Predicting Socioeconomic Success and Mental Health Outcomes for Young Adults who Dropped Out of College

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Abstract

This dissertation is comprised of two studies that both aimed to understand the population of young adults who dropped out of college. Life course theory and the theory of emerging adulthood were used to create the theoretical foundation for the studies. The first study explored how students who dropped out of college were faring during young adulthood on multiple measures of well-being (personal income, job satisfaction, subjective socioeconomic success, mastery, happiness, depression, and stress). Five latent classes emerged from the data, which demonstrated the heterogeneity within the sample (N = 1,530). The second study then utilized the same sample to examine how transitions into adulthood predicted well-being during young adulthood while controlling for family of origin resources and developmental assets. The transitions to adulthood included timing of marriage, parenthood, and whether or not the young adult was living independently of their parents or not. The hypotheses based on theory were partially supported, with some differences existing between men and women. The discussion reviews the implications for practice and policy.

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Introduction

The issue of dropping out of college has strong historical roots in higher education (Astin, 1964; Bayer, 1968) and continues to be an important topic for current research. First, it is important to highlight current statistics related to the college experience in order to understand this population. The enrollment of young adults in college two years after high school rose 22 percent between 1974 and 2006 (Ingels, Glennie, Lauff, & Wirt, 2012) and will continue to increase in the next decade (Hussar & Bailey, 2013). However, despite increased attendance in college, only 24 percent of individuals 25-34 years old have obtained a bachelor's degree and 9.5 percent have obtained an associate's degree (U.S. Census Bureau, 2012a). Among first-time, full-time students, 32 percent do not complete a bachelor's degree within six years (U.S. Department of Education, 2012). The background characteristics of students who are enrolling in postsecondary institutions has changed and includes more students who are less prepared academically and have fewer resources, which leads to lower college completion rates (Bound, Lovenheim, & Turner, 2009). These statistics show there are large numbers of young adults who want to attend college, start college, but do not complete degrees.

The attention paid to students who drop out is lacking, especially as national objectives are focused on increasing college attendance and degree completion (Obama, 2009), rather than focused on how these large groups of students who drop out are faring in young adulthood. Young adults are also dealing with other life transitions simultaneously, including the possibilities of marriage, parenthood, and independent living (Arnett, 2006). This study will specifically focus on students who drop out and their experiences from adolescence into young adulthood. Students who drop out are defined in this study as young adults who previously attempted some college after high school, but did not complete any degree or certificate program.

Young adult well-being is defined in this study as the seven observed measures of personal income, job satisfaction, subjective SES, mastery, happiness, depression, and stress.

Research Questions

This dissertation is comprised of two studies that both aimed to understand the population of young adults who dropped out of college. The first study explored how students who drop out were faring during young adulthood on multiple measures of well-being. The second study then examined how family of origin resources, adolescent assets, and transitions into adulthood predicted the well-being of students who dropped out. These two studies are distinct in the specific research questions, outlined below.

RQ1: What are the patterns and groupings of multiple measures of well-being among college students who have dropped out?

The way current research about educational attainment is conducted leads to an assumption that all college students who drop out must be failing in young adulthood compared to peers who complete degrees, as discussed in the following sections. This study aimed to show that there is heterogeneity within the population of college students who drop out. To provide a point of comparison with previous studies showing more negative outcomes for dropouts, I established that the mean scores of well-being in young adulthood were statistically different for college students who dropped out compared to peers who completed a bachelor's degree. In line with previous research, I hypothesized that bachelor's degree recipients had higher or better scores on family SES sources, assets, and outcomes of well-being as compared to peers who dropped out of college. Considering the framework of life course theory, I hypothesized that bachelor's degree recipients had lower rates of marriage and first births, but higher rates of living outside the parental home as compared to peers who dropped out of college.

Next, I aimed to understand the patterns and groupings of well-being among students who dropped out of college on seven measures of well-being: personal income, job satisfaction, subjective SES, mastery, happiness, depression, and stress. There were many possibilities of patterns and groupings within these measures of well-being. Because the literature rarely focuses on college students who dropped out as a heterogeneous population, it was unclear how patterns and groupings of well-being would emerge. Some college students who dropped out could have high income and high happiness, while others could have high income and low happiness. I expected that not all of the measures of well-being would be highly correlated and there would be a substantial amount of variation within this population. Therefore, the possible patterns and groupings needed to be examined with an exploratory method that centered on the person. This study used a form of latent class analysis to answer this first research question, as described further in the data analysis plan section.

While the latent class analysis was exploratory, theory and research guided my expectations. I hypothesized the latent class analysis would reveal at least four different groups of well-being patterns among college students who dropped out. I expected a very high group on all the measures: high income, high happiness, high job satisfaction, high mastery, and low scores on depression and stress. I also expected a very low group on all of the measures: low income, low happiness, low job satisfaction, low mastery, and high scores on depression and stress. The two or three middle groups from the latent class analysis were hypothesized to be the most interesting because they could have the same level of income, but different scores on the other measures of well-being. I hypothesized that one of the middle groups would be happier and less depressed than the other middle group and the process of determining the differences between those groups led to the next research question.

RQ2: What predicts the well-being of college student dropouts in young adulthood?

After the well-being of college student dropouts was distinguished by patterns and groupings, I examined what resources, assets, and markers of adulthood predicted the measures of well-being. Underlying this research question was the assumption that traditionally established relations between assets and well-being were robust in this subpopulation. As supported by the research literature discussed below, higher amounts of resources and assets during adolescence should have been significant and positive predictors of young adult well-being. The main point in these models was to specifically examine how timing of markers of adulthood additionally predicted measures of well-being.

My hypotheses were based on what is known about recent cohorts of young adults in the United States and the framework of life course theory. According to the literature reviewed later in this dissertation, marriage generally has a positive influence on well-being, especially for individuals who marry later in young adulthood. For this study, I hypothesized that individuals who married after the age of 23 would have higher socioeconomic success and mental health in young adulthood compared to single individuals and peers who married before age 23. Individuals who married before the age of 23 were hypothesized to have higher socioeconomic success and mental health as compared to never married peers. The literature about parenthood for the general population was very clear about the negative effects having a child tends to have on outcomes of well-being. Therefore, I hypothesized that becoming a parent would negatively influence all outcomes of well-being, especially for young adults who had their first child before age 23. The literature reviewed below also described living independently from parents as a positive influence on outcomes of well-being for the general population. In this sample, I

hypothesized that living independently from parents would positively influence all outcomes of well-being.

It was possible that the markers of adulthood could be different for this specific subpopulation of young adults who failed at the on-time transition of completing their attempted education. For example, perhaps becoming a parent actually boosted mental health for young adults who dropped out of college. That type of finding would be contradictory to what research has concluded about the overall cohort of current young adults in the United States, but possible because so little is known specifically about young adults who drop out of college. That contradictory finding would be important to know about this population when targeting funding and interventions for new parents. Overall, I predicted that family resources, adolescent assets, and transitions of adulthood would significantly predict the multiple measures of well-being in young adulthood. This research question was best answered through the use of latent regression analysis, which is discussed below in the data analysis plan section.

Theoretical Framework

The process of becoming a young adult who dropped out of college was best situated within the theoretical framework of life course theory. The main purpose of life course theory is to examine and explain change in lives over time (Mayer, 2009). Arnett (2000) defines emerging adulthood as occurring between the late teens and twenties and as a time period in which a person feels they have not yet reached adulthood. This study specifically examined the changing experiences that led to becoming a college student dropout. One of the main assumptions of the theory is that prior experiences in life are predictors of future life outcomes (Mayer, 2009). Therefore, this study examined how the combination of resources and assets in adolescence and transitions in emerging adulthood were predictors of well-being in young

adulthood. Life course theory also emphasizes the importance of studying multiple life domains. This study examined several domains simultaneously, including school, family, and neighborhoods.

