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You Can Go Your Own Way : Examining the Pathways of College Student Leaders

Margaret Judith Toich
Montclair State University

Abstract

According to the International Leadership Association, more than 2,000 academic and co-curricular programs exist at universities across the nation (Guthrie, Teig, & Hu, 2018). Evaluation of programs is largely piecemeal—meaning that the additive effects of these programs are not examined. The purpose of this study is to address the current gap in the literature by holistically assessing the impact that these leadership experiences have on the participating students rather than looking at the consequences of these experiences individually. The current study uses 99 students' data from a five- year, multi-institutional, longitudinal study to examine the pathways that these undergraduate students take to develop their leadership skills through all academic, co-curricular leadership development programs and formal leadership positions throughout all four years of their undergraduate career. Eight pathways were identified by a research team based on participatory experiences of students (e.g., a formal leadership position, no participation and mixed participation path). Antecedents to and consequences of these pathways were examined using Chi-square and regression analyses with highly involved participants having higher school engagement and psychosocial development their senior years compared to less involved students. The results of this study have large implications for the leadership development field, both to those working in institutions and leadership practioners, helping to inform who is in these programs and the longitudinal impact of these developmental programs on students.

Keywords: leader development, leader identity, college students, leadership

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You Can Go Your Own Way: Examining the Pathways of College Student Leaders

By

Margaret J. Toich

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College of Humanities and Social Sciences

Department of Psychology

Thesis Committee

[redacted]

Dr. Valerie I. Sessa
Thesis Sponsor

[redacted]

Committee Member

[redacted]

Dr. Daniel V. Simonet
Committee Member

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MARGARET JUDITH TOICH

Montclair State University

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Introduction

Leader Identity

A leader identity is "how one thinks of oneself as a leader" and previous research has found adoption of leader identities co-varies with leadership effectiveness (Day, Harrison, & Halpin, 2009; Day & Sin, 2011). The majority of leader identity development takes place during sensitive periods. These periods differ from crucial periods in that failure to develop during a sensitive period does not mean that developing that skill (in this case, leadership identity) cannot occur at all (Bornstein, 1989). That is the development of a leadership identity is not a pass or fail hurdle but it is rather the progressive growth of seeing oneself as a leader. Avolio and Vogelgsang (2011) posit that the fastest and easiest development occurs in youth and adolescence because the number of opportunities to enact leadership are plentiful (e.g., sports team captain, stage crew manager, Student Government Association President). Day, Harrison, and Halpin (2009) introduced leadership identity-development spirals in which positive leadership experience reinforce and encourage additional participation and result in a strongly ingrained leader identity. Successful experiences in certain leadership enactment scenarios encourages the continuation of leadership enactment, pursuit of more challenging leadership goals, and development of a diverse set of skills. These spirals can also be negative with these experiences punishing and reducing involvement. Because of the self-reinforcing, cyclical nature

of leader identity development understanding how these identities develop during sensitive periods like college is crucial to practioners and leadership researchers in the continued evaluation of these experiences and programs.

Murphy and Johnson (2011) propose a model of lifespan leader development which emphasizes the importance of early developmental sensitive periods and experiences but it is not an exhaustive list of all possible influences on leader development. See Figure 1. The model shows that early developmental factors (e.g., gender, parenting style, and education) influence the aspects of leader identities we develop, our self-regulatory processes, and then finally influences leadership enactment and effectiveness. Contextual influences such as societal expectations and time in history influence the development of leader identities, self-regulation, and leadership enactment and effectiveness are also included. In short, Murphy and Johnson (2011) state that our early experiences influence how we understand leadership, those differences in understanding then relate to differences in actually doing and being effective at leadership and affect the continued enactment of leadership. For the purpose of this study, we use this model as a theoretical guide for the inclusion of antecedents and consequences to leadership development in college students as will be discussed later. See Figure 2 for Murphy and Johnson's (2011) model. This model did not serve to fully inform the antecedents and consequences of this study as it was not exhaustive and we anticipated the inclusion of other constructs based on previous research.

While the literature clearly establishes leader identities as an important construct within the field, understanding the longitudinal development of leadership identities from adolescent sensitive developmental periods is fledgling. The rationale for understanding longitudinal development of this construct extends beyond the fact that it is relatively uncharted research

territory. Previous research has argued that sustained leadership enactment relies on the integration of leader identity with one's self-identity thus understanding how leader identities develop is crucial to developing effective, long-term leaders (Lord & Hall, 2005). Research from Komives, Dugan, & Owen (2011) utilizes a grounded-theory approach to understand leader identity within college students but is reliant on a small sample size. While this study found that complex leader identities are related to move effective leadership behaviors, it leaves a gap for current researchers and practioners in generalizing these results.

College Student Leadership Development

Freshmen college students are malleable and sensitive to developmental experience. Thus continuing from high school to college in leadership development shows the beginnings of successful leader identity development during this sensitive period. Although research demonstrates that students begin to develop or increase their leadership knowledge, skills, and abilities during their college years (Mayhew et al., 2016), few studies have taken a comprehensive look at the leader development of students during their entire tenure at college. Developmental opportunities take many forms including academic (major, minor, or certification), curricular and co-curricular programs, and practice (formal leadership positions). The effectiveness of these opportunities is variable and inconsistent due to the range of topics covered and missions of each program (Dugan, 2011; Dugan, Kodama, & Gebhart, 2011). In addition, research indicates that students learn different things about leadership depending on their experiences (Sessa, Morgan, Kalenderli, & Hammond, 2014). Lord and Hall (2005) posit that leadership involves mixes of "behavioral, cognitive, and social skills" which are all learned during different leadership experiences and developed at different rates. Effective leadership is then reliant on the learning and integration of these skills into one's leader identity. Given the

number of developmental opportunities for college students, understanding who chooses what experiences and the trends of that participation is germane to understanding their consequences. The purpose of this research is to begin to understand which students pursue leader development opportunities and which pathways of leader development they choose.

In many colleges there are a myriad of options interested students can choose from to pursue their leader development including learning about leadership through formal education opportunities, developing leader skills and competencies through training and development opportunities, and enacting leadership via formal leader roles. Research suggests that the best approach integrates a mixture of all three (Sessa et al., 2014). However, little research has assessed which pathways, or participation themes, of leader development students choose when given an array of possibilities, leading to our first research question:

> *Research Question 1: When presented with an array of leader development possibilities including curricular, co-curricular, and practice opportunities, what pathways do students who are initially interested in their own leader development choose to pursue during their time in college?*

Antecedents to Leader Development Pathway Choice

Using Murphy and Johnson (2011) as a guide, I am next interested in determining if these constructs help determine which pathways they choose to pursue during college. In this paper, the relationships between demographic characteristics of gender, race, and SES, barriers to participation, psychosocial development, high school experiences, and motivations to pursue leadership development with pathways chosen are explored.

