Empowering Nontraditional College Students:

A Self-Transformative Intervention for Promoting Positive Identity Development

Alan Meca[1]

University of Texas at San Antonio

Kyle Eichas[1]

Tarleton State University

Bethany Cruz

University of Texas at San Antonio

Kelsie K. Allison

Old Dominion University

Clint Dennard

McLennan Community College

Zachary Stickley

Yhat Enterprises, LLC

In Press

This is a post-peer-review, pre-copyedit version of an article published in Identity: An International Journal of Theory and Research. The final authenticated version is available online at: https://doi.org/10.1080/15283488.2024.2389435

Correspondence concerning this article should be addressed to Alan Meca, Ph.D., Department of Psychology, University of Texas at San Antonio, One UTSA Circle, San Antonio, TX 78249 (email: alan.meca@UTSA.edu)

[1] Drs. Alan Meca and Kyle Eichas share co-equal credit as lead authors on this manuscript.

Abstract

Identity development has been consistently linked to a variety of positive adjustment indicators and plays a critical role during times of uncertainty. Despite this, only a handful of interventions have been developed to promote positive identity development. However, these interventions have not only focused on adolescent and emerging adults, but apart from a handful of social identity interventions, have also not targeted specific domains of identity development. In the current study, we outline the development of a domain-specific identity intervention, the Making Career and Educational Choices workshop (MCEC), and evaluate pre to posttest outcomes in a sample of 58 college students (M_{age}=32.33, $S.D._{age}$=10.95; 48% White; 82% female). Students were assigned to either MCEC (n=32) or a control (n=26) group by random assignment of selected time slots. Two-wave latent change modeling indicated intervention gains in identity commitment making, identification with commitment, and identity exploration in breadth and in depth. Although preliminary, the relatively large estimates of intervention-related change provide support for the capacity of career-focused identity interventions to support students in choosing and committing to a future life direction. Implications, challenges, and future directions are discussed to guide future research.

In Press

Empowering Nontraditional College Students: A Self-Transformative Intervention for Promoting Positive Identity Development

Identity development has been consistently linked to a wide variety of positive adjustment indicators among adolescent and emerging adult populations (see Meca et al., 2023; Schwartz et al., 2015). Moreover, although to a lesser degree, studies have shown identity plays an important role in adjustment later in adulthood (Beaumont & Pratt, 2011; Whitbourne et al., 1996). Additionally, identity has been conceptualized to play a critical role during times of uncertainty and substantive life changes (Haslam et al., 2021). Taken together, identity represents a key development asset throughout the entirety of the lifespan, and the establishment, maintenance, and establishment of a sense of self is necessary to support well-being and adaptation to major life transitions and stressful events (Mitchell et al., 2021). Despite this, only a handful of interventions target positive identity development (Eichas et al., 2015). These interventions have sought to create empowering group contexts to support general identity work among high school adolescents (e.g., Kurtines et al., 2008) and college-going emerging adults (e.g., Berman et al., 2008; Meca et al., 2014; Schwartz et al., 2005).

In Press

Though promising, there are important limitations of existing positive identity interventions. First, existing interventions have focused exclusively on adolescent and emerging adult samples. Although focusing on these populations makes sense given that identity is a particularly salient developmental challenge in the transition to adulthood, it is critical to note that identity is a life-long process of defining oneself in relation to society that is renewed at every life stage (Erikson, 1959; Josselson, 2017). The challenge of re-defining oneself can be provoked by important life events, both expectable and unexpected (Marcia, 2002), including a return to formal education in adulthood (Clausen, 1998). In sum, the developmental stage

specificity of existing programs limits the generalizability of these identity interventions, particularly as they relate to life transitions that are less age-graded. Second, except for a handful of social-identity focused interventions (for review, see Hoffman & Umaña-Taylor, 2023), existing identity interventions have largely concentrated on identity broadly with respect to content. Although this domain-flexible approach makes sense for youth populations who are tackling identity development broadly and unevenly across a number of domains (Schwartz et al., 2015), there is a critical need for domain-specific identity interventions tailored to specific life course transitions.

In this study, we sought to address these key gaps in the positive identity intervention literature by evaluating outcomes of the Making Career and Educational Choices workshop (MCEC), an intervention for promoting positive identity development among nontraditional college students. Within the current study, we relied on Horn and Carroll's (1996) definition of nontraditional student characteristics. Specifically, nontraditional students are defined as college students who have one or more of seven key characteristics which include delayed enrollment into postsecondary education, attending part-time, financially independent, working full time while enrolled, has dependents other than a spouse, a single parent, or did not obtain a standard high school diploma. Non-traditional are a growing population and face significant barriers throughout their educational journey that caters more to traditional students (Hittepole, 2019; Knox, 2023). Given that recent work shows that adult learners' sense of self evolves as they transition into higher education (Brunton & Buckley, 2021), and identity represents a key developmental asset across the lifespan (Beaumont & Pratt, 2011; Whitbourne et al., 1996) and during periods of transitions (Mitchell et al., 2021), there is a need for a positive identity intervention that, unlike past iterations, does not target a particular developmental period.

In Press

Towards that end, the MCEC creates group contexts in which students focus on career and education choices as they approach the education-to-work life course transition.

Conceptualizing Positive Identity Development

Positive identity development has served as a target for developmental interventions for high school adolescents (Eichas et al., 2017; Ferrer-Wreder et al., 2002) and college students (Berman et al., 2008; Meca et al., 2014; Schwartz et al., 2005). Consistent with this earlier work, we define *positive identity development* as the process of proactively choosing personal values, social roles, and life goals (Meca et al., 2021) and *positive identity* as the sense of social integration, self-differentiation, and narrative continuity that results from these choices (Côté & Levine, 2016). Developmental interventions have targeted positive identity development because identity is theorized to guide choices and actions over the long-term, acting as "the 'steering mechanism'" for a person's life course" (Kurtines et al., 2008, p. 127). For example, choices that conflict with the sense of "who I am" produce cognitive dissonance (Clausen, 1986), whereas those that actualize the sense of "who I am" produce feelings of personal expressiveness (Waterman, 1990). Thus, identity is theorized to regulate the actions people use to adapt to changing developmental contexts (*identity-as-regulation*; Lerner et al., 2001). From this perspective, identity allows "the individual to select the paths he/she will pursue in life, to find the means to attain the goals that are chosen (optimization), and to cope with failures and losses in the means to reach goals (compensation)" (Lerner et al., 2001, p. 34).

Our definition of positive identity is not only grounded in Erikson's (1963, 1968) psychosocial developmental theory, but also in Marcia's (1966) operationalization of the identity development process and recent extensions to Marcia's identity status paradigm. Marcia (1966, 1994) extracted two processes underlying identity development: *exploration* and *commitment*.

In Press

Whereas *exploration* represents the process of sorting through various potential identity alternatives, and thus, the "work" of identity development (Grotevant, 1987), *commitment* refers to the act of making identity choices. An identity commitment is a choice in life direction or beliefs that the person "would abandon only with great reluctance" (Marcia, 1994, p. 73).

Our definition of positive identity is also aligned with the dual-cycle model of identity development (Luyckx et al., 2006), which unpacked the process of making identity choices across two separate cycles: formation and maintenance. In the commitment formation cycle, individuals first examine a range of identity alternatives (called *exploration in breadth*) and then make initial choices (*commitment making*; Luyckx et al., 2006). In the commitment evaluation cycle, individuals evaluate the choices or commitments made in the first cycle by more closely examining the extent to which the choices they made fit or actualize their sense of self (*exploration in depth*). To the extent that these choices fit, individuals then more fully embrace and integrate them into their sense of self (*identification with commitment*). When individuals find that their choices do not fit (or no longer fit), they are likely to engage in further *exploration in breadth*. Subsequent iterations of the dual-cycle model outlined a fifth process, *ruminative exploration* (Luyckx et al., 2008), which represents a maladaptive form of exploration marked by unrealistic expectations, perfectionism, and fear of making the "wrong" choice. From this perspective, exploration in breadth, commitment-making, exploration in depth, and identification with commitment are processes underlying positive identity development.

In Press

Positive Identity Interventions

Positive identity interventions for adults evolved out of the work of the Miami Youth Development Project which focused on empowering marginalized youth (Kurtines et al., 2008b). For nearly two decades, the Miami Youth Development Project operated as a university-

community partnership delivering life course interventions in the alternative high schools of Miami Dade County Public Schools to youth exhibiting various behavioral or academic problems (Kurtines et al., 2008b). The project's focus was on developing the Changing Lives Program as a group counseling intervention to help troubled youth to change the direction of their lives for the better. Developers of the program, and its subsequent iterations, theorized that the time when a young person is forming an identity is a leverage point in the life course that can be used to chart a new life direction (Montgomery et al., 2008). They conceptualized positive identity as an organizing construct (Ferrer-Wreder et al., 2002) for designing and evaluating the program's life course intervention strategies, described next. Below we outline key components underlying the Changing Lives Program's intervention strategy, which drew on a participatory co-learning approach to facilitate mastery experiences and self-transformative processes.