After highlighting the major tenets, there are also key concepts within life course theory that relate to this study (Macmillan & Copher, 2005). First, individuals have roles that have multiple configurations. Roles include being a student, worker, spouse, or parent. Individuals can be both a student and a parent. These roles have trajectories that can be temporary. For example, an individual may not always be a student. Within these trajectories, transitions can occur. For example, a worker can obtain a job. This process of obtaining a job is a transition. During young adulthood, there are five main transitions, or markers, that tend to occur for most individuals (Osgood, Ruth, Eccles, Jacobs, & Barber, 2005). These markers include: completing school, moving out of the parental home, obtaining full-time work, getting married, and becoming a parent. This study specifically focused on young adults who had not completed postsecondary schooling and examined the other transitions to adulthood simultaneously.

Life course theory posits that these markers can follow pathways, or societal trajectories. There are cultural rules about how and when these transitions should occur. For example, in the U.S., the traditional process is to finish college before getting married. Individuals can choose to get married before finishing college, but current U.S. society views that as an untraditional path (Marquardt, Blankenhorn, Lerman, Malone-Colón, & Wilcox, 2012). Obtaining a college degree and waiting to have children has a distinct advantage for financial success, but this is not always the typical pathway that emerging adults experience. In recent decades, these pathways have quickly changed and involve more pathways than once followed (Arnett, 2006). The median age of marriage, college enrollment, and rates of moving locations have all dramatically increased

for emerging adults over the past century. Recent generations of adolescents and young adults have been considered to have a prolonged adolescence with lack of responsibilities and a prolonged moratorium within life stages (Erikson, 1968). This is particularly true between the ages of 18-25 as adolescents become emerging adults with some responsibilities but are still trying to decide on their future life paths. Because of these changes, it is even more important to study these pathways in current research.

The concepts of timing and historical contexts were the foundation for the creation of life course theory as researchers realized that events such as the Great Depression and World War II influenced cohorts differently (Elder, 2002). For example, children who experienced these events were generally resilient to the long-term effects of the historical events, but earlier cohorts who experienced the events during young adulthood tended to suffer with lower well-being and satisfaction (Elder, 1999). The characteristics of the individuals, such as gender and social standing, also influenced how they experienced the life events. The combination of the individual's personality and self-selection into new situations created a cumulative continuity that led to many possible outcomes (Caspi, Bem, & Elder, 1989). For example, a shy man who experienced war as he was becoming a young adult would have a very different path in his life course compared to an outgoing man who experienced war as a child. There are many life course path possibilities in this study as well.

The current study focused on a U.S. population that experienced adolescence in the late 1990s and young adulthood at the turn of the millennium. These young adults specifically grew up in a time when "college for all" was the mentality and the main curriculum in high schools was to prepare students for college instead of careers (Rosenbaum, Stephan, & Rosenbaum, 2010). This time was very different from their parents' historical timing of young adulthood,

where college was less popular and solid careers existed for individuals straight out of high school. This historical context is considered when making conclusions about the results in this study.

Additionally, the timing of these events within a young adult's life was considered as an important predictor of well-being outcomes. Research studying older cohorts found that early marriage and early childbearing had detrimental effects for individuals due to cumulating effects of disadvantage (Elder, 1998). Individuals who married early in young adulthood tended to come from lower socioeconomic backgrounds and lost education opportunities as a result of marriage. Individuals who had children early in young adulthood had less money as a result of the expenses of children and some also lost the opportunity to attend full-time educational opportunities. Leaving home at different times in young adulthood also influenced individuals in these cohorts financially. These results led Elder (1998) to include the on-time or off-time transitions of life events as a key concept of life course theory. Recent research about marriage, childbirth, and leaving home are reviewed below. Considering the historical context of the cohort in this study and the changing rates of timing and order of transitions, these young adults who dropped out of college could have experienced these transitions differently.

Another key concept of life course theory is that of linked lives (Elder et al., 2003). Individuals are linked to each other in many ways, and some of the most important linkages are parent-child relationships. History has demonstrated the shifting trends in children leaving the parental home and parents being more involved in their adult children's lives (Putney & Bengtson, 2003). The rising rates of young adults living with parents are a result of unemployment and needed financial support (Payne & Copp, 2013). Leaving the parental home marks an important shift from dependence on parents to independence and autonomy (Mulder,

2009). Life course theory focuses on how the event influences the linked lives of parents and young adults. This study specifically examined how this particular transition of leaving the parental home influenced young adult well-being among college students who dropped out.

As emerging adults value the concepts of living away from home and working, educational attainment is the main method through which they will achieve these goals (Sandefur, Eggerling-Boeck, & Park, 2005). Related to educational attainment, adolescents can feel that high school is not critical, but emerging adults begin to see the importance of school as it influences their immediate and future career choices (Arnett, 2004). In addition, emerging adults begin to realize the realities of work and school and how their high expectations have changed to become more realistic (Konstam, 2007). For example, the belief in working hard to obtain any goal can be tarnished as emerging adults realize the limits of their past academic achievement and socioeconomic status. These shifts in thinking are relevant to how young adults feel about their own well-being.

From adolescence to young adulthood, individuals are making these important decisions that will influence the rest of their well-being throughout the life course (Eccles, Templeton, Barber, & Stone, 2003). Compared to the rest of the life course, young adulthood is a time of higher depression and anxiety (Mirowsky & Ross, 2003). These low feelings of well-being will decrease with time, but are high in young adulthood due to the many transitions young adults experience. Due to a focus on increasing postsecondary education levels (Obama, 2009), it is unclear how well-being differs for young adults who do not obtain postsecondary degrees. Instead of assuming all students who dropped out must have low levels of well-being due to their academic failure, it is important to establish the heterogeneity within the large population of students who dropped out.

Young Adults who Drop Out of College

Life course theory provides strong contextualization for the importance of early life experiences on the transitions from adolescence to young adulthood for all individuals. However, research is just beginning to consider the importance of students who drop out as a separate population that may need intervention. Students who drop out are likely to flounder during the school to work transition because they have not acquired skills necessary for relevant careers (Vuolo, Mortimer, & Staff, 2013). Young adults without clear paths to follow in life are considered to be treading water by current researchers (Settersten & Ray, 2010). Dropping out of college is a transition that puts individual at risk for later life course well-being. The literature review below describes why college student dropouts are rarely studied and the few studies that have accessed the population.

One of the main reasons college student dropouts are rarely studied as a separate population is access. Students who drop out no longer share the common educational institution that allows for easy research access. Contacting dropouts involves reaching out to young adults through multiple venues rather than one institution. Most colleges and universities do not follow up with former students who are not alumni. However, the use of longitudinal data among nationally representative populations does effectively capture the experiences of students who drop out. This study used a secondary dataset that follows adolescents before, during, and after the experience of dropping out of college into young adulthood.

Related longitudinal research tends to focus on stratifications of educational attainment and often employs methodological approaches that limit our understanding of the college dropout population. In multiple studies, education is operationalized dichotomously as completing a college degree or not (Byun, Irvin, & Meece, 2012; DiPrete & Buchmann, 2006).

