philadelphia*. Poster session at the 11<sup>th</sup> Annual Campus-Community Partnerships for Health Conference, Portland, OR.
- Prince, D., & Morrisk, C.** (October 2008). *Impact of sanitation on girl's health and education: Northwest province, Cameroon*. Poster session at the 136<sup>th</sup> American Public Health Association Annual Meeting, San Diego, CA.

### **Invited Lectures**

- Prince, D.** (July 2013). "What about Place? Considering the Role of Physical Environment on Youth Imagining of Future Possibility". Guest lecture for graduate course Urbanism and Resilience: Neighborhood Networks at the University of Washington College of Build Environment, Urban Planning.
- Prince, D.** (May 2013). "I'm Afraid I Won't Make it to 19": Prevalence and Correlates of Truncated and Optimistic Future Expectations for African American and Latino Young Men. Institute of Translational Health Sciences KL2/TL1 Scholars Recognition Event, Seattle, WA.
- Prince, D.** (July 2012). "Emplacing Youth Future Self Concept." Guest lecture for graduate course at the University of Washington College of Build Environment, Urban Planning.
- Prince, D.** (May 2012). "Place & Youth Identity Processes." Guest lecture for graduate course People, Place, Equity at the University of Washington School of Social Work.

## RESEARCH FOCUS & EXPERIENCE

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### Focus

Adolescent Health Risk Behaviors

School and community interventions

Identity formation

Place and environmental influences

Mixed Methods

### Experience

#### **Research Analyst**

09/2012-06/2014

*Chicago Youth Development Study* (Principle Investigators: Deborah Gorman-Smith, Patrick Tolan & David Henry)

- Utilizing CFA and SEM to examine the structure and relationship of future self-concept and health risk behaviors from early adolescence through young adulthood.

#### **Pre-doctoral Research Trainee & Analyst**

09/2010 –06/2014

Departments of Sociology and Social Work, University of Washington  
*Beyond High School Study* (Preceptor: Paula Nurius)

- Utilized multivariate statistical methods to test contribution of academic self-concept on academic success and the role of cumulative stress on psychosocial functioning for vulnerable youth.

#### **Co-Investigator**

06/2009-06/2014

Child Health Institute & Social Work, University of Washington  
*Contexts of Drinking Study* (Co-Investigator: Ann Vander Stoep)

- Developed a graphic interview method utilizing longitudinal self-reported alcohol use data from ages 12 to 21 years; Conducted qualitative semi-structured interviews on factors related to changes in alcohol use; Led team in directed content analysis using consensus coding.

#### **Pre-doctoral Research Trainee & Analyst**

09/2009 –06/2010

Social Development Research Group, University of Washington  
*Community Youth Development Study* (Principal Investigator: David Hawkins)

- Utilized hierarchical linear modeling to test for effects of the intervention on academic outcomes for youth.

**Pre-doctoral Qualitative Analyst**

06/2008-09/2009

School of Social Work, University of Washington

*Depression Care Study with Rural Latinos*

(Principal Investigator: Gino Aisenberg)

- Conducted directed content analysis of interview transcripts with participants involved in a phone-based depression intervention study.

**Co-Investigator**

09/2007-05/2008

University of Pennsylvania, MPH Capstone Project

“Exploring the Lived Context of Black Youth Sexual Decision Making”

- Conducted a focused ethnography to describe the socio-cultural context of sexual decision making processes for a group of black teen peer educators.

**Research Assistant**

05/2007-05/2008

U-Penn Public Health Program &amp; Philadelphia Global Water Initiative

*Bome-Ngyenmbo Water Sanitation Improvement Project*

- Trained Cameroonian partners in research methods and procedures; conducted 150 household questionnaires; conducted focus groups with girls in primary and secondary school on water use, hygiene and on education

**TEACHING FOCUS & EXPERIENCE**

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## Focus

Foundation Curriculum: Social Welfare Research and Evaluation; Human Behavior and the Social Environment; Social Work for Social JusticeAdvanced Curriculum: Critical Understandings and Approaches to Youth Development; Health Promotion with Vulnerable Populations; Risk & Resilience; Place & Health

## Experience

**Critical Understandings & Approaches to Youth Development, Sole Instructor/Teaching Fellow**

Winter, 2014

UW Bothell Interdisciplinary Arts &amp; Sciences

Developed new interdisciplinary course that explores multiple cultural, political and contextual understandings of youth development and how these understandings are shaped by the intersection of institutions, policies, and communities.

**Social Science Research Methods, Sole Instructor/Teaching Fellow**

Fall 2013;

UW Bothell Interdisciplinary Arts &amp; Sciences

Spring 2014

**Social Welfare Research & Evaluation, Sole Instructor** Summer 2012;  
Required course for UW Advanced Standing MSW students Summer 2013

**Social Welfare Research & Evaluation, Teaching Practicum** Spring 2012  
Required course for UW MSW students

**Exploring Relationships through Fiction and Film: Sex, Gender & Sexuality, Co-Instructor** 09/2004-05/2008  
Elective course for undergraduate students from the Greater Lakes College Association participating in the Philadelphia Center Program, Philadelphia, PA

#### PRACTICE EXPERIENCE

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**Program Director, Sayre-Penn Partnership for Health** 09/2005-05/2009  
University of Pennsylvania Netter Center for Community Partnerships

- Supervised programs connecting clinical care to health promotion; Directed youth employment programs using peer health education model and youth health council; Served as community preceptor for undergraduate and health professional students placed at high school.

**Program Coordinator, Urban Nutrition Initiative at the Netter Center for Community Partnerships, University of Pennsylvania, Philadelphia, PA** 06/2003-08/2005

- Coordinated school-day and after-school nutrition education programs including healthy snacks, school garden, peer-led nutrition education program and community health classes.

**Americorps VISTA Volunteer, Netter Center for Community Partnerships, University of Pennsylvania, Philadelphia, PA** 08/2002-05/2003

- Coordinated Penn-Sayre partnership activities; supported Beacon after-school program; developed community Family Fitness Nights.

Conference Presentations Co-Developed and Implemented with Youth

*“Strap Up 2 Get Down: Teens teaching Teens 2 stay safe”* at the Real World, Real Lives Conference, Dover, DE. May 2007

*“Stay Safe Crew: Lessons from a youth-driven project to promote healthy sexuality”* at the National Youth Leadership Conference, Philadelphia, PA. March 2006

## PROFESSIONAL & COMMUNITY SERVICE

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### Service to the Profession

**Invited Peer Reviewer:** *Journal of Youth Studies* 04/2013-present

### Service to the Academy

**UW Doctoral Program Peer Mentor** 09/2010 – 06/2011

- Informal peer mentor to in-coming first year doctoral student.

**UW Doctoral Program Steering Committee Member** 09/2009-06/2011

- Elected by the doctoral student body to serve as two year student representative.

### Service to the Community

**Coalition of Anti-Racist Parents**, active member, Seattle WA February 2013-present

- Developed and facilitated workshop “Developmental Milestones for Children and Youth in Recognizing and Internalizing Race & Racism: Strategies for Parents and Care-Givers” for Capital Hill Cooperative Preschool

**Co-Facilitator**, Tacoma Youth Summit, Tacoma, WA 05/2009

**Sayre Health Center Community Advisory Board**, Member, Philadelphia, PA 2004 – 2008

**Co-Facilitator**, Sayre High School Gay 2005-2008

**Coach**, Students Run Philly Style, Philadelphia, PA 2006-2008

### Professional Affiliations

Society for Social Work and Research, *Student Member*

Society for Prevention Research, *Student Member*

American Public Health Association, *Student Member*