A Participatory Co-Learning Process. The Changing Lives Programs' empowerment approach drew on Freire's (1983) transformative pedagogy to embrace participants' concerns, life experiences, and understanding of local conditions as the starting point for intervention activities. Adult program facilitators and adolescent group members collaborated in *problem posing* (Freire, 1983) about the concerns youth brought to the group. In problem posing, adults and other group members helped youth articulate the problems in their lives they wanted to solve, the ones that solving would bring about personally meaningful and significant life change. The aim of this approach was to facilitate an empowering group process in which adults and youth participated as co-learners in dialogue with each other rather than in didactic teacher-student instruction (Ferrer-Wreder et al., 2002). As described in more detail elsewhere (Eichas et al., 2021), participatory co-learning brought together group members' collective experiential knowledge of the social worlds of their schools and neighborhoods with adults' experiential

In Press

knowledge of the world outside of these schools and neighborhoods. The rationale for this approach was that bringing to bear diverse perspectives on life problems would help youth co-construct a critical understanding of these challenges more likely to lead to desired life change than an uncritical understanding. In their new role as co-learners, youth re-worked their life problems into life change goals that they were then expected to pursue.

Facilitating Mastery Experiences. According to the Changing Lives Program's theory of change, youth's goal-directed actions are the active ingredients in promoting positive identity development because these actions create opportunities for self-transformative mastery experiences (Kurtines et al., 2008). Experiences of overcoming challenges through perseverant effort, which Bandura (1997) called *enactive mastery experiences*, produce "a transformational restructuring of efficacy beliefs that is manifested across diverse realms of functioning" (p. 53). The recognition that mastery experiences transform self-concepts originated from research on the treatment of phobias in which experiences of personal control not only reduced phobic behavior but also altered how participants viewed themselves and their capabilities (Bandura et al., 1975). According to Bandura, the cascading effects of mastery experiences across diverse realms of functioning does not rely on stimulus generalization. Instead, it reflects "metacognitive changes in people's beliefs concerning their agentic power for self-change" (Bandura, 1997, p. 53). Thus, to the extent that they produce mastery experiences, the actions young people take to overcome challenges and pursue goals have the potential to be self-transformative.

A Self-Transformative Model. Mastery experiences are self-transformative when they involve self-construction and self-discovery (Eichas et al., 2015). Self-construction is the primarily cognitive process of proactively sorting through, critically evaluating, and choosing from among identity alternatives afforded by one's developmental context (Berzonsky, 2004).

In Press

Self-discovery, on the other hand, is the primarily emotion-focused process of recognizing activities that express one's true self and using these activities to actualize one's unique set of potentials, talents, skills, and capabilities (Waterman, 2015). To encourage self-transformative processes, the Changing Lives Program interwove into its group work the use of a Life Course Journal that could be flexibly adapted to the concerns of each participant (see Appendix A; Eichas et al., 2015). Following the recommendations of Schwartz et al. (2005), journal exercises targeted both self-construction and self-discovery. The journal targeted self-discovery by encouraging youth to discuss what they wanted to do with their lives in the future as a possible life goal and explore what the feelings associated with goal-related activities suggested about how well the goal fit them. Specifically, the journal raised participants' awareness of feelings associated with tasks that optimally balance challenge and skill (i.e., flow; Csikszentmihalyi, 1990) and tasks that people feel express who they really are because they involve using unique abilities, strengths, and interests (i.e., feelings of personal expressiveness; Waterman, 2011). The journal targeted self-construction by encouraging youth to discuss the changes they wanted to make in their lives in the present as life change goals and to create and critically evaluate strategies for attaining these goals (Berman et al., 2001). In sum, youth participated in a set of domain-flexible activities designed to integrate self-construction and self-discovery into their attempts to change their lives for the better.

Evaluation and Extensions of the Changing Lives Program. Outcome trials of the Changing Lives Program have showed that adolescents participating in these positive identity interventions increased their use of a proactive information-seeking approach to identity exploration and their sense of control and responsibility for making life changes and decreased less in their emotion-focused identity processing, relative to comparison participants (Eichas et

In Press

al., 2010, 2017; Ferrer-Wreder et al., 2002). Indeed, in one of the first evaluations, Ferrer-Wreder and colleagues (2002) found that participants in the intervention had significant increases in self-construction processes, including increases in problem-solving competence and sense of control and responsibility for life choices, relative to those participants in a comparison group. Eichas et al. (2010) found that intervention participation was associated with increases in self-construction and self-discovery processing and, among females, a decrease in internalizing problem behaviors despite the intervention not specifically targeting them. More recently, Eichas et al. (2017) found participating in the Changing Lives Program was associated with increased self-construction and, by buffering against losses in self-discovery, contributed to more personally expressive life goals. Eichas et al. (2017) further found that this qualitative life goal change was associated with lowered internalizing problem behaviors and increased identity synthesis at 4-month follow up. Finally, Eichas et al. (2021) found that the participant-reported impact of participatory co-learning processes (connectedness to group and facilitator, skill development, and discussion of alternative points of view) measured at the end of each session predicted positive pre to posttest change in youth mental health.

In Press

In response to the recognition that identity challenges often intensify after adolescence during a period of emerging adulthood (Arnett, 2000), the Changing Lives Program was adapted for university-based work with emerging adults in college (Schwartz et al., 2005). The Daytona Adult Identity Development Program (Berman et al., 2008) was implemented within an elective course focused on personal growth psychology primarily for juniors and seniors at a public university. Similar to the Changing Lives Program, the Daytona Adult Identity Development Program had group facilitators that were interns in a clinical psychology masters' program at the university, supervised by faculty. In their evaluation, Berman et al. (2008) found significant

increase in identity exploration and significant decrease in identity distress from pre- to post-assessment. This program continues to evolve in new directions, including leaderless group and online asynchronous discussion board formats (Berman, 2019).

Building on this program, the Miami Adult Development Project was implemented in a required capstone course for seniors pursuing bachelor's degrees in psychology. The Miami Adult Development Project deviated from the Daytona Adult Identity Development Program in two distinct ways. Firstly, the Miami Adult Development Project included, in addition to the intervention group sessions, traditional classroom techniques (i.e., lecture, weekly readings, class discussion, etc.) to teach students about identity theory and research with a focus on issues central to emerging adulthood and research methodology. Second, the Miami Adult Development Project was implemented by peer facilitators who volunteered to receive training on group work and peer facilitation. This decision stemmed from the focus of making the program more easily transportable to other institutions as well as the recognition that peers, if adequately trained, have the capacity to more aptly connect with participants given their shared experiences. Evaluation of the Miami Adult Development Project found significant decreases in identity-related distress relative to a comparison group (Meca et al., 2014). Reductions in identity distress were associated with concurrent increases in identity synthesis and well-being.

In Press

Reaching Out to Adult Learners and Other Nontraditional Students

Today's college students are substantively different from previous generations, with some estimates indicating that at least 40% of today's college students can be classified as nontraditional (CLASP, 2015). Indeed, adult learners, which are typically defined as learners over the age of 25, are estimated to have accounted for 34% of the U.S. college student population in 2021 (IPEDS, 2021). Although the percentage of adult learners in post-secondary

education has declined by nearly 24% from 2011 to 2021 (IPEDS, 2021), universities have been increasingly seeking to enroll and retain adult and nontraditional students as a means of maintaining enrollment levels in the face of projected declines in traditional undergraduate students (Clark & Cluver, 2023). At same time, current estimates indicate that 27% of undergraduate students were enrolled part-time (NCES, 2022a), 40% of undergraduate students were employed in Fall 2021 (NCES, 2022b), and 22% of undergraduate students are parents (United States Government Accountability Office, 2019), highlighting that college students today are increasingly nontraditional.

In response, there has been a recognition that institutions need to shift whom they serve (Knox, 2023) in the face of the projected enrollment cliff if universities are to remain viable. Beyond the economic motivations for higher education institutions, in the wake of new technology such as artificial intelligence and automation, there will likely be an increasing demand for upskilling, micro-credential, and/or career changes by adult learners (Jaiswal et al., 2021). However, an increase in the college enrollment of adult students would necessitate a shift in how universities serve their students to ensure programming is rooted in strategies for supporting adult learners' and nontraditional students' development who have multiple competing demands (e.g., work, parenthood, etc.) that result in a college experience that is not reflective of more traditional college students (Hittepole, 2019; Knox, 2023).

Unfortunately, there is little research on what to do to promote the positive identity development of these students (Berman et al., 2008). The research that does exist tends to conceptualize nontraditional students in terms of perceived deficiencies and lack of "traditional" student characteristics (Donaldson & Townsend, 2007). Moreover, the developmental stage specificity of existing identity interventions may not be as useful for adult and nontraditional

In Press

students given these competing demands, limited availability for extracurricular activities, support systems largely rooted off campus, and a primary focus on degree completion for purpose of a higher wage (Steinhaurer & Lovell, 2019). As a result, there is a critical need for the identification of strategies by which we may promote positive identity development among adult learners and nontraditional students, and more broadly, during this education-to-work life transition experienced by all students, regardless of whether they can be characterized as emerging, young, or middle-aged adults.

Making Career and Educational Choices Workshop (MCEC)

This study examines intervention gains among nontraditional students participating in MCEC, an adaptation of the Miami Adult Development Project (Meca et al., 2014), which itself evolved out of the Changing Lives Program (Kurtines et al., 2008). Like prior iterations, MCEC uses a self-transformative participatory co-learning approach developed in previous positive identity interventions (Eichas et al., 2021). However, it refines participatory co-learning activities to specifically focus on supporting students' career and education decisions within a university center on a community college campus.