That approach clumps the experience of students who drop out with high school degree holders who never attempted college. Studies that fail to consider the nuances between postsecondary certificates and college credit without a degree compare very different types of students (Symonds, Schwartz, & Ferguson, 2011). Earning a vocational certificate after high school can be very beneficial for a young adult's career and financial status compared to few college credits (Grubb, 2002). However, these young adults are often grouped together and compared to students who have dropped out of a four-year institution because they both completed "some postsecondary education." Other studies attempt to address the differences in educational attainment by examining number of years of education on a continuous scale (Dubow, Huesmann, Boxer, Pulkkinen, & Kokko, 2006; Melby, Conger, Fang, Wickrama, & Conger, 2008). However, this does not distinguish between someone who struggled to complete the degree in six years and someone who excelled in college and graduated in four years. Overall, blending these very different transitions after high school is problematic when some of the transitions are healthy and others are viewed as failure.

In addition to these problems in accurately identifying students who drop out, the literature has not attended to the diversity of experiences within that group. By focusing on comparing the group to more normative paths, results display a simple average for an entire group (U.S. Census, 2012b). For example, the work-life earnings for high school graduates amount to $1,371,000 and the earnings for bachelor's degree holders are $2,422,000. The entire chart indicates that higher educational attainment always results in higher work-life earnings. Simplistic comparisons to degree holders and no exploration of the range within a group has been beneficial for past research, but future research needs more detail to within group variations.

Previous research has focused on reasons for college dropout and raising retention, but little research has examined the assets that students who drop out do rely on to have positive well-being in adulthood. Studying the phenomenon of college student outcomes typically lacks a developmental focus, especially as students navigate other transitions to adulthood, such as financial responsibility (Goldrick-Rab, Harris, & Trostel, 2009). Especially for students who drop out, who have already failed at one transition, they could have ambiguous relationships with other transitions. While institutions and research tend to focus on academic readiness, recent research has demonstrated the importance of focusing on psychosocial factors (Allen, Robbins, & Sawyer, 2010). These factors are broadly considered non-cognitive and several factors overlap. Measuring psychosocial factors can help identify students who are likely to dropout, but it is currently unclear how dropouts feel after the event of leaving college. Therefore, this study examined multiple measures of well-being in young adulthood within the college dropout population.

Family of Origin Resources

When entering college, young adults are already at different levels of stratification because of family background (Grodsky & Jackson, 2009). Young adults from low income backgrounds tend to enroll in different types of schools compared to higher income peers (Feliciano & Ashtiani, 2012). Additionally, if a parent does not have a college degree, their children are less likely to obtain a college degree (Bowen, Chingos, & McPherson, 2009). The combination of family income, parental occupational prestige, and parental educational attainment is a strong predictor of educational attainment in young adulthood (Faas, Benson, & Kaestle, 2013). People who have high family socioeconomic status (SES) and do not complete college may rely on their family SES for future careers, but students who drop out with low

family SES have fewer job opportunities because of the lack of resources (Brand & Xie, 2010). In other words, the students who drop out that are most negatively affected are those with low SES backgrounds. This study considered family of origin resources as important predictors of young adult socioeconomic success and mental health outcomes of well-being.

Adolescent Assets

Research has established that developmental assets during adolescence are important predictors of well-being (Eccles, Brown, & Templeton, 2008). These assets include multiple domains of intellectual, psychological, and social assets. The accumulation of developmental assets is well-established as protective factors for adolescents (Sesma, Mannes, & Scales, 2013). Less is known about how assets predict well-being for specific groups of people, including young adults who have dropped out of college. This study examined how three types of assets (intellectual, psychological, and social) during adolescence predicted the well-being outcomes of young adults who dropped out of college.

Intellectual assets. There are three critical intellectual assets that have been consistently linked to well-being in young adults. Adolescents are dealing with multiple cognitive changes at once (Zarrett & Eccles, 2006) and many of these changes can be assets for positive youth development (Eccles et al., 2008). IQ is a stable part of these cognitive changes that tends to be a more important influence on educational attainment when IQ is high compared to when it is low (Johnson, Deary, & Iacono, 2009). For adolescents with low IQ, other sociological factors like family resources can be more important for educational attainment. High school grade point average (GPA), another intellectual asset, is one of the best predictors of college completion (Astin & Oseguera, 2012). This is true even though a common belief among young adults, regardless of college attendance and completion, is that high school is irrelevant for educational

goals (DeLuca & Rosenbaum, 2001). The majority of young adults view education as a hurdle to overcome (Clydesdale, 2007) and students who drop out in particular may feel this way about their past educational experiences. However, school success is still an important personal asset that can influence well-being (Eccles et al., 2008). The cognitive process of decision making is an intellectual asset, which evolves in a non-logical manner during adolescence (Keating, 2004). Good decision making skills can help adolescents avoid risky behavior (Reyna & Farley, 2006) and predict well-being during emerging adulthood (Paternoster & Pogarsky, 2009). Based on this evidence of the importance of intelligence, GPA, and decision making skills, this study considered these three intellectual assets as important predictors of well-being among young adults who have dropped out of college.

Psychological assets. Adolescents use the psychological assets of physical self-perception, self-esteem, and positive affect for healthy development and well-being (Eccles et al., 2008). Physical self-perception, or how individuals view their physical behavior, is strongly related to self-esteem (Maïano, Ninot, & Bilard, 2004) and positively influences exercise participation (Page, Fox, Biddle, & Ashford, 1993). Self-esteem captures how people feel about the positive and negative events in their lives (Hewitt, 2009). Self-esteem is an important non-cognitive skill that has strong influences on outcomes such as wages (Drago, 2011) and high self-esteem is related to positive well-being (Zaff & Hair, 2003). Adolescents with low self-esteem are at risk for low economic prospects, such as dropping out of school and not attending college (Trzesniewski et al., 2006). It is difficult for young adults to make decisions about career development when experiencing low self-esteem (Niles, Jacob, & Nichols, 2010). Without the asset of self-esteem, adolescents could mentally bring themselves down by thinking they are not "good enough" or capable of attending and completing college. Another psychological asset is

positive affect, which predicts income in young adulthood (De Neve & Oswald, 2012). Adolescents with high positive affect engage in fewer risky behaviors and report better health in emerging adulthood (Hoyt, Chase-Lansdale, McDade, & Adam, 2012). It is currently unclear to what degree students who drop out have these psychological assets. The three psychological assets of high physical self-perception, high self-esteem, and high positive affect were examined as predictors of young adult well-being among college students who dropped out.

Social assets. Beyond the within person assets that adolescents rely on, there are multiple social assets that help promote positive development (Eccles et al., 2008). Neighborhood quality is an established social asset that is important for adolescent outcomes (Leventhal & Brooks-Gunn, 2000). The neighborhoods parents choose to live in are linked to academic achievement partially due to within home quality and the education levels of surrounding neighbors (Dupéré, Leventhal, Crosnoe, & Dion, 2010). Neighborhood quality and school connectedness are strongly linked for adolescents (Dupéré, Leventhal, & Vitaro, 2012). School connectedness is defined as how students feel about their own inclusion at school and it is a strong predictor of later mental health outcomes (Bond et al., 2007; Shochet, Dadds, Ham, & Montague, 2006). The lack of school connectedness predicts dropping out of high school, young adult delinquent behavior, and substance abuse (Henry, Knight, & Thornberry, 2012). Healthy peer relationships are another social asset that can positively influence well-being and be protective against other risks in life (Bukowski, 2003). Academically, friends tend to take similar math courses in high school (Crosnoe, Riegle-Crumb, Field, Frank, & Muller, 2008). If a friend takes an advanced math class, an adolescent is more likely to take that same advanced class rather than a less advanced course. Even being in classes with other students who have parents with college degrees can be beneficial for adolescents who have parents with lower

levels of education (Choi, Raley, Muller, & Riegle-Crumb, 2008). It is currently unclear how social assets may be different for students who drop out, especially since these assets are strong predictors of academic achievement. However, recent research has demonstrated social connectedness during adolescence is a stronger predictor of well-being in young adulthood compared to academic achievement (Olsson, McGee, Nada-Raja, & Williams, 2012). The combination of these three social assets were examined in conjunction with other assets to predict young adult well-being among college students who dropped out.

