

Promoting Viable Career Choice Goals Through Career Decision-Making Self-Efficacy
and Career Maturity in Inner-City High School Students:
A Test of Social Cognitive Career Theory

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Dedication
To My Family

Abstract

In an effort to understand the viability of inner-city adolescents' career choice goals, the purpose of this study was to predict relationships among person factors, environmental factors, career maturity, career decision-making self-efficacy, vocational outcome expectations, and viable career choice goals within this population. I predicted that greater career maturity and stronger support systems would significantly predict career decision-making self-efficacy and vocational outcome expectations. In turn, I hypothesized career decision-making self-efficacy and positive vocational outcome expectations would positively predict viable career choice goals among inner-city adolescents. Participants in this study were 220 10th through 12th grade inner-city adolescents, with a mean age of 16.33. Participants were recruited from a large metropolitan public school in the Midwestern United States. Participants completed a demographic questionnaire and five research measures: the *Career Decision Self-Efficacy Scale-Short Form* (CDSE-SF; Betz & Klein, 1996; Betz, Hammond, & Multon, 2005), the *Structured Career Development Inventory* (SCDI; Lapan, 2004), the *Career Maturity Inventory-Attitudes Screening Form A-2* (CMI-A2; Crites, 1978), the *Vocational Outcome Expectations-Revised* (VOE-R; McWhirter & Metheny, 2009), and the *Perceptions of Barriers Scale* (POB; McWhirter, 1997). Results of structural equation modeling suggest that environmental supports (e.g., career maturity, proactivity, career exploration, perception of fewer barriers, instrumental and emotional support) were positively related to inner-city youths' efficacy to make career decisions as well as the expected outcomes of these career decisions. In line with Social Cognitive

Career Theory (SCCT), career decision-making self-efficacy and vocational outcome expectations were positively related to career choice goals, such that inner-city adolescents with greater levels of career decision-making self-efficacy, more positive vocational outcome expectations, and higher levels of proactivity and academic achievement endorsed viable career choice goals. The need for improved early career interventions addressing career goal-setting is described. Limitations, implications, and recommendations for future research and practice are also outlined.

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CHAPTER 1

INTRODUCTION

This dissertation will discuss the factors that encourage inner-city adolescents' career development. Specifically, this paper will explore relationships among environmental and personal barriers and supports, career maturity, career decision-making, and viable career choice goals among inner-city adolescents. Chapter One will highlight the importance of developing career decision-making skills for inner-city youth, as well as the challenges and barriers they face to setting and achieving their career-related goals. Chapter Two will provide an overview of theories of career development, including Social Cognitive Theory (Bandura, 1997), Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994; 2000), the Integrative Contextual Model of Career Development (Lapan, 2004), and Crites' model of career maturity (1971). In addition, Chapter Two will provide a review of literature involving inner-city adolescents' career decision-making self-efficacy, career maturity, and vocational outcome expectations. Chapter Three will discuss the format and methodology of this study. Chapter Four will provide a review of the study results. Finally, Chapter Five will discuss the findings of this study and provide suggestions for practitioners as well as suggestions for future research.

It is clear that in our modern world, making a vocational choice is not a single decision made at one point in time, but a process involving many decisions, great and small, that combine to set one on an individualized trajectory of career development. The process of vocational decision-making begins from an early age; it is evident in the young child who has a ready answer to the question, "What do you want to be when you grow

up?” and continues in some developmentally appropriate form throughout the lifespan.

The many career decisions that a person makes, beginning with one’s first career fantasy and continuing through the adolescent and adult years, involve a complex synthesis of personal, social, and environmental components (Emmerling & Cherniss, 2003).

While it is recognized that deciding on a potential vocational direction is difficult enough, the world of today offers additional complexities in regard to the career decision-making process. The advent of the Information Age has quickly incurred a period of rapid growth, instability, and change, such that the development of one set of roles or responsibilities, or one vocational identity probably will not take an individual through his or her entire career. The days of a lifetime career, a pension, and a gold watch at retirement are long gone. The 21st century has ushered in a world of work where workers’ roles have become more fluid and the concept of “career” is constantly in a state of flux. Changes in the economy, such as recessions, downsizing, an increased exportation of jobs, and layoffs, require that today’s youth are preparing for the new realities of the 21st century labor market by building strong foundations for career decision-making across the lifespan. For even the most prepared, motivated, and educated young person, developing the efficacy and maturity necessary to make informed career decisions in this complex and constantly demanding world of work is challenging. However, for those adolescents who lack the necessary preparation, resources, training, or access to the opportunity structure, the process of decision-making (e.g., prescreening, in-depth exploration, and choice; Gati & Asher, 2001) may be even less viable.

Challenges and Barriers for Inner-City Youth

While adolescence itself brings challenges to making career decisions, inner-city youth are especially vulnerable to social, academic, and environmental constraints, which may limit their ability to set and obtain academic and career-related goals. Inner-city adolescents are more likely to score in the lowest quartile of standardized tests, to drop out of high school, and to earn fewer postsecondary degrees than White youth (U.S. Department of Education, National Center for Education Statistics, 2001). In addition to academic constraints, these youth may experience environmental and contextual barriers that hinder their career achievement. The division of wealth and the inequity of economic resources in this country continue to increase dramatically. Census bureau figures indicate that 12 million U.S. children (1 out of every 6) live in poverty (2001). Moreover, high levels of poverty, low socioeconomic status, high unemployment rates, lack of positive working role models, and lack of access to career and educational resources continue to limit the educational and career success of inner-city adolescents (Arbona, 1990; Zunker, 1990).

Additionally, institutional barriers such as racism, discrimination, or glass ceilings may encumber positive career development for these youth. As a result, inner-city adolescents are likely to have less understanding of their career interests, values, and abilities compared to suburban youth because inner-city youth have had fewer opportunities for career exploration through participation in career classes, meaningful part-time employment, internships, job shadowing, and informational interviews (Zunker). Less exposure to career exploration also likely leads to a limited understanding

of available job opportunities, leaving these adolescents less prepared to make adequate career decisions (Brown, Darden, Shelton, & Dipoto, 1999).

As a result of these academic, social, environmental, contextual, and institutional barriers, many inner-city adolescents leave high school having engaged in very little career exploration, with little preparation to make career or postsecondary educational decisions, and having developed fewer career decision-making skills (Constantine, Erickson, Banks, & Timberlake, 1998). These adolescents are faced with few pathways for advancement and traditionally enter lower paying and less prestigious careers (Kenny, Blustein, Chaves, Grossman & Gallagher, 2003). Gaining an understanding of their career interests, values, and abilities is particularly important for today's inner-city youth as recent research indicates that comprehending these constructs is essential for preparing adolescents to make successful postsecondary education or career decisions (Gati, 1998; Gati, Garty, & Fassa, 1996).

In addition to the lack of resources necessary to make adaptive and informed career decisions, research has indicated that social, contextual, and institutional forces can serve to undermine the career development of inner-city youth by lowering motivation for academic and career success, as well as for career aspirations and outcome expectations. Although many contextual and environmental forces act as barriers for these adolescents, youth are not passive bystanders, but active agents in their individual career decision-making processes. As such, they actively process and give meaning to their experiences and act on their environment (Lerner, 2002). Therefore, the meanings inner-city adolescents attribute to academic and vocational barriers (e.g., perceptions of racism, sexism, and classism) represent one mechanism through which environmental

and contextual factors influence these adolescents' career beliefs, career decision-making self-efficacy, and career outcome expectations (Solberg, Howard, Blustein, & Close, 2002).

Internalized academic and career barriers negatively influence inner-city adolescents' perceptions of career aspirations and attainments, as well as their career choice processes in general. For instance, while career aspirations and interests do not differ between multiculturally diverse inner-city youth and their suburban counterparts, multiculturally diverse youth reflect lower occupational expectations regarding attaining these careers (Arbona, 1990; Constantine, et al., 1998; Hanson, 1994). This aspiration-expectation gap indicates that although inner-city adolescents have the same goals as other adolescents, the processes they go through to make career decisions may be quite different.

The Importance of Career Decision-Making for Inner-City Youth

High school is a time when adolescents begin to make significant decisions about their future educational and career paths, as well as how to identify their aspirations and how to set their educational and career goals. Therefore, it is imperative that these youth develop the efficacy, skills, and readiness to make adaptive career decisions and set viable career choice goals. Viable career choice goals can be defined as career goals to which one is committed, goals for which one is actively preparing (including taking advantage of opportunities to achieve), and goals that are measurable, specific, and can be reached through a series of well-defined steps (Lapan, 2004). Setting viable goals does not mean that in the process of career decision-making, adolescents should be dissuaded from considering any career option that might interest them. Adolescents' career

decision-making self-efficacy beliefs (i.e., their ability to successfully engage in the tasks involved in making career decisions; Hackett & Betz, 1981) are key components in this decision-making process (Betz & Hackett, 1983; Luzzo, 1993a; Taylor & Popma, 1990). However, many inner-city adolescents lack the efficacy to make career-related decisions, and thus the career decision process is not actively pursued to a satisfying end. Difficulty making a career choice is associated with the concept of career maturity (i.e., the extent to which an adolescent is able to make independent and realistic career-related choices; Super, 1990). Developmentally, career maturity and career decision-making self-efficacy are important concepts for understanding inner-city youths' career behaviors as well as assessing their progress toward achieving viable career choice goals.

Setting viable career choice goals is an important developmental task for adolescents. However, inner-city adolescents may face numerous barriers as they attempt to set and reach their career goals, including high levels of poverty, fewer working role models, and less access to already limited resources in their schools. Therefore, these adolescents may not develop the appropriate skill set (e.g., development of career decision-making self-efficacy and career maturity) necessary to reach their career goals. Chapter Two will provide a review of theory and research related to inner-city adolescents' career decision-making self-efficacy and career maturity, as well other person and environmental factors that influence the viability of career choice goals for these students.

CHAPTER 2

REVIEW OF THE LITERATURE

In order to examine the factors that promote viable goal-setting among inner-city adolescents, the purpose of this chapter is to review theory and research related to self-efficacy and career maturity, and how these constructs, as well as related person and environmental factors, interact in the process of setting viable career goals. First, I will conduct a review of Bandura's Social Cognitive Theory (SCT; 1997) and review literature associated with this construct. As a part of my review, I will delineate the various types of self-efficacy that have been identified in the career development literature. Next, a review of Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) as it has been applied to educational and vocational development will be provided. To thoroughly describe person and environmental factors identified in this theory, I will examine Lapan's (2004) Integrative Contextual Model of Career Development, Super's (1990) construct of career maturity (i.e., career attitudes and career decision-making skills), and Crites' (1971) model of career maturity. Next, I will provide a critical review of career decision-making research using SCCT as a model. This review will highlight relationships among career decision-making self-efficacy, outcome expectations, person and environmental factors, and career choice goals. Finally, I will discuss the need for additional research on models of career decision-making in order to promote viable career choice goals in inner-city adolescents.

Bandura's Social Cognitive Theory

In his landmark theory, the Social Cognitive Theory, Bandura (1977; 1997) proposed a theoretical framework that helps to explain and predict human behavior and

decision-making. Self-efficacy, defined as a person's belief in his or her capabilities to perform a particular activity (Bandura, 1977; 1997), varies from individual to individual. Self-efficacy, for the purposes of this study, can be delineated via three specific terms: self-efficacy, career decision-making self-efficacy, and career self-efficacy. While self-efficacy is defined as people's beliefs about their capabilities to exercise influence over the events that affect their lives (Bandura, 1997), career decision-making self-efficacy refers specifically to people's beliefs regarding their ability to successfully accomplish tasks related to the career decision-making process (Betz & Hackett, 1983). Career decision-making self-efficacy also differs from career self-efficacy, in that career decision-making self-efficacy is efficacy to accomplish the tasks related to making career decisions (i.e., accurate self-appraisal, goal selections, developing plans for the future, gathering occupational information, and problem solving; Betz & Hackett, 1983), while career self-efficacy is defined as a content or task-specific self-efficacy (i.e., efficacy for performing the tasks related to a particular career, such as a science or engineering career; Lent & Brown, 2006).

According to Social Cognitive Theory, self-efficacy is achieved through one's personal motivation and through one's beliefs regarding his or her capability or competence in performing domain-specific tasks (Bandura, 1997; Betz & Hackett, 1983; Lent et al., 1994). Motivation and beliefs together influence one's perceptions of his or her abilities, such that an individual's perceived abilities may vary from his or her actual performance. Thus, when an individual's self-efficacy increases regarding his or her personal abilities to perform well on a particular task, levels of persistence and motivation will also increase, with the end result being even greater self-efficacy for

completing a specific activity (1997). Indeed, numerous studies have suggested that greater self-efficacy in such domains as academic performance (Lent, Brown, & Larkin, 1986), interests in academic subjects, including math, English, and science (Smith & Fouad, 1999), and career interests and goal-setting (Bandura, Barbaranelli, Vittorio-Caprara, & Pastorelli, 2001) is related to increases in desired outcomes such as higher grades, greater interests in core academic subjects, and greater career interests and increased goal-setting activity (Bandura et al.; Lent et al., Smith & Fouad).

According to SCT, efficacy beliefs regulate human functioning through cognitive processes, motivational processes, affective processes, and selection processes (Bandura, 1995). These processes typically exert a multivariate influence on human functioning. Cognitive processes involve forethought and self-appraisal of capabilities in setting and attaining one's personal goals. In this regard, the stronger one's perceived self-efficacy, the stronger the commitment to one's personal goals (Locke & Latham, 1990). Motivational processes involve forming beliefs about what one can do, anticipating likely outcomes of actions, and setting goals and planning courses of actions to fulfill pre-set goals. Affective processes involve one's ability to cope with anxiety, stress, or other emotions that may be present in challenging situations. Finally, selection processes involve one's ability to select environments that cultivate certain potentials and lifestyles, while avoiding activities and environments that one believes will exceed his or her coping strategies. In regard to inner-city adolescents' self-efficacy beliefs, selection processes could be defined as the ability to exercise some control over the barriers they encounter (such as the effects of poverty, or attending high schools with less funding and fewer individualized programs). Thus, when cognitive processes, motivational processes,

affective processes, and selection processes are positive and goal directed, those with stronger efficacy beliefs are more likely to persist in the face of perceived and actual barriers than those with weaker efficacy beliefs (Bandura, 1995).

Bandura's (1977; 1997) model also details four types of learning experiences through which self-efficacy beliefs are developed: past performance accomplishments, vicarious (or observational) learning, somatic and emotional states (e.g., anxiety), and verbal persuasion (e.g., encouragement). According to Bandura, the most effective of these forms is performance accomplishments, or obtaining mastery experiences. Here, the experience of personal success builds efficacy. In the classroom, for example, high grades that adolescents attribute to their own efforts can strengthen their self-efficacy beliefs in the academic domain. Bandura (1995) maintains that obtaining mastery experiences is less about developing a habitual way of responding to challenges, and more about understanding and acquiring a variety of cognitive, behavioral, and self-regulatory tools that allow one to evaluate and respond to changing life circumstances successfully.

A second influential form of developing self-efficacy is through vicarious learning, or the vicarious experiences provided by those role models to whom we attend. For an adolescent, observing someone who is believed to be similar to himself or herself persist and succeed in tasks provides positive modeling and raises his or her own efficacy to complete a task or master an activity. Alternatively, observing someone deemed to be similar fail, despite persistent efforts, can decrease his or her own efficacy to complete this task. Bandura (1995) asserted that the impact of modeling on self-efficacy beliefs is greatly influenced by perceptions of similarity of the role model to the observer. The

greater the perceived similarity, the more influential the model's successes and failures will be on one's own self-efficacy. More than just finding models against whom to compare one's own abilities, people who are agentic in developing their skills in specific domains seek out models whom they feel are proficient in the competencies they wish to develop. To this end, Bandura noted that observing others demonstrating perseverant attitudes (e.g., when they persist and cope with specific, identified obstacles) can be more beneficial to the development of self-efficacy beliefs than observing others demonstrating particular skills. This does not negate, however, that among adolescents, role models tend to be those in their environments with whom they have social bonds, such as peers or parents, and that role models are not consciously sought out.

People also develop efficacy beliefs, in part, through somatic and emotional states. For instance, stress reactions, tension, anxiety, or physical symptoms such as fatigue, are often interpreted as signs of poor performance (Ewart, 1992). Moreover, mood also has a significant effect on perceived judgments of self-efficacy. Whereas a positive mood can enhance perceptions of self-efficacy, a negative mood can greatly dampen perceptions of efficacy (Kavanagh & Bower, 1985).

The fourth and final way people develop efficacy beliefs is through verbal persuasion (i.e., encouragement). With verbal persuasion from others, adolescents can cultivate beliefs in their own capabilities and make strides to ensure that success is attainable. However, just as positive persuasion may empower others; negative persuasion can serve to weaken self-efficacy beliefs.