In Press

The Developmental Context: A University Center

MCEC was developed for use at a university center on a community college campus. A university center is a partnership between a community college and a university (or universities) to provide degree programs for geographically bound students (Floyd et al., 2012). University center partnerships aim to increase access to baccalaureate and graduate programs in underserved areas. As described elsewhere (Stewart et al., 2015), the university center in which MCEC was developed provides undergraduate and graduate degree programs so that community college students can advance their education through a public university without moving away from

home. This partnership "enables them to maintain their jobs as well as family and community involvement" (Stewart et al., 2015, p. 46). Before the establishment of the university center, pursuing a baccalaureate or graduate degree from a public university would have required relocating. Consequently, the population for which MCEC was developed consists of university students who, often first in their families to pursue a four-year degree, transferred from a community college without leaving the community college campus while maintaining their work and family commitments.

MCEC Intervention Theory and Strategy

MCEC program theory maps the dual cycle model of identity development (Luyckx et al., 2006) onto the Changing Lives Program's self-transformative model of positive youth development (Eichas et al., 2017). More specifically, the MCEC recognizes that self-construction (i.e., proactively exploring, evaluating, and selecting identity-related alternatives) forms commitments, and self-discovery (i.e., recognizing and actualizing one's true self in activities) uses emotions in evaluating the quality of commitments. As shown in Figure 1, contextual opportunities for (or constraints on) youth-directed actions promote (or reduce) commitment-forming self-construction (path A) and commitment-evaluating self-discovery (path B), which in turn, contribute to a sense of identity (paths C and D). Contextual factors are likely to promote or constrain identity formation through other pathways as well (path E). Participating in MCEC is a contextual opportunity intentionally structured to promote commitment-forming self-construction and commitment-evaluating self-discovery.

MCEC's strategy is to couple critical group discussions with take-home journal exercises about career and education choices. Exercises in the Making Career and Education Choices Journal (Appendix B) prepare students to contribute to group discussions by helping them

In Press

identify career and education goals that fit their personal strengths and interests, life changes to make in order to pursue their career and education goals, and strategies for making these life changes. We adapted these exercises from journals used in the Changing Lives Program (Kurtines et al., 2008a) and Adult Development Project (Meca et al., 2014) and facilitator's guides used in the Exploration Enhancement Workshop (Schwartz, 2000) and Making Life Choices Program (Ferrer-Wreder, 1998). As shown in Table 1, MCEC included six sessions organized by these themes: Life Story, Career Dilemmas, Career Goals, Life Change Goals, Social Support, and Self-Evaluation.

MCEC sessions start by orienting students to the "big picture" of their life course. The MCEC Journal provides a life chart that students utilize to construct a narrative story line about "who I am" and "what I want to do with my life" comprised of past and anticipated future life course events and turning points that they share with their group (Life Story Theme). Next, MCEC drills down into students' narratives to focus on the present career and education dilemmas they face. First, it raises students' awareness of identity choices by presenting them with a hypothetical career dilemma. Students practice solving this dilemma before identifying a real career or education dilemma in their lives. They work with their group to problem pose and apply critical problem solving strategies to this dilemma (Career Dilemmas Theme). Exploring career and education dilemmas and selecting one to work on targets exploration in breadth and commitment-making (Figure 1, path A).

The next step in MCEC extends students' narratives into the future by exploring self-selected career goals. Students discuss their most important career goal, break the goal down into activities they would do to achieve the goal, and reflect on whether these goal activities produce in them feelings of flow (Csikszentmihalyi, 1990) and personal expressiveness (Waterman,

In Press

2011; Career Goals Theme). Exploring emotions associated with pursuing career goals targets exploration in depth and identification with commitment (Figure 1, path B). When students have identified career goals they feel fit them, MCEC again drills down, this time into their goal narratives to focus on the life changes they want to make to work toward their career goals. Students work with their group to problem pose these life changes, re-work them into life change goals, identify obstacles, and use critical problem solving to explore alternatives for attaining these life change goals (Life Change Goals Theme). Exploring life change goals and selecting one to pursue targets exploration in breadth and commitment-making (Figure 1, path A). MCEC next broadens students' narratives to include other people. Students identify the people in their lives who can support them in pursuing their career goals and strategies for enhancing this social support (Social Support Theme). Finally, students review their work by determining which actions have seemed to work so far and reflect on the group experience (Self-Evaluation Theme).

Current Study

Previous research on positive identity interventions has largely focused on adolescent and emerging adult samples and used a domain-flexible approach with respect to identity content. In this study, we sought to expand current literature on identity-based interventions to include strategies for working with nontraditional students by evaluating differential outcomes in the initial implementation of MCEC. Specifically, guided by the self-transformative model in Figure 1, we examined whether participation in MCEC is associated with increases in commitment-formation processes (exploration in breadth and commitment making), a decrease in ruminative exploration, and increases in commitment-evaluation processes (exploration in depth and identification with commitment), changes aligned with our conceptualization of promoting positive identity development.

In Press

Method

Participants

Participants for this study were recruited from undergraduate classes provided through a university center at a community college campus. As shown in the flow diagram in Figure 2, a total of 58 university center students participated in the study, including a fall cohort (n = 34) and spring cohort (n = 24) of the same academic year. Thirty-two participants were assigned to the MCEC condition and 26 to a control condition. However, because this was the first study of MCEC, main analyses did not include data for participants who were assigned to the MCEC condition but did not attend workshop sessions. This resulted in a per protocol sample size of 45 students (MCEC = 19, control = 26) ages 20-55 (M = 32.33, $S.D.$ = 10.95, $M.d.$ = 28) for the main analyses. Of these students 37 were female (22 White non-Hispanic, 6 Hispanic/Latino, 8 Black or African American, and 1 Asian/Pacific Islander) and 8 were male (4 White non-Hispanic, 3 Hispanic, and 1 self-classified as bi-ethnic). Overall, 13 students reported a family income of less than $21,000; 14 reported income of $21,000 to $40,999; 5 reported income of $41,000 to $60,999; 4 reported income of $61,000 to $80,999; 3 reported income of more than 80,999; and 6 did not provide family income information. Nineteen students in the sample reported that they were the first in their families to go to college; 21 reported that they would be the first in their families to receive a bachelor's degree. The sample was comprised largely of nontraditional students, based on Horn and Carroll's (1996) seven nontraditional student characteristics. Specifically, 20 students had waited one year or longer after high school to start college, 14 were enrolled as part-time students, 34 were classified as an independent on their last federal income tax form, 14 had non-spouse dependents, 29 worked 35 or more hours per week, 11 were single parents, and 12 received a GED or high school equivalent rather than a standard

In Press

high school diploma. Four students did not endorse any of these characteristics.

The 13 students not included in the per protocol sample ranged in age from 21 to 45 (M = 30.42, $S.D.$ = 9.20, $M.d.$ = 27) for the main analyses. Of these students 11 were female (4 White non-Hispanic, 2 Hispanic/Latino, 2 Black or African American, 1 American Indian or Alaskan Native, 1 self-classified as bi-ethnic, and 1 missing information) and 2 were male (both White non-Hispanic). Overall, 3 students reported a family income of less than $21,000; 5 reported income of $21,000 to $40,999; 2 reported income of $41,000 to $60,999; and 3 did not provide family income information. Five students reported that they were the first in their families to go to college; 7 reported that they would be the first in their families to receive a bachelor's degree; and 1 did not provide education information. Four students had waited one year or longer after high school to start college, 3 were enrolled as part-time students, 7 were classified as an independent on their last federal income tax form, 7 had non-spouse dependents, 8 worked 35 or more hours per week, 3 were single parents, and 3 received a GED or high school equivalent rather than a standard high school diploma. Three students did not endorse any of these characteristics, and 1 student did not provide information about nontraditional characteristics.

In Press

Procedure

During the recruitment process, students were told that they would be provided with an informational session on career and graduate school opportunities and that there was a chance that they would also be assigned to participate in a career and education choices workshop. To facilitate scheduling of workshop sessions, at the time students volunteered for the study they selected a time slot during which they were available for study activities. Students were given directions on how to complete the pretest assessment and asked them to complete it during a two-week assessment period. Students completed assessments through the Qualtrics online

survey system (https://www.qualtrics.com) outside of school at a time that was convenient for them. The survey items used in this study were embedded at the beginning of a longer online life course interview that elicited narrative descriptions of past, present, and anticipated future life course experiences and took about an hour to complete. After the two-week assessment period, students were provided with information about career and graduate school opportunities related to their academic major, as well as information about the graduate school application and job search processes. They attended an informational session on these topics and received a digital copy of the session's PowerPoint slides via e-mail. Students were assigned to either MCEC or a control group by random assignment of selected time slots. Those assigned to MCEC then participated in a six-week intervention, described above. Students assigned to the control group did not receive any further intervention. Participants in both conditions completed an online posttest assessment in Qualtrics that followed the same format at the pretest assessment immediately following the conclusion of MCEC. Students were offered extra course credit for completing pre and posttest assessments. There was no extra credit for attending the informational session or MCEC workshop sessions. All study procedures were approved by the Institutional Review Board of the second author's university.

In Press

Intervention Procedure

Students assigned to MCEC were scheduled to participate in six sessions of group work and complete MCEC journal exercises (Table 1). Group sessions were guided by intervention teams consisting of graduate counseling students and a licensed clinical social worker on the university staff. Each group had 2 facilitators and 3 to 5 group members, followed the same outline of session themes, and completed the same journal exercises. Group sessions took place on the community college campus in available classrooms. Graduate student facilitators had

weekly group meetings with the staff member to review individual cases and ensure that each group followed intervention protocol. Among those who participated in workshop sessions, 32% attended 1 or 2 sessions, 32% attended 3 or 4 sessions, and 37% attended 5 or 6 sessions. Records of take-home journal entries indicated that 11% did not complete any journal entries, 21% completed 1 or 2 entries, 26% completed 5 or 6 entries, and 32% completed 7 or 8 entries.

