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Promoting self-construction and self-discovery processes : a multi-stage longitudinal comparative design stage II evaluation of the changing lives program

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PROMOTING SELF-CONSTRUCTION AND SELF-DISCOVERY PROCESSES:

A MULTI-STAGE LONGITUDINAL COMPARATIVE DESIGN STAGE II

EVALUATION OF THE CHANGING LIVES PROGRAM

A thesis submitted in partial fulfillment of the

requirements for the degree of

MASTER OF SCIENCE

in

PSYCHOLOGY

by

Kyle R. Eichas

2008

To: Dean Kenneth Furton
      College of Arts and Sciences

This thesis, written by Kyle R. Eichas, and entitled Promoting Self-Construction and Self-Discovery Processes: A Multi-Stage Longitudinal Comparative Design Stage II Evaluation of the Changing Lives Program, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this thesis and recommend that it be approved.

Mary Levitt

Wendy Silverman

William M. Kurtines, Major Professor

Date of Defense: March 12, 2008

The thesis of Kyle R. Eichas is approved.

Dean Kenneth Furton
College of Arts and Sciences

Dean George Walker
University Graduate School

Florida International University, 2008

ii

DEDICATION

This thesis is dedicated to Serapio Cardenas for an important decision long ago.

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ACKNOWLEDGMENTS

I would like to thank Dr. Kurtines for the opportunity to contribute to research that is both meaningful and significant and the members of my committee, Dr. Silverman and Dr. Levitt, for their patience and encouragement. I also wish to thank my teammates in the YDP lab, especially Rick for leading the way. To my parents and my brother, thank you for high expectations and your constant presence even when we see each other less often than we would like. And Pi, thank you for your understanding and for the tenacity of your hope during the time I spent on this project (I wish I had spent that time with you).

ABSTRACT OF THE THESIS

PROMOTING SELF-CONSTRUCTION AND SELF-DISCOVERY PROCESSES:

A MULTI-STAGE LONGITUDINAL COMPARATIVE DESIGN STAGE II

EVALUATION OF THE CHANGING LIVES PROGRAM

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Kyle R. Eichas

Florida International University, 2008

Miami, Florida

Professor William M. Kurtines, Major Professor

This study evaluated the Changing Lives Program intervention in promoting emotion-focused identity exploration (i.e. feelings of personal expressiveness; PE), cognitively-focused identity exploration (i.e. informational identity processing style; INFO), and identity resolution (IDR). Using structural equation modeling techniques, this study found that participation in the CLP was associated with statistically significant positive change in PE (path = .482, $p < .043$), marginally significant change in INFO (path = .132, $p < .083$), and significantly moderated change in IDR (IDR X ETHNICITY path = .344, $p < .053$). Increase in PE scores were also found to be significantly associated with increases in INFO scores (path = .748, $p < .001$) and marginally significantly associated with increases in IDR scores (path = .379, $p < .068$). Findings suggest that the CLP intervention may promote increases in cognitively-focused identity exploration and protect against declines in emotion-focused identity exploration.

TABLE OF CONTENTS

LIST OF TABLES

I. INTRODUCTION

Self-Construction and Self-Discovery in Positive Identity Development

The nature of the identity development process has long been a subject of debate within the identity literature. At times, identity development has been depicted as a process of creation (Berzonsky, 1986), while at other times it has been depicted as a process of discovery (Waterman, 1984). Until recently, the creation and discovery perspectives were considered to be mutually exclusive due to their inherently incompatible depictions of the nature of the self (Waterman, 1984; Berzonsky, 1986). The creation perspective depicts the self as a construction of the individual, such that the individual actively constructs the self through identity-related choices made rationally from among alternatives offered by the individual's context (Schwartz, 2002). Self-construction identity processes are associated with the individual's thoughtful and dispassionate consideration of the present alternatives. The discovery perspective, on the other hand, is rooted in eudaimonism and, unlike the creation perspective, holds that there is a pre-existing true or optimal self to be discovered (Schwartz, 2005). The true self is referred to as the daimon and is defined by the set of unique potentials, talents, skills, and capabilities that exist within an individual. Self-discovery identity processing is associated with the individual's feeling that an activity or a choice is consistent or resonant with the true self. Thus, while self-construction entails cognitive exploration of alternatives, self-discovery is characterized by affective exploration for insight into one's unique potentials, skills, and capabilities.

Building upon empirical evidence for the convergence of self-construction and self-discovery (Schwartz, Mullis, Dunham, & Waterman, 2000), identity researchers have begun to examine the possibility that identity exploration consists of *both* affective exploration for insight and cognitive exploration of alternatives (Schwartz, 2002; Schwartz et al., 2005; Soenens, Berzonsky, Vansteenkiste, Beyers, & Goosens, 2005), a view that constitutes a significant departure from previous debate within the identity literature. Recent studies have posited potential links between self-construction and self-discovery (Schwartz, 2002; Soenens et al., 2005), and there has been an effort to articulate an integration of both perspectives in a coherent model of identity development (Schwartz, 2002).

This reconsideration within the identity literature has considerable potential implications for positive youth development, a field that has recognized that a clear and positive identity is an important domain of development (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). Positive youth development intervention programs, in particular, have drawn upon the identity literature to guide the development, implementation, and evaluation of interventions that seek to promote the positive development of adolescents (Ferrer Wreder, Montgomery, & Cass Lorente, 2003; Montgomery et al., 2008; Montgomery & Sorell, 1998). These efforts have largely targeted constructs identified by identity researchers as the core component processes (e.g., exploration, commitment; Marcia, 1967) or cognitive styles (e.g., informational, normative, diffuse avoidant; Berzonsky, 1989) underlying identity formation because they are (1) conceptually related to positive identity development, (2) amenable to

change with intervention, and (3) easily measured with quantitative methods (Ferrer-Wreder, Montgomery, & Cass Lorente, 2003).

Recent intervention efforts in promoting positive identity development in troubled adolescents have begun to draw upon the potential for an integration of the self-construction and self-discovery perspectives in conceptualizing basic positive identity processes and identifying practical targets for intervention. The current study sought to contribute to the evaluation of Albrecht's (2007) Self-Transformative Model of Identity Development, a proposed integration of emotion-focused and cognitively-focused identity exploration processes, and was conducted as part of the Miami Youth Development Project's (YDP) Changing Lives Program (CLP) program evaluation. The CLP is a community-supported intervention program that seeks to promote the positive development of troubled multi-ethnic youth attending alternative public high schools in the Miami area. Consistent with recommendations for the development and evaluation of interventions by Rounsaville, Carroll, and Onken (2001), CLP Multistage Longitudinal Comparative (MLC) Stage II evaluation includes short-term controlled outcome studies in the preliminary evaluation of the CLP intervention.

The Miami Youth Development Project (YDP)

The Miami Youth Development Project (YDP) is a community-supported positive youth development program that utilizes community-university collaboration and principles consistent with the outreach research model (Kurtines et al., 2008) to serve the needs of Miami's multi-problem youth. The YDP aims to foster positive youth development by creating, refining, and implementing programs with culturally diverse

and multi-problem adolescents attending alternative high schools in Miami. Students often come to alternative schools with a history of attendance, behavior, and/or motivational problems.

A Psychosocial Developmental Life Course Approach

For its work with troubled adolescents, the YDP draws its developmental framework from Erikson's (1968) psychosocial developmental theory and Elder's (1998) life course theory. Erikson (1968) conceptualized identity as an internal and self-constructed dynamic organization of drives, abilities, beliefs, and individual history, while Elder (1998) described the life course as the pathway of the individual's life as it moves through the sequence of socially defined, age-graded events and roles over time. Life course theory holds that life transitions are comprised of social and psychological qualitative state changes that are elements of a larger life course pathway. The YDP's psychosocial developmental life course framework integrates Erikson's psychosocial view of identity formation with Elder's description of the life course to depict identity as the "steering mechanism" that guides the individual's life course and adolescence as a transitional period of increased likelihood of a radical break or departure from a previous life course pathway, referred to as a life course turning point (Montgomery et al., 2008). That is, the self-constructed dynamic organization of drives, abilities, beliefs, and individual history that a person begins to form during adolescence is thought to guide the life course within the constraints of history and social circumstances.

Promoting Positive Identity: The Changing Lives Program (CLP)

As part of the YDP, the Changing Lives Program (CLP) provides on-site counseling services in all four of the voluntary alternative high schools in the Miami Dade County Public School system using the model of school counseling designed by Keys, Bemak, and Lockhart (1998). Each year approximately 100 to 150 students are self-referred or referred by teachers or school counselors for counseling services provided in a group modality. The immediate goal of counseling is to address the concerns that youth bring into counseling (i.e., relationship issues, life choices, anger management, self-esteem, etc.), however, the long-term focus remains on promoting positive youth development by helping students evaluate their lives, make changes to address problems, and develop insight.

A Self-Transformative Model of Identity Development

The YDP adopts as its guide for CLP intervention and evaluation efforts with adolescents the Self-Transformative Model of Identity Development (Albrecht, 2007), in which the adolescent's sense of self is hypothesized to be the direct result of both affective exploration for insight (self-discovery) and cognitive exploration of alternatives (self-construction) as well as contextual factors such as age, gender, ethnicity, and participation in weekly CLP counseling sessions that may moderate identity processes. Consistent with the YDP's psychosocial developmental life course developmental framework, this model proposes that historical, social, and/or personal contextual opportunities and constraints have a direct association with the adolescent's sense of

self. The relationship between contextual factors and the adolescent's sense of self is hypothesized to be partially or fully mediated by self-construction and/or self-discovery identity processes. Both self-construction and self-discovery are considered to have positive effects on the development of the "steering mechanism" guiding the life course, while contextual factors may have variable associations. Participation in weekly CLP counseling sessions conducted according to the YDP's intervention framework is conceptualized as a particularly important personal contextual opportunity for positive identity development.

A Participatory Transformative Approach to Promoting Identity Development

CLP intervention efforts take a person-centered participatory transformative approach informed by Freire's (1970/1983) transformative pedagogy and recent work on multicultural counseling theory (Sue & Sue, 2003) in employing both emotion-focused and cognitively-focused intervention strategies in a manner consistent with Albrecht's (2007) Self-Transformative Model of Identity Development, described above. Freire (1970/1983) developed and practiced his transformational pedagogy with impoverished Brazilian peasants, and the YDP extends this approach to culturally diverse multi-problem youth whose lives often take place outside mainstream social institutions. As described by Montgomery et al. (2008), the primary intervention goal is to empower troubled adolescents to change their lives in positive directions. Rather than directing the activities of the group, counselors seek to empower students by facilitating the development of a group context in which adolescents have the opportunity to transform their sense of control and responsibility by taking an active role in the counseling

process. Special attention is paid to opportunities for the group to collaborate on cognitively-focused identification of problems and solutions (Montgomery et al., 2008) and on the emotion-focused development of awareness of personal strengths, potentials, and qualities (Albrecht, 2007).