Transitions into Adulthood

After accumulating personal assets in adolescence, individuals will begin to experience the typical markers of adulthood. This study focused on four main markers of adulthood in order to understand the outcomes of well-being in young adulthood. The first marker, completing education, was stable in this study because of the focus on students who drop out. Everyone in this study did not complete the postsecondary education they began after high school. The other transitions of getting married, having a child, and leaving the parental home have established literatures described below, but tend to focus on larger populations rather than students who drop out specifically. Each of these sections have specific hypotheses based on the literature because these were the main predictors in this study.

Becoming married. Marriage is a marker of adulthood that many young adults in the United States will experience, with the median age for marriage at 24.8 years for women and 27.3 years for men (Goodwin, McGill, & Chandra, 2009). The link between marriage and well-being has been well established, particularly for the differences between people who have ever married or never married. Marriage positively influences happiness levels (Vanassche, Swicegood, & Matthijs, 2012) and increases well-being for both men and women equally (Kim

& McKenry, 2002; Soons, Liefbroer, & Kalmijn, 2009). Being married tends to be more advantageous for psychological well-being compared to being single, even though these effects decrease over time (Musick & Bumpass, 2012). Furthermore, research has confirmed it is the status change of becoming married that influences well-being, above and beyond the individual characteristics who selects into marriage, such as gender and age (Horwitz, White, & Howell-White, 1996; Kim & McKenry, 2002). While becoming married is generally positive, first marrying before age 22 can be detrimental for life satisfaction (Uecker, 2012). Delaying marriage is associated with higher incomes for women and a lower likelihood of divorce (Hymowitz, Carroll, Wilcox, & Kaye, 2013). Specifically related to education, college attendance increases the likelihood of ever marrying for socioeconomically advantaged students (Musick, Brand, & Davis, 2012). Currently, it is unclear how marriage can have different influences among college students who drop out. This study aimed to examine how the experience of marriage prior to traditional college graduation ages influenced well-being outcomes among college students who dropped out. I hypothesized that individuals who married after the age of 23 would have higher socioeconomic success and mental health in young adulthood compared to single individuals and peers who married before age 23. Individuals who married before the age of 23 were hypothesized to have higher socioeconomic success and mental health as compared to never married peers. The age of 23 years old was used in hypotheses due to its meaning as the time individuals would have completed college if it were an on-time event with their peers.

Becoming a parent. Becoming a parent is another marker of adulthood that young adults can experience, with or without the act of marriage. In fact, since the 1980s, the proportion of births to unmarried women in the United States has steadily increased (Arroyo,

Payne, Brown, & Manning, 2013). Becoming a parent leads to significant declines in well-being (Nomaguchi & Milkie, 2003), especially for women who are cohabiting and men who are single (Woo & Raley, 2005). Additionally, both men and women non-parents always report less depression than all types of parents (Evenson & Simon, 2005). The findings for timing of parenthood have been mixed, with some research finding early motherhood being negative for midlife well-being (Koropeckyj-Cox, Pienta, & Brown, 2007) and other research finding no timing differences on well-being for men or women (Taylor, 2009). As a result, future research must always consider the context of parenthood in addition to timing (Umberson, Pudrovska, & Reczek, 2010). This study examined the timing of parenthood for young adults who dropped out of college. It was hypothesized that experiencing parenthood would be detrimental to well-being compared to peers who did not experience parenthood. It was also hypothesized that parenthood would be especially detrimental for individuals who experienced it before the age of 23 in the life course.

Independent living. The majority of emerging adults in the United States want to be independent and out of the parental home, which is related to the importance of being financially independent (Arnett & Schwab, 2012). Leaving the parental home is a sign of autonomy and independence. Young adults can also return to living at home after being temporarily independent (Mitchell, 2006). Some researchers argue that perceptions are beginning to change and there is more acceptance about living with parents in young adulthood (Newman & Aptekar, 2007). Living independently of parents is positively related to subjective well-being due to parental autonomy support, the motivations for leaving and the satisfaction with the current living situation (Kins, Beyers, Soenens, & Vansteenkiste, 2009). It is currently unclear how living situations in young adulthood differently influence well-being among students who drop

out. It was hypothesized that young adults who did not live with their parents would have higher levels of well-being compared to peers who did live with their parents in young adulthood.

Well-Being in Young Adulthood

Well-being in adulthood is important for better health, productivity, and social integration (Keyes & Waterman, 2003). Measures of well-being were the outcomes in this study, but the life course perspective also calls to attention the need for understanding why those measures would be important for young adults who dropped out of college. Educational attainment is a well-established predictor of multiple outcomes of well-being (Plank & MacIver, 2003), but what does well-being look like when desired educational attainment is not met? What are the other important predictors of well-being? Assuming some students who drop out experience high well-being in young adulthood, it is important to understand how these measures of well-being may influence their future lives.

Socioeconomic success. The first domain of well-being in this study focused on multiple measures of socioeconomic success. Personal income is widely considered an objective measure of success while job satisfaction is part of subjective success (Ng, Eby, Sorensen, & Feldman, 2005). Income is established as an important predictor of subjective well-being (George, 2006). Being employed is related to higher subjective well-being compared to being unemployed (Soons et al., 2009) and feelings of workplace success are correlated with happiness levels (Boehm & Lyubomirsky, 2008). Both individuals and the workplace benefit when people are happy at work and satisfied with their jobs (Fisher, 2010). Job satisfaction and life satisfaction are closely linked and often operate in a reciprocal relationship (Erdogan, Bauer, Truxillo, & Mansfield, 2012). Being happy can result in being satisfied about work, but being satisfied with work can also lead to life satisfaction. Subjective SES, or how individuals feel about their

personal success compared to others, is strongly related to educational attainment and income (Johnson & Benson, 2012) and is predictive of later health outcomes (Adler, 2009). These outcomes of socioeconomic success could be very different for students who drop out, a group of young adults who consistently have lower average incomes next to peers who have obtained a bachelor's degree. This study considered the multiple measures of personal income, job satisfaction, and subjective SES to be outcomes of socioeconomic success for the college dropout population.

Mental health. A mental health issue in young adulthood is happiness and there are several related terms in the literature that capture this positive outcome. Happiness is a well-studied concept because being happy translates into better health and longevity across the life span (Diener & Chan, 2011). Other research has found that the highest levels of happiness do not always translate to the best outcomes of success, but it is generally good to be above average on happiness levels (Oishi, Diener, & Lucas, 2007). Positive affect and success have a bidirectional relationship where being happy can lead to more success and success can lead to more happiness (Lyubomirsky, King, & Diener, 2005). A related construct is subjective well-being, which includes both levels of emotions and high life satisfaction, and is generally viewed as important for a well-lived life (Diener, Oishi, & Lucas, 2009). Similar to the way unemployment can influence long term subjective well-being (Lucas, 2007), young adults who experience the major life event of not completing their intended education could experience lower happiness later in adulthood compared to peers. However, within the college dropout population, there should be a group of individuals who still experience high levels of happiness, probably due to the assets and transitions they experienced earlier in life.