Measures

Positive identity development was measured using items from the Dimensions of Identity Development Scale (DIDS; Luyckx et al., 2008). The DIDS is a 25-item scale that includes measures of *exploration in breadth*, *commitment making*, *ruminative exploration*, *exploration in depth*, and *identification with commitment*. This study used the version of the DIDS presented in Luyckx et al. (2008). Participants rated the items on a 5-point Likert scale, with response options ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). That said, confirmatory factor analysis conducted with a prior sample of 121 participants from the same data collection site provided good model fit [$\chi^2(109) = 137.72$, $p = .03$, CFI = .964; TLI = .955; RMSEA = .047; SRMR = .052] for a 17-item version of the DIDS. Standardized factor loadings were all greater than .55 and statistically significant at $p < .001$, and model-based McDonald's omega scale reliabilities were acceptable (exploration in breadth = .74; commitment making = .84; ruminative exploration = .88; exploration in depth = .73; identification with commitment = .78). As a result of these prior findings, the current study utilized a reduced 17-item measure of DIDS. Moreover, in the present sample, a confirmatory factor analysis using Bayesian estimation with informative priors based on parameter estimates from the previous analysis indicated acceptable model fit (Posterior Predictive Checking 95% CI [-.25.22, 96.03]; Posterior Predictive $p = .15$) and all standardized factor loadings were greater than .71 with credibility intervals that only included

In Press

positive values (Appendix C). Cronbach's alpha coefficients indicated acceptable reliability (exploration in breadth = .71; commitment making = .87; ruminative exploration = .85; exploration in depth = .67; identification with commitment = .73).

Data Preparation

Prior to model evaluation, we assessed data for multivariate outliers, pretest equivalence between MCEC and control groups, and missingness. A multivariate outlier was defined by a leverage score (i.e., the degree to which a particular case unduly influences the regression analysis) four times greater than the mean leverage, a cut-off used in past research (e.g., Bagner et al., 2013). No outliers were found. Evaluation of group equivalence revealed no significant differences in age (t = -1.10, p = .277), gender (p = .704, Fisher's exact test), or first-generation college student status ($\chi^2(1)$ = .390, p = .532). Moreover, multivariate analysis of variance (MANOVA) revealed no significant differences between groups for scores on observed variables at pretest (Wilks' λ = .917, $F(5, 36)$ = .650, p = .664). The missing data rate at posttest was 33%. We assessed missingness by correlating a dummy variable indicating whether or not participants completed the posttest assessment (1 = completed posttest, 0 = did not complete posttest) with pretest and demographic variables. There were no significant correlations between pretest and demographic variables and whether or not participants completed the posttest assessment.

In Press

Analytic Plan

The analytic process was conducted in four steps. First, descriptive statistics were calculated for all variables at pre and posttest. Second, as shown in Figure 3A, we used two-wave latent change models (Duncan & Duncan, 2004) estimated in *Mplus* 8.4 (Muthén & Muthén, 1998-2019) to examine pretest means and change scores for each identity dimension. In the two-wave latent change model, a latent intercept factor provided estimates of the mean initial

score (M_I) and its variance (V_I), and a latent slope factor provided estimates of the mean change score (M_S) and its variance (V_S). In order for this model to be just-identified, residual variances for the indicators had to be fixed rather than estimated. We fixed the residual variances (V_{Pre}, V_{Post}) to include a correction for measurement error based on McDonald's omega reliabilities of the DIDS items estimated with the prior sample from the same data collection site. This error correction was the estimated unreliability (1 – the subscale reliability estimate) multiplied by the variance of the subscale score (Hoyle, 2011). In addition, because six students who participated in the study in the Fall semester did not provide posttest data until the Spring semester, we used the time score feature in Mplus to set the loading of the posttest score on the slope factor to a time score (TS), reflecting a random (varying) time interval for each student. Using a time score allowed us to relax the assumption that the time interval between pretest and posttest was constant across participants. Finally, we used a full information robust maximum likelihood estimator (FIML) to accommodate missing data in conjunction with the Huber-White "sandwich" estimator to account for non-independence among students who signed up for the same time slot. Third, to assess differential pre to posttest intervention outcomes, we added condition and cohort to the model as predictor variables (Figure 3B). When predictors of the latent slope are included, the path coefficient for any particular predictor variable provides an estimate of the effect of that predictor on change in the outcome variable, holding constant all other predictors. By design, participation in MCEC was hypothesized to predict change (the latent slope), holding constant the semester of participation (Cohort) and pretest scores (the latent intercept). Therefore, MCEC (1 = intervention group, 0 = control group) was modeled as a predictor of the latent slope while controlling for Cohort (1 = Fall 2013, 0 = Spring 2014) and the latent intercept to hold constant these variables. Thus, differential intervention outcomes were

In Press

evaluated by examining covariate-adjusted change (B_{MS}). Fourth, we computed effect size estimates following guidelines in Feingold (2009) for growth modeling analyses (d_{gma}).

Results

Table 2 presents the means and standard deviations for pre and posttest variables for the full sample. Subsequently, we estimated our two-wave latent change models (Duncan & Duncan, 2004) in *Mplus* 8.4 (Muthén & Muthén, 1998-2019). As indicated in Table 3, for the sample as a whole, there was a significant increase in commitment making (M_{Slope} = .17), exploration in depth (M_{Slope} = .12), and identification with commitment (M_{Slope} = .21). Moreover, there was a significant decline in ruminative exploration (M_{Slope} = -.19). Building on this model, intervention and cohort were added as predictors. Table 4 presents path estimates highlighting the intervention for the two-wave change models. Per protocol analyses revealed differences between MCEC and control group participants in change in exploration in breadth (B = .46, 95% CI = .05-.87, d_{gma} = .45), commitment making (B = .44, 95% CI = .09-.79, d_{gma} = .57), exploration in depth (B = .31, 95% CI = .02-.59, d_{gma} = .40), and identification with commitment (B = .28, 95% CI = .02-.54, d_{gma} = .41). To provide greater contextualization, we report in Table 3, the intercepts and change scores (i.e., slopes) of the latent change model by condition. Findings revealed that MCEC participants increased on average in commitment making (M_{Slope} = .42) and identification with commitment (M_{Slope} = .39), whereas control group participants changed little on these dimensions (M_{Slope} = -.04 and .06, respectively). In contrast, whereas MCEC participants increased on average on exploration in breadth (M_{Slope} = .28) and exploration in depth (M_{Slope} = .41), the control group participants showed decreases on these dimensions (M_{Slope} = -.38 and -.10, respectively).

Because our outcome findings are potentially biased by the considerable number of

In Press

participants assigned to the MCEC condition did not attend workshop sessions (n = 13, see Figure 2), we supplemented per protocol analyses with intent to treat analyses that included non-attenders. As shown in Table 4, intent to treat analyses were consistent with per protocol analyses in indicating differences between those assigned to MCEC and control conditions in change in exploration in breadth (B = .54, 95% CI = .14-.88, d_{gma} = .52) and commitment making (B = .35, 95% CI = .02-.67, d_{gma} = .39). However, unlike per protocol analyses, although point estimates were positive for exploration in depth (B = .13, 95% CI = -.21-.48, d_{gma} = .17) and identification with commitment (B = .21, 95% CI = -.02-.45, d_{gma} = .36), confidence intervals show that negative differential outcomes could not be ruled out.

Discussion

In this study, we sought to advance research on strategies for promoting positive identity development. We evaluated intervention gains among participants in MCEC, a positive identity intervention for nontraditional college students. MCEC draws on life course theory to target the education-to-work life transition experienced by all students, regardless of whether they can be characterized as emerging, young, or middle-aged adults. As a whole, our findings support our hypotheses that MCEC promotes both commitment formation and commitment evaluation. In doing so, our study makes several key important contributions to the identity intervention literature. Specifically, our findings 1) provide further support for the adaptability of positive identity interventions, 2) demonstrate the promise of focusing intervention work on specific domains of identity development, and 3) show the feasibility of tailoring identity interventions for specific life course transitions.

Support for the Adaptability of Positive Identity Interventions

Despite the extensive research documenting the key role that identity development has in

In Press

positive adjustment across a variety of indicators (see Meca et al., 2023; Schwartz et al., 2015), only a handful of interventions for promoting positive identity development have been developed to date (Eichas et al., 2015). In contrast to other types of psychosocial interventions, these positive identity interventions replace manual-driven programming with participatory co-learning among participants and facilitators in the effort to create empowering group contexts for identity work. Outcome trials of positive identity programs have shown intervention-related increases in adolescents' information-oriented identity exploration and sense of control and responsibility for making life changes (Eichas et al., 2010, 2017; Ferrer-Wreder et al., 2002) and life goal development (Eichas et al., 2017) and decreases in identity distress (Meca et al., 2014). Consistent with these past evaluations, we found participation in MCEC was associated with increases in exploration in breadth and depth and in commitment making and identification with commitment.