CLP uses youth-directed transformative activities as its key behavioral intervention strategy for facilitating empowerment (Kurtines, Montgomery et al., in press). Successful participation in self-selected and self-directed activities has been hypothesized to empower youth by strengthening intrinsic motivation to achieve life goals, and control and responsibility with respect to life activities (Brandtstadter & Lerner, 1999; Burger, 1989; Deci, 1992; Herman-Stahl & Peterson, 1996; Hunter and Csikszentmihalyi, 2003; Larson, 2000; McWhirter, 1994, 1997, 1998; Peterson & Reid, 2003; Pittman, 2000; Rich, 2003; Schmidt & Padilla, 2003; Seligman & Csikszentmihalyi, 2000; Zimmerman, 1995; Zuckerman, 1979). Through attempts that adolescents make to solve problems and change their lives for the better, called mastery experiences, they become the "experts" and in the process become empowered. Mastery experiences generated by cognitively-focused and emotion-focused transformative activities are thought to have the potential to transform the way youth understand and/or feel about their current life course. More specifically, the quality of the self-construction and/or self-discovery processes associated with mastery experiences generated by cognitively-focused and emotion-focused transformative activities are hypothesized to precipitate complex cascading change in either (or both) cognitive and affective components of life course experiences (see Kurtines, Montgomery et al., in press).

Consistent with recommendations for the development and evaluation of interventions by Rounsaville et al., (2001), the on-going evaluation of intervention outcomes within the CLP has taken place as part of the Stage II of the CLP MLC program evaluation (Montgomery et al., 2008). Stage II evaluation consists of the extension and refinement of previous Stage I pilot/feasibility testing, manual/protocol writing, infrastructure development, and measure development. The CLP Stage II evaluation focuses primarily on psychometric evaluation of measures and short-term controlled outcome studies in the preliminary evaluation of the CLP intervention. Stage III evaluation focuses on long-term program effectiveness and possible transportability through long-term controlled effectiveness outcome studies over the life span of the participants and the program.

This present outcome study was conducted as part of the Stage II evaluation of the CLP participatory transformative intervention approach in promoting both self-constructive and self-discovery identity exploration in troubled adolescent youth. While previous studies have evaluated the CLP intervention in terms of self-construction processes (Ferrer-Wreder et al., 2002; Swenson, 2004) or self-discovery processes (Albrecht, 2005, 2007), no studies, to date, have evaluated the intervention in terms of both self-construction and self-discovery processes, nor have any studies examined the contemporaneous relationship between self-construction and self-discovery processes with troubled adolescent youth. The present study also examined potential exogenous contextual moderators of self-construction and self-discovery processes (i.e. gender and

ethnicity). Analyses included an examination of the level of identity resolution as a marker of psychosocial developmental challenge related to identity exploration.

In pursuing these analyses, this study sought to contribute to the evaluation of the Self-Transformative Model of Identity Development proposed by Albrecht (2007) and, toward that end, had three main research aims. The first aim of this study was to investigate CLP intervention effectiveness in promoting positive change in self-construction processes (i.e. informational identity processing style) self-discovery processes (i.e. feelings of personal expressiveness) and level of identity resolution. The second aim was to investigate potential moderators of intervention effectiveness (i.e. gender and ethnicity). The third aim was to investigate hypothesized links between self-construction (informational style) and self-discovery (feelings of personal expressiveness), such that an increase in self-construction is hypothetically associated with an increase in self-discovery, and between level of identity resolution and both self-construction and self-discovery, such that an increase in level of identity resolution is associated with increases in self-construction and self-discovery.

II. LITERATURE REVIEW

Self-Construction and Self-Discovery in Adolescence

According to Erikson (1963), the ascendant psychosocial task of adolescence is the integration of the roles, skills, and identifications youth have learned in childhood with the expectations of the adult world into a coherent sense of identity. The search for this sense of identity is characterized by the crisis between the ego syntonic tendency toward identity synthesis, a self-constructed dynamic organization of drives, abilities, beliefs, and individual history, and the ego dystonic tendency toward identity confusion, the lack of such an organization. Crisis is thought to be prompted by either an identity deficit, in which the adolescent encounters circumstances in which in which he or she lacks enough of a sense of identity to make important life decisions, or an identity conflict, in which the adolescent experiences circumstances that bring to light the incompatibility of two or more aspects of his or her identity (Baumeister, 1999). Both syntonic and dystonic elements are necessary in the positive development of the adolescent as the dialectic tension between them represents a time of increased vulnerability and potential for development (Erikson, 1968, 1985). As such, the identity crisis, also known as identity exploration (Adams et al., 2001; Waterman, 1999), is considered a normal developmental challenge during adolescence that involves processes necessary for finding, assessing, and establishing identity commitments.

Self-Construction: The Identity Style Model

Within the identity exploration literature, a significant body of work has drawn upon the constructivist tradition as expressed by Kelly (1955) in asserting that the

individual is an intentional agent who participates in the construction of his or her world (Berman, Schwartz, Kurtines, & Berman, 2001). The individual is depicted in the role of a scientist, proactively making identity-related choices by forming and testing hypotheses in a cognitive, rational, and dispassionate manner (Grotevant, 1987; Berzonsky, 1989; Berman et al., 2001). Identity theories in this vein have emphasized abilities and orientations (Grotevant, 1987), cognitive problem-solving competence (Berman et al., 2001), and cognitive processing styles (Berzonsky, 1989).

Berzonsky's (1989) constructivist approach to identity formation emphasizes the cognitive processing orientations with which a person forms and maintains an identity. Drawing on the work of Kelly (1955), Berzonsky (1993) proposed that people are self-theorists in that they create a conceptual structure that helps them make sense of their experience. There are three types of self-theorists, (1) the scientific information-oriented, (2) the dogmatic normative-oriented, and (3) the ad hoc diffuse/avoidant oriented. When applied to the psychosocial task of identity formation, these orientations toward self-construction are termed identity styles. The informational orientation is characterized by the seeking out and utilizing of self-relevant information when making decisions related to identity (Berzonsky, 1992), while the normative orientation is characterized by conformation to the expectations of others or of reference groups. The diffuse avoidant identity style is often distinguished by avoidance of identity-related choices.

Most individuals have the ability to use all three identity orientations by late adolescence (Berzonsky, 1990). Though not necessarily more advanced than normative style, the informational style has been associated with several indices of positive

psychosocial adjustment in adolescence, including: openness to ideas and experience and the need to exert cognitive effort (Berzonsky, 1990); active, problem-focused coping strategies and social support seeking (Berzonsky, 1992); and self-reflective tendencies, salience of personal identity content, and openness to feelings and fantasies (Berzonsky & Sullivan, 1992).Adolescents who score higher on measures of informational style tend to come from authoritative homes (Berzonsky, 2004), have well-defined educational plans, and have high levels of both conscientiousness and goal-directedness (Berzonsky & Kuk, 2000). Though evidence suggests that while both normative and informational styles are generally more adaptive than diffuse avoidant style, the informational style is more adaptive than the normative style in situations in which youths must assume personal responsibility for academic priorities and monitor their own activities and progress (Berzonsky & Kuk, 2000).

Self-Discovery: Feelings of Personal Expressiveness

Within the identity literature, a body of work is emerging in the humanist tradition, resonant with the rapidly growing interest in positive psychology (Seligman & Csikszentmihalyi, 2000), to emphasize the consideration of personal strengths and creative potentials. The individual is depicted as becoming or growing toward the fulfillment of his or her potential. Theories in this vein have asserted the importance of self-actualization (Maslow, 1968), flow (Csikszentmihalyi, 1990), and feelings of personal expressiveness (Waterman, 1990). Flow is an affective state characterized by a balance between the challenge at hand and the skills one brings to it (Csikszentmihalyi, 1990), while self actualization refers to fulfilling one's potentials and living up to one's

12

ideals on a consistent basis (Maslow, 1968). Personal expressiveness emphasizes the subjective experience associated with engaging in identity-related activities (Waterman, 2005) and the self-discovery process (Waterman, 1984).

Personal expressiveness is considered the second of these successively more integrated levels of affective processing, more integrated than the experience of flow and less integrated than self-actualization (Schwartz, 2002, 2006; Schwartz et al, 2005; Waterman, 1990). Feelings of personal expressiveness are defined as the positive, subjective state characterized by the deep satisfaction that accompanies engagement in activities or goals that utilize one's unique potentials and that are hypothesized to represent one's basic purpose in living (Waterman, 1993). While performing activities that evoke feelings of personal expressiveness, individuals experience (a) an unusually intense involvement, (b) a special fit or meshing with the activities, (c) a feeling of intensely being alive, (d) a feeling of completeness or fulfillment, (e) an impression that this is what one was meant to do, and (f) a feeling that this is who one really is (Waterman, 2005).

Existing research suggests that feelings of personal expressiveness are associated with many positive life outcomes (Csikszentmihalyi, 1975, 1990b; Waterman, 1993, 2004). Participation in personally expressive activities is related to higher levels of intrinsic motivation to accomplish life tasks (Waterman, 2005), as well as higher scores on measures of perceived competence and self realization values and importance. Evidence suggests a strong association between personal expressiveness and self determination (Waterman et al., 2003). Recent studies conducted with high school

students have also found evidence of the association between personal expressiveness and several indices of positive psychosocial adjustment in adolescence. Feelings of personal expressiveness, in combination with flow and goal-directed behavior, has been found to be significantly associated with an higher levels of adolescent-reported psychological well-being and lower levels of adolescent reported problem behavior (Palen & Coatsworth, 2007). While there appear to be gender differences in the types of activities that males and females find personally expressive (socializing, instrumental, and literary activities for females and sports/physical activities for males), reported levels of personal expressiveness within those activities have been found to be similar across gender (Sharp, Coatsworth, Darling, Cumsille, & Ranieri, 2007). Research also suggests that there are more similarities in feelings of personal expressiveness across countries and cultures than differences (Coatsworth et al., 2005; Sharp et al., 2007).