Although each of the above processes serves to influence the development of self-efficacy beliefs, behavior can best be predicted not by self-efficacy beliefs alone, but by

the combined effects of self-efficacy, outcome expectations, and personal goals (Bandura, 1997). Therefore, in addition to perceived self-efficacy for tasks, SCT also takes into account outcome expectations for given events. While self-efficacy is generally concerned with an individual's view of his or her own capabilities, outcome expectations are focused on the perceived consequences of a particular action (Bandura, 1997). In other words, while self-efficacy is concerned with the question "Can I do this?" outcome expectations involve the question "If I do this, what will happen?" (Lent, Brown, & Hackett, 2000, p. 38). For instance, while inner-city youth may understand that a college degree can lead to higher pay and more job security (i.e., outcome expectations), they may doubt their ability to achieve this goal (i.e., low self-efficacy beliefs). Conversely, culturally diverse students may perceive themselves as highly capable in fields such as math or science (i.e., high self-efficacy beliefs), but may perceive those fields as having few role models or leaving them open to discrimination (i.e., outcome expectations).

According to Bandura, one may have high self-efficacy, but these self-efficacy beliefs are mediated by outcome expectations, which determine whether one attempts a given behavior, the amount of effort one will put toward a given behavior or goal, and how long one will persist in the face of obstacles (1997). The influence of outcome expectations is evident in the perceptions of inner-city and suburban teens. For example, although career aspirations between inner-city adolescents and suburban adolescents do not differ, inner-city adolescents and youth from culturally diverse backgrounds tend to hold lower perceived outcome expectations regarding career aspirations than do suburban and White youth (Arbona, 1990).

SCT also considers personal goals in the relationship of self-efficacy beliefs to outcome expectations. Personal goals can be defined as one's intent to take part in a particular activity or to produce a given result (Bandura, 1997). SCT considers two dimensions of goals: choice-content goals (i.e., the type of career one is interested in pursuing) and performance goals (i.e., the level of performance or attainment one is interested in achieving). For example, two adolescents may have the same choice content goal (e.g., a career in mathematics); however, they may differ in their performance goals (e.g., teaching high school math or obtaining a Ph.D. in statistics).

It is through setting and pursuing personal goals that adolescents can build and exercise personal agency in their educational and career pursuits. For instance, high self-efficacy and positive outcome expectations for mathematics will likely enhance the pursuit of math-related educational and career goals, such as continued practice in doing math problems, seeking opportunities to excel in their math performance (e.g., participating in math teams or in advanced math classes), and exploring math-related career pursuits. As expected, progress toward personal goals strengthens adolescents' self-efficacy and outcome expectations, thus continuing this positive cycle. In contrast, low self-efficacy or negative outcome expectations may interfere with performance via negative self-talk or experiences of anxiety, thus perpetuating a negative cycle and leading to less persistence in attaining personal goals.

Throughout the description of SCT, Bandura highlighted the transactional relationships among (a) internal, personal factors, (b) behaviors, and (c) environmental factors through the triadic reciprocal model. According to Bandura (1997), the triadic reciprocal model is defined as a bi-directional model which posits that personal

characteristics (e.g., cognitive processes, emotions), contextual variables, and behaviors interact and jointly impact one's perceived self-efficacy. In accordance with SCT, these elements influence each other in a reciprocal manner, where given variables may have different weights at different times (Lent et al., 1994).

Therefore, according to SCT, behavior can be predicted by one's perceived self-efficacy, rather than solely from actual accomplishments (1997). In this sense, Bandura connects self-efficacy with people's motivations and actions, arguing that what people believe influences motivation, actions, and ultimately, the decision-making process. This is regardless of whether or not the beliefs are actually true. Bandura's theory underscores the importance of personal, contextual, and environmental factors in understanding adolescents' perceptions regarding their abilities and confidence to perform the actions necessary in making specific career decisions. While these factors do not fully determine adolescents' goal activities, they are influential in the career decision-making process. For instance, inner-city youth are more likely to have a lower quality education, fewer career role models, and less financial support for postsecondary education than suburban students (Brown, Darden, Shelton, & Dipoto, 1999). These factors may combine to influence self-efficacy beliefs and outcome expectations in a negative manner, such that inner-city adolescents may have less confidence in their career decision-making skills. In addition, SCT highlights the integral role of perceived self-efficacy, outcome expectations, and personal goals in the career decision-making process, as well as the sources of influence that can build or detract from adolescents' self-efficacy. Indeed, research conducted with young adults indicates that SCT is predictive of career development trajectories and career choice goals in these adolescents (Bandura, 1997;

Lent, Brown, & Larkin, 1986). In order to better understand the theoretical underpinnings of career decision-making in inner-city adolescents, I will next review Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994).

Social Cognitive Career Theory

Based in part on Bandura's Social Cognitive Theory (1977; 1997), Social Cognitive Career Theory (SCCT) was developed by Lent, Brown, and Hackett (1994; 2000) as a framework for academic and career development. The intent of SCCT is to highlight the dynamic relationships among social cognitive variables (e.g., self-efficacy, outcome expectations, goals) and their relationship with personal and environmental influences (e.g., gender, ethnicity, family, social supports) in order to better understand how people develop vocational interests, make vocational choices, and achieve career success (Brown & Lent, 2005).

In SCCT, Lent, Brown, and Hackett (1994; 2000) highlighted the four primary learning experiences postulated by Bandura: performance accomplishments, vicarious learning, social persuasion, and physiological and affective states. These theorists also highlighted the three variables that Bandura identified, self-efficacy beliefs, outcome expectations, and career goals, as they predict the career behaviors of forming interests, setting career goals, and making career choices (Brown & Lent, 2005).

In SCCT, Lent et al. (1994, 2000) expanded on Bandura's theory by considering a broader social-cognitive context in the development of individual interests. Moreover, contextual influences to career choice, such as barriers and supports have been identified within the SCCT model as they interact with cognitive variables to influence career development outcomes (Lent et al., 2000). In this way, SCCT considers the interaction of

environmental variables, personal variables, self-efficacy, outcome expectations, performance attainments, choices, goals, and interests in a complex and dynamic fashion.

The model of triadic reciprocity, which was developed for use in SCT, is also utilized within SCCT in order to provide a framework for the relationships among people, their behaviors, and the environment in which they function (Brown & Lent, 1996). In SCCT, the concept of triadic reciprocity is further expanded to describe three distinct, yet overlapping models: the Interest model, the Performance model, and the Choice model (Lent et al., 1994).

The Interest model depicts the avenues through which career interests develop. According to this model, career interests are derived from experiential and cognitive variables that work to influence career choice behaviors as well as skill development. Self-efficacy, goal construction, and outcome expectations interact to foster and focus career interests. In line with Bandura's theory, the Interest model proposes that interests are likely to develop when people see themselves as capable (i.e., self-efficacious) and see the tasks they are or will be performing as valuable (i.e., positive outcome expectations; Lent et al., 1994). Again, following SCT, the Interest model highlights the relationships among emergent interests, self-efficacy, and outcome expectations, and their collective effects on the development and sustainment of personal goals. Personal goals are increased through engagement in particular activities, with the result that young people experience an increase or decrease of their self-efficacy and outcome expectations as they experience success or failure. This feedback loop is seen as ongoing and constantly recycling, particularly during adolescence, as young people define their interests, self-efficacy, outcome expectations, and personal goals.

SCCT also examines the factors that affect academic performance, as well as career performance and attainment. In the Performance Model, SCCT theorists again examine the relationships among self-efficacy, outcome expectations, and personal goals; however, a fourth element is added, namely, young people's levels of ability. Specifically, this model posits that self-efficacy and outcome expectations are, in part, influenced by people's perceptions of their abilities and past performances (Lent et al., 1994). Young people's self-efficacy and outcome expectations then influence the performance attainments they set (e.g., whether an adolescent attempts to earn an A in a challenging academic course). Finally, in accordance with SCCT, it should be noted that people's personal and contextual factors influence the perceptions of their abilities, self-efficacy, outcome expectations, and goal-setting, and these factors in turn influence their learning experiences.

The Choice model is also relevant to the construct of career decision-making self-efficacy in adolescents. This sophisticated and complex model accounts for the numerous factors that influence career choices over time, including self-efficacy, outcome expectations, interests, learning experiences, and past performance accomplishments. In the Choice model, personal, contextual, and environmental factors are seen as predicting the formation of career interests (Lent et al., 1994). For instance, gender and ethnicity are viewed as primary factors in one's socially constructed worldview and highly influential in the career development process. In adolescents, these contextual factors may foster, or conversely inhibit, their self-efficacy, outcome expectations, and goal construction in regard to specific career interests. In addition, contextual factors may enhance or detract from young people's access to the opportunity structure in which many career goals are

formed (Lent et al., 2000). For instance, while an adolescent may be interested in pursuing a career in theater, he or she may be constrained by economic realities, such as the need for an immediate income, or a lack of resources, including funding, training, or parent support. As such, the Choice model does not assume that adolescents' career choices are primarily an outcome of their career interests, or an expression of their person-environment fit or self-actualization efforts. Instead, in the Choice model, SCCT theorists highlighted the many real-world instances in which adolescents are not free to pursue their principal career interests (Brown & Lent, 2005).

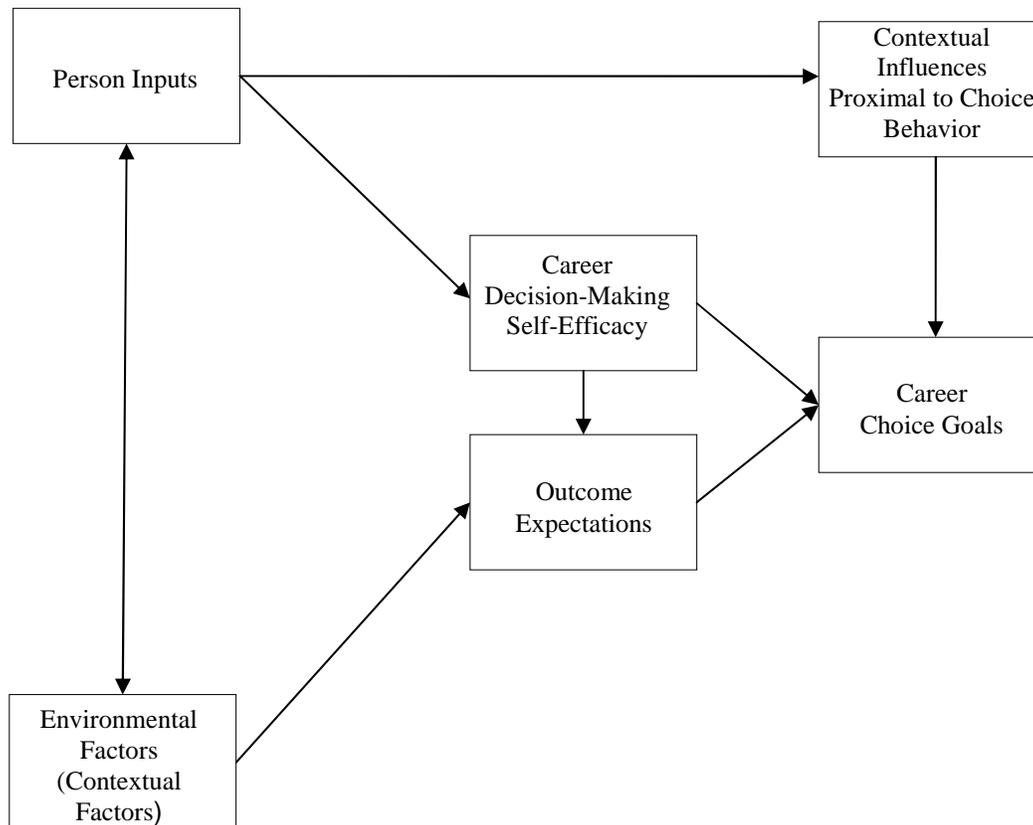
In a static world, individuals would make career choices based solely on their career interests. However, people's choices are dynamic and involve personal, contextual, and environmental factors that interact with interests to influence their career decision-making processes. To address these dynamic constructs, the concepts of person inputs and contextual affordances (Vondracek, Lerner, & Schulenberg, 1986) are made use of within SCCT (Lent et al., 1994; 2000). Person inputs can be defined as individual factors (e.g., gender, ethnicity, interests, values, abilities) that people bring to the career development process. Contextual affordances refer to those environmental factors that either support (e.g., supports such as access to resources, role models) or hinder (e.g., barriers such as single parent families, poverty) young people's career development processes. In particular, these constructs highlight the perceived internal or external resources that people feel are available to them.

According to Lent et al. (1994; 2000) contextual affordances can be divided into two categories: distal and proximal factors. Distal factors are background influences, (e.g., culture, gender role socialization, skill development opportunities, and available

learning models) that influence people's self-efficacy, outcome expectations and interests. Proximal factors exert their influence during the critical or active phases of young people's choice process (e.g., in certain cultures, adolescents' career decisions may be influenced by family supports; Lent et al., 1994). Proximal influences may include social, familial, emotional, or financial support for the chosen occupation, job availability, and sociocultural barriers, such as discrimination.

As noted above, Lent and colleagues' (1994) SCCT model can be used to understand the personal, social, and contextual factors involved in career and educational development. The application of the model to adolescent career decision-making self-efficacy fits well as it provides a useful framework for understanding adolescent career development and decision-making from sociocultural and cognitive contexts, where individual and contextual factors such as gender, ethnicity, race, class, self-efficacy, outcome expectations, personal goals, environmental supports, and opportunity structure are examined. Understanding the personal factors and contextual variables in the career decision-making process of inner-city adolescents is paramount, as their career choice processes are greatly influenced by these factors. Figure 1 provides a model of Social Cognitive Career Theory. To gain a better sense of the personal and contextual factors that can enhance the career decision-making process in adolescence, I will now turn to a brief review of Lapan's (2004) Integrative Contextual Model of Career Development (ICM).

Figure 1: Social Cognitive Career Theory Model



The Integrative Contextual Model of Career Development

According to Lapan's (2004) Integrative Contextual Model of Career Development, in order for adolescents to set and reach viable career goals (i.e., goals to which one is committed, goals for which one is actively preparing, including taking advantage of opportunities to achieve, and goals that are measurable, specific, and can be reached through a series of well-defined steps), they must develop six specific vocational skills, including: (a) career exploration skills (Flum & Blustein, 2000); (b) person-environment fit skills (i.e., understanding how one's own interests, skills, values, and abilities relate to various occupations in the world of work; Parsons, 1909); (c) goal-setting skills; (d) social, prosocial, and work readiness skills (Bloch, 1996); (e) self-regulated learning skills (i.e., a set of learning strategies designed to maximize one's educational and vocational opportunities; Lapan, Kardash, & Turner, 2002); and (f) the utilization of social support (in the case of adolescents, parent, peer, and teacher support; Turner & Lapan, 2002).

In addition to developing these skills, adolescents are much more likely to approach career decision-making with an adaptive and proactive approach if they can achieve six separate, but interrelated, vocational outcomes: (a) academic achievement; (b) positive self-efficacy expectations (Bandura, 1997); (c) positive self-attributional styles (i.e., confidence that one's own skills, abilities, and efforts will determine the bulk of one's life experiences; Bandura, 1997); (d) vocational identity (i.e., a clear, stable picture of one's interests, personality, and talents; Flum & Blustein, 2000); (e) the crystallization of personally-valued vocational interests (Strong, 1927); and (f) the proactive pursuit of one's life goals (Markus & Nurius, 1986).

Lapan argued (and research indicates) that these skills and outcomes are integratively and contextually related to one another, such that they exert multivariate effects on adolescents' vocational development (Turner, Conkel, Reich, Trotter, & Siewert, 2006; Turner, Trotter, Lapan, Czajka, et al., 2006). From an SCCT perspective, these skills and outcomes can be conceptualized as person inputs (e.g., academic achievement) and environmental factors (e.g., career exploration skills, person-environment fit skills, goal-setting skills, work readiness skills, and instrumental and emotional support), that interact with each other to influence the career decision-making process, (i.e., an adolescent's confidence in making career decisions, the perceived outcome of a given decision, and an adolescent's ability to set viable and realistic career goals). Specifically, these person and environment factors, according to SCCT theory, affect efficacy and outcome expectations, which affect viable career choice goals. In line with ICM theory (Lapan, 2004), young people who have developed these adaptive career skills and have more positive contextual affordances (e.g., parent support) are more likely to set viable choice goals, whereas those adolescents who lack these skills and supports are less likely to set viable career choice goals. To discuss the factors associated with adolescents' abilities to set viable career goals, I will now turn to a review of the construct of career maturity.

Career Maturity

Today's emphasis on building the career maturity of adolescents as a way to assist them to make more aware, informed, and realistic career choices began with the work of Donald Super (1957) on the concept of vocational maturity. Super's concept of vocational maturity was based on the idea that vocational development could follow a

stage process, similar to other life tasks. Super postulated that in each vocational life stage, young people were presented with at least one developmental life task that they must successfully complete before they could move to the next stage in the development process. For instance, during ages 14 through 18, adolescents are typically in Super's Exploration stage. During this stage, tasks such as crystallization (i.e., forming a general vocational goal through knowledge of individual characteristics, and beginning the process of planning to move in that direction), specification (committing to an occupation), and implementation (obtaining the education or training necessary for one's chosen occupation) must be met before young people can move to the next stage of career development, establishing oneself in a career (1990).

According to Super (1957), vocational maturity can be defined via five dimensions: (a) orientation to vocational choice (i.e., concern regarding career choice); (b) information and planning about one's preferred occupation; (c) consistency of vocational preferences (i.e., consistency over time and across occupational fields); (d) crystallization of traits (i.e., realistic attitudes toward work, stability of work interests); and (e) wisdom of vocational preferences, (which Super likened to the "fit" between person and vocation).