Another positive mental health outcome in young adulthood is mastery. Mastery has many definitions and strong correlates to definitions of happiness, but is typically viewed as an individual's sense of ability to choose and change their surrounding environments (Ryff & Singer, 2013). Mastery is strongly related to the life events happening in young adulthood (Shanahan & Bauer, 2004). Highly correlated with autonomy, mastery motivation can be important for other outcomes of well-being (Bridges, 2003). Among a college student sample, mastery was highly correlated with a measure of flourishing (Diener et al., 2010). It is unclear how mastery could be different for young adults who dropped out of college. As hypothesized with happiness, it was assumed that some students who dropped out still experienced high levels of mastery due to their assets during adolescence and other life transitions.

On the negative side of mental health outcomes is depression. Reducing the incidence of major depression is a high priority in the next ten years for psychologists (Muñoz, Beardless, & Leykin, 2012) and the prevention of depression needs to be considered beyond the context of just health outcomes (Cuijpers, Beekman, & Reynolds, 2012). Depression is a mental health outcome that has very clear gender differences, with women consistently having higher or worse scores as compared to men (Brown, Meadows, & Elder, 2007). Depression scores decrease between adolescence and young adulthood for women, regardless of the life paths (e.g., education, work, and marriage) they choose to follow (Amato & Kane, 2011). Depression is problematic for individual quality of life, cognitive functioning, mortality, workplace functioning, and many other outcomes (Lépine & Briley, 2011). Related to education, young adults who do not meet their educational goals do not experience different levels of depression compared to their peers (Reynolds & Baird, 2010). This study examined the heterogeneity of depression within the college dropout population. It was hypothesized that some students who

dropped out would experience high depression while others would have low depression scores, a positive outcome for young adults.

The other negative mental health outcome in this study was stress, which can be closely related to depression (Kessler, 1997). In this study, stress is defined as chronic distress (Maguire, 2012), a negative mental health component for young adults. Multiple life transitions can be a source of stress, including getting married, becoming a parent, and changing living conditions (Weber, 2011). High stress has negative implications for mental and physical health, but can be buffered by positive influences such as mastery and self-esteem (Thoits, 2010). Among college students, high levels of perceived stress levels are negatively related to happiness (Schiffrin & Nelson, 2010). This study aimed to examine the stress levels of young adults who dropped out of college and how stress interacted with other measures of well-being. It was hypothesized that some students who dropped out would experience high levels of stress, particularly if they have experienced early transitions into adulthood and lacked positive assets during adolescence.

Overall, this study aimed to explore both the positive and negative aspects of mental health within the college dropout population. Socioeconomic success was also considered as an important set of outcomes in young adulthood that were correlated with mental health outcomes. Additionally, family resources, personal assets, and markers of adulthood were examined as predictors of these multiple measures of well-being in young adulthood.

Method

The National Longitudinal Study of Adolescent Health (Add Health) is a U.S. representative sample of adolescents interviewed in-home at four time points into young adulthood between 1995 and 2009. The first wave (Wave 1) consisted of participants enrolled in

7th-12th grade, ages ranging between 11-21 years old. One year later, the participants were re-interviewed for Wave 2, excluding seniors, ages ranging between 12-19 years old. The third time point interviews occurred six years after Wave 2, ages ranging between 19-25 years old. Seven years later, the fourth time point interviews were conducted, ages ranging between 25-31 years old. Incorporating systematic sampling methods and implicit stratification into the Add Health study design ensured representativeness of U.S. schools with respect to region of country, urbanicity, school size, school type, and ethnicity (Harris et al., 2009). Additionally, non-response bias was minimal in both Wave 3 (Chantala, Kalsbeek, & Andraca, 2005) and Wave 4 (Brownstein et al., 2010).

Sample

Due to the study design, it was first important to focus on the number of participants who were assigned weights. The sampling weight used in this study was for respondents who participated in all four waves (*N* = 9,421). Three criteria were used to determine whether or not a participant was considered a college student who dropped out. First, participants were asked in Wave 4 about their highest level of education achieved to date. Choices included "high school graduate," "some vocational/technical training (after high school)," "completed vocational/technical training (after high school)," "some college" or "completed college (bachelor's degree)." To be included in the study sample, participants must have responded "some college" (N = 3,157). Because this item could include those who earned associate's degrees or various professional certificates in the "some college" category, the study sample was further restricted to participants who did not receive any degrees or certificates by Wave 4 from a college, university, or vocational/technical school, which would exclude associate's degrees and post baccalaureate academic programs (N = 2,069). For the final criterion, participants had to

answer in Wave 4 that they were not currently attending a college, university, or vocational/technical school where they would be taking courses for academic credit, which further reduced the sample by 539 participants. Putting together all three criteria, the eligible sample for this study was 1,530 participants, which is 16.2% of the original eligible sample. This percentage is very similar to the national population of 25-34 year olds in 2008 who had obtained some college, but no degree (18.4%) (U.S. Census Bureau, 2010). The census data does not distinguish the college enrollment status like the sample for this study.

Family of Origin Resources

Family income. At Wave I, parents responded to total family yearly income before taxes in 1994, with responses ranging from $0 - $999,000. This variable was condensed to 10 continuous categories (e.g., 4 = $40,000-$49,999).

Parental educational attainment. Adolescents reported in Wave 1 on their resident parents' education level with the continuous scale ranging from 1 (eighth grade or less) to 8 (professional training beyond a four-year college or university). This type of interval measurement is typical in social science research and is particularly useful because it distinguishes between levels of education rather than just years obtained (Jenkins & Sabates, 2007). This study uses the Modified Dominance Model where the higher status parent information defines the variable (Korupp, Ganzeboom, & van der Lippe, 2002). For example, if a mother's educational attainment was a high school degree and the father's educational attainment was some college, some college would be used as the adolescents' indicator of parental educational attainment because it is higher.

Parental occupational prestige. Adolescents reported in Wave 1 on their resident parents' occupational prestige level with the continuous scale ranging from 1 (no job) to 7

(professional I, such as doctor, lawyer, or scientist). Occupational prestige was treated similarly to educational attainment in that the higher status parent information was used.

Intellectual Assets

Grade point average. GPA was reported by adolescents at Wave 1 through the answers to four items regarding grades in four subjects: math, science, English, and history/social studies. The reliability of these four items for this sample was .66. Higher grades indicated a higher grade point average score, ranging from 1.0 (*Ds and Fs*) to 4.0 (*all As*).

Intelligence. The Peabody Picture Vocabulary Test was administered to participants at Wave 1 by trained researchers and is considered a proxy for intelligence in this study. A higher score indicated a higher proxy for intelligence, with possible scores ranging from 9-141.

Decision making skills. Participants at Wave 1 were asked four questions related to decision making skills. The statements included, "When you have a problem to solve, one of the first things you do is get as many facts about the problem as possible," and "When making decisions, you generally use a systematic method for judging and comparing alternatives." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) and the Cronbach's alpha for this sample was .73.

Psychological Assets

Self-esteem. Self-esteem was measured at Wave 1 and included six items. Statements included, "You have a lot of good qualities" and "You like yourself just the way you are." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) and the Cronbach's alpha for this sample was .84.

Physical self-perception. Adolescents were asked at Wave 1 about five items related to feeling healthy. Statements included, "You have a lot of energy," and "When you do get sick,

you get better quickly." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) and the Cronbach's alpha for this sample was .72.

Positive affect. Positive affect was measured at Wave 1 and included four items that focused on feelings during the past week. Statements included, "You enjoyed life," and "You were happy." Responses ranged from 0 (*never*) to 3 (*most of the time*) and the Cronbach's alpha was .68.

Social Assets

Neighborhood quality. At Wave 1, interviewers were asked three questions about the surrounding neighborhood. Statements included, "How well kept is the building in which the respondent lives?" and "How well kept are most of the buildings on the street?" Responses ranged from 1 (*very poorly kept (needs major repairs))* to 4 (*very well kept)* and the Cronbach's alpha for this sample was .66.