Conceptual Relations between Cognitive and Affective Identity Exploration

In light of (1) current reconsideration of the mutual exclusivity of the creation and discovery metaphors, (2) empirical evidence suggesting an association between informational style and high levels of personal expressiveness (Schwartz, Mullis, Waterman, & Dunham, 2000), and (3) further empirical evidence suggesting that among college students informational style and personal expressiveness are amenable to positive change through cognitive and emotion-focused intervention strategies, respectively (Schwartz, Kurtines, & Montgomery, 2005), questions concerning the nature of the relationship between self-construction and self-discovery processes are beginning to be addressed in the identity literature (Schwartz, 2002; Soenens et al.,

2005) and in the context of positive youth development interventions (Albrecht, 2007). Recent studies have posited that the relationship between affective and cognitive identity processes may be sequential (Schwartz, 2002), mutually reinforcing and cyclical (Soenens et al., 2005), or dependent upon the developmental challenges currently being faced by the individual (Albrecht, 2007).

Reasoning that the fundamental distinction between the self-construction and self-discovery perspectives is one of process versus content, Schwartz (2002) proposed an individualization process model that integrates the two perspectives. Schwartz conceptualized the self-construction perspective as pertaining to the process that an individual uses to form a coherent identity, while the content of the identity that is formed is associated with the self-discovery perspective. Thus, according to this model, self-construction processing is thought to precede self-discovery processing such that choices made rationally from among alternatives offered by the individual's context provide opportunities for the discovery of the unique potentials, talents, skills, and capabilities that already exist in the individual.

Alternately, other researchers have suggested that self-construction and self-discovery may be a cyclical process of mutual reinforcement (Soenens et al., 2005). According to this conceptualization, the individual is presented with identity-relevant choices, and the exploration of alternatives associated with these choices leads to greater insight into the individual's potentials, as well as opportunities to act upon them. When the individual acts upon his or her potentials, he or she is often presented with new identity-related choices that may lead to further cognitive exploration of alternatives.

Self-Construction and Self-Discovery in Positive Youth Development

Because adolescents must begin to choose and commit to the goals, roles, and beliefs about the world that give life direction and purpose as well as coherence and integration (Erikson, 1968), models of identity development that integrate the self-construction and self-discovery processes underlying identity exploration may be of particular utility in positive youth development programs that target adolescence. Previous positive youth development research has recognized the potential of models integrating self-construction and self-discovery processes to guide the development, implementation, and evaluation of developmental interventions with adolescents exposed to risks associated with living in low-income urban community contexts (Albrecht, 2007).

CLP Participation and Self-Construction and Self-Discovery Processes

There have also been several studies within the YDP that have evaluated CLP effectiveness with measures of self-construction or self-discovery. Ferrer-Wreder et al. (2002) used two measures of cognitive identity exploration to evaluate the CLP intervention and found a significant association between participation in the CLP and a positive change in normative identity style as assessed by the Identity Style Inventory (ISI). The same study found that the association between CLP participation and positive change in problem-solving competence, as assessed by the Critical Problem-Solving Scale (CPSS), was significantly moderated by ethnicity. A second study, Swenson (2004), also found a significant association between CLP participation and change in normative identity style, however, the reported change was in the negative direction.

Thus far, two YDP studies have evaluated the effect of the CLP intervention with a measure of affective identity exploration. Albrecht (2005) found that the association between participation in the CLP and feelings of personal expressiveness was significantly moderated by a gender by ethnicity interaction. Conversely, Albrecht (2007), in an application of structural equation modeling techniques, found that participation in the CLP was significantly associated with positive change in personal expressiveness relative to the control group without moderation by gender, ethnicity, or age. The study also documented a direct relationship between a negative contextual factor, identity distress, and personal expressiveness.

A Self-Transformative Model of Identity Development

Albrecht (2007) proposed a Self-Transformative Model of Identity Development in which the adolescent's sense of self is hypothesized to be the direct result of both affective exploration for insight (self-discovery) and cognitive exploration of alternatives (self-construction), as well as contextual factors that may moderate identity processes. Consistent with a psychosocial developmental life course approach, this model posits that historical, social, and/or personal contextual opportunities and constraints have a direct association with the adolescent's sense of self. The relationship between contextual factors and the adolescent's sense of self is hypothesized to be partially or fully mediated by self-construction and/or self-discovery identity processes. Both self-construction and self-discovery are thought to have positive effects on the adolescent's development of a sense of identity, while contextual factors may have variable associations.

Albrecht (2007) emphasized the role of the particular developmental challenges faced by the individual during adolescence as an important influence on the degree of cognitive and affective exploration undertaken at any particular time. As an illustrative example, Albrecht pointed to the difference between the adolescent's search for a job after graduation from high school and the search for a career during college. An individual at one time in life may dispassionately search through the available choices for a job that will allow for adequate financial support, while at another time in life, the same individual may seek out a career or college major that feels right, or feels as if it "fits" the individual. Albrecht suggested that optimal identity development employs both strategies.

Existing evidence suggests that, though self-construction and self-discovery processes are distinct from one another, both are implicated in and necessary for optimal identity development (Schwartz et al., 2005). Further, evidence suggests that cognitively-focused intervention strategies are effective in promoting self-construction processes and that emotion-focused intervention strategies are effective in promoting self-discovery processes, as well as necessity of the inclusion of both types of strategies in interventions that seek to promote positive identity development (Schwartz et al., 2005). However, there have been no studies, to date, within the YDP that have evaluated the effectiveness of the CLP intervention in terms of both self-construction and self-discovery identity processes, nor have any studies examined the relationship between self-construction and self-discovery processes in troubled adolescent youth.

Developmental Challenge: Resolving Psychosocial Conflict

According to a psychosocial perspective, the task of resolving identity conflict associated with identity crisis is an important developmental challenge for adolescents. As such, the degree to which identity conflict is resolved, as well as the quality of that resolution, may influence the degree of self-construction and self-discovery that an adolescent is willing or able to undertake at a given time. Though identity resolution has been conceptualized as an indicator of positive identity development in the context of positive youth development efforts (Lerner et al., 2005), resolutions of the identity crisis during adolescence may theoretically be positive, as in the achieved identity status (Marcia, 1967), while others may be less successful or even negative. A less desirable resolution of the identity crisis, according to the psychosocial perspective, is characterized by role repudiation, expressed either as diffidence, the reluctance to explore and commit to identity choices, or as defiance, a preference for a socially undesirable or negative identity (Erikson, 1985). This suggests that self-reported identity resolution may at times reflect a failure to engage in the process of identity exploration (i.e. the lack of crisis), or the commitment to a socially marginalized identity (Erikson & Erikson, 1957).

Erikson (1985) emphasized the role of the social environment and ideological institutions in the emergence of either the ego strength of fidelity, the product of successful identity resolution, or role repudiation. Contemporary adolescents, especially those living in disempowering low-income, urban community contexts, have become increasingly alienated from and less invested in such institutions (Cote, 1994; Ferrer-

Wreder et al. 2002) and often experience psychosocial difficulties related to the community, peer groups, family, and work (Duchnowski, Kutash, & Friedman, 2002). For these adolescents, the conflict associated with the identity crisis may be more challenging when also exposed to dangers associated with these contexts, such as daily violence, crime, and substance abuse (Berman, Kurtines, Silverman, & Serafini, 1996). Previous research suggests that approximately one third of CLP participants, for example, experience moderate, severe, or very severe upset, distress, and/or worry associated with long-term goals, career choices, friendships, sexual orientation and behavior, religion, values and beliefs, and group loyalties (Hernandez, Montgomery, & Kurtines, 2006).

Intervention programs that seek to promote positive development with troubled adolescent populations, such as the CLP, may confront the task of facilitating the awareness of identity deficits and identity conflicts in the face of contextual factors that make these challenges more difficult to manage. Existing research findings regarding indices conceptually linked to identity resolution are mixed. On the one hand, evidence suggests that psychosocial interventions can be effective in increasing identity exploration (crisis) and decreasing or loosening commitments with adolescents (Berman, 1998) and with CLP participants in particular (Albrecht, 2005, 2007; Ferrer-Wreder et al., 2002) and that increases in self-discovery processing associated with participation in the CLP may be accompanied by an increase in identity distress (Albrecht, 2007). On the other hand, evidence also suggests that increases in perceived positive group support for CLP counseling group members are associated with increasing identity resolution

(Garcia, 2005). It is thought that increases in self-reported identity distress that co-occur with increased self-discovery processing may indicate engagement in positive identity development through exposure to new and stressful but ultimately beneficial identity options (Albrecht, 2007), and further, that the context of a counseling group may offer support during a period of exploration. However, while it may be hypothesized that participation in positive youth development intervention would increase identity resolution, the relationship between participation in the CLP intervention and identity conflicts associated with the adolescent identity crisis may be complex and influenced by contextual factors, and therefore open to examination.

Evaluating Contextual Moderators in the CLP

Studies within the YDP that have sought to evaluate the CLP intervention using samples drawn from urban contexts of multi-ethnic heterogeneity have conceptualized participation in the CLP counseling intervention as the focal independent variable, the independent variable of primary research interest (Jaccard & Turrisi, 2003) and have routinely examined contextual factors, such as gender and ethnicity as potential moderators of the relationship between participation in the CLP and psychosocial outcomes. Research findings regarding these potential contextual moderating factors have been mixed. While participation in CLP has been found, for example, to be significantly associated with positive change in identity development as assessed by the YDP Life Course Interview (Lewis Arango, Kurtines, Montgomery, & Ritchie, 2008), the association between participation in CLP and positive change in future possible selves, as assessed by a qualitative extension of the Possible Selves Questionnaire (PSQ-

QE), was reported to be significantly moderated by gender and ethnicity and by a gender by ethnicity interaction (Kortsch, Kurtines, & Montgomery, 2008). Similarly, Garcia (2005) found that the association between participation in the CLP and psychosocial development of intimacy was significantly moderated by ethnicity.

Examination of the Self-Transformative Model of Identity Development

Consistent with Albrecht's (2007) Self-Transformative Model of Identity Development, Figure 1 represents the model analyzed in this study. Resolution of the adolescent identity crisis was conceptualized as an important developmental challenge and a potential factor in self-construction and self-discovery processes. Because several studies have found that the informational identity processing style and feelings of personal expressiveness are associated with the achieved identity status (Berman et al., 2001; Berzonsky, 1989, 1990; Schwartz et al., 2000), theorized to be the most desirable resolution of the identity crisis and characterized by high levels of both identity crisis/exploration and identity commitment (Grotevant, 1987; Marcia, 1967), increases in self-reported levels of identity resolution were hypothesized to predict increases in self-construction and self-discovery.

Primary analyses were conducted to evaluate CLP intervention effectiveness in promoting positive change in emotion-focused self-discovery processes (i.e. feelings of personal expressiveness; path A), cognitively-focused self-construction processing (i.e. informational identity processing style; path B), and level of identity resolution (path C). These intervention effects were hypothesized to be moderated by gender and ethnicity. As the literature is mixed with respect to gender and ethnicity-related differences in

identity development, moderation by gender and ethnicity is hypothesized to be potentially associated with increases or decreases in self-discovery and self-construction processes and level of identity resolution.