In 1971, Crites built on Super's concept of vocational maturity and expanded it to include two major factors: career choice content and career choice process. These factors were further broken down into sub-parts. Crites defined career choice content in terms of the consistency of a choice and realism of choice (i.e., are choices similar over time and are they realistic for this individual?). He then defined the second major factor, career choice process, in two parts: competencies (i.e., cognitive factors, such as career

decision-making skills) and affective factors (i.e., attitudes toward career). Crites postulated that those with high levels of career maturity were more likely to obtain successful and personally satisfying careers due in part to their greater understanding of the career decision-making processes, their understanding of the links between their present actions and future career goals, the wide variety of career decision-making skills they possess, and their ability to understand the benefits of considering a number of potential careers. In addition, those with high levels of career maturity, according to Crites, also temper their career aspirations with the demands of reality (Savickas, 1990).

In the current literature, career maturity is most often defined as individuals' readiness to make age-appropriate and informed career choices (Savickas, 1984); however, other authors have defined career maturity in terms of understanding the steps necessary to make career decisions, the consistency of career choices, and making realistic career choices (Levinson, Ohler, Caswell, & Kiewra, 1998; Patton & Creed, 2001). The importance of building career maturity-through affective interventions and the development of career decision-making skills-has been reflected in the high number of research studies involving career maturity. According to Powell and Luzzo (1998), it has become one of the most ubiquitous variables examined in adolescent career development research. Therefore, like career decision-making self-efficacy, career maturity is now understood to be an important component to the career development process.

Nonetheless, the construct of career maturity does have its detractors. Critics have highlighted the focus on the individual as a major limitation of career maturity, especially in a globalized, multiculturally diverse world. In addition, this construct has been criticized as adhering too closely to a developmental stage model, without allowing room

for inclusion of time perspective or culture (Vondracek & Reitzle, 1998). Despite criticisms, researchers have identified the value of this construct, particularly in working with adolescents (Raskin, 1998; Vondracek & Reitzle) and in assessing career maturity as a way to inform counseling and educational programming for youth (Levinson & Ohler, 2006). In particular, Patton and Lokan (2001) called for more research on career maturity and its correlates, including age, gender, socioeconomic status, work role salience, locus of control, and career indecision. They noted that career maturity must be made more applicable to the changing career patterns and wide variety of social and cultural groups in today's workforce.

In sum, a review of SCT (Bandura, 1977; 1997) and SCCT (Lent et al., 1994; 2000) has highlighted the role self-efficacy plays in young people's beliefs, actions, and decision-making processes. In addition, a brief review of Lapan's (2004) ICM theory has underscored how specific person inputs and environmental factors can interact to enhance adolescents' career decision-making and viable career choice goals. Finally, a review of career maturity has underscored the need for adolescents to develop the career attitudes and skills necessary to make age-appropriate and informed career choices. The next section will provide a critical review of the factors postulated by SCCT-career decision-making self-efficacy, outcome expectations, person inputs (e.g., gender, ethnicity, academic achievement), and environmental factors (e.g., supports and barriers)-as integral to adolescents' career decision-making and career choice goals.

Relationships Among Career Decision-Making Self-Efficacy, Career Outcome Expectations, and Person and Environmental Factors

Following both SCT and SCCT, career decision-making self-efficacy incorporates young people's perceptions of their abilities to accomplish a task or carry out a specific behavior (i.e., self-efficacy) as well as their beliefs about the consequences of completing this task or behavior (i.e., outcome expectations). Hackett and Betz (1981) were the first to study the relationship between self-efficacy expectations and vocational achievement. They initially hypothesized that personal self-efficacy beliefs would influence the career decision-making processes of people. Results of their initial studies demonstrated that career decisions, achievements, and behaviors were influenced by self-efficacy beliefs in both young men and women (Hackett & Betz, 1981; Taylor & Betz, 1983).

Over the last 2 decades, researchers have shown that there are consistent, positive relationships among career decision-making self-efficacy and many career-related constructs in college student samples (Luzzo, 1993a; Taylor & Betz, 1983; Taylor & Popma, 1990). For instance, Taylor and Betz examined career decision-making self-efficacy in the treatment of career indecision in a sample of university students; they found that students' career decision-making self-efficacy was negatively correlated to levels of career indecision. Taylor and Popma expanded on this research to examine relationships among career decision-making self-efficacy, vocational indecision, and locus of control. Results were consistent with previous research; career decision-making self-efficacy was shown to be negatively related to vocational indecision and locus of control in college students.

However, the career decision-making self-efficacy of high school students has been understudied. Therefore, hypotheses regarding career decision-making self-efficacy for inner-city high school students must be drawn primarily from existing literature on career decision-making self-efficacy in the college-age population, and secondarily from the small number of studies on career decision-making self-efficacy among inner-city high school students. The following sections will highlight this research.

Career Decision-Making Self-Efficacy, Outcome Expectations and Adaptive Career Behaviors

Researchers continue to demonstrate that career decision-making self-efficacy is an important factor in relation to both educational and career outcomes; thus, this construct has received considerable attention in the literature (Betz & Luzzo, 1996). Indeed, research on career decision-making self-efficacy has shown this construct to be correlated to numerous adaptive career constructs. For instance, career decision-making self-efficacy is positively correlated with vocational identity (Gushue, Scanlan, Pantzer, & Clarke, 2006; Robbins, 1985), career exploration (Blustein, 1989), attitudes toward nontraditional careers (Mathieu, Sowa & Niles, 1993), locus of control (Luzzo, 1993a), patterns of career choice (Gianakos, 1999), interest congruence (Lent, Brown, & Larkin, 1989), outcome expectations (Gushue, 2006), and career maturity (Luzzo, 1993a). In addition, in the literature, negative relationships among career decision-making self-efficacy and constructs such as vocational indecision (Taylor & Betz, 1983; Taylor & Popma, 1990) and career confusion (Gianakos, 2001) have been shown. For instance, Blustein examined the relationship between career decision-making self-efficacy and environmental and self-exploration. He found that career decision-making self-efficacy

was significantly and positively related to both engaging in environmental exploration and self-exploration. In addition, Gushue, Scanlan, et al. studied relationships among career decision-making self-efficacy, career exploration, and vocational identity; the researchers found that higher levels of career decision-making self-efficacy were related to greater engagement in career exploration and a more clarified vocational identity. Although it is evident that high levels of career decision-making self-efficacy in adolescents are associated with desirable career attitudes and skills, researchers are now turning to address the personal, contextual, and environmental factors that may help or hinder the development of inner-city youths' career decision-making self-efficacy (Constantine et al., 1998; Chung, 2002; Gushue, 2006; Gushue et al., 2006; Gushue & Whitson, 2006). For this reason, studies involving these factors, such as educational outcomes, ethnic identity, environmental supports, goal intentions, and career development interventions, will be reviewed below.

Career Decision-Making Self-Efficacy, Outcome Expectations and Goal Intentions

In terms of educational outcomes, researchers have explored relationships among career decision-making self-efficacy and academic variables, including academic and social adjustment, persistence in occupational and academic training, and academic achievement (Peterson, 1993; Taylor & Popma, 1990). Taylor and Popma explored career decision-making self-efficacy in undergraduate students who had selected an academic major, made a tentative selection, or were undecided. Results of this study indicated that students with higher levels of career decision-making self-efficacy had higher levels of academic decidedness. In another study, Peterson (1993) examined relationships between career decision-making and academic variables in underprepared college students. She

found that career decision-making self-efficacy was more predictive of academic integration than any other variable (e.g., initial career goals, perceived commitment to goals, intention to persist through challenges). In addition, she found that higher career aspirations, outcome expectations, and higher grades were significantly related to higher levels of career decision-making self-efficacy; moreover, African American students had significantly greater career decision-making self-efficacy scores than Native American, Asian American, or Caucasian American students.

Career Decision-Making Self-Efficacy, Outcome Expectations, and Ethnicity

Peterson's (1993) findings regarding ethnic group differences in career decision-making self-efficacy are in line with Chung's (2002) findings, which also demonstrated that African American university students scored higher than Caucasian American students on a measure of career decision-making self-efficacy. However, Peterson's and Chung's findings conflict with the results of a number of studies that examined the relationship between ethnicity and career decision-making self-efficacy. For instance, Gloria and Hird (1999) examined differences in career decision-making self-efficacy, trait anxiety, and ethnic identity. Significant differences were found in terms of race; White students reported higher career decision-making self-efficacy and lower trait anxiety and ethnic identity. Moreover, when examining predictors of career decision-making self-efficacy, Gloria and Hird found that ethnic variables (e.g., a strong ethnic identity) were stronger predictors of career decision-making self-efficacy for culturally diverse students than they were for Caucasian students. Finally, in a related study, Mau's (2000) findings demonstrated that college students from Taiwan scored significantly lower than students from the United States on a measure of career decision-making self-

efficacy. Mau's interpretation of this difference was that it was likely attributable to coming from collectively-oriented versus individually-oriented cultures, with students from Taiwan relying more on group efforts than students from the United States.

As current economic disparities continue to disadvantage minority populations, the majority of inner city youth are comprised of multiculturally diverse adolescents. Therefore, researchers have also examined the relationship between career decision-making self-efficacy and ethnic identity in inner-city high school students. Researchers have found mixed results regarding this relationship. For instance, in one study involving Latino ninth grade students, Gushue (2006) demonstrated that a greater sense of ethnic identity was significantly predictive of greater career decision-making self-efficacy; moreover, the association between ethnic identity and career outcome expectations was mediated by self-efficacy. However, in a second study conducted by Gushue and Whitson (2006), no relationships among ethnic identity and self-efficacy or outcome expectations for African American ninth grade students was found. In a related study, Patel, Salahuddin, and O'Brien (2008) demonstrated that acculturation (along with peer support) was predictive of career decision-making self-efficacy in a sample of adolescents from Vietnam.

Although empirical research focused on racial or cultural differences in career decision-making self-efficacy is certainly not plentiful, it is heartening to see that a number of researchers are beginning to address these relationships. More studies on these constructs are necessary to understand associations between career decision-making self-efficacy and outcome expectations for those other than the White middle-class college population.

Career Decision-Making Self-Efficacy, Outcome Expectations, and Gender

Similar to race and ethnicity, results are mixed in studies in which relationships between career decision-making self-efficacy and gender are examined. Although in a number of studies researchers have found no significant differences between males and females on measures of career decision-making self-efficacy (Bergeron & Romano, 1994; Bright, 1996; Wilson, 2000), gender differences have been found in career decision-making self-efficacy for nontraditional careers. For instance, Betz and Hackett (1986) found that females report higher efficacy expectations and outcome expectations for traditionally female occupations than for traditionally male occupations. In a significant amount of research, researchers have also shown that female undergraduates report lower mathematics self-efficacy and outcome expectations than do their male counterparts (Hackett & Betz, 1989; Lent, Lopez, & Bieschke, 1991; Pajares & Miller, 1994).

Career Decision-Making Self-Efficacy, Outcome Expectations, and Career Exploration

In addition to person factors such as race and gender, researchers have focused on career-related behaviors, such as career exploration, as one way to understand inner-city adolescents' career decision-making self-efficacy. For instance, in research conducted by Gushue et al. (2006), researchers found that career decision-making self-efficacy was positively correlated with vocational identity and career exploration activities among African American high school students. In another high school study, Brown, Darden, Shelton, and Dipoto (1999) examined the relationship between career decision-making self-efficacy and career exploration. Similar to Gushue et al., these authors found that career exploration significantly predicted career decision-making self-efficacy. Finally,

McWhirter, Rasheed, and Crothers (2000) found further evidence for career exploration as a predictor of career decision-making self-efficacy. Here, the researchers examined relationships among career exploration, career decision-making self-efficacy, vocational skills self-efficacy, perceived educational barriers, outcome expectations, and career expectations among inner-city high school students enrolled in a 9 week career education course (McWhirter et al., 2000). Using a nonrandomized, within-subjects, crossover design, pretest, posttest, and follow-up data (with a health education class as the control condition) were collected. Findings suggested that participation in a career exploration class will result in increased career decision-making self-efficacy, vocational skills self-efficacy, and short-term gains in outcome expectations, but will not influence perceived educational barriers. Indeed, results from other studies suggest that career exploration and intervention programs are effective in increasing students' career decision-making self-efficacy (Betz & Luzzo, 1996; Fouad & Smith, 1996; Taylor & Popma, 1990).

The findings of McWhirter et al. (2000) are consistent with research on career decision-making self-efficacy, barriers, and supports, in which researchers have shown that increasing supports may be a more effective way of enhancing career decision-making self-efficacy for multiculturally diverse, inner-city youth, than focusing on removal of perceived barriers (Lent et al., 2000). In general, this line of research indicates that career decision-making self-efficacy is strongly connected to inner-city adolescents' education, exploration, and training experiences; moreover, education and training experiences influence one's perceptions of available career options. Therefore, it is important that inner-city adolescents be given opportunities to build career decision-making self-efficacy through career exploration.

Career Decision-Making Self-Efficacy, Outcome Expectations, and Environmental Factors in College Students

In recent years, researchers have employed Social Cognitive Career Theory to explore contextual variables, such as perceptions of educational and career supports and barriers in relation to career decision-making self-efficacy. Evaluations of parent support have found that the overall quality of relationships, as well as a specific perceived sense of support, may influence adolescents' career decision-making self-efficacy. Hargrove, Creagh, and Burgess (2002) examined relationships among family process variables and career decision-making self-efficacy in university students. These researchers' results indicated that a number of family process factors (i.e., degree of conflict, frequency of expressed anger, aggression, conflict among family members) were negatively associated with career decision-making self-efficacy, while other factors were positively associated with career decision-making self-efficacy (i.e., level of expressiveness, achievement in school and work, and orientation toward intellectual-cultural activities). However, when examining family environment variables, Whiston (1996) found that only one variable, intellectual-cultural orientation, influenced career decision-making self-efficacy in college students.

In terms of barriers, studies have continued to demonstrate that college students perceive multiple barriers to attaining career aspirations, including discrimination in the form of racial or sexual discrimination, lack of resources (e.g., money), low levels of perceived social support, and perceived lack of abilities (Luzzo, 1993b; Luzzo & McWhirter, 2001). Indeed, both Luzzo and Weiss (2001) found a significant, negative relationship between perceptions of barriers and career decision-making self-efficacy in

university students. The researchers noted that when perceptions of barriers were low, career decision-making self-efficacy was high. This is consistent with Luzzo and McWhirter's research that found that women and ethnic minority undergraduates perceived significantly more career-related barriers than males or White students. In addition, ethnic minority students also reported lower levels of career decision-making self-efficacy, and lower levels of coping with perceived barriers than White students.

Career Decision-Making Self-Efficacy, Outcome Expectations, and Environmental Factors in High School Students

Similar to research with college populations, positive contextual affordances, highlighted in SCCT as an important factor in efficacious decision-making, have also been addressed in relation to career decision-making self-efficacy in inner-city adolescents. Although this research is still in the nascent stages, as mentioned previously, researchers have hypothesized that building positive supports may be more important in promoting inner-city youths' career development than removing barriers for these adolescents (Lent et al., 2000). For inner city adolescents, increasing vicarious learning through social support and role modeling may enhance their career decision-making self-efficacy, increase their confidence to overcome obstacles to the career decision-making process, and promote their intentional actions toward career-related goals.

For example, in a study conducted by Gushue and Whitson (2006) with high school students, parental support was positively related to career decision-making self-efficacy. This is consistent with previous research in which positive relationships among career decision-making self-efficacy and a multitude of family relationship variables (i.e., attachment to mother, functional independence from mother, attitudinal independence

from mother, attitudinal independence from father) were found (O'Brien, 1996). In addition, teacher support has been positively related to both the career decision-making self-efficacy and goal intentions among African American inner-city adolescents (Gushue & Whitson, 2006). Similar results were found in a study conducted by Metheny, McWhirter, and O'Neil (2008), where higher levels of perceived teacher support were related to higher levels of career decision-making self-efficacy, vocational outcome expectations and goal intentions in inner-city public high school seniors. Finally, in relation to social support, one emergent study to date has addressed siblings as a source of career decision-making and career development support. Ali, McWhirter, & Chronister (2005) found that for low SES high school students, sibling support for educational and vocational plans highly influenced the career decision-making self-efficacy of these inner-city adolescents. The authors concluded that sibling support may have a greater impact than parental support on the development of self-efficacy beliefs in low SES students. This is consistent with qualitative research conducted with college students indicating siblings can serve as a primary source of support for vocational decisions by providing career information, role modeling, and emotional support for career decision-making (Schultheiss, Kress, Manzi, & Glasscock, 2001; Schultheiss, Palma, Predragovich, & Glasscock, 2002).