That said, it is worth noting that in contrast to Meca et al. (2014), who did not find evidence that participating in the Miami Adult Development Project was directly associated with change in identity commitment, our estimates of intervention-related change in commitment making and identification with commitment were relatively large. The magnitude of these differential outcomes may stem from our focus on nontraditional students and adult learners within the context of a university center partnership. Although community college education has traditionally focused on providing two-year degree programs, over the past generation there has been a movement toward creating new educational pathways to bachelor's degrees. University center partnerships that bring programs from four-year universities to community college campuses represent only one of the strategies for expanding access to new student populations. Although little is known about the experiences of students attending university centers, these

In Press

experiences are likely to be very different from those of students attending classes on a university campus, probably in ways that influence identity exploration. For all their virtues, community college campuses lack an opportunity structure typical of a university campus. For example, community college campuses usually do not house working research labs, which reduces opportunities for interactions with research faculty and graduate students who could serve as role models or natural mentors for undergraduates. In the context of fewer structural opportunities for identity exploration, MCEC may have had a larger impact than it would otherwise have had because it addressed an unmet need in this particular developmental context. It is worth noting, however, that other nontraditional educational pathways such as online and distance learning programs may also fail to provide sufficient opportunities for identity exploration. If so, then providing positive identity interventions such as MCEC may be a practical strategy for enriching these educational pathways.

The Promise of Domain-Specific Identity Interventions

In addition to providing further evidence for the adaptability of identity interventions, our current study extends the existing literature by highlighting the potential usefulness of domain-specific interventions. This is particularly critical given that, with the exception of a handful of social identity interventions largely focused on ethnic/racial identity development (for review, see Hoffman & Umaña-Taylor, 2023), existing identity interventions have not targeted specific domains of identity development. As such, our findings regarding the differential outcomes of MCEC indicates the possibility for creating identity interventions targeting other personal identity domains. For example, it may be feasible to adapt MCEC strategies to promote moral identity development, which has been linked to moral behavior and emotions (Hertz & Krettenauer, 2016; Lefebvre & Krettenauer, 2019) as well as positive adjustment and prosocial

In Press

behavior among adolescent populations (e.g., Hardy et al., 2014).

MCEC intervention strategies may also be adapted to promote parenting identity, which has not only been associated with mental health among first-time expecting parents and current parents (Meca et al., 2020; Piotrowski, 2021; 2023), but with positive parenting practices as well (Fadjukoff et al., 2016). As such, participating in a parenting identity focused program that uses a group-based participatory co-learning approach may promote positive identity development that prevents against perinatal or postpartum mood and anxiety disorder. Such a program could also be utilized with current parents during parenting transitions such as early adolescence, given that studies document shifts in parenting identity during that period of the child's lifespan. These programs may offer a supportive context by which parents can co-construct their own identity as parents and explore alternative parenting strategies. Additionally, a group-based participatory co-learning approach may help parents bolster their own mental health, which may lead to improvements in parenting and family functioning (Bennett et al., 2013).

Tailoring Identity Interventions for Specific Life Course Transitions

As previously noted, identity interventions have been developed for adolescent (e.g., Kurtines et al., 2008) and emerging adult populations (e.g., Berman et al., 2008; Meca et al., 2014). Even social-identity focused interventions have largely been developed for adolescent populations (see Hoffman & Umaña-Taylor, 2023). In contrast to these programs, MCEC was not developed to target a particular developmental period. Indeed, instead of targeting a developmental period, MCEC targets the education-to-work transition. That is, regardless of when in life students come to college, they all face the challenge and responsibility of making choices about what to do when they finish college. The implications of our outcome findings are thus twofold. First, they highlight the suitability of identity interventions for adults. Such a

In Press

finding is not surprising given that, although identity development may be developmentally salient in adolescence and young adulthood, it represents a life-long development process (Erikson, 1959; Josselson, 2017).

Second, our findings indicate the feasibility of developing identity interventions that are tailored to particular life course transitions rather than age-based groupings. Whereas MCEC focused on the college-to-work transition, future interventions may be similarly formulated to support identity development during other life transitions. For example, identity interventions may be developed to support immigrants as they transition into a new host country. Indeed, prior research has highlighted that identity may serve as a key anchor during the immigration process (Schwartz, et al., 2006). Additionally, interventions may also be developed to support veterans' transitions to civilian life, given extensive research highlighting the complex identity challenges faced with this transition (Smith & True, 2014). Other opportunities for designing identity interventions include life changes such as divorce or bereavement, which also have important identity-related challenges (Papa & Lancaster, 2015). In each of these examples, people experience a transition to a new social role that they are challenged to integrate into their sense of identity. Moreover, although some of these life transitions are more prevalent and/or tied to specific developmental periods (e.g., bereavement tends to be more common in late adulthood), there is still wide variability in when these life transitions can take place, with some, such as immigration, ranging across any point within the lifespan. That said, it is important for such interventions to none the less consider the developmental specificity of the populations they serve as life transitions, and identity development, are none the less impacted by developmental processes. Moreover, the specific content of the identity challenge depends on the nature of the transition experience. It stands to reason that the content of the identity intervention should fit the

In Press

content of the identity challenge, even if there are general processes (i.e., exploration and commitment) involved. Synchronizing intervention content with the specific identity challenges posed by particular life course transitions may result in developmental interventions that people find more relevant to their lives. In sum, identity interventions can be life course interventions.

Limitations

Although the results of the present study make important contributions to the identity intervention literature, they should be considered in light of several limitations. To begin with, our sample size was small and may impact the robustness of our findings. Although we found relatively large estimates of intervention-related change, and findings were consistent with prior research (e.g., Eichas et al., 2010, 2017), small samples can be susceptible to both sign (i.e., estimate on the wrong side of zero from the true effect) and magnitude (i.e., overestimation of true effect) errors (Lindstromberg, 2023). Second, participants were assigned to either MCEC or a control group by random assignment of selected time slots. Third, our control group did not offer a credible placebo or alternative treatment, and thus, does not rule out possible Rosenthal and Hawthorne type effects. This is particularly important to highlight given attrition (Figure 2), potentially biasing our sample to those who were highly motivated to complete the intervention to begin with. When we included participants who were assigned to the intervention condition but did not participate, some estimates of intervention related change were smaller. Fourth, although we were able to examine short-term gains, future research should include long-term follow-up to determine maintenance of observed treatment gains.

Fifth, a note of caution should be taken regarding the generalizability of these findings. Indeed, MCEC was only provided to junior- and senior-level undergraduate students at a university center on a community college campus. Bringing university degree programs to

In Press

community colleges represent only one of the strategies for expanding access to new student populations. A more prevalent strategy is distance learning in asynchronous online environments. Although it is likely that university center and online students face similar barriers in accessing opportunities for identity exploration offered at university campuses (e.g., research labs, mentoring by faculty or graduate students, structured internships, etc.), their experiences of education are likely to differ in many other ways. Whether MCEC would work in an online environment remains an empirical question to be addressed by future research. For that matter, whether the strategy of tailoring an identity intervention to the education-to-work transition would work in a residential university environment with a more traditional student population is also unknown.

Conclusion

Despite these limitations, the present study provides preliminary evidence that participating in positive identity development interventions promotes identity development for adult learners and nontraditional college students. Indeed, our findings highlight the capacity of MCEC to aid students in exploring and committing to various life directions, regardless of developmental trajectory. Given that identity development has been recognized as a life-long process (Erikson, 1959; Josselson, 2017), the focus on the education-to-work transition rather than a particular developmental period demonstrates the flexibility of MCEC. As the number of adult learners and nontraditional students in college institutions continues to increase, the need to develop interventions rooted in education-to-work transitions, versus age-group developmental periods, is critical. In sum, MCEC may serve as a foundational step toward the development of adaptable interventions needed to further support nontraditional college students as they transition from college to the workforce.

In Press

References

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469-480. https://doi.org/10.1037/0003-066X.55.5.469

Bandura, A. (1997). *Self-efficacy: The exercise of control.* W H Freeman/Times Books/ Henry Holt & Co.

Bandura, A., Jeffery, R. W., & Gajdos, E. (1975). Generalizing change through participant modeling with self-directed mastery. *Behaviour Research and Therapy*, *13*(2-3), 141-152. https://doi.org/10.1016/0005-7967(75)90008-X

Beaumont, S. L., & Pratt, M. M. (2011). Identity processing styles and psychosocial balance during early and middle adulthood: The role of identity in intimacy and generativity. *Journal of Adult Development, 18*(4), 172–183. https://doi.org/10.1007/s10804-011-9125-z

Bennett, C., Barlow, J., Huband, N., Smailagic, N., & Roloff, V. (2013). Group-based parenting programs for improving parenting and psychosocial functioning: A systematic review. *Journal of the Society for Social Work and Research, 4*(4). https://doi.org/10.5243/jsswr.2013.20

Berman, S. L. (2019). *Making life choices: The psychology of personal and interpersonal growth*. San Diego: Cognella Academic Publishing

Berman, S. L., Kennerley, R. J., & Kennerley, M. A. (2008). Promoting adult identity development: A feasibility study of a university-based identity intervention program. *Identity: An International Journal of Theory and Research,* 8(2), 139-150. https://doi.org/10.1080/15283480801940024

Berman, A. M., Schwartz, S. J., Kurtines, W. M., & Berman, S. L. (2001). The process of exploration in identity formation: the role of style and competence. *Journal of*

In Press

adolescence, *24*(4), 513–528. https://doi.org/10.1006/jado.2001.0386

Berzonsky, M. D. (2004). Identity style, parental authority, and identity commitment. *Journal of Youth and Adolescence, 33*(3), 213- 220. https://doi.org/10.1023/B:JOYO.0000025320.89778.29

Brunton, J., & Buckley, F. (2021). 'You're thrown in the deep end': adult learner identity formation in higher education. *Studies in Higher Education*, *46*(12), 2696-2709. https://doi.org/10.1080/03075079.2020.1767049

The Center for Law and Social Policy [CLASP] (2015). Center for Postsecondary and Economic Success. Retrieved from http://www.clasp.org/resources-and-publications/publication-1/CPES-Nontraditional-students-pdf.pdf

Clark, C., & Cluver, M. (2023). *Trend No. 1: College enrollment reaches its peak*. Deloitte Insights. https://www2.deloitte.com/us/en/insights/industry/public-sector/articles-on-higher-education/enrollment-rates-in-higher-education.html

Clausen, J. (1986). *The life course: A sociological perspective*. Prentice-Hall.