Figure 1: Conceptual Model
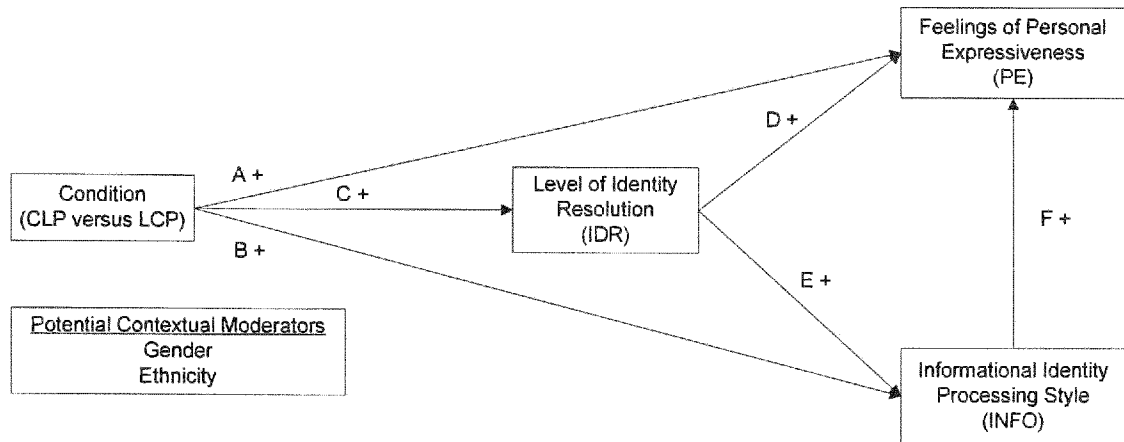
Positive change in the level of identity resolution was believed to be directly related to positive change in emotion-focused self-discovery, such that increases in the level of identity resolution were hypothesized to predict increases in feelings of personal expressiveness (path D). The psychosocial difficulties often experienced by troubled youth, such as those related to the community, peer groups, family, and work (Duchnowski et al., 2002), may divert attention away from inward-oriented emotion-focused processes and toward outward-oriented cognitive problem-solving processing of immediate conflicts, while the resolution of psychosocial conflict may enable adolescents to commit more time and attention to self-discovery. Positive change in the level of identity resolution was believed to also be directly related to positive change in cognitively-focused self-construction processing, such that increases in the level of identity resolution were hypothesized to predict increases in the use of informational

identity processing style (path E) as increasing resolution of psychosocial conflict may allow adolescents to increase their exploration of new identity options. Positive change in self-construction processing was thought to be directly related to positive change in self-discovery processing, such that increases in informational identity processing style were hypothesized to predict increases in feelings of personal expressiveness (path F) as the exploration of identity alternatives offered by an individual's context may increase opportunities for the individual to discover his or her unique potentials, talents, skills, and capabilities.

III. METHODS

Participants

Participants for this study were drawn from data gathered by the Changing Lives Program from Fall 2002 to Spring 2006. First analyses involving level of identity resolution, informational style, and feelings of personal expressiveness were conducted using 248 White/Non-Hispanic, African-American, and Hispanic adolescents. Due to under-representation, the eighteen White/Non-Hispanic individuals were dropped from the sample. Primary analyses were done with 230 African-American and Hispanic adolescents aged 13-19 who had completed pre-test and post-test assessments on the Erikson Psycho-Social Index (EPSI; Rosenthal, Gurney, & Moore, 1981), the Identity Style Inventory (ISI; Berzonsky, 1992), and the Personally Expressive Activities Questionnaire (PEAQ; Waterman, 1990), 89 of whom participated in a one-semester non-intervention (non-random) control comparison condition. The sample consisted of one hundred twenty-nine females (eighty-two African-American, forty-seven Hispanic) and one hundred one males (fifty-six African-American, forty-five Hispanic).

Recruitment of Participants

Participants were recruited to the CLP through self-referrals or through referrals from the school counselor, the teachers, or the administrators. They completed the parent consent and student assent forms before joining one of eight types of groups: anger management, relationships, substance abuse, stress and coping, self-esteem, troubled families, alternative lifestyles, and grief and loss. The groups were organized and implemented through the school administration with the assistance of the school

25

counselor as part of the school's ongoing counseling program. All of the students who participated in the control comparison condition were identified by the school counselors or school administrators as not having participated in any of the counseling and guidance programs prior to or during the semester of their involvement with the YDP and as not having been referred to counseling, whether through self-referral or referral by the school counselor, teachers, or administrators.

Procedure

Intervention Procedure

Each intervention group was led by an intervention team that consisted of one group facilitator, one co-facilitator, and one or two group assistants. All groups shared this structure and format. All group facilitators and co-facilitators were graduate level students enrolled in either a doctoral or a masters level program. Group assistants were undergraduate psychology students who had been trained in the administration of the measures and in participant tracking procedures. Group assistants had at least one semester of work experience in the CLP prior to joining the groups.

The group facilitators and co-facilitators served in a counseling capacity that utilized the CLP's intervention strategy, a participatory transformational pedagogy, previously described. The intervention groups met for approximately 45 minutes to 1 hour every week for approximately 8 to 12 weeks in the fall semester and approximately 8 to 12 weeks in the spring semester.

Assessment Procedure

The students were assessed by undergraduate psychology students serving as research trainees. Their training took place at the beginning of each semester and included instruction concerning confidentiality issues, assessment administration, dress code, high school regulations, interviewing strategies, and role-playing of interviews. Assessments were conducted at three times during the school year on school grounds and during school hours. Assessments took place the week preceding the commencement of the semester sessions and the week after the end of each semester's sessions. These assessments included the same battery of evaluations, including the Erikson Psycho-Social Index (EPSI), the Identity Style Inventory (ISI), and the Personally Expressive Activities Questionnaire (PEAQ).

Measures

Background Information Form (BIF)

The Background Information Form (BIF) was given to all participants in the current study. It served as a record of demographic information. The proposed study utilized information about the participants' gender and ethnicity (Hispanic/Latino, African American, Non-Hispanic White, Bi-ethnic, and Other).

Identity Style Inventory (ISI).

The Identity Style Inventory (ISI; Berzonsky, 1992) is a 39-item self-report measure that includes three subscales indicating the use of informational style, normative style, and diffuse avoidant style in situations that require identity exploration and a fourth subscale indicating identity commitment. This study used the informational

style subscale (INFO). Sample items measuring informational style included, "When making important decisions, I like to have as much information as possible." Items are rated on a 5-point Likert scale labeled: 1 = "almost never true", 2 = "usually not true", 3 = "undecided", 4 = "sometimes true", and 5 = "almost always true" (Berzonsky, 1992). The INFO subscale consists of 10 items, the scores of which are averaged to generate a subscale score. Berzonsky (2004) a found an alpha coefficient of .78 and test-retest reliability of .87 for the INFO subscale. Ferrer-Wreder et al. (2002) found an alpha coefficient of .59 for INFO in a sample of ethnically diverse high school students. Analysis of the sample utilized by the present study indicates an alpha coefficient of .70 for the INFO subscale. Theoretically consistent relationships have been found between the identity style scales and measures of identity status, identity orientation, social-cognitive processes, and personality dimensions (Berzonsky, 1990, 1992, 2003, 2004; Berzonsky & Sullivan, 1992; Schwartz et al., 2000), indicating evidence of concurrent validity.

Erikson Psycho-Social Index (EPSI).

The Erikson Psycho-Social Index (EPSI; Rosenthal, Gurney, & Moore, 1981) is a 72-item self-report measure that includes six subscales, each consisting of 12 items indicating how well respondents have resolved conflicts indicative of Erikson's stages of psychosocial development. This study used the identity resolution subscale (IDR). Items on this subscale utilize key words and statements from Erikson's characterizations of the identity versus identity confusion stage. Sample items measuring identity resolution included, "I know what kind of person I am." Items are rated on a 5-point Likert scale,

labeled 1 = "almost never true", 2 = "usually not true", 3 = "undecided", 4 = "sometimes true", and 5 = "almost always true" with half of the items representing successful resolution of the identity (vs. role confusion) crisis, and half representing unsuccessful resolution. Items representing unsuccessful resolution were reverse-coded prior to analysis. Thus, mean scores for the IDR subscale yield an index of degree of resolution, with high subscale scores indicating higher levels of identity resolution. These subscales have demonstrated satisfactory construct validity and adequate alpha reliability coefficients (Rosenthal, Gurney, & Moore, 1981; Sandor & Rosenthal, 1986). Subscale scores were correlated with the subscales of Greenberger and Sorensen's Psychosocial Maturity Inventory (PSM), Form D. The study reported a correlation coefficient of .56 between the identity versus identity confusion subscale of the EPSI and the identity subscale of the PSM. Standardized item alphas have been reported as .74 for the identity subscale in a large youth sample ranging across middle school through college (Montgomery, 2005). Analysis of the sample utilized by the present study indicates an alpha coefficient of .77.

Personally Expressive Activities Questionnaire (PEAQ).

The Personally Expressive Activities Questionnaire (PEAQ; Waterman, 1995) is a 14-item self-report measure that includes three subscales indicating feelings of personal expressiveness, hedonic enjoyment, and flow challenge. This study used the feelings of personal expressiveness subscale (PE). The PEAQ has been adapted for use in the evaluation of CLP such that questions refer to activities associated with the long-term life goals of the respondents. Thus, the PE subscale indicates the degree to which

respondents feel that the pursuit of life goals is personally satisfying and expressive of their unique potentials. Sample items measuring feelings of personal expressiveness included, "When I do these activities, I feel like it's what I was meant to do." Items are rated on a 7-point Likert scale labeled: 1 = "strongly disagree" to 7 = "strongly agree", with 4 = "not sure" (Waterman, 1995). The PE subscale consists of six items, the scores of which are averaged to generate a subscale score. Waterman (2005) reported an alpha coefficient of .77 for the PE subscale. Analysis of the sample utilized by the present study indicates an alpha coefficient of .91 for the PE subscale. Waterman (2004) found significant correlations between PEAQ scores and the identity achieved and identity diffused statuses and informational and diffuse avoidant styles on a group of identity measures that included the ISI, the Dellas Identity Status Inventory (DISI), and the Revised Extended Objective Measure of Ego Identity Status (EOM-EIS), providing evidence of concurrent validity.