Regarding barriers, researchers have indicated that higher levels of perceived barriers are associated with lower career decision-making self-efficacy and less positive outcome expectations. In a study conducted with Latino high school students, perceptions of barriers were negatively related to career decision-making self-efficacy and with a more integrated vocational identity (Gushue, Scanlan, Pantzer, & Clarke, 2006). This is

consistent with Patton, Creed, and Watson's (2003) work, which demonstrated relationships among perceptions of greater career barriers, lower levels of career maturity, and lower levels of career decision-making self-efficacy. However, in an earlier study, Creed, Patton, and Bartrum (2004) demonstrated no relationship among perceptions of barriers and career decision-making self-efficacy among Australian high school students. Therefore, researchers have highlighted the need to further define barriers in terms of internal and external barriers. Additionally, they underscore the need to examine perceived efficacy for coping with those barriers in order to better understand relationships among inner-city adolescents' perceptions of barriers and career decision-making self-efficacy (Lent et al., 2000).

Next, in order to further illustrate the ways in which personal and contextual factors influence inner city youth's career decision-making and career choice processes, I will review research pertaining to relationships among career maturity, career decision-making self-efficacy, and outcome expectations.

Career Decision-Making Self-Efficacy, Outcome Expectations, and Career Maturity

Career maturity has been shown to be predictive of a number of important career decision-making skills and career decision-making attitudes for adolescents, including locus of control (Luzzo, 1993a), career commitment (Bishop & Soloman, 1989), career exploration (Stumpf & Colarelli, 1980), and career decision-making (Hartman, Fiqua, & Blum, 1985). The relationship between career maturity and career decision-making self-efficacy has also been studied. In Luzzo's study, career decision-making self-efficacy was significantly and positively correlated with one aspect of Crites' (1971) construct of career maturity, career choice attitudes. This finding is consistent with Creed and Patton's

(2003) study in which career decision-making self-efficacy was a main predictor of career maturity attitudes. Taken together, research on this relationship provides support for theories of career decision-making self-efficacy, including SCT (Bandura, 1997) and SCCT (Lent et al., 1994), which postulate a positive correlation between people's confidence in making career decisions and their attitudes toward the career decision making process. However, Luzzo found no support for a relationship between career decision-making self-efficacy and the second component of Crites' model, career choice competencies (i.e., career decision-making skills). This calls into question relationships among efficacy expectations and career decision-making skill development and performance. However, Crites indicated that the measure of career decision-making self-efficacy employed in this study taps affective dimensions of career decision-making self-efficacy and may not adequately measure career decision-making skills. Thus, more research on these relationships is needed. Furthermore, it is important to note that this study was comprised of predominantly White college students and thus may not be generalizable to inner-city, adolescent populations. In order to better understand how career maturity develops in inner-city adolescents, relationships among demographic variables (e.g., socioeconomic status and ethnicity) and career maturity next will be discussed.

In general, researchers have not supported a direct relationship between career maturity and socioeconomic status (SES). Authors Super and Nevill (1984) argued that SES may indirectly influence career maturity by exerting influence on commitment to work roles, an important factor in the development of career maturity. In support of this thesis, SES was found to play an important role in the intensity of adolescents'

perceptions of work values (Krau, 1987); and SES has been found to be positively correlated with the adaptive career behaviors (e.g., work commitment, work participation, work values, and work salience) known to influence career maturity (Nevill & Perrotta, 1985; Watson & Stead, 1990).

In many studies, researchers have found that minority adolescents report lower career maturity than their Caucasian counterparts (Luzzo, 1992; McNair & Brown, 1983; Westbrook & Sanford, 1991). Lee (1984) compared Native American, Caucasian American, and African American high school students to predict the effects of ethnicity, sex, parental influence, degree of certainty, and self-concept on career maturity. Results indicated the factors that predict career maturity in culturally diverse and Caucasian American youth may differ. In addition, the author found that self-concept and parental influence interacted with ethnicity to predict career maturity attitude scores. This led the author to conclude that the career maturity attitudes of African American and Native American students were more highly impacted by parental influences than for their Caucasian American counterparts. In a related study examining relationships among race, gender, SES, and career maturity, McNair and Brown (1983) found that Caucasian American tenth grade students scored higher on measures of career maturity than African American tenth grade students; moreover, females were more career mature than males. Finally, in two additional studies, researchers have noted differences in career maturity as a function of ethnicity. An earlier study by Dillard and Perrin (1980) examined the influence of SES, grade level, family intactness, and ethnicity among Caucasian American, African American, and Puerto Rican high school students. After controlling for sex and ethnicity, SES was the strongest predictor for career maturity.

In addition, the relationship between career maturity and reference group perspectives (i.e., groups that people refer to when evaluating their own qualities, circumstances, attitudes, and behaviors) of African American youth from lower SES families was investigated (Smith, 1976). Results indicated that students with a middle-class reference group orientation had higher career maturity scores than those whose reference perspective was associated with lower SES. In this study, gender and family background were unrelated to career maturity and reference group perspectives. However, postsecondary educational plans and students' opinions on contextual barriers were related to both career maturity scores and reference group perspectives. In another investigation, Hardin, Leong, and Osipow (2001) examined the cultural relativity of career maturity with both Asian American and Caucasian American students. Results indicated that as a whole, Asian Americans demonstrated less career maturity than Caucasian American students; however, when acculturation was accounted for, highly acculturated Asian students' career maturity scores did not differ from Caucasian students' scores.

Although relationships between career maturity and ethnicity have been heavily researched, the studies reviewed previously have often taken an ethnic differences approach that compares career maturity levels between ethnic groups, with the White middle-class career maturity perspective as the standard (Powell & Luzzo, 1998). In addition to the obvious ethnocentricity of this approach, authors have noted that these comparisons may not be practically meaningful because the career maturity of multiculturally diverse adolescents may be structurally different than that of Whites (one possible reason for traditionally lower scores in inner-city adolescents; Westbrook &

Sanford, 1992). At a broader level, studies investigating relationships between career maturity and demographic variables (e.g., SES, ethnicity) have been highly criticized as unsystematic and poorly integrated (Patton & Lokan, 2001). Researchers are calling for more longitudinal studies in order to understand correlational findings among career maturity, career decision-making skills, career decision-making attitudes, and person and environment factors. Moreover, as the workforce of today is growing increasingly diverse, there is a dire need for understanding career maturity as a potential mediator of cultural and contextual factors when examining adolescents' readiness to make appropriate career decisions.

Summary of Research Findings Regarding Career Decision-Making Self-Efficacy, Outcome Expectations, and Person and Environmental Factors

Taken together, research with college-age and inner-city adolescents shows that youth who perceive higher levels of career decision-making self-efficacy demonstrate less vocational indecision, possess a greater sense of vocational identity, engage in more career exploration, possess more positive career attitudes (i.e., demonstrate strong commitment to goals, possess higher levels of coping efficacy to overcome barriers), and identify positive environmental supports (e.g., parent and teacher support; Anderson & Brown, 1997; Brown et al., 1999; Gushue et al., 2006; Gushue & Whitson, 2006; O'Brien, 1996). Although research provides a mixed picture of inner-city adolescents' levels of career decision-making self-efficacy in comparison to suburban adolescents, studies clearly indicate that goal intentions and outcome expectations lag behind these students' middle-class counterparts (Arbona, 1990; Flores, Navarro, Smith, & Ploszaj, 2006; Gushue, 2006; Luzzo & McWhirter, 2001). In particular, compared to middle-class

suburban adolescents, inner-city young people may face additional challenges, such as less access to academic and career resources, fewer positive role models, fewer opportunities to perform optimally (i.e., performance accomplishments; Bandura, 1997), and more exposure to racial or ethnic discrimination when developing career choices. Therefore, it is imperative that researchers understand the factors that are related to viable career choice goals for these youth, so as to assist inner-city adolescents in developing the attitudes and skills necessary to set and attain viable career goals. The following section will provide a review of the literature on relationships among career decision-making self-efficacy, outcome expectations, and career choice goals in inner-city adolescents.

Relationships Among Career Decision-Making Self-Efficacy, Outcome Expectations, and Career Choice Goals

As young people enter their final year of high school, they are required to make academic and career related choices that will affect the trajectory of their career paths. According to SCCT (Lent et al., 1994), career decision-making self-efficacy and outcome expectations interact with personal and environmental factors to explain and predict adolescents' academic and career choices (Flores, Navarro, et al., 2006; Flores, Ojeda, Huang, Gee, & Lee, 2006; Gushue & Whitson, 2006). Although there is a paucity of research regarding these relationships among inner-city youth, research that has been conducted demonstrates that high levels of self-efficacy and positive outcome expectations are predictive of higher levels of education and career choice goals; alternatively, low self-efficacy and less positive outcome expectations are associated with

higher amounts of career indecision and lower education and career choice goals in youth (Flores, Navarro, et al., 2006; Flores, Ojeda et al., 2006; Gushue & Whitson, 2006).

For example, Gushue and Whitson (2006) examined relationships among career decision-making self-efficacy, ethnic identity, and career goals in Black and Latina girls. Results suggested that higher levels of career decision-making self-efficacy were found to be related to nontraditional vocational goals, such as science and math-related career goals. Thus, the authors hypothesized that high levels of career decision-making self-efficacy may increase inner-city adolescent girls' confidence in their ability to attain careers associated with higher status and income (i.e., outcome expectations). These results are consistent with a study by Flores, Navarro, et al. (2006) that found that higher levels of nontraditional career self-efficacy were related to career choice goals in Mexican-American adolescent males. In a related study, Flores, Ojeda, et al. (2006) studied relationships among acculturation, career decision-making self-efficacy, problem-solving appraisal and educational choice goals in Mexican American students. Their findings suggested that career decision-making self-efficacy is predictive of higher educational choice goals; moreover, students who endorsed higher levels of Anglo acculturation are more likely to select a higher level of career choice goals. However, these authors make note of previous research demonstrating that although Anglo acculturation is associated with high educational goals and college attendance, it is not related to Mexican American students' desire to attend college or take part in college planning. Therefore, while evidence supports the SCCT model-career decision-making self-efficacy and outcome expectations are important factors in career choice goals-more research is needed to understand the complex person input and contextual factors that

interact with career decision-making self-efficacy and outcome expectations to influence the viability of these career choice goals.

There has been little research that has examined relationships among career decision-making self-efficacy, outcome expectations, and career choice goals.

Additionally, a dearth of research exists that examines these factors in relation to adolescents' viable career goals, goals necessary for successful transition from high school to post-secondary education or employment (Lapan, 2004). Viable career choice goals can be defined as goals to which one is committed, goals for which one is actively preparing (including taking advantage of opportunities to achieve), and goals that are measurable, specific, and can be reached through a series of well-defined steps (Lapan, 2004). Developing viable career goals is an important skill for high school students as research on career goals has consistently shown that high school students' expectations for the future both mediate the influence of environmental barriers and have a strong relationship with future career choice goal attainments (Mahoney & Merritt, 1993; Sewell & Hauser 1975).

The research that does exist on viable career choice goals has primarily examined differences in adolescents' perceptions regarding their educational and career aspirations (i.e., preference for a particular career goal) and expectations (i.e., estimations regarding probable career attainment), rather than examining pathways to career choice goal attainment among inner-city youth. For instance, Hanson (1994) found that socioeconomic status (SES) was the strongest predictor of unrealized outcome expectations among African American adolescents. Moreover, he found SES had an effect on unequal choice goals and outcome expectations, with low SES students aspiring

to prestigious choice goals (e.g., desiring to become a pediatrician), but lower outcome expectations (e.g., I won't get accepted to college). Similar results were also found by Rojewski and Hill (1998), who examined relationships among academically at-risk students, vocational outcome expectations, and career aspirations. Adolescents who were at-risk for academic failure were more likely to endorse lower occupational expectations. Although they endorsed high career aspirations (i.e., they still aspired to prestigious careers requiring high levels of postsecondary education), there was a significant gap between their ideal career choice goals and their expectations to achieve these goals. Therefore, while inner-city adolescents may set certain career goals, they may not believe these goals are possible to attain or they do not know how to reach these goals.

In a second, related study involving African American high school seniors, the majority of students reported having goals that would require postsecondary education; however, there was a large discrepancy between those reporting that they had these goals, and those that actually enrolled in college preparatory curriculum (Mahoney & Merritt, 1993). This disconnect between educational aspirations and active preparation for goal attainment is consistent with research indicating adolescents may hold unrealistic career aspirations and desire to pursue career paths that have far fewer openings available than there are students who would like to train for these careers (e.g., careers in medicine or law; Schneider & Stevenson, 2000). While pursuing prestigious careers in the sciences or "dream" careers, such as careers in professional sports or the entertainment industries are not unrealistic or unreasonable goals in and of themselves; researchers have consistently found that inner-city adolescents are not actively taking the steps to make these career choices viable. For instance, Schneider and Stevenson found that approximately 55% of

high school students in their sample tended to be unaware or underestimated the amount of education needed for entry into certain occupations and were not actively pursuing the courses (e.g., science and math) necessary to obtain these career goals (2000). Results of these studies are consistent with Crites' (1971) idea that the two major problems that inner-city high school students face are indecision about careers and impracticable future career goals, or career goals they were not actively preparing for (e.g., would like to become a pharmacist, but does not enjoy chemistry and is not taking the necessary science courses to achieve this goal). While a level of career indecision during high school is developmentally appropriate, the above research indicates inner city youth are not engaging in the career development process in a planful, systematic way and, in general, are not building the adaptive career behaviors necessary to be successful in the 21st century world of work. Therefore, taken as a whole, higher career aspirations, lower levels of perceived self-efficacy, negative outcome expectations, and less exposure to career exploration (leading to less active career preparation) in high school may lead to career choice goals that are not viable for inner-city youth.

Purpose of the Study

While little research has examined relationships among career decision-making self-efficacy, outcome expectations, and career choice goals, almost no research exists that examines these factors in relation to adolescents' viable career choice goals. The research that does exist has examined the disconnect in adolescents' perceptions regarding their educational and career aspirations (i.e., preference for a particular career goal) and expectations (e.g., estimations regarding probable career attainment), rather than examining pathways to promote viable goal setting and attainment behaviors among

inner-city youth (Hanson, 1994; Mahoney & Merritt, 1993). Therefore, although evidence supports career decision-making self-efficacy and outcome expectations as important factors in career choice goals, more research is needed to understand the complex person input and contextual factors that interact with career decision-making self-efficacy and outcome expectations to promote viable career choice goals among inner-city youth.

In an effort to understand how inner-city adolescents could set viable career choice goals, this study employed Structural Equation Modeling (SEM) to test the utility of Social Cognitive Career Theory, informed by ICM and Crites' model of career maturity, to predict relationships among person factors, environmental factors, career maturity, career decision-making self-efficacy, career outcome expectations, and viable career choice goals with this population.

Within the SEM model, I employed several sets of predictions that are consistent with SCCT's basic interest and choice models. First, SCCT posits that person inputs and environmental factors exert multivariate direct effects on career decision-making self-efficacy and outcome expectations. Second, SCCT proposes that career decision-making self-efficacy partially mediates person and environmental factors as they are related to career outcome expectations. Finally, SCCT proposes that career decision-making self-efficacy and outcome expectations predict viable career choice goals.

Therefore, I hypothesized that a causal model of Viable Career Choice Goals will demonstrate significant associations among person input factors in two domains (gender and academic achievement) and environmental factors in seven domains (proactivity, perceptions of barriers, career exploration, social skills, career maturity, emotional

support, and instrumental support), and career decision-making self-efficacy and outcome expectations.

Within the model, I expected to find: *Hypothesis 1*: Greater career maturity, and stronger support systems would positively predict career decision-making self-efficacy and career outcome expectations; *Hypothesis 2*: Career decision-making self-efficacy would mediate person and background factors as it predicted career outcome expectations and viable career choice goals; *Hypothesis 3*: Greater career decision-making self-efficacy and positive outcome expectations would positively predict more viable career choice goals.

Chapter One provided an overview of the need for inner-city youth to develop adaptive career behaviors, including career decision-making self-efficacy, career maturity, and positive vocational outcome expectations, in order to encourage viable career goal-setting. Chapter Two highlighted the research that exists regarding career decision-making self-efficacy, outcome expectations, and career choice goals in inner-city adolescents. In addition, Chapter Two explored research indicating inner-city adolescents' career choice goal-setting behaviors mediate challenges and barriers to goal attainment and are strong predictors of future goal attainment. Chapter Three will provide an overview of the participants and procedures of this study. Chapters Four and Five will review results of this study and discuss the implications of the findings.

Chapter 3

METHOD

Participants

Participants in this study were 220 10th through 12th grade adolescents from one urban public school in a large, metropolitan area of over 2,000,000 people in a Midwestern state. Participants ranged in age from 14 to 18; mean age was 16.33 (SD = .861 years). Of these participants, 59.0% were males ($n = 129$) and 41.0% were females ($n = 91$); 32.7% identified as African American ($n = 72$), 44.1% identified as Asian American ($n = 97$), 10.5% identified as Caucasian American ($n = 23$), 4.1% identified as Hispanic or Latino ($n = 9$), 0.5% identified as Native American ($n = 1$) and 8.2% ($n = 18$) identified as multiracial, with 16 participants identifying as African American/Caucasian American, one participant identifying as Asian American/Caucasian American, and one student identifying as Native American/Caucasian American.

Participants were recruited from high school English, art, and engineering classes. Research instruments were completed during regular classroom instruction time and participation in this study was voluntary; no research incentives were offered. School profiles suggested that approximately 74% of the students live at the middle to low-income level. Sixty-seven percent of the study participants were predicated to graduate from high school on time. Table 1 provides a summary of the demographic characteristics of the participants.