Demographics. Leader development processes differ across gender, race, and SES in college (Kezar & Moriaty, 2000; Soria, Hussein & Vu, 2014). For example, in terms of

participation in club leader roles, there is evidence that students of different races are more or less likely to participate, with whites and Asians more likely to participate and Blacks less likely to participate (see Cuyjet, 2006; Soria, et al., 2014). Those in a higher SES are also more likely to participate (Soria, et al., 2014). In addition, different types of involvement are helpful for developing leadership for different demographic groups (Kezar & Moriarty, 2004). In a similar vein, there is conflicting evidence surrounding the enactment of leadership and participation in leadership positions by gender (Dugan, 2006). Leadership research has been studied as and, likely as a result, stereotyped as "male" and this underlying assumption may limit participation of females and non-binary individuals (Eagly & Johnson, 1990; Renn, 2007). Definitions leadership has shifted over decades of research to include stereotypically feminine characteristics (e.g. relationship building, service) which may help encourage participation of non-males and may help elucidate gender differences between leadership identity development and enactment (Eagly & Johnson, 1990; Dugan, 2006). But no research has looked at how demographics impact choice of the leader development pathway chosen throughout college.

Barriers to Participation. Just as students are presented with an array of developmental opportunities, an array of constraints in a student's personal life may limit or entirely prohibit participation in leadership developmental opportunities. The prevalence of non-traditional students is increasing with 40% of undergraduate students being non-traditional (over 25 years old, low-income, employed full or part-time) (CLASP, 2015). Demands on personal life from financial constraints and familial obligations may take priority over attaining a leadership position or attending an external leadership development conference, for example. I am interested in how working (both on and off-campus), living location (both on and off-campus),

parental status, marital status and care-taker obligations affect leader development pathway chosen by these students.

Psychosocial Development. Psychosocial development relates to a person's psychological development in, and interaction with, the social environment. College years are formative in terms of psychosocial development as identified by previous research (Dunkel & Anthis, 2001). In terms of leadership, Flores, Matkin, Burbach, Quinn, and Harding (2010) suggest that this type of development helps students think about leadership differently, incorporating less self-focused views and more other-focused perspectives. In addition, recent theory and research suggests that psychological development and leader development are intertwined (Day, et al., 2009). However, little research has sought to investigate how these simultaneously occurring developmental processes influence one another. For this reason, I am interested in how differing levels of psychosocial development affects leadership developmental pathway.

High School Experiences. Leadership experiences can be attained prior to undergraduate education. Previous leadership experiences consistently predict taking on similar positions in college (Arvey, et al., 2007; Dugan & Komives, 2006; Kezar & Moriarty, 2000). Additionally, continuation of leadership enactment is an illustration of Day and colleagues' (2009) leadership identity-spirals. Based on previous research, I am interested in the effect that high school experience has on developmental pathway in terms of high school leadership experience, engagement, and GPA.

Motivational Readiness to Enact Leadership (MREL). An additional factor that may influence pathway choice is MREL. Previous research has defined MREL as having a general readiness to learn, identifying a leader possible self, being motivated to lead, and being

efficacious in leadership (Knudsen, Sessa, Bragger, & Toich, 2018). Freshman year MREL has also been found to be predictive of participation in clubs, leader roles, and co-curricular leader develop in sophomores (Knudsen et al., 2018). Literature in this domain is still developing, however, it is understood that MREL is centered on being "ready, willing, and able" to enact leadership likely making it influential on pathway choice. Although this research has collapsed these constructs as one variable, the current study examines these constructs individually.

General Readiness to Learn (GRL). Traditionally, readiness to learn, or the likelihood that one seeks knowledge and changes behavior as a result, is assessed in young children first entering school (Rubenson, 1998; Coolhan, Fantuzzo, Mendez, McDermott, 2000; Janus & Duku, 2007). Cognitive (e.g., concrete knowledge) and noncognitive (e.g., autonomy and adaptability) skills have been involved in the process of learning, both prior to and during learning episodes (Rubenson, 1998; Janus & Duku, 2007). In addition, other studies focus on the learning goal orientation, resilience, and self-regulation in addition to the previously discussed factors (Coolahan, et al., 2000). For the purpose of this study, the latter definition of readiness to learn will be used. Previous research has used these three constructs together to assess general readiness to learn (Knudsen et al., 2018). Student with a learning goal orientation (LGO) set goals to increase competence rather than to avoid negative judgement like those with performance goal orientation (Dweck, 1986). LGO has also been linked to leadership self-efficacy and effectiveness, making it a key component of readiness to learn (Hendricks & Payne, 2007). Second, resilience centers on adapting to difficult circumstances which is prevalent to students as they juggle multiple "hats" during their undergraduate careers (Reichard & Walker, 2016). Finally, self-regulation has been shown to be an essential component of leadership in that

those with high self-regulatory abilities are more willing to take on more challenging learning and leadership goals (Avolio & Vogelgeseng, 2011).

Leader Possible Selves (LPS). A possible self represents a future-oriented idea of what one could become, would like to become or are afraid of becoming as opposed to an actual self which is who one currently is (Marcus & Nurius, 1986). High degrees of difference between possible and actual selves provides motivation to develop toward the possible self, according to self-discrepancy theory (Higgins, 1987). Leadership is a domain in which a possible self could motivate a student to actively seek developmental opportunities. Previous research confirms that holding an LPS is associated with leader development and acquisition of leadership roles in a sample of college student leaders (Sessa, Bragger, Alonso, Knudsen, & Toich, 2018).

Motivation to Lead (MTL). Chan and Drasgow (2001) define motivation to lead (MTL) as a relatively stable trait that "affects a leader's or leader-to-be's decisions to assume leadership training, roles, and responsibilities and that affect his or her intensity of effort at leading and persistence as a leader". Increased MTL is related to increased engagement and interest in current leadership roles (Pintrich & Schunk, 1995). It is likely that highly motivated to lead students are involved in a multitude of opportunities or participate in leadership consistently. Lord and Hall (2005) argue that MTL is pivotal to seeking novel leadership experiences and continuing in current experiences.

Leadership Self-Efficacy (LSE). Bandura (1986) introduced self-efficacy which influences the choices you make, your aspirations, the amount of effort you put forth, perseverance, thought patterns, and amount of stress. Higher self-efficacy is also associated with setting higher, more challenging goals and standards. Positive experiences reinforce behavior while negative experiences sanction it and signal that the individual needs to solve that

discrepancy (if a task is valued) or to abandon effort (if a task is not valued; Bandura, 1991). One application of this theory is in leadership. Leadership self-efficacy is a belief that one can take on a leadership role, not only in acquiring a new role but also in pursuing additional opportunities for development (Avolio & Vogelgesang, 2011). Previous research has also discussed that young adults are more likely to develop LSE through leadership development opportunities and, at this age, LSE is fluid (Sorcher & Brant, 2002). However, as one ages, LSE becomes crystallized which further demonstrates the importance of developmental programs in college as it is within a sensitive period of development. As a student progress in undergraduate education, the leadership experiences they gather serve to reinforce or sanction leadership participation.