Structural Equation Modeling: Indices of Model Fit

This study utilized a Structural Equation Modeling (SEM) approach. The SEM framework takes a confirmatory approach to the analysis of structural theories that is conducive to hypothesis testing (Byrne, 2001). This approach specifies that the causal processes underlying structural theories can be represented by a series of regression equations. Thus, SEM offers a plausible method for representing and evaluating the causal processes underlying identity development by allowing for the testing of hypothesized relationships among identity components. Following the recommendations of Bollen and Long (1993), a variety of global fit indices was used, including indices of

absolute fit, indices of relative fit and indices of fit with a penalty function for lack of parsimony. First, the chi-square and its probability value (p-value) were examined. The higher the p-value is, the closer the fit between the hypothesized model and model fit (Byrne, 2001), with a target p-value of greater than .05. The comparative fit index (CFI) was used as an index of fit based on the comparison of the hypothesized model with the independence model. A CFI value of greater than .95 was used to indicate model fit. The root mean square error of approximation (RMSEA) accounts for the error of approximation in the population. An RMSEA of less than .08 was used to indicate model fit. The p-value for the test of close fit was also examined, with a non-significant p-value being consistent with good model fit.

Research Aims

Within the framework of the CLP Stage II evaluation, this study had three outcome research aims that were evaluated with a sample of individuals that had completed pre- and post-tests on IDR, INFO, and PE using SEM techniques.

Research Aim 1 (Outcome Analyses)

The first aim of this study was to investigate whether participation in the CLP intervention was associated with statistically significant increase in level of identity resolution, informational identity processing style, and feelings of personal expressiveness relative to participants in the control condition. This question is designed to replicate and extend the findings of Albrecht (2005, 2007) with respect to the effectiveness of the CLP. Three specific outcome research hypotheses were tested.

Research Hypothesis 1.1. Participants in the intervention condition will show a statistically significant positive change in IDR relative to control participants.

Research Hypothesis 1.2. Participants in the intervention condition will show a statistically significant positive change in INFO relative to control participants.

Research Hypothesis 1.3. Participants in the intervention condition will show a statistically significant positive change in PE relative to control participants.

Research Aim 2 (Moderation Analyses)

The purpose of Research Aim 2 is to investigate two exogenous interpersonal contextual factors (gender and ethnicity) as potential moderators of intervention effectiveness (i.e., changes in levels of identity resolution, informational style, and personal expressiveness). One specific outcome research hypothesis was tested.

Research Hypothesis 2. The effectiveness of the intervention condition will be moderated by the interpersonal contextual variables of gender and/or ethnicity such that there will be statistically significantly difference in intervention response by the categories of the interpersonal contextual variables (e.g., male versus female; Hispanic/Latino versus Black/African-American).

Research Aim 3 (Directionality of Effects)

The purpose of Research Aim 3 was an investigation of the directional relations among level of identity resolution, informational style, and personal expressiveness in general and specific questions concerning whether positive change in level of identity resolution is related to positive change in informational style, whether positive change in level of identity resolution is related to positive change in personal expressiveness, and

whether positive change in informational style is related to positive change in personal expressiveness. Three specific outcome research hypotheses were tested.

Research Hypothesis 3.1 Positive change in the IDR will be associated with positive change in INFO.

Research Hypothesis 3.2 Positive change in IDR will be associated with positive change in PE.

Research Hypothesis 3.3. Positive change in INFO will be associated with positive change in PE.

IV. RESULTS

Model 1: Outcome and Moderation Analyses (Research Aims 1-3)

Model 1 (visually presented in Figure 2) provided results for the main outcome (effectiveness) analyses, moderation analyses, and directionality of effect for the full sample.

Figure 2: Final SEM Model
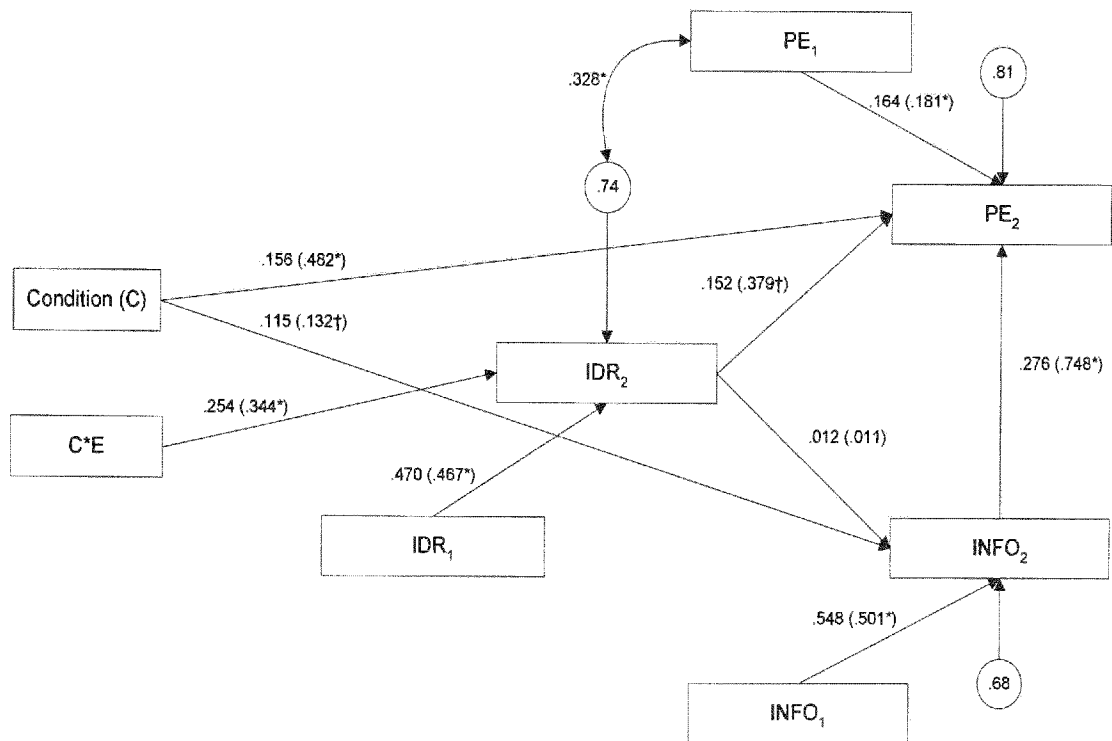
Figure 2: Rectangles are observed (measured) variables and circles are standardized error variances, values in parentheses are unstandardized path coefficients, values not in parentheses are standardized path coefficients, straight lines with arrows are presumed causal paths, double-headed curved lines are correlations. All exogenous variables were assumed correlated, but such correlations were omitted from the diagram to reduce clutter. * denotes significance at $p < .05$. ✚ denotes marginal significance.

The fit of Model 1 was evaluated with AMOS 7.0 using the sample covariance matrix as input and a maximum likelihood solution. The model is statistically overidentified. Prior to analysis, and within each group, data for the continuous variables were evaluated for outliers, by examining leverage statistics for each individual; an outlier was defined as an individual with a leverage score four times greater than the mean leverage. No outliers were found. The data was also assessed for missingness. Dummy variables were created for missing data and correlated with gender, ethnicity, age, and school location. Missing data was not strongly correlated with any of these variables; Little's MCAR test was also performed and found to be non-significant, $\chi^2 =$ 34.981, df $=32$, $p =.328$, further suggesting that the data is missing at random. Preliminary model analyses were performed using missing data that were imputed using Expectation-Maximization based imputation, as performed by the computer program Amelia II (Honaker, Joseph, & Blackwell, 2006). All final analyses were performed using the Full Information Maximum Likelihood (FIML) method within AMOS 7.0. The data was also assessed for non-normality. The data for informational style, feelings of personal expressiveness, and identity resolution showed kurtosis and skewness within acceptable ranges.

Research Hypotheses 1.1-2 (Outcome and Moderation Analyses)

Following the logic of Rausch, Maxwell, and Kelly (2003), the scores of the baseline measures (PE_1, ID_1, $INFO_1$ see Figure 2) were used for the analysis of covariance of an quasi-experimental outcome design with two waves of assessment (pretest, posttest) to evaluate Research Hypotheses 1.1-1.3, i.e., whether CLP was

associated with positive change in level of identity resolution (IDR), informational identity processing style (INFO), and feelings of personal expressiveness (PE) relative to the control condition. Specifically, Condition (C) was defined as a two-valued dummy variable (scored 1 or 0) for the two intervention conditions (CLP vs. control). By design, difference in this variable (intervention vs. control) was hypothesized to be related to differential outcome (positive change in IDR, INFO, and PE) at posttest (IDR_2, $INFO_2$, and PE_2) controlling for pretest (IDR_1, $INFO_1$, and PE_1). The hypothesized differences were evaluated using covariate-adjusted change in which the baseline (pre-test) measure of the outcome and the outcome at the posttest are strategically used as covariates to define different features of change (Rausch et al., 2003).

Two exogenous interpersonal contextual factor covariates, Gender (G) and Ethnicity (E), were included in the analysis of outcome as measured at pretest, as were all possible interaction terms (i.e., CxG, CxE, GxE, CxGxE), with C designated as the focal independent variable. Non-significant interactions were dropped from the final model, leaving a single significant interaction term (CxE). To reduce clutter, Figure 2 excludes the paths associated with the constitutive terms C and E, as these path coefficients are contingent upon the higher order CxE interaction term (Jaccard & Turrisi, 2003). The overall chi square test of model fit was statistically non-significant, $\chi^2 (9) = 9.385$, $p < .403$. The Root Mean Square Error Approximation (RMSEA) was .014. The p-value for the test of close fit was .765. The Comparative Fit Index (CFI) was .999.

Table 1: Descriptive Statistics for Model 1 Variables (N= 230)

Variable	M		SD		Skewness		Kurtosis	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Level of Identity Resolution (IDR)	3.667	3.677	.611	.609	-.048	-.363	-.645	.229
Informational Identity Processing Style (INFO)	3.392	3.481	.609	.550	-.290	.061	.083	.272
Feelings of Personal Expressiveness (PE)	5.393	5.205	1.366	1.528	-.875	-.760	.291	-.085

Outcome Research Hypothesis 1.1.

As can be seen from Figure 1, the path coefficient for the effect of the 2-way Condition x Ethnicity interaction on IDR_2 (holding IDR_1 constant) was found to be statistically significant, (path = .344, $p < .053$), indicating that change in IDR among intervention group participants relative to control group participants differs between genders and that this difference is statistically significant, $p < .053$. Following the logic of Jaccard and Turrisi (2003) in which the regression coefficients associated with lower order product terms represent simple main effects that are conditional and based upon the higher order product terms, the path C > IDR_2 is interpreted under the condition that the dummy variable for E equals 0. For example, among African-American participants, participation in the intervention condition was associated with a statistically significant decrease in IDR relative to participation in the control group (path = -.213, $p < .046$). African-American intervention group participants decreased .213 units more than African-American control group participants, $p < .046$. Among Hispanic participants, participation in the intervention condition was associated with a non-significant increase in IDR relative to participation in the control condition (path = .131, $p < .355$).