Table 1: Demographic Characteristics

	<u>Respondents (<i>n</i>)</u>	<u>Percent</u>
<u>Sex</u>		
Male	129	58.6%
Female	91	41.4%
<u>Ethnicity</u>		
African American	72	32.7%
Asian American	97	44.1%
Caucasian	23	10.5%
Hispanic	9	4.1%
Native American	1	0.50%
Other	18	8.2%
<u>Age</u>		
14	2	0.90%
15	29	13.2%
16	106	48.2%
17	61	27.7%
18	22	10.0%
<u>Grade</u>		
10	111	50.5%
11	86	39.1%
12	23	10.5%

Procedures

Approval from the school principal and the school district's research, evaluation, and assessment office was obtained prior to the commencement of this study.

Recruitment was completed by a career development educator and teachers who advised students that they could voluntarily participate in a research project that related to their career development. Informed consent was obtained prior to data collection. Students were given passive informed consent forms to take home to share with their parents or guardians. Students were instructed that their parent/guardian must sign and return the consent form only if they do not want their son/daughter to participate in this research. The informed consent form indicated the timeframe within which parents had to respond (i.e., two weeks from the date the forms were handed out). One parent returned a signed consent form.

Data collection occurred over a 1-month period during the spring semester. A total of 20 classes (from five classroom teachers) were invited to participate in this study. Students were asked to complete the demographic questionnaire and the five research measures: Career Decision Self-Efficacy Scale-Short Form (CDSE-SF; Betz & Klein, 1986; Betz, Hammond, & Multon, 2005), Career Maturity Inventory-Attitudes Screening Form A-2 (CMI-A2; Crites, 1978), Structured Career Development Inventory (SCDI; Lapan, 2004), Vocational Outcome Expectations Scale-Revised (VOE-R; McWhirter & Metheny, 2009); and the Perceptions of Barriers Scale (POB; McWhirter, 1997). All instruments were completed during one 60-minute class period. Students who chose not to participate were asked by their classroom teacher to complete alternative classroom work.

Each participant received the following instructions: “For those of you who are participating in today’s activities, you will be asked to fill out a career workbook that will help you learn more about your career development skills and goals. For the first 5 minutes of class, you will be provided with instructions on how to complete the surveys. The surveys include: (a) Career Decision Self-Efficacy scale, which measures your confidence in making career-related decisions; (b) Vocational Outcome Expectations scale, which looks at what you think the end result of your career decisions may be; (c) Career Maturity Inventory, which examines readiness to make career decisions; (d) Structured Career Development Inventory, which measures career exploration, academic achievement, proactivity, and viable career choice goals, and (e) the Perceptions of Barriers survey, which measures career barriers. You will be asked about a variety of things, such as your attitudes toward the world of work, your knowledge about different types of work, support you receive from others regarding school, how much confidence you have in completing career-related activities, and roadblocks to reaching your career goals. When you are finished, I will score your surveys and come back next week with an individual career profile about your career strengths, and what things you may need to learn more about, work harder at, or get more support with to achieve your career goals. We will also have a brief class discussion in which you will be able to ask questions about your career profiles and discuss how this information might be helpful to you. Nothing from this discussion will be used as data in my research project and it will not be recorded.”

Participants were asked to raise their hand if they did not understand something related to the research measures or needed further clarification. The investigator

personally answered each student's questions as needed; however, the investigator did not assist participants in responding to the research items in order to avoid biasing the results of the study.

Students were informed that the primary investigator would return in 1 week with an individual career development profile for each student who completed the survey packet. The investigator returned to each participating classroom within a week of the first visit and provided each student with a career development profile developed from the Structured Career Development Inventory (SCDI) subscale scores. Students' self-perceptions in the following categories were included on the profile: Viable Career Choice Goals, Proactivity, Career Interests, Work Values, Social Skills, Emotional Support, and Instrumental Support. Each category was briefly described in both bar graph and paragraph format in the report, including where a student's score fell (categories included low, medium, and high). Suggestions regarding what students could do to improve their skill in a particular area were provided. Students were given their profiles and a brief group career development intervention was provided in class.

Measures

Demographic questionnaire. General demographic information was collected by administering a demographic information form. The demographic questionnaire included participant identifier (participants' name), age, and grade. In addition, the person factors (i.e., the SCCT construct of person factors are individual difference factors that one brings to the career development process, such as gender or ethnicity) were also gathered using the demographic form. These included gender, race/ethnicity, and academic

achievement (or the student's self-estimated grade point average based on their science, math, and language course grades).

The Career Decision Self-Efficacy Short Form. Career decision-making self-efficacy was measured by the Career Decision Self-Efficacy Scale-Short Form (Betz & Klein, 1996; Betz, Hammond, & Multon, 2005). The CDSE-SF is a 25-item short form of the original Career Decision Self-Efficacy scale. The scale measures respondents' confidence in their ability to perform career-related tasks on a five-point Likert scale ranging from *no confidence* (0) to *complete confidence* (4). Higher scores indicate greater career decision-making self-efficacy. The CDSE-SF assesses five behavioral domains, based on Crites' (1971) model of career maturity, including: self-efficacy to accomplish accurate self-appraisals, self-efficacy to select specific goals, self-efficacy to formulate plans for the future, self-efficacy to gather occupational information, and self-efficacy to engage in effective problem-solving. Sample items are: "How much confidence do you have that you could select one occupation from a list of potential occupations?" and "How much confidence do you have that you could persistently work at your major or career goal even when you get frustrated?"

In the original norming sample of 346 university students, the internal consistency reliability coefficient for the CDSE-SF total score was .97 (Taylor & Betz, 1983). Other researchers have found levels of internal consistency ranging from .92 to .97 for college students (Nilsson, Schmidt, & Meek, 2002) and from .78 to .88 for high school students (Brown, Darden, Shelton, & Dipoto, 1999). Construct validity for the entire scale has been established with a number of adaptive career constructs in college-aged students, including career indecision (Taylor & Betz, 1983), vocational identity (Betz, Klein, &

Taylor, 1996), career exploration (Blustein, 1989) and career maturity (Luzzo, 1993a). Moreover, evidence of construct validity has been provided by significant correlations with career indecision (Career Decision Scale; Osipow, Carney, Winer, Yanico, & Koschir, 1987) and career decidedness (My Vocational Situation; Holland, Daiger, & Power, 1980). Consistent with past studies, (Betz, Klein, & Taylor, 1996; Blustein, 1989; Luzzo, 1993a), in this current study, the total score for the entire instrument was used to measure career decision-making self-efficacy.

The Career Maturity Inventory-Attitudes Screening Form A-2 (CMI-A2; Crites, 1978) was used to measure career maturity. This measure is based on Crites' model of career maturity. The instrument measures the subjective processes of how career choices are made (i.e., the instrument measures the attitudinal dimension of the career maturity construct; Crites, 1978). The CMI-A2 assesses five attitudinal domains: (a) decisiveness/indecisiveness, (b) involvement/non-involvement in the career development process, (c) orientation/non-orientation towards work, (d) independence/dependence when making career choices, and (e) compromise/non-compromise in making career choices. Therefore, the CMI-A2 is designed to assess a person's feelings regarding making career choices and entering the world of work. The measure is comprised of 50 items measured on a dichotomous scale (1 = agree, 0 = do not agree). Sample items are: "Everyone seems to tell me something different; as a result, I don't know what kind of work to choose;" and, "You should choose a job in which you can someday be famous."

The CMI-A2 has been found to have good psychometric properties (Crites, 1978). In the original norming sample of high school students, Crites reported an internal consistency coefficient of .74 and a test-retest reliability coefficient of .71 for the CMI-

A2. Crites found mean correlations among the five dimensions of the test to average $r = .58$ for seventh grade students and $r = .60$ for eighth grade students. Career maturity as measured by the total scale score of the CMI-A2 has been related to occupational aspirations; Bathory (1967) correlated the CMI-A2 with the Occupational Aspiration Scale (Miller & Haller 1964) and obtained a correlation coefficient of .39 for ninth grade students. In addition, several studies have found that career maturity (as defined by Crites) is related to more realistic occupational choice, goal orientation, career decisiveness, and commitment to career choice in adolescent and college samples (Westbrook, 1984; Savickas, 2000). In this current study, the total score for the entire instrument was used to measure career maturity.

The Structured Career Development Inventory. The Structured Career Development Inventory (Lapan, 2004) was used to measure person factors, environmental factors, and viable career choice goals. This 58-item instrument measures career exploration, person-environment fit, viable career choice goals, social/prosocial/work readiness skills, self-regulated learning, positive self-attributions, vocational identity, vocational interests, and proactivity. Scores from six of the subscales were used for this current study: Career Exploration, Person-Environment Fit, Social/Prosocial/Work Readiness Skills, Proactivity, Viable Career Choice Goals, and Social Support (Emotional/Instrumental Support). Scores from the Vocational Interests, Vocational Identity, Self-Regulated Learning and Positive Self-Attributions Scales were not analyzed because the constructs measured by these scales did not bear directly on the research questions.

SCDI items are scored on a 5-point Likert scale (0 = *strongly disagree* to 4 = *strongly agree*). Example items include: Career Exploration (7 items; “I have explored what abilities, talents, and skills I want to use in my future career” and “I have participated in career exploration activities that help me think about what education and career options I want to pursue”), Person-Environment Fit (8 items; “I have thought about the working conditions (like working indoors or outdoors) that I would like to have in my future career” and “I have gotten information about the kind of education I will need to get the type of job I want in the future”), Social/Prosocial/Work Readiness Skills (6 items; “I get along well with people who are different or think differently than me” and “I work well with others to solve problems and complete projects”), Proactivity (6 items; “I take advantage of opportunities to achieve my career goals” and “I am actively preparing myself to reach my job goals”), Viable Career Choice Goals (6 items; “I am developing the academic skills I need to help me reach my educational and career goals” and “My education and work goals are well-defined and specific”), and Social Support (14 items; “When I am in my classes at school, I feel cared about” and “My parents, grandparents, foster parents, or guardians help me in school”).

In adolescents, Social/Prosocial/Work Readiness Skills, as measured by the SCDI, have been negatively related to lack of peer support. Proactivity, Self-Regulated Learning, Social/Prosocial/Work Readiness Skills, and Career Exploration have been positively related to readiness to transition into high school and negatively related to magnitude of perceived barriers to successfully reach educational and vocational goals (Turner, Trotter, Lapan, Czajka, et al., 2006). Among diverse, inner-city 7th and 8th grade students, internal consistency estimates for the SCDI scales ranged from $r = 0.70$ to $r =$

0.89 (Turner, Conkel, Landgraf, & Starkey, 2008). Interrater reliability estimates for the scales in the SCDI have been shown to be strong (i.e., intraclass correlation coefficients > .80 for each scale; Turner, Trotter et al., 2006).

The Vocational Outcome Expectation Scale-Revised. Outcome Expectations were measured by the Vocational Outcome Expectations-Revised (VOE-R; McWhirter & Metheny, 2009). This instrument is a 12-item scale designed to measure expectations regarding attaining personally valued career outcomes. Participants rate their responses on a 4-point Likert scale ranging from (1) *strongly disagree* to (4) *strongly agree*. Sample items are: “My career planning will lead to a satisfying career for me;” and, “I have control over my career decisions.” Participants’ responses are summed (with possible total scores ranging from 12 to 48). A higher score on this measure indicates greater expectations that personally valued career outcomes will be attained. A lower score indicates lower expectations that personally valued career outcomes will be attained. An alpha of .95 was found for a sample of 325 12th grade students at an urban public high school located in a Midwestern city (Metheny, McWhirter, & O’Neil, 2008). Cronbach’s alphas ranging from .83 to .85 have been found among diverse, urban high school students (Kenny, 2003; McWhirter et al., 2000). Concurrent validity estimates were obtained by correlating the Vocational Outcome Expectations Scale with a five item measure developed by Fouad and Smith (1996) used to assess outcome expectations of middle-school students participating in a career education class, for which a correlation coefficient of .54 ($p < .01$) was observed (McWhirter et al., 2000).

The Perceptions of Barriers Scale. Perceptions of barriers were measured using the Perceptions of Barriers Scale (POB; McWhirter, 1997). The POB is a 48-item

inventory rated on a five-point Likert scale (0 = *Strongly Disagree*, 4 = *Strongly Agree*) that measures the perceived likelihood that adolescents will experience specified barriers in their future jobs, the likelihood of barriers keeping adolescents from pursuing postsecondary educations, and perceived barriers that may arise when completing postsecondary education. Scores from the first scale, perceptions of barriers in one's future career (questions 1 through 11), were used in this study; higher scores indicate perceiving more difficulty in overcoming barriers. Scores from these last two scales were excluded from this study because the constructs measured by these scales did not bear directly on the research questions. Barriers as measured by the POB have been related to gender-role attitudes, educational plans, and career expectations among Mexican American and European American boys and girls (McWhirter et al., 1997). A sample item includes, "In my future job, I will probably be treated differently because of my sex" and "In my future job, I will probably experience discrimination because of my ethnic/racial background." In the original norming sample of high school students, McWhirter et al. reported an internal consistency coefficient of .87 (1997). Concurrent validity estimates were obtained with a 10-item measure of the job opportunity structure by Howell, Frese, and Sollie (1984); the overall scales were significantly correlated ($p < .01$; McWhirter et al., 2000).

Data Analysis

The statistical packages SPSS 14.0 (SPSS Inc., Chicago, IL) and AMOS 17.0 (SPSS Inc., Chicago, IL) for Windows were used by the principal investigator for data analyses. All data entry was completed by the principal investigator. Of the participants completing the surveys, only 220 provided usable data (i.e., these subjects had 5 or fewer

missing data values). The omitted responses were estimated using mean scale scores. The ratio of study participants to model pathways, according to Jöreskog & Sorbom (1993) should, at a minimum be 5:1; however, others have indicated a 10:1 ratio as preferable (Kline, 2005). With 21 identified pathways, the sample size of 220 meets the minimum ratio of 5:1, and also the preferred ratio of 10:1.

SEM with maximum likelihood estimates was employed to analyze relationships among the exogenous (predictor) and endogenous (predicted) variables in the model. SEM is useful for analyzing both the direct and indirect effects of a larger set of variables using one or several criterion variables of interest. SEM controls for Type I error, which can be problematic when individual analyses among large numbers of variables are conducted, by simultaneously modeling associations among both observed and latent variables, as well as their associated error variances. Maximum Likelihood was chosen as the means of analysis because this method of estimation yields less biased results (Schumacker & Lomax, 2004). Moreover, Maximum Likelihood estimates have more stringent assumptions than other potential estimation methods, such as Generalized Least Squares (GLS), Heterogeneous Kurtosis (HK) or Elliptical Distribution Theory (EDT). The assumptions of Maximum Likelihood are multivariate normality, homoscedasticity, linearity, and reasonable outlier and multicollinearity control (Schumacker & Lomax).

To assess model fit, five commonly used goodness-of-fit indicators were used to assess the overall fit of the specified model to the data. The indicators employed were the Chi Square Likelihood Ratio Statistic (CMIN/DF), the Normed Fit Index (NFI), the Incremental Fit Index (IFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). CMIN/DF compares the True model (the model that

would fit perfectly to the data) to the actual model to see if the discrepancy between the two models is significant. A nonsignificant difference between the True and actual models (at $p > .05$), with a discrepancy ratio between the two models in the range of 2 to 1 or 3 to 1, provides evidence that the actual model is an adequate fit to the data (Carmines & McIver, 1981, p. 80).

The NFI, IFI, and TLI are also discrepancy models. These indices compare the actual model to a poorly fitted baseline model (in this case the independence model was employed). When using the NFI, IFI, and TLI, larger discrepancies are considered stronger evidence of model fit, with values closer to 1 (typically $> .9$) indicating good model fit, and values closer to 0 (typically $\leq .9$) indicating poor model fit. CMIN/DF, NFI, IFI, and TLI are sensitive to sample size, and do impose penalties (by underestimating path beta weights, and overestimating goodness-of-fit estimates) for more complex models. Therefore, the Root Mean Square Error of Approximation was also employed to validate results. This index is much less sensitive to sample size because RMSEA uses population rather than sample parameters. These population estimates are estimated by building confidence intervals around the RMSEA coefficient, so that the question being asked by the researcher is: How well would this model, with unknown but optimally chosen parameter values, fit the population covariance matrix if it were available (Browne & Cudek, 1993, pp. 137-138)? Thus, with a confidence interval of 90%, the researcher can interpret with 90% confidence that the true value in the population would fall between the upper and lower bounds of the confidence interval. Moreover, RMSEA has been shown to be adequately sensitive to model misspecification (Hu & Bentler, 1998), and commonly used interpretive guidelines have consistently been

shown to yield appropriate conclusions regarding model quality (Hu & Bentler, 1998, 1999). RMSEA assesses how well an actual model approximates an expected True model. RMSEA is also calculated using a non-centrality index (typically calculated as

$d = \frac{\chi^2 - df}{N - 1}$). Thus, RMSEA = 0 suggests that the actual model is a perfect fit to the

data, RMSEA of < .05 indicates that the actual model is a good fit, RMSEA of > .05 but < .10 indicates that the model is adequately fitted to the data, and an RMSEA of \geq .10 indicates that the model fit is less than adequate.