Together, these antecedents lead to our second research question:

Research Question 2: What are the relationships between demographic characteristics, barriers to participation, previous experiences, psychosocial development, and the facets of MREL in leader development pathway chosen?

Consequences of Leader Development Pathway Choice

Finally, I am interested in the consequences of participation in leader development pathway. These consequences are informed by Murphy and Johnson (2011

Grade Point Average (GPA). A body of empirical research has demonstrated an association between cognitive ability and leadership role occupancy (Judge et al., 2004; Kickul & Neuman, 2000; Lord, De Vader, & Alliger, 1986; Mumford, Campion, & Morgeson, 2007). For this reason, I expect that pathways with higher participation would result in higher GPAs.

Leadership Self-Efficacy. The accumulation of leadership experiences builds efficacy as posited by Day and colleague's (2009) leader identity-development spirals making it a likely

consequence of continued leadership participation. Continuation in these opportunities allows for more chances of success and increases the likelihood of continuing down the same course and expanding leadership involvement (Avolio & Vogelgesang, 2011). For this reason, we expect that over the course of a student's undergraduate career, LSE will differ by chosen pathway in that different developmental opportunities would allow students to interact more with others and offer more opportunities to be reinforced in their leader identities and leadership involvement.

Psychosocial Development. As previously mentioned, the development of leadership and psychosocial development is intertwined (Day et al., 2009). Through leadership experiences and general maturation processes, psychosocial development also develops and crystalizes into one's mid-twenties (Sorcher & Brant, 2002). Sessa and colleagues (2018) also found a small relationship between this development and leadership development participation. For these reasons, we are also interested in exploring this construct as a direct consequence of pathway choice.

Leadership Competencies. Leadership competencies are developed through experiences that help crystalize a leadership identity (Day et al., 2009). These competencies are then developed via leadership opportunities at undergraduate universities. Leadership competency change would then be the result of participatory experiences after completing one leadership opportunity (Fleishman et al., 2001; Mumford et. al., 2000; Yammarino, 2000). Because a multitude of opportunities exist within universities, there are opportunities to develop skills, and by extension, leadership competencies. For these reasons, I expect differences in leadership acquisition as a consequences of leadership pathway choice.

School Engagement. When engaging in leadership development opportunities in undergraduate careers, students may increasingly value and identify with their institutions and

the peers within them (Leithwood & Jantzi, 2000). Knudsen and colleagues (2018) also found consistent correlations between school engagement and subsequent years of leadership development participation indicating the potential for school engagement to change over time as a result of these participation opportunities. See Figure 2 for a model including antecedents and consequences to leader pathway.

Together these consequences lead to our final research question:

Research Question 3: What are the consequences of leader development pathway chosen based on GPA, LSE, Psychosocial Development, Leadership Competency, and School Engagement?

Method

Participants

Five universities were identified based on having a variety of requirements; (1) A first semester, freshman year leadership development program, (2) Continued opportunities to participate in leadership via clubs and on-campus jobs, leadership majors, minors, or certifications during all four years of undergraduate education, (3) Diversity in terms of university size, research classification, location, and demographic makeup of students. These university administrators recruited students for participation. Three of the five programs are co-curricular and two are curricular programs. See Table 1 for definitions of leadership development opportunities across all five universities. The universities differed in size (four large, one small), Carnegie classification (one teaching, four research), and public/private (four public, one private). A total of 423 participants were drawn from 1,820 first-semester students enrolled in leader development programs at five schools for an original response rate of 23%. Ninety-nine participants responded to all four years of surveys. Students were traditionally aged college

students with 68% female, 49% Caucasian, 14% Asian, 14% Hispanic, 8% African-American, and 15% coming from another racial group or having multiple racial identities.

Procedure

During all years of data collection, emails were sent to participants containing instructions and a participation link. Students were compensated $10 for participation freshman, sophomore, and junior years and $25 for senior year with at least 90% survey completion. In order to maximize the amount of data collected, students who did not complete the previous year's survey were given an extended survey the subsequent year to capture missing information. Results from each time's surveys were compiled into a single database.

Measures

See Table 2 for a clear delineation of constructs measured each year.

Demographics. These variables were measured on the freshman year survey. Gender was measured by asking "What is your gender?". Race was measured by asking participants "What is your race?" and providing single-select options as indicated by the US census. Socioeconomic status was measured by asking, "How would you describe your family's financial situation?".

Barriers to Participation. Employment status, living location, parental status and marital status were all measured using single-items on the sophomore year survey. Employment variables included an additional item to gather the total number of hours per week work. Living location variables included an additional item to gather the distance away from campus.

High School Experience. Past leadership experience was assessed on the following; (1) experience in leader roles during high school, (2) duration in leadership situations in high school and (3) perception of overall leadership experience in comparison to peers. Items were collapsed

into one scale measuring students' overall past leadership experience (α = .78). A 70-item Student Engagement and Family Culture Survey was used to measure high school engagement (Leithwood & Jantzi, 2000). In an effort to reduce survey items, only six subscales were selected from the measure resulting in a reliable 41 item scale (α = .93). Removed subscales included *Quality of Instruction, Family Educational Culture, and School Decision Making* as these subscales were not focused on the student themselves. These subscales were, rather, focused on family, teacher and school attitudes toward educational environments. The first subscale, *Responding to Requirements* was measured by 10 items such as "I always finish my schoolwork on time" (α = .81). *Class Related Initiative* contained 6 items such as "I put a lot of energy into my schoolwork" (α = .77). *Extracurricular Participation* was measured by four items that focused on participating in school events (e.g. plays, athletics, musicals) (α = .83). *A Sense of Belonging* was measured by 10 items such as "I feel that I belong at this school" (α = .90). *Valuing* was measured by seven items such as "I think schoolwork is really important" (α = .76). *Student Academic Self-Efficacy* was measured by five items such as "I am able to understand most of the material covered in my classes" (α = .81). High school GPA was measured using a single, self-report item.

Freshman Year Psychosocial Development. The Student Developmental Task and Lifestyle Assessment was used to measure psychosocial development (SDTLA; Winston, Miller, & Cooper, 1999). Two of three tasks were used: *Autonomy* which measures both instrumental, social, and emotional independence (e.g., "I satisfactorily accomplish all important daily tasks (e.g., class assignments, test preparation, room/apartment cleaning, eating, and sleeping)") and *Mature Interpersonal Relationships,* which measures whether students are shifting towards greater trust, independence, and individuality (e.g., "When I wish to be alone, I have difficulty

communicating my desire to others in a way that doesn't hurt their feelings (R)." The third task *Establishing and Clarifying* Purpose was removed from this study as it focused more on personal career development than interpersonal interactions. These facets were combined into a total score (α = .82).

Freshman Year Motivational Readiness to Enact Leadership. MREL was measured using multiple scales including Readiness to Learn, Leader Possible Self, Motivation to Lead, and Leadership Self-Efficacy.