Subgroup Mean Differences: Level of Identity Resolution

In order to elaborate upon the relationships described in the previous section, pre- to post- change in IDR was calculated for the treatment and control conditions separately. Recalling that IDR scores range from 1 to 5, IDR decreased from 3.680 to 3.659 for the intervention group, while the control group increased in its mean IDR score from 3.646 to 3.725 (see Table 2). Mean INFO scores were calculated for each participating subgroup, defined by gender and ethnicity.

Table 2: Mean Change Scores, Pre- to Post-test

Variable	Condition	M	
		Pre-	Post-
IDR	Intervention (I)	3.680	3.659
	Control (C)	3.646	3.725
INFO	Intervention (I)	3.409	3.535
	Control (C)	3.365	3.403
PE	Intervention (I)	5.427	5.355
	Control (C)	5.335	4.873

Table 3 shows mean IDR scores for all participating subgroups, as well as a comparison between the intervention and control conditions. At pre-test, Hispanic females in the intervention group had a mean IDR score .489 units higher than their counterparts in the control group, the greatest difference among the subgroups. The Hispanic males in the intervention group had a mean IDR score .206 units less than control group participants. At post-test, African-American females experienced the greatest difference between conditions among subgroups, with the intervention group showing a mean IDR score .426 units less than control group participants.

Table 3: IDR Mean Comparisons, Intervention vs. Control

| | African-American | | | | Hispanic | | | |
| | Males | | Females | | Males | | Females | |
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Intervention (I)	3.693	3.757	3.644	3.564	3.610	3.734	3.885	3.793
Control (C)	3.724	3.634	3.595	3.990	3.816	3.625	3.396	3.635
T- C	-.031	.123	.049	-.426	-.206	.109	.489	.158

IDR mean change scores for each subgroup are displayed in Table 4. Females in the control group showed the largest increases in IDR. Hispanic females in the control group increased .395 units, while Hispanic females increased .239 units. Males in the control group, on the other hand, experienced decreases in IDR, with Hispanic males decreasing .191 units and African-American males decreasing .090 units. In the intervention group, Hispanic males experience the largest increase, increasing .124 units.

Table 4: IDR Mean Change Scores, Pre- to Post-test

| | African-American | | | | | | Hispanic | | | | | |
| | Males | | | Females | | | Males | | | Females | | |
	Pre-	Post-	Δ	Pre-	Post-	Δ	Pre-	Post-	Δ	Pre-	Post-	Δ
I	3.693	3.757	.064	3.644	3.564	-.080	3.610	3.734	.124	3.885	3.793	-.092
C	3.724	3.634	-.090	3.595	3.990	.395	3.816	3.625	-.191	3.396	3.635	.239

Outcome Research Hypothesis 1.2.

The path coefficient for the effect of Condition on $INFO_2$ (holding $INFO_1$ constant) showed a marginally significant change in informational identity processing style (INFO) relative to participants in the control condition (path $= .132$, $p < .083$). The

intervention group changed .132 units more than the control group on INFO, $p < .083$. There were no statistically significant interactions found.

Subgroup Mean Differences: Informational Identity Style

In order to elaborate upon the relationship described in the previous section, pre- to post- change in INFO was calculated for the intervention and control conditions separately. Recalling that INFO scores range from 1 to 5, INFO increased from 3.409 to 3.535 for the intervention group, while the comparison control group increased in its mean INFO score from 3.365 to 3.403 (see Appendix A). Mean INFO scores were calculated for each participating subgroup, defined by gender and ethnicity.

Table 5 shows mean INFO scores for all participating subgroups, as well as a comparison between the intervention and control conditions. African-American males showed the largest pre-test differences between intervention and control conditions. The intervention group showed a mean INFO pre-test score of .271 units more than control group participants. This subgroup also showed the largest post-test difference, with the intervention group participants showing a mean INFO post-test score of .314 units more than the control group participants. Hispanic females showed the smallest pre-test and post-test differences between the intervention and control conditions, with the intervention group scoring .105 units higher than the control group at pre-test and .025 units higher than the control group at post-test.

Table 5: INFO Mean Comparisons, Intervention vs. Control

| | African-American | | | | Hispanic | | | |
| | Males | | Females | | Males | | Females | |
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Intervention (I)	3.728	3.628	3.607	3.614	3.263	3.518	3.413	3.465
Control (C)	3.457	3.314	3.448	3.483	3.051	3.448	3.308	3.440
I- C	.271	.314	.159	.131	.212	.070	.105	.025

INFO mean change scores for each subgroup are displayed in Table 6. While most subgroups increased in INFO from pre-test to post-test, Hispanic males showed the largest increases (.255 units and .397 units for the intervention and control groups, respectively) and African-American females showed the smallest increases (.007 units and .035 units for the intervention and control groups, respectively). African-American males decreased in INFO from pre-test to post-test, with the intervention group decreasing .100 units and the control group decreasing .143 units.

Table 6: INFO Mean Change Scores, Pre- to Post-test

| | African-American | | | | | | Hispanic | | | | | |
| | Males | | | Females | | | Males | | | Females | | |
	Pre-	Post-	Δ	Pre-	Post-	Δ	Pre-	Post-	Δ	Pre-	Post-	Δ
I	3.728	3.628	-.100	3.607	3.614	.007	3.263	3.518	.255	3.413	3.465	.052
C	3.457	3.314	-.143	3.448	3.483	.035	3.051	3.448	.397	3.308	3.440	.132

Outcome Research Hypothesis 1.3.

The path coefficient for the effect of Condition on PE_2 (holding PE_1 constant) showed a statistically significant change in feelings of personal expressiveness (PE) relative to participants in the control condition (path = .482, $p < .043$). The intervention

41

group changed .482 units more than the control group on PE, $p < .043$. There were no statistically significant interactions found.

Subgroup Mean Differences: Feelings of Personal Expressiveness

In order to elaborate upon the relationship described in the previous section, pre- to post- change in PE was calculated for the treatment and control conditions separately. Recalling that PE scores range from 1 to 7, PE decreased from 5.427 to 5.355 for the treatment group, while the comparison control group decreased in its mean PE score from 5.335 to 4.873 (see Appendix A). Mean PE scores were calculated for each participating subgroup, defined by gender and ethnicity.

Table 7 shows mean PE scores for all participating subgroups, as well as a comparison between the intervention and control conditions. At pre-test, the largest difference between intervention and control groups was found among Hispanic females, with the intervention group showing a mean PE score of .878 units more than the control group. Male intervention group participants had lower mean PE pre-test scores than their control group counterparts, with African-American males in the intervention group showing PE scores of .228 units less than control group participants and Hispanic males showing PE scores of .344 units less than control group participants. At post-test, the largest differences between conditions were among females. African-American females in the intervention group had a mean PE post-test score of .509 units more than control group participants, while Hispanic females in the intervention group had a mean PE post-test score of .419 units more than control group participants.

Table 7: PE Mean Comparisons, Intervention vs. Control

| | African-American | | | | Hispanic | | | |
| | Males | | Females | | Males | | Females | |
	Pre-	Post-	Pre-	Post-	Pre-	Post-	Pre-	Post-
Intervention (I)	5.217	4.786	5.549	5.439	5.028	5.039	5.697	5.372
Control (C)	5.445	4.870	5.465	4.930	5.372	4.870	4.819	4.953
I- C	-.228	-.084	.084	.509	-.344	.169	.878	.419

PE mean change scores for each subgroup are displayed in Table 8. Among control group participants, African-American males, African-American females, and Hispanic males showed decreases in PE of .575, .535, and .502 units, respectively, while Hispanic females increased .134 units. Among intervention group participants, African-American males and Hispanic females showed the largest decreases in PE of .431 and .325 units, respectively.

Table 8: PE Mean Change Scores, Pre- to Post-test

| | African-American | | | | | | Hispanic | | | | | |
| | Males | | | Females | | | Males | | | Females | | |
	Pre-	Post-	Δ	Pre-	Post-	Δ	Pre-	Post-	Δ	Pre-	Post-	Δ
I	5.217	4.786	-.431	5.549	5.439	-.110	5.028	5.039	.011	5.697	5.372	-.325
C	5.445	4.870	-.575	5.465	4.930	-.535	5.372	4.870	-.502	4.819	4.953	.134

An effects analysis was conducted in order to examine the combined direct and indirect effects of participation in the intervention group on INFO and PE scores relative to control group participation for both Hispanic and African-American subgroups. Among African-American participants, participation in the intervention group was associated with a .129 unit increase in INFO and a .498 unit increase in PE, relative to

participation in the control group. Among Hispanic participants, participation in the intervention group was associated with a .133 unit increase in INFO and a .631 unit increase in PE relative to participation in the control group.

Research Hypotheses 3.1-3.3 (Directionality of Effects)

Path $IDR_2 > INFO_2$ reflects contemporaneous change and estimates the extent to which changes in IDR are associated with changes in INFO at the posttest. This path coefficient was not significant (path = .011, $p < .854$).

Path $IDR_2 > PE_2$ reflects contemporaneous change and estimates the extent to which changes in IDR are associated with changes in PE at the posttest. This path coefficient was marginally significant (path = .379, $p < .068$), indicating that positive change in IDR was associated with marginally significant increases in PE, across both conditions.

Path $INFO_2 > PE_2$ reflects contemporaneous change and estimates the extent to which changes in INFO are associated with changes in PE at the posttest. This path coefficient was statistically significant (path = .748, $p < .001$), indicating that positive change in INFO was associated with significant increases in PE, across both conditions.

V. DISCUSSION

This study had three main research (outcome) aims. The first research aim was to investigate whether participation in the CLP intervention was associated with increases in level of identity resolution, the use of informational identity processing style, and feelings of personal expressiveness relative to participation in the control condition. The second aim was to investigate two exogenous interpersonal contextual factors (gender and ethnicity) as potential moderators of intervention effectiveness (i.e., changes in level of identity resolution, informational style, and personal expressiveness). The third research aim was to investigate the directionality of effects, specifically to examine (1) whether an increase in level of identity resolution was associated with an increase in informational style, (2) whether an increase in level of identity resolution was associated with an increase in personal expressiveness, and (3) whether or not an increase in informational style was associated with an increase in feelings of personal expressiveness.