Clausen, J. (1998). Life reviews and life stories. In J. Z. Giele & G. H. Elder (Eds.), *Methods of life course research: Qualitative and quantitative approaches* (pp. 189–212). Thousand Oaks, CA: Sage.

Côté, J. E., & Levine, C. G. (2016). *Identity formation, youth, and development: A simplified approach.* Psychology Press.

Csikszentmihalyi, M. (1990). *Flow: The Psychology of optimal experience.* Harper Perennial Modern Classics.

Donaldson, J. F., & Townsend, B. K. (2007). Higher education journals' discourse about adult undergraduate students. *The Journal of Higher Education*, *78*(1), 27-50.

In Press

https://doi.org/10.1080/00221546.2007.11778962

Duncan, T. E., & Duncan, S. C. (2004). An introduction to latent growth curve modeling. *Behavior therapy*, *35*(2), 333-363. https://doi.org/10.1016/S0005-7894(04)80042-X

Eichas, K., Albrecht, R. E., Garcia, A. J., Ritchie, R. A., Varela, A., Garcia, A., Rinaldi, R., Wang, R., Montgomery, M. J., Silverman, W. K., Jaccard, J., & Kurtines, W. M. (2010). Mediators of positive youth development intervention change: Promoting change in positive and problem outcomes? *Child and Youth Care Forum*, *39*, 211-237. https://doi.org/10.1007/s10566-010-9103-9

Eichas, K., Meca, A., Montgomery, M. J., & Kurtines, W. M. (2015). Identity and positive youth development: Advances in developmental intervention science. In McLean, K. C., & Syed, M. (Eds.). *The Oxford handbook of identity development* (pp. 337 – 354). Oxford University Press

Eichas, K., Montgomery, M. J., Meca, A., Garcia, A. J., & Garcia, A. (2021). Engaging marginalized youth in positive development: The Changing Lives Program. In Dimitrova R., Wiium N. (Eds.), *Handbook of positive youth development: Advancing research, policy, and practice in global contexts* (pp.431-446). Springer. https://doi.org/10.1007/978-3-030-7062-529

Eichas, K., Montgomery, M. J., Meca, A., & Kurtines, W. M. (2017). Empowering marginalized youth: A self-transformative intervention for promoting positive youth development. *Child Development*, *88*(4), 1115-1124. https://doi.org/10.1111/cdev.12866

Erikson, E. H. (1959). *Identity and the life cycle; Selected papers, with a historical introduction by David Rapaport.* International University Press.

in Press

Erikson, E. H. (1963). *Childhood and society.* Norton.

Erikson, E. H. (1968). *Identity: Youth and crisis* (No. 7). WW Norton & Company

Fadjukoff, P., Pulkkinen, L., Lyyra, A.-L., & Kokko, K. (2016). Parental identity and its relation to parenting and psychological functioning in middle age. *Parenting: Science and Practice, 16*(2), 87–107. https://doi.org/10.1080/15295192.2016.1134989

Feingold, A. F. (2009). Effect sizes for growth-modeling analysis for controlled clinical trials in the same metric as for classical analysis. *Psychological Methods, 14*(1), 43-53. http://doi.org/10.1037/a0014699

Ferrer-Wreder, L., Lorente, C. C., Kurtines, W., Briones, E., Bussell, J., Berman, S., & Arrufat, O. (2002). Promoting identity development in marginalized youth. *Journal of Adolescent Research*, *17*(2), 168-187. https://doi.org/10.1177/0743558402172004

Floyd, D. L., Garcia Falconetti, A. M., & Felsher, R. A. (2012). Applied and workforce baccalaureate models. *New Directions for Community Colleges*, 158, 5-11. https://doi.org/10.1002cc.20012

Freire, P. (1983). *Pedagogy of the oppressed.* New York, NY: Herder & Herder.

Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of adolescent research*, *2*(3), 203-222. https://doi.org/10.1177/074355488723003

Hardy, S. A., Walker, L. J., Olsen, J. A., Woodbury, R. D., & Hickman, J. R. (2014). Moral identity as moral ideal self: Links to adolescent outcomes. *Developmental Psychology, 50*(1), 45–57. https://doi.org/10.1037/a0033598

Haslam, C., Haslam, S. A., Jetten, J., Cruwys, T., & Steffens, N. K. (2021). Life change, social identity, and health. *Annual Review of Psychology*, *72*, 635-661. https://doi.org/10.1146/annurev-psych-060120-111721

In Press

Hertz, S. G., & Krettenauer, T. (2016). Does moral identity effectively predict moral behavior?: A meta-analysis. *Review of General Psychology*, *20*(2), 129-140. https://doi.org/10.1037/gpr0000062

Hittepole, C. (2019). Nontraditional students: Supporting changing student populations. NASPA, Student Affairs Administrators in Higher Education. https://www.naspa.org/images/uploads/main/Hittepole_NASPA_Memo.pdf

Hoffman, A. J., & Umaña-Taylor, A. J. (2023). The promise of leveraging social identities in interventions to enhance the well-being and lives of adolescents. *Child Development Perspectives, 17*(3-4), 129–135. https://doi.org/10.1111/cdep.12486

Horn, L. J., & Carroll, C. D. (1996). *Nontraditional Undergraduates: Trends in Enrollment from 1986 to 1992 and Persistence and Attainment among 1989-90 Beginning Postsecondary Students. Postsecondary Education Descriptive Analysis Reports. Statistical Analysis Report*. US Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.

Hoyle, R. K. (2011). *Structural equation modeling for social and personality psychology. SAGE Publications Ltd*

Integrated Postsecondary Education Data System (IPEDS) (2023). *National Center for Education Statistics [NCES]*. Washington, DC: U.S. Department of Education.

Jaiswal, A., Arun, C. J., & Varma, A. (2022). Rebooting employees: Upskilling for artificial intelligence in multinational corporations. *The International Journal of Human Resource Management*, *33*(6), 1179-1208. https://doi.org/10.1080/09585192.2021.1891114

Josselson, R. (2017). *Paths to fulfillment: Women's search for meaning and identity*. Oxford University Press.

In Press

Knox, L. (2023). *Grasping for a Foothold on the Enrollment Cliff*. https://www.insidehighered.com/news/business/revenue-strategies/2023/05/12/grasping-foothold-enrollment-cliff

Kurtines, W. M., Ferrer-Wreder, L., Berman, S. L., Lorente, C. C., Briones, E., Montgomery, M. J., Albrecht, R., Garcia, A. J., & Arrufat, O. (2008). Promoting positive youth development: The Miami Youth Development Project (YDP). *Journal of Adolescent Research, 23*(3), 256-267. https://doi.org/10.10.1177/0743558408314375

Lefebvre, J. P., & Krettenauer, T. (2019). Linking moral identity with moral emotions: A meta-analysis. *Review of General Psychology*, *23*(4), 444-457. https://doi.org/10.1177/1089268019880887

Lerner, R. M., Freund, A. M., De Stefanis, I., & Habermas, T. (2001). Understanding developmental regulation in adolescence: The use of the selection, optimization, and compensation model. *Human Development*, *44*(1), 29-50. https://doi.org/10.1159/000057039

Lindstromberg, S. (2023). The winner's curse and related perils of low statistical power– spelled out and illustrated. *Research Methods in Applied Linguistics*, *2*(3), 100059. https://doi.org/10.1016/j.rmal.2023.100059

Luyckx, K., Goossens, L., Soenens, B., & Beyers, W. (2006). Unpacking commitment and exploration: Preliminary validation of an integrative model of late adolescent identity formation. *Journal of adolescence*, *29*(3), 361-378. https://doi.org/10.1016/j.adolescence.2005.03.008

Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I., & Goossens, L. (2008). Capturing ruminative exploration: Extending the four-dimensional

In Press

model of identity formation in late adolescence. *Journal of research in personality*, *42*(1), 58-82. https://doi.org/10.1016/j.jrp.2007.04.004

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*(5), 551–558. https://doi.org/10.1037/h0023281

Marcia, J. E. (1994). The empirical study of ego identity. In H. A. Bosma, T. L. G. Graafsma, H. D. Grotevant, & D. J. de Levita (Eds.), *Identity and development: An interdisciplinary approach* (pp. 67–80). Sage Publications, Inc.

Marcia, J. E. (2002). Identity and psychosocial development in adulthood. *Identity: An international journal of theory and research*, *2*(1), 7-28.

Meca, A., Allison, K. K., Cruz, B., Ayers, K. L., Webb, T., Patel, P. (2022). Who am I? Identity and its implications for health and psychosocial functioning. In Encyclopedia of Child and Adolescent Health. Elsevier. https://doi.org/10.1016/B978-0-12-818872-9.991111-4

Meca, A., Allison, K., Rodil, K., Ayers, K., & Eichas, K. (2021). "I Just Can't": Why are Emerging Adults Feeling More Anxious and Uncertain? In T. Duncan & A. Cohen (Eds.), *Cultivating Student Success: A Multi-faceted Approach to Working with Emerging Adults in Higher Education.* Oxford University Press.