*Freshman Year General Readiness to Learn***.** Readiness to learn included 101 questions determined by measuring openness to learning (VandeWall, 1997), self-regulation (Brown, Miller, & Lawendowski, 1999), and resilience (Wagnild, 1993). A single mean score was created for all of these variables (α = .70). Learning Goal Orientation was assessed using the learning goal orientation subscale within the 13-item Openness to Learning scale developed by VandeWall (1997). The Likert response scale was reduced from its original 7-point scale to 5-point scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree", (α = .89). Self-regulation was assessed using a 63-item measuring from Brown and colleagues (1999). While rationally-derived subscales existed within the measure, only the total score was used (α = .91). Finally, resilience was measured using 25 items from Wagnild (1993). Only the total score was used although the scale has two subscales, *Personal Competence* and *Acceptance of Self and Life* (α = .94).

*Freshman Year Leader Possible Self***.** A 10-item formative LPS scale (Sessa et al., 2018) was used to determine if students thought of leadership as something that they could develop and as something they wanted to develop within themselves. The measure includes five items that determine whether an individual sees leadership as something that is innate or that can be

developed (e.g., “Leadership is something that a person possesses inside themselves, similar to the way one is born intelligent or wit”; α = .69). An individual’s goals to become a leader was also assessed using five items (e.g., “My main goal professionally is to achieve a leadership position in my field of study”; α = .76). Response categories for both included “Strongly disagree”, “Disagree”, “Neither disagree nor agree”, “Agree”, and “Strongly agree”.

*Freshman Year Motivation to Lead***.** Chan and Drasgow (2001) developed a scale to measure MTL describing three types of motivation to be a leader. The first section of this scale is designed to measure Affective-identity MTL for example, “Most of the time, I prefer being a leader rather than a follower when working in a group” (α = .82). The next section is designed to measure Non-calculative MTL (e.g., “I am only interested to lead a group if there are clear directions”; α = .72). The last section is designed to measure Social-normative MTL, (e.g., “I feel that I have a duty to lead others if I am asked”; α = .73). The original 27-item measure was reduced to a 17 measure with nine items measuring affective-identity, four items measuring non-calculative, and four items measuring social normative motivation to lead. Only items from Chan and Drasgow (2001) with factor loadings of over .60 were retained.

Freshman Year Leadership Self-Efficacy. LSE was measured both freshman and senior years using a 22-item scale adapted from Hannah et al. (2012). Participants rated their level of confidence on a series of statements from 0 (no confidence at all) to 100 (complete confidence in ability). This scale has three facets including leader action self-efficacy (e.g., “As a leader I can energize my followers to achieve their best”), leader self-regulation (e.g., “As a leader I can determine what leadership style is needed in each situation”), leadership means efficacy (e.g., “As a leader I can effectively lead working within the boundaries of the organization’s policies”). For the purposes of this research we utilized the total mean scale score (α = .92).

Freshman Year Leadership Competency. These competencies were developed by one university's stakeholders for their leadership minor and then used for all participants across universities. Students were asked to assess themselves on these ten dimensions associated with effective leadership, including communication, critical thinking, strategic agility, inspiring and engaging others, commitment to lifelong learning, effective citizenship, results orientation, big picture thinking, community building, and ethics/values. Response options for these items ranged from 1 "early in development for a college student" to 5 "advanced for a college student". The overall scale was reliable ($\alpha = 91$).

Freshman and Sophomore Year Leadership Experience. Students indicated which leadership opportunities they completed in their freshman and sophomore year during the sophomore year of data collection. On-campus leadership positions were identified by each university's administrators (e.g., Resident Assistants, elected Student Government positions) prior to collection of the Freshman year survey and were used for each year's survey.

Junior Year Leadership Experience. Students indicated which leadership opportunities they completed their junior year during junior year data collection.

Junior Year Alternate Survey. Additional surveys were created to bolster participation. Alternate surveys were developed such that students that did not completed the sophomore year survey received a survey which asked about sophomore and junior year leadership opportunity participation during the junior year data collection period. Students that did complete freshman and sophomore year surveys only indicated which leadership opportunities they participated in during their junior year.

Senior Year GPA. GPA was determined by asking students "What is your GPA?"

Senior Year University Engagement. Senior year engagement was measured using the same scale as high school engagement from Leithwood & Jantzi (2000).

Senior Year Psychosocial Development. Senior year psychosocial development was measured using the same scale as Freshman year psychosocial development from Winston and colleagues (1999).

Senior Year Leadership Competency. This was assessed using the same university-developed competencies as assessed during the freshman year data collection period.

Senior Year Alternate Survey. Similar to junior year, alternate surveys were created for those that did not either complete the junior year survey or the sophomore and junior year survey. These students indicated which leadership experiences they participated in their junior and senior years or sophomore, junior, and senior years, respectively, during the senior year data collection period.

Analyses

Analyses were done in SPSS 25 and R. Developmental pathway variables were dummy coded (e.g., HighInvolvement = 0 or 1) and created as a single, separate ordinal variable (i.e., High, Mid and Low- Level Involvement = 1, 2, 3, respectively) in order to conduct chi-square, ordinal regression, and ANCOVA analyses. These variables were used to analyze hypothesized antecedents and consequences. Consequences were analyzed using the corresponding freshman year variable as a covariate.

Results

Two graduate students coded participation in academic, co-curricular, leadership development programs, and leadership positions for all four years of participants' using a compiled database (kappa = .87). These codings were compiled onto participation sheets that

contained participant identification number, freshman, sophomore, junior and senior year participation as described above, and club participation.

The principle investigators and one graduate student examined each student's participation sheet individually. Initially, one investigator and the graduate student looked at each participation sheet individually to examine the involvement across the participant's undergraduate career. Participants with similar overall participation were placed in piles. Each pile represented a pathway and after patterns were determined, definitions were created to clearly establish the inclusion criteria for each pathway. After pathways were established and defined, the two researchers independently sorted the participation sheets to ensure that categories were clearly defined (see Table 3). Finally, resulting categories were checked for accuracy and agreement after the confirmatory round of sorting using the second principle investigator who was not involved in the initial sorting stage. Coders agreed on participation sorting at 84.5% agreement (Fleiss's kappa = .82).

Three high-level pathways (*High Involvement*, *Mid-Level Involvement*, and *Low to No Involvement*) were identified with eight total sub-pathways being identified ranging from a highly mixed involvement in which students participated in coursework, formal leader development programs, and formal leader positions to minimal involvement in which students did not participate in any leader development (beyond club participation) past their freshman year. Two pathways emerged that focused on one category of development only and these focused on participation through leadership positions (*Positional* and *Low Positional Involvement*) The majority (61%) of participants were in the High Involvement category and 21% were in the *Mid-Level Involvement* pathway while the minority of participants (16%) were in *the Low to No Involvement* pathway. This indicates that the majority of students that

participate in these freshman year, first semester leadership development programs continue on in leadership positions, academic opportunities and leadership development programs throughout their undergraduate experiences.