With respect to the first research aim, the results of this study provided support for the hypothesis that participation in the CLP's intervention was associated with statistically significant or marginally significant differences between intervention and control conditions in change in level of identity resolution, informational style, and feelings of personal expressiveness from pre- to post-test. With respect to the second research aim, results indicated statistically significant moderation of intervention effects on level of identity resolution by ethnicity. Intervention effects on informational identity processing style and feelings of personal expressiveness were not moderated by gender

or ethnicity. With respect to research aim three, change in level of identity resolution was found to have a marginally significant association with change in feelings of personal expressiveness, such that as level of identity resolution increased, feelings of personal expressiveness also increased. This was consistent with the hypothesized relationship. Contrary to the hypothesized relationship, change in level of identity resolution was not found to have a statistically significant relationship with change in informational style. Consistent with the hypothesized relationship, change in informational style was found to have a statistically significant association with change in feelings of personal expressiveness, such that as informational style increased, feelings of personal expressiveness increased.

Research Aim 1: Outcome Analyses (Main Effects)

The first research aim was to investigate whether participation in the CLP intervention was associated with an increase in level of identity resolution, the use of informational identity processing style, and feelings of personal expressiveness relative to the control condition.

Level of Identity Resolution

A statistically significant condition x ethnicity interaction was found to moderate change in IDR (see the following section on interaction effects). The simple main effects of IDR are discussed in this section. Among Hispanic participants, participation in the intervention condition was associated with a non-significant increase in IDR relative to participation in the control condition (path = .131, $p < .355$). Among African-American participants, in contrast, the effect of condition on IDR (path = -.213, $p < .046$) was not

in the expected direction. That is, African-American intervention group participants decreased .213 units relative to African-American control group participants, $p < .046$. More specifically, African-American intervention group participants experienced a decrease in IDR while African-American control group participants experienced an increase in IDR. Among African-American control group participants, females experienced the largest increase in IDR, with an increase of .395 units. These findings suggest that within some subgroups, namely African-American participants, the CLP intervention may be associated with a decrease in levels of identity resolution.

Informational Identity Processing Style

Participation in the intervention condition was found to have a marginally significant association with positive change in INFO (path = .132, $p < .083$). Mean pre-test INFO scores were higher among intervention participants than among control group participants. This was true across all subgroups. Both the intervention group and control group experienced increases in INFO, but the intervention group increased .132 units more in INFO than the control group. The African-American male subgroup departed from this trend, as both intervention and control group participants decreased in INFO. The total effect of condition on change in INFO represents the combined direct effect of condition on change in INFO and indirect effect that works through change in IDR. The total effect of participation in the intervention condition on INFO for African-American participants was a .129 unit increase relative to participation in the control condition, while among Hispanic participants the total effect was a .133 unit increase relative to control group participation. Thus, these findings suggest that the students who attend

alternative high schools in Miami often experience an increase in informational style and that participation in the CLP intervention is associated with increased positive change in informational style.

Feelings of Personal Expressiveness

Participation in the intervention condition was found to have a statistically significant association with positive change in PE (path = .482, $p < .043$) relative to the control condition. Mean pre-test PE scores were lower for males in the intervention condition than for males in the control condition but were higher for females in the intervention condition than females in the control condition, with the greatest initial difference between conditions experienced by Hispanic females (.878 units). Both the intervention group and the control group experienced pre to post test decreases in PE, but the intervention group decreased .482 units less than the control group. The total effect of condition on change in PE represents the combined direct effect of condition on change in PE and indirect effect that works through change in IDR and INFO. An examination of the total effect of participation in the intervention condition on PE showed that African-American intervention participants decreased .498 units less than African-American control group participants, while Hispanic intervention group participants decreased .631 units less than Hispanic control group participants. Thus, these findings suggest that alternative high school students in Miami often experience a decrease in feelings of personal expressiveness and that participation in the CLP intervention is associated with a lesser decrease in personal expressiveness. As such, these findings appear to be consistent with those of previous CLP stage II evaluation

studies (Albrecht, 2007) in suggesting that participation in the CLP may protect against declines in feelings of personal expressiveness.

Research Aim 2: Moderators of Intervention Outcomes (Interaction Effects)

The second research aim was to investigate two exogenous interpersonal contextual factors (gender and ethnicity) as potential moderators of intervention effectiveness (i.e., changes in the level of identity resolution, informational processing style, and feelings of personal expressiveness). Results indicated some evidence that these factors moderate intervention outcomes. A statistically significant condition x ethnicity interaction was found to predict pre to post test change in IDR (path = .344, $p <$ .053). The effect of condition on IDR differed between African-American and Hispanic participants. This finding suggests that contextual factors may influence the relationship between participation in the CLP counseling intervention and level of psychosocial conflict.

Research Aim 3: Directionality of Effects

The third research aim was to evaluate directionality of change between level of identity resolution, informational identity processing style, and feelings of personal expressiveness. Consistent with expectations, PE was found to increase as IDR increased (path = .379, $p < .068$). The relationship between increasing levels of identity resolution and increasing personal expressiveness of life goal activities may further suggest that decreases in psychosocial conflict facilitate self-discovery by allowing individuals to focus more time and energy on the affective exploration of life goal-related activities and less time and energy on resolving the conflicts themselves. The nature of the identity

conflict that is being resolved or left unresolved is of particular interest. For adolescents who live in disempowering low-income, urban community contexts and often are exposed to daily violence, crime, and substance abuse (Berman, Kurtines, Silverman, & Serafini, 1996), identity conflict may be particularly severe. Indeed, one third of CLP participants experience moderate, severe, or very severe upset, distress, and/or worry associated with long-term goals, career choices, friendships, sexual orientation and behavior, religion, values and beliefs, and group loyalties (Hernandez, Montgomery, & Kurtines, 2006). In this case, the resolution of identity-related conflict in the present may supersede any exploration of activities related to longer-term life goals.

Contrary to expectations, INFO was not found to increase significantly as IDR increased (path = .011, p < .854). Thus, level of identity resolution may not predict an individual's orientation toward information-seeking in their cognitive exploration of identity alternatives. Further, this finding suggests that cognitive identity exploration may be less influenced by change in identity-related conflict, and the resolution of this conflict, than are affective identity exploration processes. Albrecht (2007) emphasized the role of the particular developmental challenges faced by the individual as an important influence on the degree of cognitive and affective exploration undertaken at any particular time. It is plausible that the challenge of resolving identity-related conflict may play a role in shaping the balance of cognitive and affective exploration at any particular time.

Consistent with expectations, PE was found to increase as INFO increased (path = .748, p < .001), suggesting that participants' affective exploration of life goal activities

increased as they became more oriented towards information-seeking in their cognitive exploration of identity alternatives. This finding may indicate that an informational orientation to self-construction increases opportunities for self-discovery related to life goal activities as adolescents explore new identity options. Specifically, an increasingly informational orientation may play a role in buffering against the steep decrease in feelings of personal expressiveness seen in the control group.

Previous research has generated empirical evidence suggesting that self-construction processes are amenable to change through cognitively-focused intervention strategies and that self-discovery processes are amenable to change through emotion-focused intervention strategies (Schwartz et al, 2005). The results of the present study suggest that CLP intervention may have an effect on both self-construction and self-discovery processes and that at least some of the effect on self-discovery processes occurs through change in self-construction processes. Thus, in not limiting itself to cognitively-focused strategies *or* emotion-focused strategies, the CLP's person-centered participatory transformative approach may have the advantage of having a greater impact on both types of identity exploration.

While these findings may be suggestive of (1) a link between self-construction and self-discovery processes and between self-discovery and levels of psychosocial conflict among troubled adolescents and (2) a relationship between participation in the CLP intervention and increases in self-construction and self-discovery processing, taken alone they provide no definite answers regarding whether one group's change is necessarily more suggestive of positive identity development than the other group. These

findings do not address the satisfaction associated with the identity resolution in terms of its meaning and significance for study participants, nor do they address possible changes in meaning and significance. Identity resolutions that adolescents think are more meaningful and feel are more significant are likely less subject to revision than resolutions they experience as less meaningful and significant, and therefore potentially less likely to predict exploration of additional identity alternatives and more likely to predict increasing affective exploration of the current resolution. Adolescents who find their identity resolution less meaningful and significant may be more open to intervention efforts.

These findings also do not address the quality and content of the identity alternatives being cognitively explored. Because identity alternatives available for adolescents to explore are a function of contexts that are shaped by historical and social circumstances, an information-seeking orientation may be more likely to lead to positive life outcomes and increased self-discovery when identity-related choices presented to adolescents is more "positive." Likewise, when few positive identity alternatives are available, an information-seeking orientation may be less likely to lead to positive life outcomes and increased self-discovery. Therefore, possible differences in the content of identity choices being explored by the intervention and control groups may be of particular research interest. More specifically, participants in the CLP intervention may become aware of, and have the opportunity to thoughtfully consider, new identity options that are qualitatively different from those considered by other alternative high school students. Future research may pursue an examination of the quality and content of

the identity options being considered by CLP participants as compared to control group participants in order to further evaluate increases in informational style.

Finally, these findings also do not address the quality and content of the life goals being affectively explored, especially in terms of their meaning and significance to study participants. While some participants' levels of self-discovery may increase relative to relatively static life goals, other participants' levels of self-discovery may increase relative to changing life goals. Life goals that adolescents find more meaningful and significant may be more likely to be targets of increasing self-discovery processing, while life goals that adolescents find less meaningful and significant may be more likely to be targets of unchanging or even decreasing self-discovery processing. Therefore, qualitative change in life goal content, as well as potential differences in qualitative change between intervention and control groups may also be of future research interest and may be of particular utility in evaluating apparent decreases in feelings of personal expressiveness.

While it remains unclear exactly what these change results mean in term of positive identity development, these findings suggest that processes implicated in identity development are subject to change through counseling intervention. Further, feelings of personal expressiveness, informational identity processing style, and level of identity resolution appear to be amenable to change in a relatively short period of time. More specifically, participation in the CLP intervention for a semester (approximately 8-12 weeks) appears to be associated with increases in self-construction processes greater

than those experienced by most alternative high school students, while also associated with lesser decreases in self-discovery processes.

Conclusions

This study represents the first evaluation of the YDP Model of Self-Transformative Development (Albrecht, 2007) that has incorporated measures of both self-construction and self-discovery processes. A main contribution of this study was to provide empirical evidence that suggests that self-transformative identity development intervention strategies demonstrate effectiveness in promoting both emotion-focused identity exploration and cognitively-focused identity exploration in adolescent youth. More specifically, this study replicated Albrecht's (2007) finding that the CLP intervention resulted in lesser decreases in reported feelings of "fit" between intervention participants and their life goals-related activities relative to the control group and also found that the CLP intervention resulted in increased reported orientation toward seeking out and utilizing of self-relevant information when making identity-related decisions relative to the control group.