School connectedness. Adolescents at Wave 1 were asked five questions related to their feelings about school connectedness. Statements included, "You feel close to people at your school," and "You feel like you are part of your school." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) and Cronbach's alpha for this sample was .77.

Peer relationships. At Wave 1, adolescents reported on the time they spent with their best friend. Questions included, "Did you spend time with {name} during the past weekend?" and "Did you talk to {name} on the telephone during the past seven days?" Responses ranged from 0 (*none of the events*) to 4 (*all four events*) and the Cronbach's alpha for this sample was .68.

Transitions into Adulthood

Becoming married. In order to capture when participants got married for the first time, if ever, several questions were used from Wave 4. Participants were asked to categorize multiple relationships in their past. The relationships marked as married were then followed by questions of the marriage date. Using this marriage date and the participant's birthdate, a variable was created to indicate what age the participant was first married. Using theory and the median ages, three categories were created to specify timing: never married, first married before age 23, or first married at age 23 or older.

Becoming a parent. In order to capture when participants experienced a live birth for the first time, if ever, multiple items were examined from Wave 4. Participants responded to how many live births resulted from any relationship or sexual encounter in their lifetime. Participants were also asked about the age of their biological children, all live births, who were still living. This age of the child was subtracted from the participant age at Wave 4 to capture the timing of the live births. Using theory and the median ages, categories were created to specify timing: no live births, first live birth before age 23, or first live birth at age 23 or older.

Independent living. At Wave 4, participants were asked about their current living arrangement. The statement specifically said, "Where do you live now? That is, where do you stay most often?" Participant responses were recoded into 0 (*your parent's home*) or 1 (*outside of the parental home*). Outside of the parental home included: another person's home, your own place, group quarters, homeless, or other.

Young Adult Socioeconomic Success Outcomes

Personal income. Young adults at Wave 4 were asked, "How much income did you receive from personal earnings before taxes, that is, wages or salaries, including tips, bonuses,

and overtime pay, and income from self-employment?" Responses ranged from $0 to $999,995 and were condensed into ten continuous categories (e.g., 5 = $50,000-$59,999).

Job satisfaction. At Wave 4, young adults were asked about their current, main job or the most recent job they held. The question was, "How satisfied (are/were) you with this job, as a whole?" Responses ranged from 1 (*extremely dissatisfied*) to 5 (*extremely satisfied*).

Subjective SES scale. At Wave 4, young adults responded to the visualization of a ladder and this statement, "Think of this ladder as representing where people stand in the United States. At the top of the ladder (step 10) are the people who have the most money and education, and the most respected jobs. At the bottom of the ladder (step 1) are the people who have the least money and education, and the least respected jobs or no job. Where would you place yourself on this ladder? Pick the number for the step that shows where you think you stand at this time in your life, relative to other people in the United States." Responses ranged from 1-10.

Young Adult Mental Health Outcomes

Mastery. Young adults at Wave 4 were asked five items related to their feelings of mastery and were reminded, "How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?" Statements included, "Other people determine most of what I can and cannot do," and "There is little I can do to change the important things in my life." These items were recoded to be positive with responses ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach's alpha for this sample was .72.

Happiness. At Wave 4, young adults were asked five items related to their feelings of happiness. Statements included, "During the past seven days, you enjoyed life," and "During the past seven days, you felt happy." Responses ranged from 0 (*never or rarely*) to 3 (*most of the time or all of the time*) and the Cronbach's alpha for this sample was .77.

Depression. Young adults at Wave 4 were asked nine questions related to their feelings of depression. Statements included, "During the past seven days, you felt depressed," and "During the past seven days, you felt that you were too tired to do things." Responses ranged from 0 (*never or rarely*) to 3 (*most of the time or all of the time*) and the Cronbach's alpha for this sample was .81. The items used in both the happiness and depression scales are part of the original CES-D scale (Radloff, 1977). Recent research has found these items to be distinct factors of positive affect and depressed affect (Shafer, 2006). Keeping the two separate scales also allowed for the original directionality of the items to be preserved.

Stress. At Wave 4, participants were asked about four items related to stress. Statements included, "In the last 30 days, how often have you felt that you were unable to control the important things in your life?" and "In the last 30 days, how often have you felt that difficulties were piling up so high that you could not overcome them?" Responses ranged from 0 (*never*) to 4 (*very often*) and the Cronbach's alpha for this sample was .72.

Demographic Characteristics

In order to fully understand the relationships between resources, assets, markers of adulthood, and outcomes of well-being, demographic characteristics were also considered. Gender is an important demographic characteristic that most likely heavily influenced the markers of adulthood. In this study, gender was dummy coded to represent men (0) and women (1). Age was examined in the data and it was essential in creating the timing of the markers of adulthood (Wave 4 range = 24-33 years old). Ethnicity was considered as a comparison between other ethnicities (0) and White (1) because of the possible relationship to family socioeconomic resources. Family structure during adolescence was also considered as a comparison between

other family structures (0) and two-parent headed households (1) because of the possible relationship to family socioeconomic resources.

Data Analysis Plan for Research Question 1

RQ1: What are the patterns and groupings of multiple measures of well-being among students who have dropped out of college?

Modern techniques related to categorizing variables and people fall under the umbrella of mixture modeling. Latent class analysis is a specific technique that allows for the creation of patterns and groups while still using a person-oriented approach (Collins & Lanza, 2010). For comparison, factor analysis is a similar technique but uses the variable-oriented approach. Cluster analysis (Aldenerfer & Blashfield, 1984) is an older method that also categorizes people, but does not use a model-based approach. The model-based approach used in latent class analysis has many advantages, such as established criteria for determining the number of clusters and the ability to probabilistically determine which cluster best suits an individual (Vermunt & Magidson, 2002). Because all of the indicator variables in this study are continuous, the specific method was actually latent profile analysis (Collins & Lanza, 2010). However, the terms latent class and latent profile analyses are frequently used interchangeably, particularly in the MPlus software language (Muthén & Muthén, 2007). Using MPlus in this study also allowed for the consideration of the complex sampling design and missing data patterns. Addressing the complex sampling design was necessary for making conclusions about the representative estimates in the results. Ignoring missing data can lead to examining data for only the people who answered every question, a potentially biased group from the rest of the sample. Therefore, this study used the maximum likelihood procedure, a model-based approach, for handling

missing data (McKnight, McKnight, Sidani, & Figueredo, 2007). Using maximum likelihood with robust standard errors created unbiased estimates in the results.

The first steps for completing the latent class analysis in this study involved defining the constructs and measures. The latent construct in this method was not measured directly, but was called young adult well-being. Seven measures (income, job satisfaction, subjective SES, mastery, happiness, depression, and stress) were the observed indicators of the latent construct. I considered that two latent constructs could emerge from the data. There was also the possibility of needing to remove an observed variable that did not fit well with the others.

Assumptions were important to consider during the creation of the statistical model. Latent class analysis has one major assumption of local independence, which is that the observed measures are independent when considering the latent variable (Collins & Lanza, 2010). This does not mean general independence of observed variables because the correlation between these variables is actually part of what creates the classes. Instead, local independence is just on the condition of the latent construct. This assumption was examined through the modification indices of error terms within the MPlus results. If the modification indices indicated the model fit would be improved by error term correlations, the model would be adjusted accordingly.