Meca, A., Eichas, K., Quintana, S., Maximin, B. M., Ritchie, R. A., Madrazo, V. L., Harari, G. M., Kurtines, W. M. (2014). Reducing identity distress: Results of an identity intervention for emerging adults. *Identity: An International Journal of Theory and Research, 14*(4), 312-331. https://doi.org/10.1080/15283488.2014.944696

Meca, A., Paulson, J. F., Webb, T. N., Kelley, M. L., & Rodil, J. C. (2020). Examination of the relationship between parenting identity and internalizing problems: A preliminary examination of gender and parental status difference. *Identity: An International Journal*

In Press

of Theory and Research, 20(2), 92-106. https://doi.org/10.1080/15283488.2020.1737070

Mitchell, L. L., Adler, J. M., Carlsson, J., Eriksson, P. L., & Syed, M. (2021). A conceptual review of identity integration across adulthood. *Developmental psychology*, *57*(11), 1981–1990. https://doi.org/10.1037/dev0001246

Muthén, L. K. & Muthén, B. O. (1998-2019). *Mplus user's guide* (Eighth Edition). Muthén & Muthén; 1998–2019.

Montgomery, M. J., Kurtines, W. M., Ferrer-Wreder, L., Berman, S. L., Lorente, C. C., Briones, E., ... & Eichas, K. (2008). A Developmental Intervention Science (DIS) outreach research approach to promoting youth development: Theoretical, methodological, and meta-theoretical challenges. *Journal of Adolescent Research*, *23*(3), 268-290. https://doi.org/10.1177/0743558408314376

National Center for Education Statistics [NCES] (2022a). *Characteristics of Postsecondary Students).* Washington, DC: U.S. Department of Education.

National Center for Education Statistics [NCES] (2022b). *Undergraduate Enrollment.* Washington, DC: U.S. Department of Education.

Papa, A., & Lancaster, N. (2016). Identity continuity and loss after death, divorce, and job loss. *Self and Identity*, *15*(1), 47-61. https://doi.org/10.1080/15298868.2015.1079551

Piotrowski, K. (2021). Parental identity status in emerging and early adulthood, personality, and well-being: A cluster analytic approach. *Scandinavian Journal of Psychology*, *62*(6), 820-832. https://doi.org/10.1111/sjop.12779

Piotrowski, K. (2023). Parental identity formation in mothers is linked to borderline depressive symptoms: A person-centered analyses. *Frontiers in Psychology*, *14*. https://doi.org/10.2289/fpsyg.2023.1086947

In Press

Schwartz, S. J., Hardy, A. S., Zamboanga, L. B., Meca, A., Waterman, S. A., Picariello, S., Luyckx, K., Crocetti, E., Su Yeong, K., Brittian, S.A., Roberts, E. S., Whitbourne, K. S., Ritchie, A. R., Brown, J. E., & Forthun, F. L. (2015). Identity in young adulthood: Links with mental health and risky behavior. *Journal of Applied Developmental Psychology*, *36*, 39-52. https://doi.org/doi.101016/j.appdev.2014.10.001

Schwartz, S. J., Kurtines, W. M., & Montgomery, M. J. (2005). A comparison of two approaches for facilitating identity exploration processes in emerging adults an exploratory study. *Journal of Adolescent Research*, *20*(3), 309-345. https://doi.org/10.1177/0743558404273119

Schwartz, S. J., Montgomery, M. J., & Briones, E. (2006). The Role of Identity in Acculturation among Immigrant People: Theoretical Propositions, Empirical Questions, and Applied Recommendations. *Human Development, 49*(1), 1–30. https://doi.org/10.1159/000090300

Smith, R. T., & True, G. (2014). Warring identities: Identity conflict and the mental distress of American veterans of the wars in Iraq and Afghanistan. *Society and Mental Health*, *4*(2), 147-161. https://doi.org/10.1177/2156869313512212

Steinhauer, A., & Lovell, E. D. (2019). Non-traditional community college students' academic pursuits: Time, connectedness, support, wages and research. *Community College Journal of Research and Practice*, *45*(3), 223-226. https://doi.org/10.1080/10668926.2019.1666066

Stewart, A., Moffat, M., Travers, H., & Cummins, D. (2015). Utilizing partnerships to maximize resources in college counseling services. *Journal of College Student Psychotherapy, 29*(1), 44-52. https://doi.org/10.1080/87568225.2015.976093

In Press

United States Government Accountability Office (2019). Higher Education: More information could help student parents access additional federal student aid (Report to Congressional Requesters GAO-19-522). https://www.gao.gov/assets/710/701002.pdf

Waterman, A. S. (1990). Personal expressiveness: Philosophical and psychological foundations. Journal of Mind and Behavior, 11, 47–74.

Waterman, A. S. (2011). Eudaimonic identity theory: Identity as self-discovery. In *Handbook of identity theory and research* (pp. 357-379). Springer New York.

Waterman, A. S. (2015). Identity as internal processes: How the "I" comes to define the "me" In K. C. McLean & M. Syed (Eds.), *The Oxford handbook of identity development* (pp. 195–209). Oxford University Press.

Whitbourne, S. K. (1996). Psychosocial perspectives on emotions: The role of identity in the aging process. In C. Magai & S. H. McFadden (Eds.), *Handbook of emotion, adult development, and aging* (pp. 83–98). Academic Press. https://doi.org/10.1016/B978-012464995-8/50006-6

In Press

Tables

Table 1

Description of MCEC Journal Exercises

Session Theme	Journal Exercise
1. Life Story	1a. (completed in group) Identify most important life course events and turning points and co-construct life stories taking turns sharing with the group.
2. Career Dilemmas	2a. Solve a hypothetical career dilemma and identify a personal career/education dilemma. 2b. Engage in guided critical problem solving for personal career/education dilemma.
3. Career Goals	3a. Identify most important long-term career goal, break this goal into activities essential for achieving the goal, and the feelings (e.g., flow, personal expressiveness) associated with engaging in the activities.
4. Life Change Goals	4a. Identify a transformative life change goal necessary in order to reach the most important career goal 4b. Identify the most serious obstacle to accomplishing the life change goal. 4c. Engage in guided critical problem solving about actions to take in order to overcome obstacles and accomplish the life change goal.
5. Social Support	5. Identify sources of social support available for reaching their goals and how to enhance this support.
6. Self-Evaluation	6. Review work by evaluating progress towards goals and identifying actions that seemed to have worked so far.

In Press

Table 2

Descriptive Statistics for Model Variables

Variable	Mean		S.D.		Skewness		Kurtosis	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Exploration in Breadth	3.21	3.10	1.11	0.84	-0.12	0.12	-0.27	-0.36
Commitment Making	4.02	4.23	0.78	0.71	-0.83	-2.15	1.01	0.69
Exploration in Depth	4.14	4.25	0.79	0.63	-1.27	-0.51	2.58	0.40
Identification with Commitment	3.96	4.21	0.68	0.63	-1.30	-1.30	4.84	3.92
Ruminative Exploration	2.62	2.43	1.02	0.90	0.21	0.52	-0.72	0.12

In Press

Table 3

Model-estimated Means and Standard Deviations for Pretest (Intercept) and Change (Slope) for MCEC and Control Group

	Overall				MCEC				Control			
	Intercept		Slope		Intercept		Slope		Intercept		Slope	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Exploration in Breadth	3.17*	0.87*	-0.07	0.44	2.97*	1.01*	0.28*	0.23	3.31*	0.74*	-0.38	0.62
Commitment Making	4.04*	0.68*	0.17	0.49	4.02*	0.84*	0.42*	0.47	4.05*	0.54*	-0.04	0.36
Ruminative Exploration	2.57*	0.94*	-0.19	0.54*	2.57*	1.06*	-0.21	0.64*	2.57*	0.84*	-0.18	0.42
Exploration in Depth	4.16*	0.64	0.12	0.47	3.98*	0.88	0.41	0.64	4.28*	0.35*	-0.10*	0.06
Identification with Commitment	3.98*	0.58	0.21	0.36	3.92*	0.80	0.39*	0.43	4.03*	0.34	0.06	0.17

Note. Means and standard deviations presented for per protocol sample ($N = 45$). * $p < .05$

In Press

Table 4

Parameter Estimates for Two Wave Change Models

		PP Analyses ($N = 45$)			ITT Analyses ($N = 58$)		
Outcome	Predictor	B	SE	95% CI	B	SE	95% CI
EB Slope	EB Intercept	-.22	.20	[-.61, .17]	-.25	.18	[-.60, .09]
	Cohort	-.13	.22	[-.57, .30]	.24	.20	[-.14, .57]
	MCEC	.46*	.21	[.05, .87]	.54**	.21	[.14, .88]
CM Slope	CM Intercept	-.28	.23	[-.74, .18]	-.25	.11	[-.46, -.04]
	Cohort	-.08	.22	[-.51, .36]	.01	.20	[-.39, .41]
	MCEC	.44*	.18	[.09, .79]	.35*	.16	[.02, .67]
RE Slope	RE Intercept	-.29**	.10	[-.48, -.10]	-.27**	.10	[-.47, -.10]
	Cohort	.04	.19	[-.34, .42]	-.03	.25	[-.53, .39]
	MCEC	-.01	.19	[-.39, .36]	.09	.24	[-.38, -.49]
ED Slope	ED Intercept	-.57	.36	[-1.27, .13]	-.72**	.26	[-1.22, -.22]
	Cohort	.40	.22	[-.03, .83]	-.29	.16	[-.61, .02]
	MCEC	.31*	.15	[.02, .59]	.13	.18	[-.21, .48]
IC Slope	IC Intercept	-.29	.18	[-.65, .07]	-.28*	.13	[-.54, -.03]
	Cohort	.19	.18	[-.16, .53]	-.26*	.12	[-.49, -.02]
	MCEC	.28*	.13	[.02, .54]	.21	.13	[-.02, .45]