For the purpose of this research, we analyzed the pathways at the higher-level (*High*, *Mid-Level*, *Low to No Involvement*) rather than sub-pathways because of power concerns based on the small sample size in this initial sample. See Table 4 for correlations between constructs of interest.

In order to examine *Research Question 2*, a series of chi-squares and ordinal regressions were performed between the three high-level categories of the pathways and the set of antecedents. Three sets of analyses were conducted: (1) Chi-squares on demographic variables and barriers to participation, (2) An ordinal regression for high school experiences and (3) An ordinal regression for leadership and developmental component variables. First, six separate chi-square analyses were conducted by pathway membership and gender, socioeconomic status, race, living on or off campus, working on or off campus, and being a caregiver, parent or spouse. No significant differences were found which indicates that these three pathways are comprised of similar groups of students from a demographics standpoint. Second, ordinal regressions between pathways and high school experience variables and leadership-related variables were conducted. The analysis between high school experience variables (leadership experience, engagement, GPA) was not significant indicating that longitudinally, high school experiences were not impactful on leadership developmental pathway choice in college. Leadership and psychosocial development variables (MREL facets and psychosocial development) included similar, non-significant findings indicating that these variables are not predictive of leader developmental

pathway. In answer to the second research, I did not find antecedents for leader developmental pathway. See Tables 5 through 7 for results from these analyses.

In order to examine *Research Question 3*, a series of One-way ANCOVAs were conducted to determine whether statistically significant difference between developmental pathway (High, Mid and Low-level involvement) and senior year GPA, LSE, Psychosocial Development, Leadership Competency, and School Engagement, controlling for the respective freshman year variable. Of these ANCOVAs, two were significant. There was a significant effect of developmental pathway on senior year psychosocial development after controlling for freshman year psychosocial development, such that Low to No Involvement students were significantly less psychosocially developed than High Involvement students, $F(2, 95) = 4.56$, $p < .05$. There was also a significant main effect for senior year school engagement after controlling for high school engagement such that Low to No Involvement students were significantly less engaged than High Involvement students, $F(2, 95) = 3.80$, $p < .05$. There were also marginally significant differences between High Involvement and Mid-Level Involvement with the former reporting higher engagement than the latter. See Tables 8 through 12.

Discussion

Findings

The purpose of this exploratory study was to first develop thematic participation pathways for college student leaders then analyze the antecedents to and consequences of these pathways. The first research question aimed to understand the pathways, or participation themes, of college students throughout their four years of undergraduate education. After multiple rounds of sorting, discussing and examining each student's participation, eight pathways were developed with high inter-rater agreement. A quarter of the students in this study participated in

multiple leader roles, leader academic programs, and co-curricular leader development programs indicating that they were engaged in activities that allowed them to learn about leadership, develop leader skills and competencies, and actually do leadership beyond freshman year thus integrating all three opportunities which research suggests is the best approach (see Sessa, et al., 2014). Another quarter participated in multiple leader roles along with either academic programs or co-curricular programs. Some participated in only leader positions (eight held at least three positions, while five held only two positions). The minority of participants dropped out of leadership involvement or only participated in clubs after freshman year. While the hope would be for these students to continue on in leadership development through aforementioned opportunities, it is heartening that these "drop outs" were a minority. Taken together, this suggests that students who enter college directly into leader development programs continue with high levels of leader involvement throughout their college tenure.

The second research question aimed to understand the antecedents to these pathways. We tested gender, SES, race, MREL facets, High School experiences, and psychosocial development. None of those constructs were related to pathway. This finding indicates that students do not enter these pathways with different backgrounds or early developmental factors. While the purpose of this research was to examine antecedents to pathways, it is heartening that no differences emerged. Differences could have indicated that certain experiences are unattractive (e.g., leadership development programs are known as a negative experience) for certain groups or people of different abilities.

The final research question examined the consequences of these pathways in terms of LSE, psychosocial development, leadership competency, school engagement and GPA. Students that were highly mixed in their involvement were both higher in psychosocial development and

more engaged. Both of these results are in-line with previous findings that indicate that high-levels of involvement in university activities increases school engagement and psychosocial development (Leithwood & Jantzi, 2000; Knudsen et al., 2018). This study provides evidence that involvement in multiple types of leadership development (leader development programs, positions, and academics) influences increased psychosocial development and school engagement. Preliminary findings are in line with theory and research that is demonstrating that the psychological development of adults is intertwined with their leadership development (see Day et al., 2009). The consequences portion of this research will shed light on how a spectrum of leadership developmental opportunities impact students over time. However, the lack of significance for other variables from these analyses suggest that something other than these variables predict which pathways students decide to take. Other possibilities include conversations with or modeling of mentors and role models or rewards associated with participating (e.g., tuition reimbursements, school swag, or social status of that opportunity).

Theoretical Implications

This study contributes to the literature in a number of ways. First, this is the first time pathways of leadership involvement from all four years of students' undergraduate career are developed. Second, it provides empirical evidence for the consequences of these programs in psychosocial development and school engagement. Third, the results show evidence both for Day and colleagues (2009) leader identity-development spirals and for leader identity development during this sensitive developmental period in undergraduate careers. Fourth, this paper sets the stage for the continuation of the examination of developmental pathways. Ultimately, the more developmental experiences a student has, the more benefit that is reaped senior year.

Practical Implications

Leader development and leader identity development happen throughout a lifespan. That is why researchers have indicated that they develop during sensitive and not critical periods (Murphy & Johnson, 2011). Understanding how these freshman year programs impact, inspire, and set the stage for future development is pivotal to understanding what changes are needed. As previously discussed, the sheer prevalence of these programs along with the cost per student clearly demonstrates the need for this research in order to understand the impacts and trends of participation after freshman year. Results of each research shows how differences in participation does not necessarily translate to differences in outcomes. So nearly every student that participates in these freshmen year programs, continues on throughout their undergraduate experience. This is great news because the programs work by encouraging future participation (and likely through the development of LSE and leader identity). The work that these students do through leadership benefits the university environment and justifies the development and orchestration of these programs. The university benefits of these programs may be furthered by encouraging a diversity of participation in leader developmental opportunities.

Limitations and Future Research

While this research is necessary, it is not without its limitations. The first set of limitations relates to our sample. Each of the universities require self-selection into the freshman year leadership program. Thus, all participants enter into these programs interested in leadership. It would be expected that motivation to lead, or the motivation to participate in leadership programs as assessed within this study, would be significantly higher than non-participant students because selecting into these programs would reflect some aspect of willingness to lead. The effect of this bias could not be fully probed as there was not a control group with students

from these universities that did not participate in these freshman year programs, which is another limitation relating to sample. The inclusion of a control group would have allowed the examination of the differences between those that self-select into these programs and those that do not. Future research should include a control group of students that did not self-select into these programs. It would be of interest to see whether or not all students regardless of early interest have the same developmental pathways or if they diverge into new pathways.