Creating and testing the fit of the model in latent class analysis was an extensive process. First, I created the syntax for the model in MPlus (see Appendix A) following the instructions for "LCA with continuous latent class indicators using automatic starting values with random starts" (Muthén & Muthén, 2007, p. 148). This model estimated the means and variances of the latent variable and the indicators. The estimation technique of maximum likelihood with robust standard errors was the default used in this model, which matched the technique needed for the complex sampling design in this study. After running the model, I checked the fit statistics. The

Adjusted Bayesian Information Criterion (Adjusted BIC) was the main fit statistic to determine the number of classes that were appropriate for this sample (Nylund, Asparouhov, & Muthén, 2007). A lower adjusted BIC score indicated better fit and parsimony of the model. I used this indicator along with theory to determine how many classes existed for the well-being of young adults who dropped out of college.

After considering the model fit statistics, I examined the parameter results for conceptualization of the classes. The parameter results consisted of conditional response means broken up by each class. These parameters helped me understand who is in each class. Overall, the goal for this latent profile analysis was that there was heterogeneity within the population of students who drop out on measures of well-being.

Data Analysis Plan for Research Question 2

RQ2: What predicts the well-being of college students who drop out in young adulthood?

For social scientists, the term prediction implies statistical analyses involving dependent variables and usually a regression method. Regression techniques have advanced in the past few decades and several forms exist under the larger umbrella of structural equation modeling (SEM). Because my research question focused on the multiple predictors of well-being, I did not create a path model analysis that is typically thought of as SEM. For example, I was not interested in knowing how family of origin resources specifically predicted intellectual assets within this population. The only prediction paths I was specifically interested in were how transitions into adulthood predicted multiple measures of well-being, while controlling for the family of origin resources and multiple assets that were established as important in the literature.

As a result, this research question was best answered by using latent regression analysis (Geiser, 2013). First, this method allowed for multiple independent and dependent constructs

with a combination of manifest and latent variables (Geiser, 2013). Examining the well-being of college students who dropped out was more than just one variable, as highlighted in research question one. The conceptualization of these variables was demonstrated in Figure 1. The use of latent constructs corrected for measurement error and allowed for better parameter estimation. Correcting for possible error helped reduce the bias found in regression analyses without latent constructs. Latent regression analysis also allowed for correlations between constructs that helped with the overall model fit. Additionally, the multivariate regression allowed for examination of predictors across multiple outcomes, unlike multiple ordinary least square regressions (Afifi & Clark, 1996). In other words, I was able to report the difference in prediction of marital status on socioeconomic status versus mental health within one model. This allowed me to test my hypotheses about how the transitions of adulthood influenced multiple measures of well-being in young adulthood.

The first steps for answering this research question were to prepare the data. Examining descriptive statistics allowed me to examine the data for assumptions of SEM (Kline, 2005). Univariate normality was examined through the skewness and kurtosis of the manifest variables. None of the variables were too highly skewed or kurtotic, so no transformations were necessary. The variables were also examined in scatterplots for linearity and homoscedasticity. There were no extreme outliers revealed in the Mahalanobis distance statistic. Correlations were also examined for normality between the manifest variables.

The next steps involved actually creating the model within MPlus. The use of MPlus software for this analysis was advantageous for addressing the complex sampling design and missing data. The same techniques as outlined in research question one were used to address these issues. The syntax used in this analysis was provided in Appendix B. I followed the

typical SEM steps of evaluating the model fit, interpreting the parameter estimates, considering similar models, re-specifying the models, and reporting the analysis accurately and thoroughly (Kline, 2005). Each of these steps took careful consideration with theory in mind. The parameter estimates were the main indicators of how the transitions to adulthood specifically predicted the multiple measures of well-being.

A second method was considered to fully understand research question two. In addition to predicting the latent constructs of continuous outcomes, I predicted the latent classes that were established from research question one. This method is commonly known as latent class analysis with covariates (Collins & Lanza, 2010). Predicting the latent classes is very similar to the concept of logistic regression, but latent constructs are used instead of observed groups (see Appendix C). Covariates were added one at a time to compare the fit between the models. If the latent class groupings changed as a result of the covariates being added, the model was too unstable to proceed with interpretation. If the latent classes were stable, then the means of the group stayed the same and the focus was on the provided odds ratios. One of the profiles becomes the reference group for the other profiles. Statements were then made about the odds of being in one group or another based on the covariate. The multiple covariates predicting the latent profile analysis were a different way to answer research question two.

Results

The first steps in this study involved comparing college students who dropped out, the main sample in this study, to their peers who completed college with a bachelor's degree (Table 1). These mean comparisons indicated a consistent pattern of college completers having higher or better scores on all continuous variables. College completers had significantly higher family resources, intelligence (PPVT), and grade point averages in high school as compared to college

students who dropped out. The two groups did not differ significantly on decision making, self-esteem, or peer relationships during adolescence, but bachelor's degree recipients did have significantly higher physical self-perception, positive affect, neighborhood quality, and school connectedness as compared to college students who dropped out. These results indicated there were differences between the two groups during adolescence before they were distinguished as college completers or not. Then in young adulthood, college completers also tended to have significantly higher personal income and subjective SES scores as compared to college students who dropped out. However, college completers and college students who dropped out did not significantly differ on job satisfaction. The two groups differed on all four mental health outcomes with college completers having higher mastery and happiness and lower depression and stress.

There were also statistical differences between the two groups on the categorical variables in this study. While the college students who dropped out group was split evenly between men and women, the bachelor's degree recipient group included more women (56.4%). Both groups had an average age between 28-29 at Wave 4, indicating that age was not a key difference between the two groups. There were no statistical differences related to ethnicity, approximately 70% of the sample was White in both groups. Bachelor's degree recipients did tend to come from a two parent headed household (69.0%) as compared to college students who dropped out (48.6%).

Focusing on the timing of transitions, there were more college completers who had never married (57.2%) compared to college students who dropped out (50.7%). These percentages are also displayed in Table 1. Out of the people who had married, there were more drop outs who married before the age of 23 (28.5%) than college completers (15.4%). The group of college

completers included more people who married after the age of 23 (27.5%) than drop outs who married after the age of 23 (20.7%). Then the differences between percentages on timing of first child were considered. More bachelor degree recipients had no children (74.4%) as compared to college students who dropped out (42.5%). Only 6.4% of college completers had a child before the age of 23 compared to 28.9% of drop outs. If bachelor degree recipients did have children, the timing tended to be after the age of 23 (19.2%). Twenty-eight percent of college student dropouts had a child when they were over the age of 23 themselves. Then the differences between percentages on independently living were considered. More college students who dropped out lived with their parents during young adulthood (16.4%) than bachelor degree recipients (13.2%). These statistics provided comparison to other research and the context for the rest of the analyses in this study.

Both research questions were addressed using MPlus 4.21 software (Muthén & Muthén, 2007). Missing data on individual variables varied within the overall sample with GPA missing the most amount of data (22%) followed by parental income (21%). MPlus accounted for the complex sampling design of Add Health and allowed for the EM algorithm technique to address missing data, keeping the sample size at the established 1,530 young adults who dropped out of college.

Research Question One

RQ1: What are the patterns and groupings of multiple measures of well-being among students who have dropped out of college?

First, the correlations between the seven measures of well-being were examined (Table 2). All of the correlations were significant at the $p < .05$ level and ranged from .12 to +/- .81. Personal income in young adulthood was most highly correlated with the subjective SES scale (r

= .32). The correlation between personal income and job satisfaction (r = .14) was just as strong as the correlations between personal income and depression (r = -.15) and stress (r = -.16). Job satisfaction was most highly correlated with happiness (r = .25) and stress (r = -.25). Mastery was most highly correlated with happiness (r = .40) and stress (r = -.39). Happiness was strongly correlated with depression (r = -.61) but even more so with stress (r = -.81). Depression and stress were also highly correlated with each other (r = .71). These correlations indicated there were significant relationships among the seven measures of well-being and the procedures for the latent profile analyses could continue.