In Chapter Three, I provided a summary of the participant demographic characteristics in this study, reviewed the procedures for participant recruitment and participation, provided information on the measures selected for data collection (including psychometric properties and sample questions), and provided a justification for the use of structural equation modeling with maximum likelihood estimates for data analysis. Chapter Four will provide an explanation of the results of this study, including the descriptive statistics obtained, as well as the results of the structural equation model and goodness of fit models.

Chapter 4

RESULTS

Variables Defined and Operationalized

For the purposes of this study, career decision-making self-efficacy was defined as the ability to engage in the tasks necessary in making career decisions (Hackett & Betz, 1981) and operationalized by the Career Decision Self-Efficacy Scale-Short Form (CDSE; Betz & Klein, 1996; Betz, Hammond, & Multon, 2005). Vocational outcome expectations were defined as the perceived vocational consequences of a particular action (Bandura, 1997) and operationalized using the Vocational Outcome Expectations-Revised scale (Metheny & McWhirter, 2009). Viable career choice goals were defined as career goals to which one is committed, goals for which one is actively preparing (including taking advantage of opportunities to achieve these goals), and goals that are measurable, specific, and can be reached through a series of well-defined steps (Lapan, 2004). Viable career choice goals were operationalized through the Viable Career Choice Goals subscale of the Structured Career Development Inventory (SCDI; Lapan). Academic achievement was defined as a student's self-estimated GPA and calculated based on self-reports of a student's grade estimates for his or her English, mathematics, and science course grades (i.e., A-F grades). Proactivity was defined as one's willingness to be open to and act on potential opportunities as they arise and was operationalized using the Proactivity subscale from the Structured Career Development Inventory. Career exploration was defined as exploring interests, work values, and personal talents and skills, and was operationalized by the Career Exploration and Person-Environment Fit subscales of the SCDI. Social skills was defined as any skill facilitating interaction and

communication with others and operationalized using the Social/Prosocial/Work Readiness subscale of the SCDI. Emotional support was defined as care and concern provided by parents/guardians, teachers, and peers, and was operationalized using 7 questions from the Social Support subscale of the SCDI. Instrumental support was defined as supportive academic behaviors, such as tutoring, after-class assistance, or help with homework that are provided to students by parents/guardians, teachers, and peers, and was operationalized using the 7 remaining questions from the Social Support subscale of the SCDI. Perception of barriers was defined as the perceived likelihood of experiencing a given psychosocial or environmental barrier in one's future job and was operationalized using the Perceptions of Barriers scale (questions 1-11; McWhirter, 1997). Finally, career maturity was defined as an individual's readiness to make age-appropriate and informed career choices (Savickas, 1990) and was operationalized using the Career Maturity Inventory –Attitudes Screening Form A-2 (CMI-A2; Crites, 1978).

Descriptive Statistics

Means, standard deviations, and Cronbach's alpha were calculated for each scale in the study. For the current study, an internal consistency reliability estimate of .70 was chosen. In the social sciences, the widely accepted alpha level is .70 or higher for a set of items to be considered a scale (Garson, 2002). Please note that the internal consistency reliabilities of the Social Skills and Viable Career Choice Goals scales are below the widely accepted alpha of .70 for the social sciences, and the Social Skills scale falls below the internal consistency reliability estimate of .60. These scales consist of six items each, and therefore are prone to reliability issues due to scale length. Because tests of reliability estimates are biased when conducted with fewer items (Kaplan & Saccuzzo,

2001), the Spearman-Brown Prophecy formula was applied to the mean scale scores. The Spearman-Brown Prophecy formula estimates the internal reliability of instruments and their scales by estimating what the coefficients would be if the number of items on the instruments was increased (in this case if the scale length was doubled for each scale). Using this formula, an alpha of .74 was obtained for the Social Skills scale and an alpha of .77 was obtained for the Viable Career Choice Goals scale. Table 2 provides means, standard deviations, and reliability estimates for all scales.

Table 2: Means, Standard Deviations, and Alpha Reliabilities for All Scale Score Variables for the Entire Sample

<u>Scale</u>	<u>α</u>	<u>SB</u>	<u>Mean</u>	<u>SD</u>	<u>Sk</u>	<u>Ku</u>
Proactivity	.710		2.60	.41	-.58	.43
Career Ex	.759		2.48	.44	-.01	.50
Em Support	.740		2.91	.54	-.35	.38
Instr Support	.726		2.70	.55	-.38	.43
POB	.926		1.48	.89	-.09	-.43
Social Skills	.588	.74	2.86	.52	-.44	.92
Career Mat	.800		0.55	.14	-.72	.81
CDSE	.948		2.57	.65	-.44	.81
VOE	.925		3.30	.52	-.82	1.16
Viable Goals	.628	.77	2.58	.50	-.20	1.31

Note: α = Cronbach's alpha; SB = Spearman Brown Prophecy Formula; M = Mean; SD = Standard Deviation; Sk = Skewness; Ku = Kurtosis; Career Ex = Career Exploration; Em Support = Emotional Support; Instr Support = Instrumental Support; POB = Perceptions of Barriers; Career Mat = Career Maturity; CDSE = Career Decision-Making Self-Efficacy; VOE = Vocational Outcome Expectations; Viable Goals = Viable Career Choice Goals.

As reported in Table 2, the statistical assumptions underlying structural equation modeling were met (i.e., data are continuous, normally distributed, variables are not truncated and there is low measurement error). Therefore, a structural equation modeling with Maximum Likelihood analysis was used to explore relationships among variables. Figure 2 shows the identified model for this study with standardized parameter estimates reported. Table 3 presents the results of the original path analysis.

Figure 2: Original Study Model with Standardized Parameter Estimates

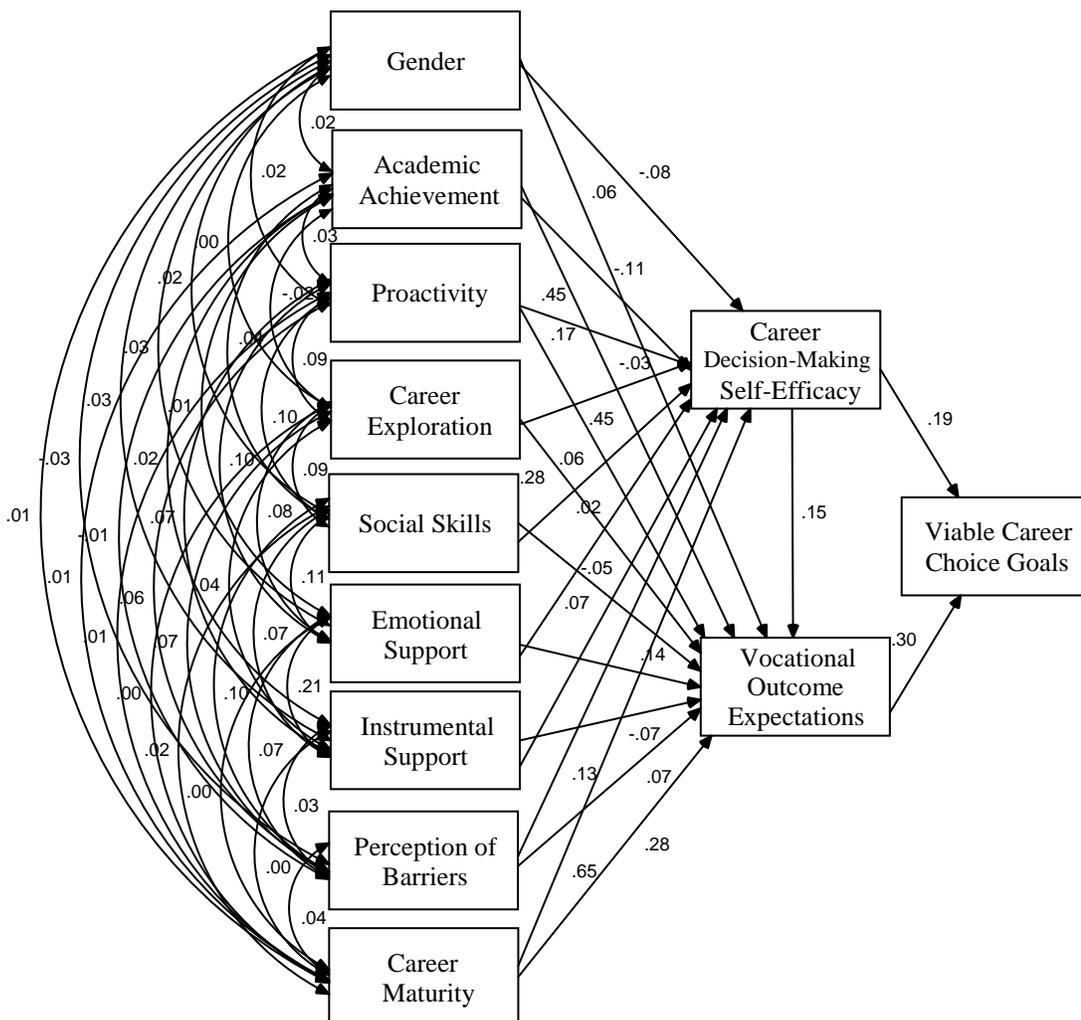


Table 3: Summary of Fit Statistics for Original Model

Original Model: Person input factors and environmental factors mediated by career decision-making self-efficacy and vocational outcome expectations.

χ^2	df	p	<u>NFI</u>	<u>IFI</u>	<u>TLI</u>	<u>RMSEA</u>	<u>CMIN/DF</u>
62.31	9	<.001	.916	.927	.302	.164	6.92

Note: $N = 220$; NFI = Normed Fit Index; IFI = Incremental Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation; CMIN/DF = Chi Square Likelihood Ratio Statistic.

For the original model (based on all hypotheses), goodness-of-fit indicators indicated a poor fit of the model to the data, CMIN/DF = 6.92, NFI = .916, IFI = .927, TLI = .302, RMSEA = .164. The model supported 8 of the hypothesized 21 relationships among variables; the original model regression weights are summarized in Table 4.

Table 4: Original Model Regression Weights

		Estimate	SE	<i>p</i>
CDSE	<--- Gender	-.083	.075	.266
CDSE	<--- Ac Ach	-.114	.067	.087
CDSE	<--- Proactivity	.453	.112	<.001
CDSE	<--- Career Ex	.446	.098	<.001
CDSE	<--- Social Skills	.060	.082	.468
CDSE	<--- Emot Support	.021	.106	.844
CDSE	<--- Inst Support	-.052	.096	.589
CDSE	<--- POB	.126	.044	.004
CDSE	<--- Career Maturity	.649	.305	.033
VOE	<--- Gender	.056	.058	.338
VOE	<--- Ac Ach	-.030	.053	.568
VOE	<--- Proactivity	.171	.091	.060
VOE	<--- Career Ex	.280	.080	<.001
VOE	<--- Social Skills	.074	.064	.251
VOE	<--- Emot Support	.141	.083	.088

Table 4: Original Model Regression Weights (continued)

		Estimate	SE	<i>p</i>
VOE	<--- Inst Support	-.072	.074	.336
VOE	<--- Career Maturity	.277	.230	.228
VOE	<--- CDSE	.151	.056	.007
Viable Goals	<--- CDSE	.186	.051	<.001
Viable Goals	<--- VOE	.303	.064	<.001

Note: Ac Ach = Academic Achievement; Career Ex = Career Exploration; CDSE = Career Decision-Making Self-Efficacy; Emot Support = Emotional Support; Inst Support = Instrumental Support; POB = Perceptions of Barriers; VOE = Vocational Outcome Expectations; Viable Goals = Viable Career Choice Goals.

Therefore, misspecified parameters were identified. Because identification of misspecified parameters is based exclusively on statistical criteria, it is important that a theoretical rationale be considered when adding or deleting pathways (Byrne, 1994). In this case, the model was examined for significant pathways and nonsignificant pathways were deleted. Therefore, in the final model, the person input variables of Gender and Social Skills were deleted. In addition, direct pathways from two variables, Academic Achievement and Proactivity, to Viable Career Choice Goals were added. The final revised model is shown in Figure 3. This model produced superior fit statistics. Specifically, the chi-square likelihood ratio statistic (CMIN/DF), yielded an index of 1.77 ($\chi^2/df = 31.96/18, p = .022$). The Normed Fit Index (NFI) = .951, the Incremental Fit Index (IFI) = .978, and the Tucker-Lewis Index (TLI) = .942 were all greater than .90, and therefore these values suggested a good fit (Hu & Bentler, 1999) of the model to the data. Finally, the Root Mean Square Error of Approximation (RMSEA) = .060.

Two bootstrap tests were then performed to control for data dependency. Bootstrapping involves drawing two independent, random samples from the full data set. The benefit of running bootstrap tests is that it allows one to examine the stability of obtained parameter estimates by using scores from different samples drawn from the same population (Byrne, 2004). Two independent random samples ($n = 200$) were drawn from the full data set. Covariances, path regression Beta weights, and bootstrap estimates for the variables in this study are found in Tables 5 and 6. Beta weights (signified by the symbol β), as shown in Table 6 and in the text following Table 6, denote the magnitude of relationships among the exogenous and endogenous variables, with larger absolute values indicating stronger relationships.

Table 5: Final Model Covariances

Covariances			Estimate	SE	Bootstrap SE	<i>p</i>	
POB	<-->	Career Maturity	.035	.008	.036	.008	<.001
Career Ex	<-->	Career Maturity	.000	.000	.000	.000	
Career Maturity	<-->	Proactivity	.006	.003	.006	.003	.048
POB	<-->	Career Ex	-.067	.026	.069	.028	.010
POB	<-->	Proactivity	-.056	.024	.055	.025	.020
Career Ex	<-->	Proactivity	.091	.014	.089	.016	<.001
Em Support	<-->	Career Maturity	.000	.000	.000	.000	
Em Support	<-->	POB	.059	.031	.055	.035	.056
Em Support	<-->	Career Ex	.083	.017	.082	.017	<.001
Em Support	<-->	Proactivity	.096	.016	.095	.018	<.001
Ac Ach	<-->	Career Maturity	.008	.005	.008	.005	.092
Ac Ach	<-->	POB	.000	.000	.000	.000	
Ac Ach	<-->	Em Support	.000	.000	.000	.000	
Ac Ach	<-->	Career Ex	.000	.000	.000	.000	
Ac Ach	<-->	Proactivity	.028	.013	.028	.012	.027
Inst Support	<-->	Career Maturity	.000	.000	.000	.000	
Inst Support	<-->	POB	.033	.031	.027	.038	.296
Inst Support	<-->	Em Support	.208	.024	.206	.026	<.001
Inst Support	<-->	Career Ex	.046	.017	.046	.017	.006
Inst Support	<-->	Proactivity	.072	.016	.070	.016	<.001

Table 5: Final Model Covariances (continued)

Covariances		Estimate	SE	Bootstrap	SE	<i>p</i>
Inst Support	<--> Ac Ach	.014	.014	.014	.016	.316

Note: Career Ex = Career Exploration; Em Support = Emotional Support; Ac Ach = Academic Achievement; Inst Support = Instrumental Support; POB = Perceptions of Barriers.

Table 6: Final Model Path Regression Weights

Regression Weights			Estimate	SE	Bootstrap	SE	<i>p</i>
CDSE	<---	POB	-.144	.042	.147	.041	<.001
CDSE	<---	Career Maturity	.590	.273	.582	.234	.031
CDSE	<---	Proactivity	.394	.099	.388	.115	<.001
CDSE	<---	Career Ex	.478	.091	.490	.094	<.001
VOE	<---	Career Ex	.350	.077	.349	.079	<.001
VOE	<---	Em Support	.155	.057	.149	.066	.007
VOE	<---	CDSE	.216	.052	.221	.063	<.001
VOE	<---	Career Maturity	.480	.218	.473	.244	.028
Viable Goals	<---	CDSE	.114	.049	.115	.054	.021
Viable Goals	<---	VOE	.216	.060	.214	.059	<.001
Viable Goals	<---	Proactivity	.404	.077	.400	.095	<.001
Viable Goals	<---	Ac Ach	.204	.050	.210	.061	<.001

Note: CDSE = Career Decision-Making Self-Efficacy; Career Ex = Career Exploration; Em Support = Emotional Support; Ac Ach = Academic Achievement; Inst Support = Instrumental Support; POB = Perceptions of Barriers; VOE = Vocational Outcome Expectations; Viable Goals = Viable Career Choice Goals.

Once assessment of model fit was determined, parameter estimates and the standard errors of the parameter estimates were examined (Boomsma, 2000). In order to facilitate the interpretation of the model, only significant paths ($p < .05$) are shown in Figure 3.