Adding more participants would also remedy the second limitation relating to sample size. The overall sample size (n = 99) was resulted in reduced overall power in analyses. The sample was further reduced by separating students into the eight pathways which reduce sample size further. Because of this limitation, using more advanced analyses and pathway analyses were not possible. A second cohort of students and data relating to post-graduation outcomes will be added to this study. An increased sample size will not only allow for additional statistical power, it will also allow for different analyses to be done. Examining the relationships between the developed pathways and post-graduation outcomes is of particular interest to practioners. It is possible that the high involvement of these students translates to early enactment of leadership in work roles as this would be in line with Lord and Hall's (2005) work that states that leadership experiences build on each other and lead to later leader effectiveness.

This research was also entirely reliant on self-report data. In the future, interview and supervisor data will be collected. It is important to understand *why* students are participating in the activities they are and why they are not selecting others. In addition, supervisor data is of interest because it is a more accurate reflection of the leadership competencies that are learned and enacted in these leadership opportunities. Supervisor data will also shed light on the

attractiveness of candidates with rich leadership experiences and learnings and will add to the body of knowledge within the field.

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Table 1

Definitions for Categories of Involvement

Category	Definitions	Category Subcomponents	Example of Participation
Academic	Participation in leadership-focused coursework and/or declaration of university-specific leadership major, minor or certification program.	Coursework	Psychology of Leadership: Theory and Application
		Major/Minor/Certification	Minor in Leadership Development Through Civic Engagement
Leadership Development Program	Involvement in co-curricular (organization or university program), curricular (course-focused program), and external leadrship development programs (e.g., LeaderShape, participation in leadership conference).	Leadership Development Program (co-curricular and curricular).	Emerging Leadership Learning Community
		External Leadership Program	LeaderShape participant
Leadership Positions	Acquisition of a formal leadership role and title in student lead organizations, work, or community organizations. These roles were either elected (formal election process), selected (requiring an application or interview), or volunteer(selecting into a leader role)	Elected Position	Student Government Legislator
		Selected Position	Resident Assistant
		Volunteer Position	Food Ambassador at Community Shelter

Note. Each year's survey contained items specifically measuring each of these variables.

Table 2

Yearly Survey Measures

Undergraduate Year	Measured Constructs
Freshman	Demographics
	High School Leadership Position Participation
	High School Engagement
	High School GPA
	Psychosocial Development
	Leadership Competency
	General Readiness to Learn
	Motivation to Lead
	Leadership Self-Efficacy
	Leader Possible Selves
	Current Leadership Participation
Sophomore	Barriers to Participation
	Current Leadership Participation
Junior	Current Leadership Participation
Senior	Psychosocial Development
	School Engagement
	GPA
	Psychosocial Development
	Leadership Competency
	Leadership Self-Efficacy
	Current Leadership Participation

Note. Other constructs were also measured during these data collection time periods but were not included here as they are not of interest to this study.

Table 3

Pathway Category Definitions

Category Name	Definition	*N*
	High-Level Involvement	
Highly Mixed Involvement (HMI)	One class, leadership positions, leadership development program participation	26
Positional and Academic Involvement (PAI)	Two classes or declaration of major, minor, or certification and two leadership positions	16
Positional and Leadership Development Involvement (PLDI)	Multiple leadership positions and participation in leadership development program	11
Positional Involvement (PI)	One leadership development program and 3 leadership positions	8
	Mid-Level Involvement	
Low Mixed Involvement (LMI)	Maximum of three aspects of participation. Combination of all levels of involvement	16
Low Positional Involvement (LPI)	Only two leadership positions	5
	Low-Level Involvement	
Single Involvement (SI)	Any one level of involvement	8
Minimal Involvement (MI)	Only club participation or no participation after freshman year	8

Table 4

Means, Standard Deviations, and Correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1. HI	0.63	0.49																											
2. MI	0.21	0.41	-.67**																										
3. LI	0.16	0.37	-.51**	-.23*																									
4. Gender	0.32	0.47	-0.01	-0.04	0.05																								
5. Race	0.49	0.50	.21*	-0.11	-0.10	0.10																							
6. SES	2.81	1.27	0.02	0.10	-0.06	0.12	.27**																						
7. Campus Living	0.41	0.49	0.05	0.02	-0.03	-0.14	0.00	-0.12																					
8. On-Campus Work	0.27	0.45	0.09	0.02	-0.08	0.02	0.03	-0.16	.55**																				
9. Off-Campus Work	0.18	0.39	-0.13	0.08	0.08	0.12	0.06	-0.05	0.09	-0.11																			
10. Care Giver	0.13	0.34	-0.02	0.02	0.00	-0.08	-0.09	0.01	0.10	0.04	-0.19																		
11. Parental Status	0.02	0.14	0.11	-0.07	-0.06	-0.10	-0.14	0.08	0.17	-0.09	.30**	-0.06																	
12. Marital Status	0.96	0.20	-0.16	0.11	0.09	0.03	0.00	-0.07	-0.14	-0.11	-0.04	-0.07	-.34**																
13. SDTLA 1	2.96	1.66	0.19	-0.18	-0.06	0.12	.33**	.20*	-0.16	0.09	-0.06	0.06	0.09	-0.04															
14. HS GPA	3.10	1.40	-0.03	0.05	0.00	0.04	.31**	0.19	-0.14	-0.03	-0.08	0.00	-0.12	-0.06	.32**														
15. HS Lead	2.98	1.01	0.01	-0.07	0.03	-0.15	0.13	0.16	0.01	-0.02	.26**	-0.18	.23*	-0.10	.25*	0.14													
16. HS SchEng	3.99	0.76	0.02	0.04	-0.03	-0.09	0.16	.36**	0.01	0.08	0.01	-.20*	0.01	-0.11	.26**	.28**	.48**												
17. GRL	4.06	0.94	-0.08	0.08	0.01	-0.06	.22*	.32**	0.07	0.06	0.14	-0.11	0.09	-0.10	.41**	.29**	.51**	.61**											
18. LPS	3.38	0.94	0.04	0.07	-0.11	0.09	.29**	.48**	0.03	0.08	-0.02	-0.08	0.08	-0.15	.41**	.42**	.37**	.45**	.69**										
19. MTLaff	3.37	1.03	-0.03	0.15	-0.11	-0.02	.20*	.44**	0.00	0.04	0.08	-0.07	0.04	-0.04	.40**	.37**	.50**	.45**	.69**	.79**									
20. MTLnc	3.33	1.12	0.04	0.07	-0.12	-0.11	.25*	.35**	-0.05	-0.05	0.07	-0.04	0.12	-0.13	.34**	.39**	.42**	.43**	.66**	.77**	.71**								
21. MTLsoc	3.73	1.15	0.02	0.12	-0.15	-0.01	.28**	.45**	-0.05	0.06	0.04	-0.08	0.13	-0.15	.40**	.39**	.47**	.47**	.68**	.80**	.77**	.75**							
22. LSE 1	3.30	1.57	0.13	-0.11	-0.02	0.03	.35**	.39**	-.22*	-0.01	0.03	-0.03	-0.10	0.03	.55**	.36**	.34**	.32**	.45**	.50**	.54**	.43**	.49**						
23. Lead Comp 1	3.45	0.97	0.03	0.01	-0.03	0.07	.32**	.40**	-0.13	0.00	0.06	-0.14	0.10	-0.07	.49**	.33**	.56**	.46**	.72**	.75**	.73**	.73**	.73**	.57**					
24. GPA 4	3.43	0.36	0.10	0.03	-0.10	0.01	0.06	-0.02	0.01	-0.01	-0.03	-0.09	0.02	0.00	-0.01	0.04	-0.08	-0.03	-0.01	-0.04	0.04	-0.06	0.00	.25*	0.00				
25. LSE 4	3.24	0.65	0.04	0.14	-0.18	-0.04	0.11	0.15	-0.01	0.10	-0.05	-0.04	0.14	-0.09	-0.03	-0.03	-0.09	-0.07	-0.03	0.03	-0.12	-0.09	0.06	-0.09	-0.06	0.15			
26. SDTLA 4	2.43	0.11	.29**	-0.02	-.30**	-0.03	.27**	0.15	-0.08	-0.01	0.08	-0.20	0.12	-0.06	0.16	-0.01	.23*	0.04	0.09	0.07	0.19	0.02	0.16	.36**	0.10	.32**	0.16		
27. Lead Comp 4	3.86	0.52	0.15	0.08	-.21*	-0.03	0.04	0.00	0.07	0.16	0.12	-0.16	0.18	0.08	0.04	-0.12	0.05	-0.03	-0.01	-0.04	-0.03	-0.16	0.10	0.05	-0.12	0.13	.52**	.39**	
28. SchEng4	2.50	0.66	-.27**	0.13	0.18	0.00	-0.07	0.00	0.13	0.03	0.00	0.13	-0.12	-0.14	-.24*	0.01	-0.06	0.12	0.10	0.16	0.12	0.16	0.07	-.40**	0.06	-.43**	-.21*	-.39**	-.42**