To the extent that the control group utilized in this study reflects the experience of alternative high school participation in Miami-Dade County, FL, declines in PE and increases in INFO over time raise the possibility that alternative high school students experience decreasing emotion-focused identity exploration and increasing cognitively-focused identity exploration. The reasons for this are unclear. It may be that contextual demands of the community, school, peer groups, family, and work require cognitive appraisal of available identity alternatives but do not require that adolescents find

54

activities that "fit" them. As previously mentioned, individuals who actively engage in activities that "fit" them demonstrate an ability to remain intrinsically motivated toward accomplishing life tasks (Waterman, 2006). While the CLP intervention appears to protect against declines in emotion-focused identity exploration as seen in findings in this and previous studies (Albrecht, 2007), it appears to also promote increases in cognitively-focused identity exploration. This finding represents the first empirical evidence that positive youth development intervention, and specifically the CLP participatory transformative approach, may impact both cognitive and affective identity exploration processes.

A second contribution of this study was to provide empirical evidence of a direct link between cognitively-focused self-construction and emotion-focused self-discovery in troubled adolescents. More specifically, as the orientation toward seeking out and utilizing self-relevant information when making decisions related to identity increases, feelings of "fit" with life goals-related activities also increase. This finding appears to be consistent with previous research that has posited that choices made rationally from among alternatives offered by the individual's context (self-construction) provide opportunities for the discovery of the unique potentials, talents, skills, and capabilities that already exist in the individual (Schwartz, 2002; Soenens et al., 2005). Still unknown is how the quality of the available alternatives influences the relationship between self-construction and self-discovery. It may be that through participation in the CLP counseling groups, adolescents are presented with (or become aware of) new and different identity alternatives than those offered by their schools and neighborhoods and

that the nature of these presented alternatives may promote self-discovery. Future qualitative research may examine the degree to which this might be accurate in terms of change in the future possible selves (Oyserman & Fryberg, 2006) of CLP intervention participants. This line of research would be important to interventions that seek to promote insight and self-discovery in troubled youth because the effectiveness of such intervention might be increased when these interventions implement strategies that promote cognitive exploration of identity alternatives in addition to strategies that promote emotion-focused exploration.

Researchers have suggested that self-construction and self-discovery processes may have a cyclical and mutually-reinforcing relationship (Soenens et al., 2005), while others have emphasized the role of the particular developmental challenges faced by the individual during adolescence (Albrecht, 2007). The findings of the current study seem to support both views. In addition to the empirical link between change in cognitive self-construction and change in affective self-discovery, the results of the present study also suggest that resolving conflict related to identity may promote affective self-discovery identity processes. Future developmental research is needed to address the degree to which a self-construction-self-discovery cycle may be shaped by changes in developmental challenges, psychosocial or otherwise.

It is also possible that the developmental challenges currently experienced by an adolescent play an important role in his or her "openness" to cognitively-focused strategies or emotion-focused strategies. Still largely unknown is the nature of the challenges that may encourage increased cognitive self-construction identity processes.

Future research may examine the particular developmental challenges that would allow for optimal effectiveness of cognitively-focused intervention strategies that may also promote self-discovery through self-construction. It is also plausible that in the face of some developmental challenges, or perhaps the lack of certain challenges, increased self-discovery may lead to increased self-construction, making it more likely that emotion-focused intervention strategies would promote self-construction processes through self-discovery.

A third contribution was to identify potential ethnic differences in the change in level of identity resolution associated with participation in the CLP intervention. More specifically, African-American intervention group participants decreased in level of identity resolution relative to African-American control group participants, while Hispanic intervention group participants increased in level of identity resolution relative to Hispanic control group participants. This finding suggests that for some adolescents, participation in CLP counseling groups may increase identity conflict. As previously stated, identity conflict is thought to occur when the adolescent experiences circumstances that bring to light the incompatibility of two or more aspects of his or her identity (Baumeister, 1999). It is possible that a CLP counseling group may facilitate this type of circumstance, especially if CLP participants encounter new and different identity alternatives than those offered by their schools and neighborhoods and these new alternatives lead them to reconsider previous identity resolutions. More research is need in order to explore additional potential exogenous moderators of intervention effects, such as differences between schools, neighborhoods, income levels, and counselor-

participant relationships, that are likely to represent group differences in a more refined manner than do differences in ethnicity. Also, more research is needed to examine the group processes that may influence intervention effectiveness.

Study Limitations

Measurement Error

The model analyzed in the present study does not account for measurement error, in effect assuming no measurement error. Future studies should consider adopting the strategy suggested by Joreskog and Sorbom (1996) that involves depicting each measure as a single indicator of the associated underlying construct and constraining the error variances for each measure to values corresponding to a priori determined levels of reliability based on alpha coefficients or previous research. In this way, measurement error can be modeled within the SEM framework.

Power

To determine an appropriate sample size, structural equation modeling requires that in addition to statistical power, issues of the stability of the covariance matrix and the use of asymptotic theory be taken into account. In terms of asymptotic theory and covariance stability, simulation studies tend to suggest that sample sizes of 100 to 125 or larger often yield adequate results given that reasonably reliable measures are used (reliabilities greater than 0.65; Jackson, 2003; Jaccard & Wan, 1996). The present study meets these standards in terms of sample size (230) and alpha coefficients associated with the relevant subscales (.77, .70, and .91 for IDR, INFO, and PE, respectively).

In terms of power, it is difficult to evaluate the power associated with specific path coefficients in complex SEM models because of the large number of assumptions about population parameters that must be made. Because of interest in the examination of potential exogenous contextual moderators of intervention efficacy that tend to require increased power, future studies within the CLP should consider pursuing such an evaluation of power. Muthen and Muthen (2002) demonstrate a procedure that substantive researchers can use in conjunction with the computer program Mplus (Muthen & Muthen, 1998) to perform a Monte Carlo study in deciding on sample size and determining power.

Directions for Future Research

Aside from directions for future research mentioned previously, perhaps the most important is the inclusion of qualitative measures of identity outcomes that have the potential to capture qualitative change in the meaning and significance of a program participant's sense of identity. The inclusion of qualitative identity measures that capture narrative expressions of the participants' sense of self that are already in use within the YDP, such as the Life Course Interview (LCI; Lewis Arango et al., 2008) and Possible Selves Questionnaire-Qualitative Extension (PSQ-QE; Kortsch et al., 2008), is important in order to document the theoretical relations between change in self-construction and self-discovery identity processes and change in the content, structure, and organization of the meaning and significance of adolescents' sense of the self. Consistent with the YDP psychosocial developmental life course framework's depiction of identity as the steering mechanism that guides the life course, such an analysis would provide

information that is potentially useful in developing intervention strategies focused on life course change. While the findings of this study provide additional support for the Albrecht's (2007) general model of self-transformative identity development, future SEM research may further develop current understanding of identity development among troubled adolescents, as well as the effectiveness of identity development interventions with this population, with the inclusion of qualitative measures of narrative expressions of sense of self alongside quantitative measures in models of identity development.

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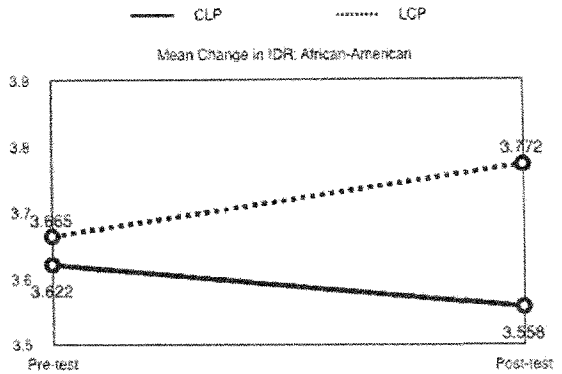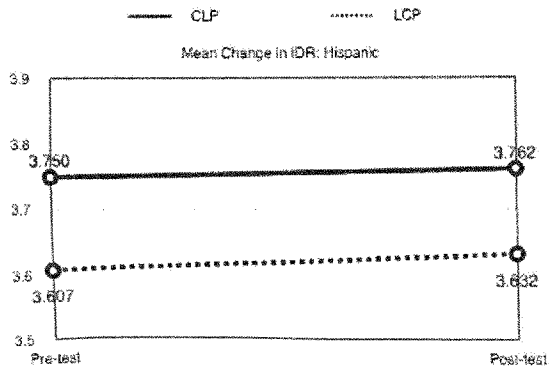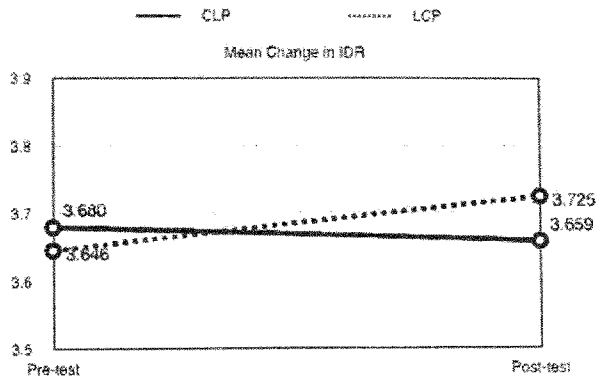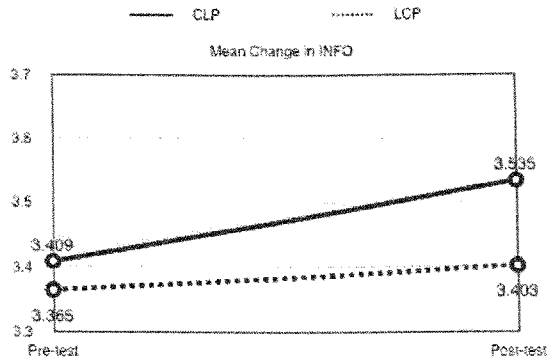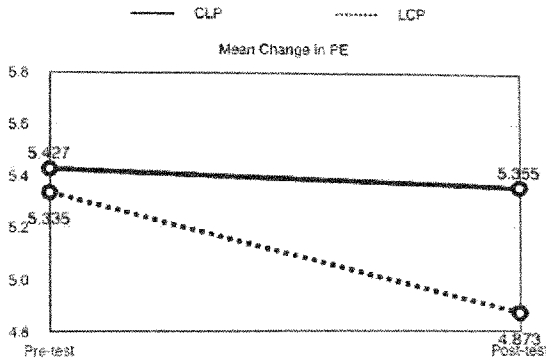
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Appendix A: Mean Change Graphs A-E

Appendix A: Mean Change Graphs A-E

Mean Change in PE

Mean Change in INFO

Mean Change in IDR

Mean Change in IDR: Hispanic

Mean Change in IDR: African-American