Figure 3: Final Modified Paths in the Model of Viable Career Choice Goals

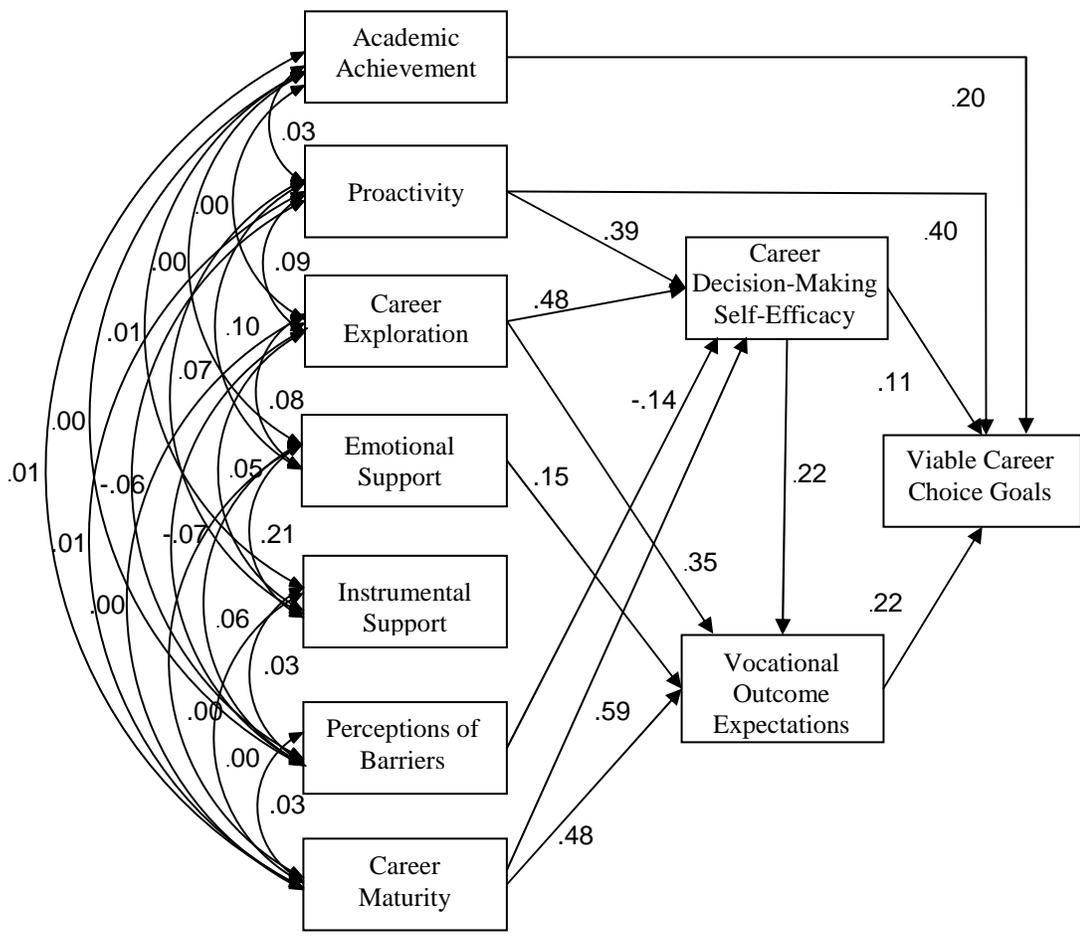


Table 7: Summary of Fit Statistics for Final Model

χ^2	<i>df</i>	<i>p</i>	<u>NFI</u>	<u>IFI</u>	<u>TLI</u>	<u>RMSEA</u>	<u>CMIN/DF</u>
31.96	18	.022	.951	.978	.942	.060	1.77

Note: N = 220; NFI = Normed Fit Index; IFI = Incremental Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation; CMIN/DF = Chi Square Likelihood Ratio Statistic.

In order to ascertain if there were racial/ethnic or gender differences among the endogenous and exogenous variables in the study, a 2 (gender) by 6 (race/ethnicity) multivariate analysis of variance (MANOVA) on the 10 endogenous and exogenous variables was conducted. A significant omnibus difference by race/ethnicity was found ($F(10, 189) = 1.437, p = .027$) for Perceptions of Barriers. Post hoc tests were conducted to examine differences. Results of Tukey's HSD indicate that African American adolescents report significantly more barriers than Asian American students ($p = .002$). In addition, Caucasian American students reported significantly more barriers than did Asian American students ($p < .001$). No significant Gender x Race/Ethnicity interaction was found.

Correlations Among Person and Environmental Factors

The model supported a number of hypothesized relationships among person-input variables and environmental factors in the constructed Model of Viable Career Choice Goals. In relation to the person-input and environmental factors, there was a significant positive relationship between Emotional Support and Proactivity ($r = .10, p < .001$), indicating that adolescents with higher levels of perceived care and concern from peers and family reported that they were more active in taking advantage of opportunities related to their career development. In addition, Emotional Support covaried significantly and positively with Instrumental Support ($r = .21, p < .001$) and with Career Exploration ($r = .08, p < .001$), indicating that inner-city adolescents with greater perceived emotional support (e.g., parent care and concern) also reported greater instrumental support (e.g., parent and teacher assistance with homework, tutoring) and greater involvement in career exploration activities (e.g., exploring abilities, talents, and skills). Moreover, Instrumental

Support covaried significantly and positively with Career Exploration ($r = .05, p = .006$) and Proactivity ($r = .07, p < .001$). Therefore, inner-city youth who perceived greater levels of instrumental support related to academic activities also engaged in more career exploration, such as actively exploring possible careers and taking advantage of opportunities that arise. Perceptions of fewer barriers were associated with more intense Career Exploration ($r = -.07, p = .01$) and greater Proactivity ($r = -.06, p = .02$), indicating that adolescents who perceive fewer barriers to reaching their future career goals are more proactive in regard to their career development and engage in higher levels of career exploration. Finally, there were significant positive relationships between Proactivity and Career Exploration ($r = .09, p < .001$), Proactivity and Career Maturity ($r = .006, p = .048$), and Proactivity and Academic Achievement ($r = .03, p = .03$), indicating that greater proactivity (i.e., capitalizing on opportunities) is associated with greater exploration of potential career interests, with making more informed, aware, and realistic career choices, and with greater academic achievement.

Correlations and Path Beta Weights among Person and Environmental Factors and Social Cognitive Variables

Career Maturity had the largest positive effect on adolescents' scores on measures of Career Decision-Making Self-Efficacy ($\beta = .59, p = .03$), followed by Career Exploration ($\beta = .48, p < .001$), and Proactivity ($\beta = .39, p < .001$). Perceptions of Barriers ($\beta = -.14, p < .001$) had a significant negative effect on Career Decision-Making Self-Efficacy, suggesting that fewer perceived barriers are associated with greater confidence in making career-related decisions. Emotional Support and Instrumental Support, were moderately correlated ($r = .22$), indicating that there were significant

positive interaction effects between Emotional Support and Instrumental Support as they together predicted endogenous variables in the model. However, neither Emotional nor Instrumental Support directly predicted Career Decision-Making Self-Efficacy, as proposed by the SCCT model. Finally, Academic Achievement was not significantly related to CDSE. Career Maturity also had a positive effect on Vocational Outcome Expectations ($\beta = .48, p = .03$). Career Exploration ($\beta = .35, p < .001$) and Emotional Support ($\beta = .15, p = .007$) also had positive effects on Vocational Outcome Expectations. The hypothesized direct relationships between Vocational Outcome Expectations and Proactivity, Academic Achievement, Perceptions of Barriers, and Instrumental Support were not supported.

Correlations and Path Beta Weights Among Exogenous Indicators

The final, revised model reflects two added paths from Academic Achievement ($\beta = .20, p < .001$) and Proactivity ($\beta = .40, p < .001$) to Viable Career Choice Goals. These pathways were direct pathways, and were not mediated by Career Decision-Making Self-Efficacy or Vocational Outcome Expectations. Therefore, Academic Achievement and Proactivity may be serving as proxy variables for person factors. In this current study, Proactivity was mediated by Career Decision-Making Self-Efficacy, and exerted a direct influence on Viable Career Choice Goals. Academic Achievement was not mediated by any other variable, but instead directly predicted variance in Viable Career Choice Goals. Moreover, in accordance with SCCT, a direct relationship between Career Decision-Making Self-Efficacy and Vocational Outcome Expectations ($\beta = .22, p < .001$) was found. Finally, Career Decision-Making Self-Efficacy ($\beta = .11, p = .02$) and Vocational Outcome Expectations ($\beta = .22, p < .001$) had direct positive effects on Viable Career

Choice Goals. Therefore, direct relationships between Career Decision-Making Self-Efficacy and Viable Career Choice Goals, and Outcome Expectations and Viable Career Choice Goals were found, in accordance with SCCT propositions.

Chapter 5

DISCUSSION

The purpose of this study was to test the utility of Social Cognitive Career Theory to understand the relationships among person factors, environmental factors, career maturity, career decision-making self-efficacy, career outcome expectations, and viable career choice goals among inner-city youth. While high school is a time when adolescents begin to make decisions regarding future educational and career goals, research shows that inner-city adolescents may not be setting viable career choice goals (i.e., prescreening, in-depth exploration, and choice; Gati & Asher, 2001). Moreover, although these adolescents report high career aspirations, they may not necessarily feel that their career choice goals are viable or will become a reality for them due to the many social and environmental barriers they may face (Arbona, 1990; Constantine et al., 1998; Hanson, 1994). In this chapter, I will first discuss the results from structural equation modeling and share implications of these results. I will then discuss recommendations for future research and practice and conclude with limitations of the present study.

There were several important findings in this research study. Consistent with the tenets of SCCT, results indicated that a number of person and environment factors are proximally and distally related to career decision-making self-efficacy and vocational outcome expectations among inner-city adolescents. In particular, adolescents with greater career maturity also reported greater career decision-making self-efficacy and more positive vocational outcome expectations. These results provide support for the prediction that greater career maturity is positively related to greater career decision-making self-efficacy and vocational outcome expectations. In line with Crites' (1971)

model of career maturity, these findings also support previous work showing that career maturity (i.e., individuals' readiness to make age-appropriate and informed career choices; Savickas, 1984) is related to a number of adaptive career behaviors, such as career exploration, career commitment, and career decision-making (Bishop & Soloman, 1989; Luzzo, 1993a; Hartman, Fiqua, & Blum, 1985; Stumpf & Colarelli, 1980).

The study of career maturity has largely been ignored among inner-city adolescents or has been limited to an "ethnic differences" approach. In this regard, previous researchers have primarily studied career maturity in White, college-age students or compared students of color to White students. These comparisons have not proved to be useful in understanding whether career maturity is predictive of agentic career variables (e.g., career decision-making self-efficacy) among inner-city adolescents. Thus, the results of this study are important in establishing career maturity as a construct that is related to career decision-making self-efficacy and positive vocational outcome expectations among inner-city youth. The results of this study, in accordance with Crites' model of career maturity, lend credence to the idea that cultivating career maturity (through affective interventions and the development of career decision-making skills) can be a salient way in which to enhance career decision-making self-efficacy and vocational outcome expectations for inner-city youth. Conversely, greater career decision-making self-efficacy and more positive vocational outcome expectations can promote career maturity among this population.

In addition, inner-city adolescents engaging in greater career exploration reported greater confidence in making career-related decisions as well as more positive vocational outcome expectations. This is consistent with research findings with inner-city high

school students indicating career exploration significantly predicts career decision-making self-efficacy (Brown et al., 1999; Gushue et al., 2006; McWhirter, Rasheed, & Crothers, 2000). While career exploration takes place at all ages and stages of development, late adolescence is a critical time when significant career and educational decisions are being made that will affect one's career trajectory (e.g., taking math or science coursework, preparing for postsecondary training). Thus, consistent with the Integrative Contextual Model of Career Development (ICM; Lapan, 2004) training that increases inner-city adolescents' career exploration skills, level of commitment to a career path, and helps address perceived barriers to setting and achieving career goals could facilitate the crystallization of viable career choice goals. Furthermore, this training can provide useful information to help parents and teachers realize their significant role in supporting inner-city adolescents to develop positive attitudes toward career exploration processes, and in turn, developing a greater understanding of the career decision-making process itself.

While results of this study indicate career maturity and career exploration are positively related to career decision-making self-efficacy and vocational outcome expectations in inner-city adolescents, the relationships among environmental supports and these factors are less clear. SCCT posits that person factors (e.g., gender, ethnicity) and background contextual or environmental factors (e.g., support) affect career decision-making self-efficacy and vocational outcome expectations. Indeed, studies have found that perceptions of parent and teacher support have been positively related to career decision-making self-efficacy in inner-city youth (Gushue & Whitson, 2006; Metheny, McWhirter, and O'Neil, 2008; O'Brien, 1996). In the current study, emotional support

was positively related to vocational outcome expectations among inner-city adolescents. Consistent with SCCT and ICM theories, this suggests that greater emotional support from parents, teachers, and peers corresponds to more viable career choice goals among inner-city adolescents. However, direct relationships among environmental supports and social cognitive variables were not uniformly found in this study. For instance, emotional support was not directly related to career decision-making self-efficacy. In addition, instrumental support had no direct relationship to career decision-making self-efficacy or to vocational outcome expectations among inner-city youth. While emotional and instrumental supports had fewer direct relationships with these social cognitive variables than originally hypothesized, both types of supports were correlated with one another, indicating a strong, positive relationship between instrumental and emotional support among inner-city youth.

One explanation for this difference may be that inner-city adolescents rely more heavily on sibling support, and less on parent and teacher support than suburban adolescents (Ali, McWhirter, & Chronister, 2005; Schultheiss et al., 2001, 2002). To date, few research studies have examined sibling support in conjunction with parent and teacher support in predicting career decision-making self-efficacy or vocational outcome expectations. However, a small number of studies with students from low socioeconomic (SES) backgrounds indicate that sibling support is an important piece of support within the context of career development, in particular in the development of self-efficacy beliefs, and may in fact have a greater influence on the development of career decision-making self-efficacy beliefs than parent support for this population (Ali, McWhirter, & Chronister; Schultheiss et al., 2001, 2002). The impact of sibling support on career

decision-making self-efficacy among inner-city adolescents is an area of future investigation; research should focus on further delineating the role of sibling support from parent, teacher, and peer support in the development of career decision-making self-efficacy and vocational outcome expectations.

Moreover, it is notable that when nonsignificant pathways were deleted from the model (e.g., paths from emotional support to career decision-making self-efficacy and from instrumental support to career decision-making self-efficacy and vocational outcome expectations), the strength of the relationships between Career Maturity and Career Exploration, and between Career Maturity and Proactivity increased. Indeed, analysis of the magnitude of these correlations indicated strong relationships among Instrumental Support, Emotional Support, Proactivity, and Career Exploration. Therefore, while emotional and instrumental support were not directly related to career decision-making self-efficacy in this study, these supports may be moderating other adaptive career behaviors related to career decision-making self-efficacy among inner-city adolescents, either directly or mediated through other variables, such as enhancing career exploration skills, proactive career behaviors, and assisting adolescents to make age-appropriate and informed career decisions. These results are consistent with ICM theory (Lapan, 2004) indicating that a number of supports are integratively and contextually related to one another, and exert multivariate effects on adolescents' career development.

Another interesting finding in the present study is the relationships among inner-city adolescents' perceptions of barriers, career decision-making self-efficacy and vocational outcome expectations. Inner-city youth's perceptions of barriers were found to be negatively related to their efficacy to make career decisions (as the number of

perceived barriers to reaching their future career goals decreased, students' career decision-making self-efficacy increased). However, students' perceptions of barriers were not related to vocational outcome expectations. This finding is not consistent with the findings of Kenny et al. (2003) where fewer perceived barriers were associated with greater career aspirations, school engagement, attainment of career goals, and vocational outcome expectations. However, other researchers have found mixed results when examining relationships among perceptions of barriers, efficacy, and vocational outcome expectations. For instance, Ali, McWhirter, and Chronister (2005) noted that when considering the relationship between perceptions of barriers and vocational outcome expectations, career decision-making self-efficacy must be examined as a mediating variable. In the current study, given the strength of career decision-making self-efficacy as a predictor of vocational outcome expectations, it is possible that career decision-making self-efficacy mediated relationships among perceptions of barriers and vocational outcome expectations among inner-city adolescents, such that inner-city adolescents' perceptions of barriers did not directly affect their vocational outcome expectations.

I also found that career decision-making self-efficacy mediated person and background factors as they predicted career outcome expectations and inner-city adolescents' viable career choice goals. Analogous to these results, Bandura (1986) stated that self-efficacy beliefs determine how much effort a person is willing to exert on a given task and how long a person will persist on a task in the face of barriers. Consequently, although greater career decision-making self-efficacy may not always lead to expected vocational outcomes, results suggest inner-city adolescents with greater perceived career decision-making self-efficacy are more likely to perceive vocational

outcomes to be positive, and therefore, according to Social Cognitive Theory (Bandura, 1997), are more likely to persist in the face of perceived barriers, such as few working role models, high levels of poverty, and lack of access to the opportunity structure.