Note. HI = High Involvement Pathway; MI = Mid-Level Involvement Pathway; LI = Low to No Involvement Pathway; SES = Socioeconomic Status; SDTLA 1 = Freshman Year Psychosocial Development; HS SchEng = High School Engagement; GRL = General Readiness to Learn; LPS = Leader Possible Selves; MTL = Motivation to Lead; aff = Affective; nc = Non-calculative; soc = Social-normative; LSE1 = Freshman Leadership Self-Efficacy; Lead Comp 1 = Freshman Leadership Competency; SDTLA 4 = Senior Year Psychosocial Development; Lead Comp 4 = Senior Leadership Competency; SchEng 4 = Senior School Engagement

*$p < .05$, ** $p < .01$

Table 5

Results of Chi-Square Analyses by Pathway and Demographic Variables

	Gender		SES					Race				
Pathway	Female	Male	Well Above Average	Somewhat Above Average	Average	Somewhat Below Average	Well Below Average	Other	White	Black	Hispanic	Asian
High-Level	41 (60.3%)	20 (62.5%)	3 (60%)	19 (61.3%)	18 (54.5%)	16 (72.7%)	5 (55.6%)	10 (66.7%)	33 (67.3%)	2 (25.0%)	10 (71.4%)	6 (42.9%)
Mid-Level	15 (22.1%)	6 (18.8%)	1 (20.0%)	6 (19.4%)	7 (21.2%)	5 (22.7%)	2 (22.2%)	4 (26.7%)	8 (16.3%)	4 (50.0%)	2 (14.3%)	3 (21.4%)
Low to No	12 (17.6%)	6 (18.8%)	1 (20.0%)	6 (19.4%)	8 (24.2%)	1 (4.5%)	2 (22.2%)	1 (6.7%)	8 (16.3%)	2 (25.0%)	2 (14.3%)	5 (35.7%)
χ^2	.15		3.91					11.26				

Note. Percentages reflect the column percentage of participants from that group.

Table 6

Results of Chi-Square Analyses By Pathway and Barriers to Participation Variables

	Employment Status		Living Location		Parental Status		Marital Status		Caregiver Status	
Pathway	Unemployed	Employed	Off-Campus	On-Campus	Non-Parent	Parent	Unmarried	Married	Caregiver	Non-caregiver
High-Level	35 (60.3%)	26 (61.9%)	35 (59.3%)	26 (63.4%)	59 (60.2%)	2 (100%)	57 (59.4%)	4 (100%)	7 (53.8%)	53 (63.1%)
Mid-Level	12 (20.7%)	9 (21.4%)	12 (20.3%)	9 (22.0%)	21 (21.4%)	0 (0%)	21 (21.9%)	0 (0%)	3 (23.1%)	17 (20.2%)
Low to No	11 (19.0%)	7 (16.7%)	12 (20.3%)	6 (14.6%)	18 (18.4%)	0 (0%)	18 (18.8%)	0 (0%)	3 (23.1%)	14 (16.7%)
χ^2	.09		.53		1.31		2.66		.46	

Note. Percentages reflect the column percentage of participants from that group.

Table 7

Ordinal Regressions Predicting Leader Development Pathway Choice

Model	Variable	B	*SE*
1	HS GPA	6.55	91.73
	HS Leader Experience	5.96	17.57
	HS Engagement	8.79	.00
2	GRL	-26.62	29333.83
	LPS	-53.16	1561.39
	MTL- Aff	106.32	2635.57
	MTL- NC	79.78	2443.98
	MTL- SN	26.54	3403.62
	Psych Dev	3.24	1638.93

Note. HS GPA = High School GPA, GRL = General Readiness to Learn, LPS = Leader Possible Selves, MTL = Motivation to Lead, Aff = Affective, NC = Non-Calculative, SN = Social-Normative, Psych Dev = Psychosocial Development.

Table 8

ANCOVA Results for Pathway and Senior Year GPA

	df	SS	*MS*	*F*	*p*
HS GPA	1	0.02	0.02	0.13	0.72
Pathway	2	0.09	0.04	0.32	0.73

Note. HS GPA = High school GPA. HS GPA was used as a covariate.

Table 9

ANCOVA Results for Pathway and Senior Year LSE

	df	SS	*MS*	*F*	*p*
Fresh LSE	1	0.24	0.24	0.59	0.45
Pathway	2	1.56	0.78	1.87	0.16

Note. Fresh LSE = Freshman Year Leadership Self-Efficacy. Freshman year LSE was used as a covariate.

Table 10
ANCOVA Results for Pathway and Senior Year Leadership Competency

	df	SS	*MS*	*F*	*p*
Fresh LC	1	0.43	0.43	1.67	0.20
Pathway	2	1.59	0.79	3.07	0.06

Note. Fresh LC = Freshman Year Leadership Competency Freshman year LC was used as a covariate.