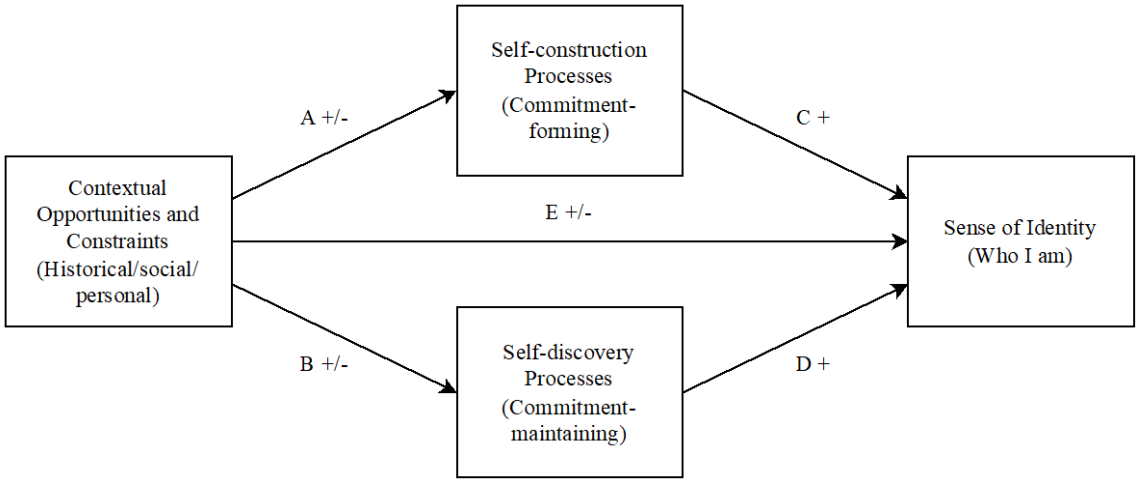
Note. PP = per-protocol; ITT = intent to treat; EB = exploration in breadth, CM = commitment making, RE = ruminative exploration; ED = exploration in depth; IC = identification with commitment. * $p < .05$, ** $p < .01$, *** $p < .001$

In Press

Figures

Figure 1

Conceptualized self-transformative model for MCEC



In Press

Figure 2

Flow diagram for MCEC outcome study

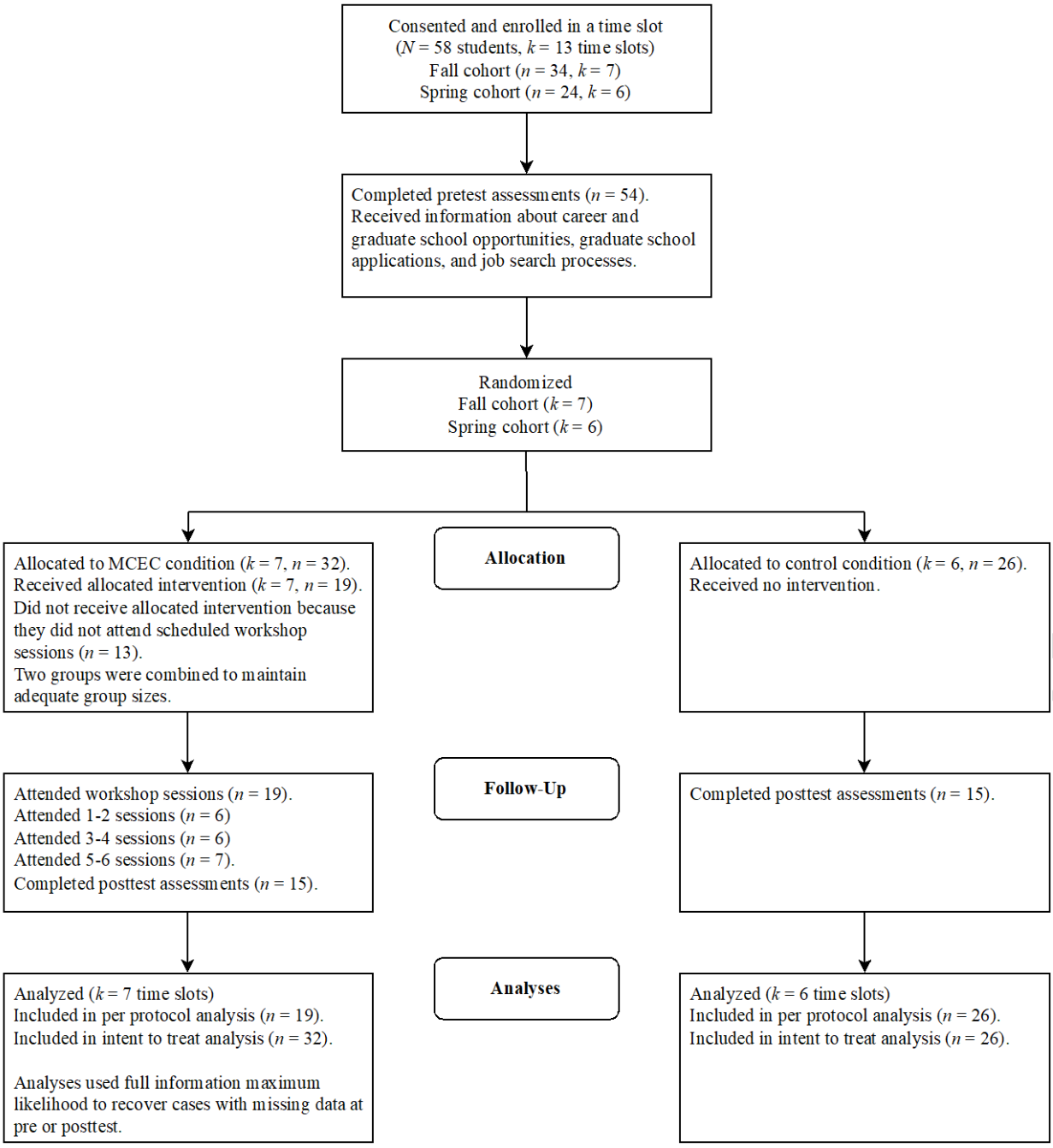
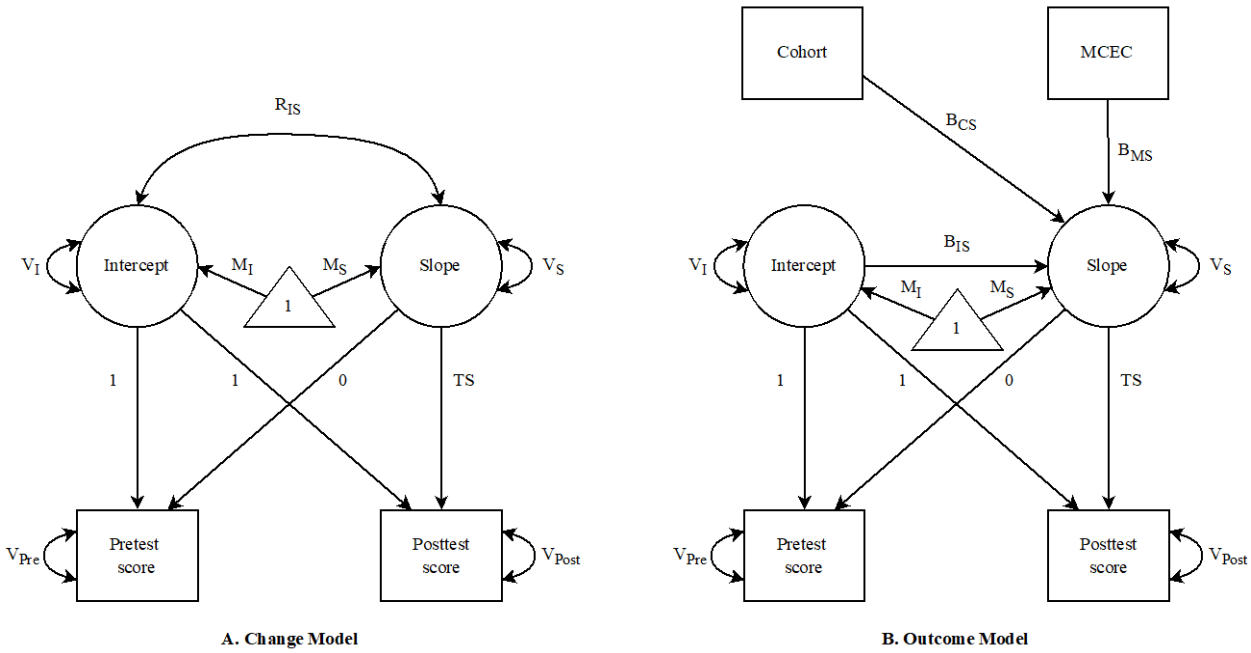


Figure 3

Path models for estimating change and outcomes



In Press