However, unique to this current study, career decision-making self-efficacy and vocational outcome expectations did not mediate the relationship between academic achievement and viable career choice goals as hypothesized; instead, a direct relationship was found between academic achievement and viable career choice goals. In addition, although career decision-making self-efficacy mediated the relationship between proactivity and viable career choice goals, an unexpected direct relationship was found between proactivity and viable career choice goals. SCCT proposes that person factors and environment factors exert both distal (background contextual factors) and proximal influences on confidence for career-related decisions, outcome expectations, and career goals (Lent et al., 2000). In this study, proactivity and academic achievements (distal exogenous variables) were found to be strongly related to viable career choice goals among inner-city adolescents. Academic achievement may be acting as a proxy for the expression of ability, a proximal variable within the SCCT model. In addition, proactivity may be a proxy variable for an underlying proximal factor that is yet unknown. In summary, there was a positive relationship found between inner-city adolescents' viable career choice goals (i.e., goals to which they are committed, for which they are actively preparing, and goals which are measurable, specific, and can be reached through a series of well-defined steps) and specific types of career behavior, including greater self-reported proactive behaviors and level of academic achievement. This is consistent with ICM theory, which proposes that youth who are self-motivated to achieve academically

and are self-regulated learners are more likely to engage in proactive approaches to setting effective educational and career goals (Flum & Blustein, 2000; Lapan, 2004; Lapan, Kardash, & Turner, 2002). Therefore, while positive self-referent cognitions regarding career decision-making self-efficacy and vocational outcome expectations are related to more viable career choice goals among inner-city adolescents, a major finding of this study indicates that additional person factors, including adolescents' proactivity and academic achievement, also are directly related to these goals.

Finally, results of this study indicated that career decision-making self-efficacy and vocational outcome expectations are important agentic factors that are related to inner-city adolescents' viable career choice goals. Career decision-making self-efficacy and positive outcome expectations were positively related to viable career choice goals. This finding is consistent with a growing body of research indicating that efficacy for making career decisions as well as expectations regarding the outcome of those decisions interact to influence inner-city adolescents' career choice goals (Flores, Navarro, et al., 2006; Flores, Ojeda et al., 2006; Gushue & Whitson, 2006). Moreover, these findings are consistent with Bandura's proposition that self-efficacy is a strong predictor of the extent to which a person will attempt, persist in, and succeed in performing a given activity. Therefore, the results of this study provide some support for SCCT as a practical framework for use with inner-city adolescents and as a predictive tool regarding inner-city adolescents' viable career choice goals. In summary, this study supported the utility of the SCCT model in describing relationships among person input factors, environmental factors, and the social cognitive factors of career-decision-making self-

efficacy and vocational outcome expectations in predicting inner city adolescents' viable career choice goals.

Implications

Taken together, the results of the current study have far-reaching implications for understanding the relationships among person input, environmental, and social cognitive factors in inner-city adolescents' career choice goals. First, results underscore what many previous studies have found regarding the salient role that adaptive career behaviors and vocational skill development play in promoting the career development of inner-city adolescents (Gianakos, 1999; Gushue, Scanlan et al., 2006; Lapan, 2004; Lapan et al., 2002; Lent et al., 1989; Luzzo, 1993a; Mathieu et al., 1993; Robbins, 1985; Taylor & Popma, 1990). Specifically, the current study highlights the fact that inner city adolescents who perceive themselves to have high levels of career maturity (i.e., have developed a readiness to make age-appropriate and informed career decisions, as well as an understanding of how to engage in the career exploration process) are more likely to report efficacy for career-related decisions and report more positive vocational outcome expectations. Additionally, this study found that inner-city adolescents appeared to endorse more positive vocational outcome expectations when they felt cared for by their parents and teachers. Although a number of previous studies have suggested that parent, teacher, and peer support were important predictors of career decision-making self-efficacy in adolescents, this study did not find these sources of support to be directly related to inner-city adolescents' efficacy for making career decisions. However, there was some support regarding the role of adaptive career behaviors postulated in ICM theory, such as career maturity, career exploration, and proactivity. This suggests that

parent, teacher, and peer support may have an indirect relationship on the promotion of other career decision-making skills for inner-city youth. By understanding the dynamic interplay among adaptive career behaviors (e.g., career maturity, career exploration, proactivity) and support, and their effects of career decision-making self-efficacy and vocational outcome expectations, this study provides insight into the need for parents and teachers to promote the abovementioned skills in order to build inner-city youth's personal agency regarding setting viable career goals for the 21st century.

Regarding perceptions of barriers, inner-city adolescents with perceptions of fewer barriers were more likely to report greater career decision-making self-efficacy. For inner-city youth who perceived more barriers to achieving their career goals, utilizing positive supports (such as social support and role modeling, as well as encouraging positive learning experiences through career exploration activities) may increase their confidence to overcome perceived obstacles to the career decision-making process. In line with ICM theory (Lapan, 2004), results of this study indicate that inner-city youth who have developed adaptive career skills (i.e., career maturity, career exploration skills, proactivity, academic achievement) and have more positive contextual affordances (i.e., greater support and fewer perceived barriers) are more likely to have viable career choice goals.

A major implication of the current research study involves relationships among career decision-making self-efficacy, person-input and background factors, vocational outcome expectations, and viable career choice goals. The current research indicates that for inner-city adolescents, career decision-making self-efficacy and vocational outcome expectations are critical factors in mediating relationships among a number of adaptive

contextual factors (i.e., person and environmental factors) and viable career choice goals. As proposed in SCCT, these social cognitive factors mediate relationships among person and environmental influences and inner-city adolescents' development of viable career choice goals. Specifically, inner-city adolescents' development of viable career choice goals may be, in part, derived from the cognitions they have regarding confidence to make career decisions and expectations regarding the outcome of these decisions. Higher levels of these cognitions could then interact to foster and focus more viable career choice goals. In line with Bandura's theory, results of this study indicate inner-city youth who see themselves as capable (i.e., self-efficacious), and see the tasks they are or will be performing as valuable (i.e., positive outcome expectations) are more likely to have viable career choice goals. In addition, inner-city youth who endorse higher levels of proactivity and greater academic achievement indicate that they are more likely to have career choice goals that are viable.

Suggestions for Future Practice

Considering the important findings of this current research, it is imperative that parents, school counselors, and teachers promote the factors that are related to inner-city adolescents' viable career choice goals, including building career maturity, career exploration skills, and proactive behaviors, supporting academic achievement, and providing emotional support to students as they engage in the career development and career goal-setting process. In addition, because having viable career choice goals is integral to determining career behaviors and ultimately, career outcomes (Lent et al., 1994), inner-city adolescents should be provided with the opportunity to build skills that support development of viable goal-setting behaviors.

First, inner-city adolescents should be given opportunities to develop career maturity through cognitive and affective interventions. Following Bandura's Social Learning Theory, SCCT, and Crites' model of career maturity, these adolescents could build career maturity through positive performance accomplishments, vicarious learning, emotional arousal, and social persuasion. Career coursework focused on the ways in which inner-city youths' values, beliefs, and life experiences fit with their career interests can provide a framework for youth to develop a more sophisticated vocational identity and a better understanding of how their current interests fit with the world of work (Performance Accomplishments). In this regard, students who want to become pharmacists, but dislike chemistry may reconsider how their interest fits with what they know about themselves. Affectively, inner-city adolescents should be provided with support and encouragement from adults in their lives in order to build more positive attitudes toward the career decision-making process to enhance career maturity (Social Persuasion). Adolescents should be supported in their current career interests and, if possible, receive mentorship from those they perceive as similar to themselves (Vicarious Learning). In addition, career counselors can help adolescents develop career maturity by running school groups that focus on exploring career interests, decreasing anxiety related to career-decision-making, and increasing adolescents' efficacy for career exploration and decision-making (Emotional Arousal).

Interventions that increase inner-city adolescents' understanding of how to make career decisions as well as their sense of control over the career decision-making process will likely help these youth to develop a stronger sense of engagement in the career exploration process. Secondly, parents, teachers, and counselors can support inner-city

adolescents by modeling appropriate work readiness and prosocial behaviors (e.g., displaying positive attitudes toward work, accepting responsibility for their work), and by addressing the real and perceived barriers inner-city youth experience with respect to efficacy for making career decisions as well as their expectations for career success. Lent et al. (2000) called for additional focus on building positive supports to enhance career decision-making self-efficacy and vocational outcome expectations, as increasing support for career choice goals may be more efficacious than teaching youth how to overcome barriers to these goals. In addition, research has shown direct relationships among open expression and communication in family members and adolescents' confidence regarding their abilities to engage in career decision-making tasks, such as gathering career information and setting goals (Hargrove et al., 2002). Therefore, given the magnitude of the barriers inner-city adolescents face (e.g., low graduation rates, higher rates of poverty, few working role models, institutionalized racism, less access to the opportunity structure), supporting adolescents by demonstrating leadership, communicating about the career development process, and nurturing their career choice goals, will likely encourage these adolescents to persist in the face of barriers and to believe that outcomes in their potential career futures can be positive.

Third, interventions that capitalize on inner-city adolescents' proactive behaviors and academic achievement may impact inner-city adolescents' career choice goals. Inner-city youth should be encouraged to recognize and take advantage of opportunities as they arise that will foster performance accomplishments (e.g., trying out for a sport or activity, applying for an internship, participating in program such as Admission Possible and Upward Bound). Regarding academic achievement, parents who feel confident in

supporting their child's academic undertakings are more likely to have children who feel efficacious about a broad variety of careers (Bandura et al., 2001); therefore, parents are encouraged to take an active interest in supporting their children's academic achievement by accessing the school's online parent portal, checking-in with their young adult about academic concerns, and discussing the steps necessary to achieve academic goals. In addition, teachers can encourage students to establish an initial grade-goal, provide feedback throughout the semester, and help students to think of measurable and specific steps they can take to achieve such academic goals.

Finally, strategies that enhance inner-city adolescents' efficacy for career decision-making as well as vocational outcome expectations may be integral to viable career choice goals for these young people. The results of this study indicate career decision-making self-efficacy and vocational outcome expectations are related to inner city adolescents' viable career choice goals; therefore, school counselors should provide career programming that facilitates the development of career decision-making self-efficacy. Specifically, school counselors should implement programming that is consistent with the American School Counselor Association's (2004) national standards, including providing "the foundation for the acquisition of skills, attitudes, and knowledge enabling students to make a successful transition from school to the world of work and from job to job across the career lifespan" (p.7). To build career decision-making self-efficacy, school counselors should work with classroom teachers to design a curriculum that relates information learned in class to potential career options. In addition, counselors should promote programming that assists students in understanding themselves in relation to the world of work, including programming that encourages

students to build their own identities by understanding how life experiences impact their career decisions, as well as building life-planning skills. Such constructivist career programs have been shown to increase students' career decision-making self-efficacy and decrease self-defeating thoughts about career, particularly in relation to decision-making confusion and commitment anxiety (Grier-Reed, Skaar, & Conkel Ziebell, 2009). Regarding vocational outcome expectations, career counselors, as well as vocational psychologists should focus on the future expectations of inner-city adolescents as a vulnerable group. Therefore, prevention programs that also target the vocational outcome expectations of these youth may be particularly helpful.

Suggestions for Future Research

Future research designed to better understand the complex interplay among person factor and environmental variables is necessary to understand how these variables affect inner-city adolescents' efficacy for career-related decisions as well as vocational outcome expectations, and ultimately, viable career choice goals. Regarding career maturity, more research is needed to understand how factors such as racial identity and perceived career-related barriers, as well as other contextual factors influence this construct for inner-city youth. In addition, future replications of this research may examine additional sources of social supports not considered in this study, such as sibling support. Recent research on environmental supports for inner-city youth has indicated this may be an important source of emotional support that has not been given full weight in current models of SCCT (Ali et al., 2005; Schultheiss et al., 2001, 2002). Regarding barriers, future research should further delineate barriers in terms of internal and external barriers. Moreover, research is currently focusing on examining perceived coping

efficacy for barriers, and thus, this factor should be included in future studies relating barriers to career choice goals in inner-city youth, as coping efficacy may be related to adolescents' perceptions of barriers as well as their career-decision making self-efficacy (Lent et al., 2000). Finally, because this study found proactivity and academic achievement were directly related to viable career choice goals, additional research is needed to explore the dimensions of these proxy variables and the underlying proximal factors they represent.

Limitations of the Study

A number of limitations were noted in this study. First, this sample was drawn from inner-city adolescents in one U.S. geographic region, and thus may not be generalizable to other areas. This study was correlational in nature, and therefore, causation cannot be assumed. Finally, future research is needed to identify other variables that may influence viable career choice goals within this population. Specifically, this study did not address factors such as learning experiences, or career interests, which, according to SCCT, play roles in the development of career choice goals.

Summary

Understanding the factors related to viable career choice goals in inner-city adolescents is an essential aspect of promoting adaptive career behaviors in these youth and adequately preparing them for an increasingly changing, globalized world of work. The ability to set and achieve viable career choice goals is a protective factor for inner-city youth and is necessary for successful career development across the lifespan. For this sample of inner-city adolescents, the results indicated that environmental support (e.g., career maturity, proactivity, career exploration, perceptions of barriers, and instrumental

and emotional support) positively affected inner-city youth's beliefs about their efficacy to make career decisions as well as the expected outcomes of these career decisions. In line with Social Cognitive Career Theory (SCCT), these social cognitive variables were related to viable career choice goals, such that inner-city adolescents with greater levels of career decision-making self-efficacy, more positive vocational outcome expectations, and higher levels of proactivity and academic achievement also had greater viable career choice goals. Based on these findings, it would seem critical to provide a multi-faceted approach targeted at building adaptive career skills, career decision-making self-efficacy, and vocational outcome expectations through exposure to positive learning accomplishments, experience practicing proactive career behaviors, and enhancing social supports, in order to encourage these youth to set career choice goals that are viable and achievable in the 21st century world of work.

Conclusion

This study sought to examine relationships among career decision-making self-efficacy, outcome expectations, and career choice goals in predicting viable career choice goals in inner-city high school students. Chapter One addressed the importance of preparing adolescents to set and achieve viable career goals, as well as the specific challenges and barriers that inner-city youth may face when striving to reach their educational and career goals. Chapter Two highlighted two theories of career development, Social Cognitive Theory (Bandura, 1997) and Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994; 2000), as well as two models of career development, the Integrative Contextual Model of Career Development (Lapan, 2004) and Crites' model of career maturity (1971), that can inform inner-city adolescents' goal-

setting behaviors. In addition, Chapter Two reviewed the literature pertaining to inner-city youth's career decision-making self-efficacy, vocational outcome expectations, career maturity, and viable career choice goals. Chapter Three provided an overview of the participants in this study as well as the research methods employed. Chapter Four discussed the relationships among endogenous and exogenous predictors within a structural equation model. Finally, Chapter Five discussed the major findings of this study. Results indicated that person factors and environmental factors have a multivariate effect on the career decision-making self-efficacy and vocational outcome expectations of inner-city adolescents. In addition to these contextual factors, inner-city students' efficacy for making career-related decisions and beliefs that vocational outcomes could be positive in their lives were related to more viable career choice goals.

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Appendix A: IRB Approval

03/26/2009

RE: "Promoting Viable Career Goals in Inner-City High School Students through Career Decision-Making Self-Efficacy and Career Maturity: A Test of Social Cognitive Career Theory"
IRB Code Number: 0812P55941

Dear Ms. Conkel-Ziebell

The Institutional Review Board (IRB) received your response to its stipulations. Since this information satisfies the federal criteria for approval at 45CFR46.111 and the requirements set by the IRB, final approval for the project is noted in our files. Upon receipt of this letter, you may begin your research.

IRB approval of this study includes the consent forms dated February 25, 2009.

The IRB would like to stress that subjects who go through the consent process are considered enrolled participants and are counted toward the total number of subjects, even if they have no further participation in the study. Please keep this in mind when calculating the number of subjects you request. This study is currently approved for 300 subjects. If you desire an increase in the number of approved subjects, you will need to make a formal request to the IRB.

For your records and for grant certification purposes, the approval date for the referenced project is January 13, 2009 and the Assurance of Compliance number is FWA00000312 (Fairview Health Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA00004003). Research projects are subject to continuing review and renewal; approval will expire one year from that date. You will receive a report form two months before the expiration date. If you would like us to send certification of approval to a funding agency, please tell us the name and address of your contact person at the agency.

As Principal Investigator of this project, you are required by federal regulations to inform the IRB of any proposed changes in your research that will affect human subjects. Changes should not be initiated until written IRB approval is received. Unanticipated problems or serious unexpected adverse events should be reported to the IRB as they occur.

The IRB wishes you success with this research. If you have questions, please call the IRB office at 612-626-5654.

Sincerely,

Felicia Mroczkowski, CIP
Research Compliance Supervisor
FM/egk
CC: Sherri Turner

Appendix B: Demographic Questionnaire

Welcome! Thank you for taking part in this career survey. We hope that by answering these questions, you are able to learn more about yourself and how you make career decisions and set career goals. To get to know you better, we will need a little background information. Please respond to the following questions.

<p>Name: _____</p> <p>ID Number: _____</p> <p>Age : _____</p> <p>Gender: _____ Male _____ Female</p>
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<p>Race/Ethnicity: Please describe your racial or ethnic background by checking one or more of the boxes below. If you do not identify with any of those listed, please describe your ethnicity in the space provided.</p> <p>_____ African American _____ Native American/Alaskan Native</p> <p>_____ Asian American/Pacific Islander _____ Hispanic/Latino</p> <p>_____ White/European American _____ Other (please describe):</p> <p>_____</p>
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<p>Year in High School: _____ Sophomore (10th) _____ Junior (11th) _____ Senior (12th)</p> <p>Grade Point Average (GPA): Please report your GPA (example: 2.98). If you do not know your GPA, please estimate what you think it may be. My GPA:</p>
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Please turn to the next page to begin helping us learn more about you and your career goals. Thank you!