Table 11
ANCOVA Results for Pathway and Senior Year School Engagement

	df	SS	*MS*	*F*	*p*
HS SchEng	1	0.67	0.67	1.67	0.20
Pathway	2	3.07	1.54	3.80	.02*

Note. HS SchEng = High School Engagement. HS SchEng was used as a covariate.
*$p < .05$

Table 12
ANCOVA Results for Pathway and Senior Year Psychosocial Development

	df	SS	*MS*	*F*	*p*
Fresh Psych Dev	1	0.67	0.67	1.67	0.20
Pathway	2	3.07	1.54	3.80	.013*

Note. Fresh Psych Dev = Freshman Year Psychosocial Development. Fresh Psych Dev was used as a covariate.
*$p < .05$

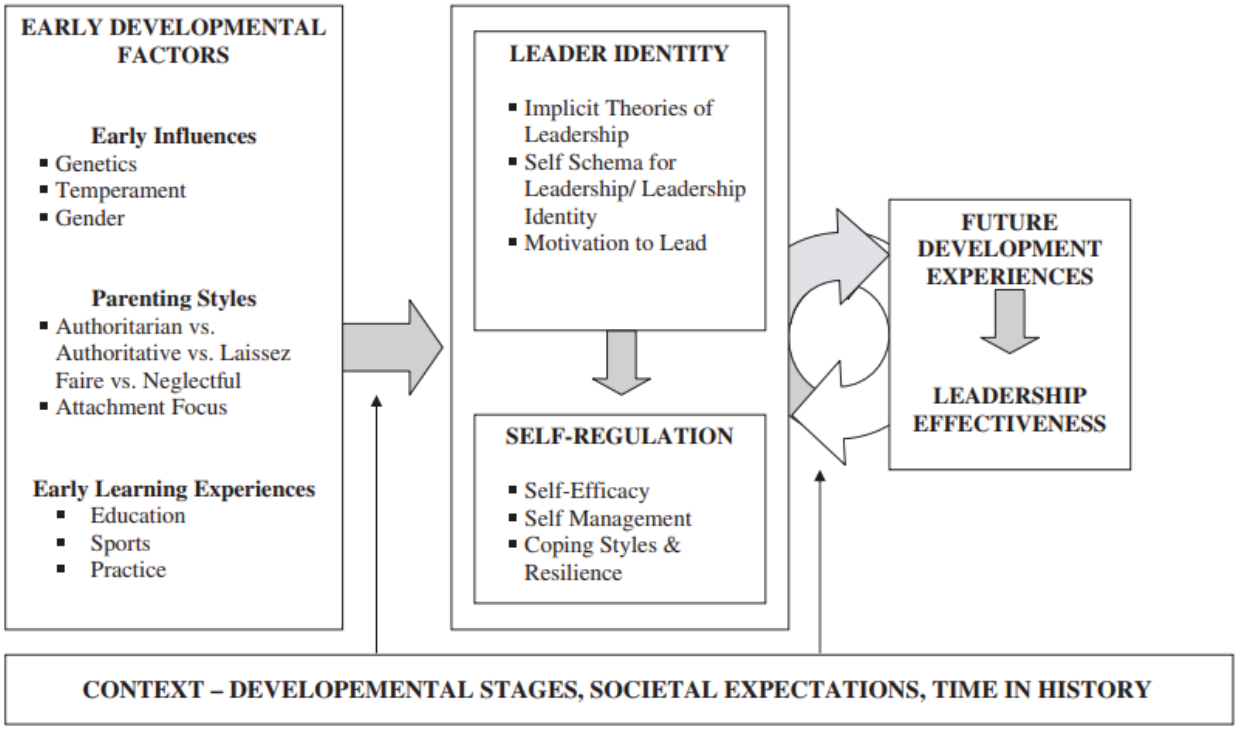

Figure 1. A life span approach to leader development as developed by Murphy & Johnson (2011).

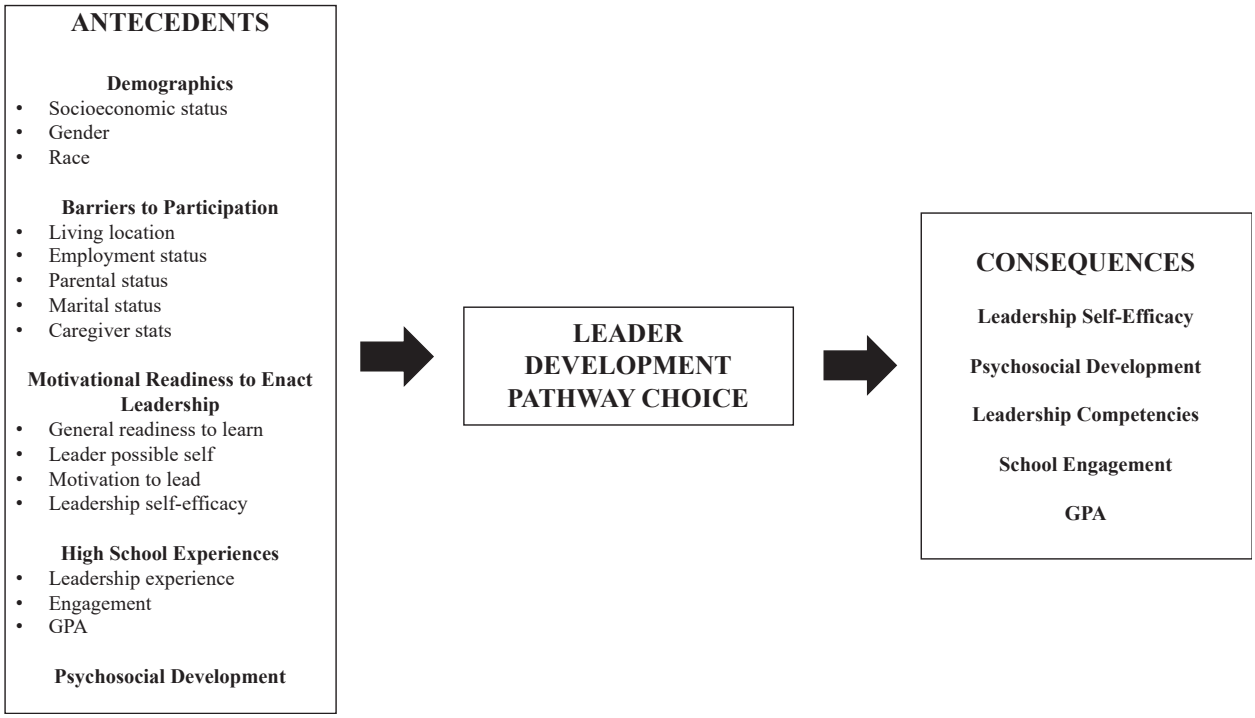

Figure 2. Antecedents and consequences to leader development pathway choice.