Six unconditional latent profile models were estimated using the seven indicators of young adult well-being (personal income, job satisfaction, subjective SES, mastery, happiness, depression, and stress). Fit statistics were reported in Table 3. The model fit was examined for low Adjusted BIC, indicating better fit and parsimony of the model (Nylund et al., 2007). The model with five latent classes had the lowest Adjusted BIC. Entropy was slightly lower in the five class model as compared to six classes, but entropy above .80 still indicated distinct classes (Celeux & Soromenho, 1996). The conditional response means and size of each class were also considered for determining the best model (Collins & Lanza, 2010). The Vuong-Lo-Mendell-Rubin Adjusted LRT test value for the model that compared four classes against five classes was 228,014.19 (p = .40), which indicated that the five classes were not necessarily needed. Due to the complex sampling design, the bootstrapped parametric likelihood ratio test was unavailable, but that could have indicated five classes were still appropriate. As a result of model fit and theoretically distinguishable classes, the five class model was the final model selected (see Table 4). All class probabilities were above 86%, which indicated that individuals were highly likely to be assigned to the correct class.

The first profile, labeled *Overall Low Well-Being* (7%; *n* = 107), included young adults with the most negative means on all seven indicators, including low income, low mastery, and high depression and stress. The second profile, labeled *Middle Socioeconomic Success, Low Mental Health* (25%; *n* = 391), included young adults who had middle income compared to the peers in the sample, but were still relatively low on job satisfaction, happiness, and high on depression and stress as compared to their other peers with middle income. The third profile, labeled *Middle Socioeconomic Success, Middle Mental Health* (38%; *n* = 574), was the largest group and included young adults with average scores on all indicators of well-being. These college students who dropped out had a middle income with average happiness, depression, and stress among the study's sample. The fourth profile, labeled *Middle Socioeconomic Success, High Mental Health* (25%; *n* = 388), included young adults who still had average income, but were the happiest and least depressed compared to their peers with average income. The fifth profile, labeled *Overall High Well-Being* (5%, *n* = 70), included college students who dropped out with the highest income and highest level of mastery. This group did not have the highest scores on all indicators, like the lowest group did. Instead, this group had slightly higher levels of depression and stress as compared to the *Middle Socioeconomic Success, High Mental Health* group, but the levels were still low. This group also had high levels of mastery. All five profiles were charted in Figure 2 with the standardized means. The profiles were later re-examined for answering research question two.

Research Question Two

RQ2: What predicts the well-being of college students who drop out in young adulthood?

As established, the seven measures of well-being were significantly correlated with each other. The correlations among the hypothesized resources, assets, and well-being were examined

to begin to answer the second research question (Table 2). Family of origin resource measures were all significantly correlated with each other (r = .34 - .42). Intellectual asset measures (intelligence (PPVT), GPA, and decision making) were not consistently related to each other. Intelligence (PPVT) was significantly correlated with GPA (r = .21), but had higher correlations with the family of origin resource measures (r = .19 – .26). Decision making was not significantly related to either intelligence or GPA. In fact, decision making had low correlations with most of the measures in this study, especially outcomes in young adulthood. Psychological asset measures (self-esteem, physical self-perception, and positive affect) were highly correlated with each other (r = .32 - .57). Social asset measures (neighborhood quality, school connectedness, and peer relationships) were not significantly correlated with each other. All of the social asset measures had low correlations with the other measures in the study, especially outcomes in young adulthood. Knowing the relationship between the observed variables for this research question helped establish the next steps in the latent regression analysis.

As a result of the low correlations within intellectual assets and social assets, the original proposed latent regression model (Figure 1) was unable to converge successfully. Therefore, I made the decision to remove the social assets variables ((neighborhood quality, school connectedness, and peer relationships) in addition to two of the intellectual asset variables (GPA and school connectedness). Intelligence (PPVT) was able to remain in the model as a single covariate because of its strong relationship to both family SES resources and the outcomes. Through examining the factor loadings and suggested modification indices in the modeling process, I also discovered that mastery was distinct from the other mental well-being outcomes. Therefore, I decided to predict three outcomes: the latent construct of socioeconomic success (personal income, job satisfaction, and the subjective SES scale), the latent construct of mental

health (happiness, depression, and stress), and the observed outcome of mastery. The latent construct of mental health includes the reversed scores of depression and stress to keep the construct positive and the model able to converge. The final model was displayed in Figure 3 and the significant unstandardized and standardized values were listed in Table 5.

Model fit statistics indicated a good fitting structural model. The chi-square test of model fit is not recommended when models use MLR estimation (Muthén & Muthén, 2007), therefore it is only reported here for reference, χ^2 (141) = 477.66, $p < .001$, scaling correction factor = 1.67. Additionally, the significant chi-square value was partially due to the large sample size (Kline, 2005). The chi-square test of model fit for the baseline model was significantly higher χ^2 (184) = 4,172.86, $p < .001$. Other fit indices were used to properly interpret the results with a desired low Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), and a high Comparative Fit Index (CFI): RMSEA = .04, SRMR = .05, and CFI = .92 (Hu & Bentler, 1999). Factor loadings on the four latent constructs (family SES resources, psychological assets, young adult socioeconomic success, and young adult mental health) were all significant and ranged from .38 to .95. Gender was the only significant demographic variable and it remained in the structural model. The relationships between variables were then examined in the structural model.

Focusing first on the exogenous constructs of family resources, assets, and gender, there were significant correlations among these variables. Family SES resources were strongly related to intelligence (PPVT) ($b = .39$). Gender was also significantly correlated with family resources, intelligence (PPVT), and psychological assets, indicating that men who dropped out of college had higher resources, intelligence (PPVT), and psychological assets (physical self-perception,

self-esteem, and positive affect) during adolescence as compared to women who dropped out of college.

Direct paths were then examined from resources, assets, and gender to the main outcomes. Family SES resources were not direct predictors of any of the three outcomes (young adult socioeconomic success, mastery, or mental health). Psychological assets did directly and positively predict each of the outcomes in a similar range (*b* = .21 - .28). Intelligence (PPVT) only directly predicted mastery in young adulthood (*b* = .12). Gender significantly influenced young adult SES success (*b* = .23), indicating that men tended to have higher scores on measures of personal income, job satisfaction, and subjective SES. Gender also significantly influenced mastery in young adulthood (*b* = .10), indicating that women who dropped out of college had higher levels of mastery as compared to men.

There were few relationships between resources and assets with the markers of adulthood (timing of marriage, timing of first birth, and living independently). However, gender was significantly associated with these markers. Gender was significantly associated with being married before 23 years old and having a child before 23 years old, indicating more women were in these categories. Gender was not significantly associated with being married after 23 or having a first child after the age of 23.

Considering all of the constructs and variables in the model at this point, the relationships between the markers of adulthood and outcomes were then examined, the main focus of this research question. Among young adults who dropped out of college, getting married either before the age of 23 or after the age of 23 was equally positively related to socioeconomic success (*b* = .11 and .10, respectively). Living independently of the parental home was also positively related to socioeconomic success (*b* = .18). However, having a child before the age of

23 was negatively related to socioeconomic success (*b* = -.11). None of the markers of adulthood directly predicted mastery in young adulthood. Additionally, timing of marriage did not directly influence young adult mental health. Living independently of the parental home was positively related to mental health (*b* = .09), but having a child before the age of 23 was negatively related to mental health (*b* = -.10). Having a child at or after the age of 23 was not significantly related to young adult mental health.

Due to the significant influences of gender on the transitions to adulthood and outcomes, follow up analyses were conducted as a multiple group analysis using the same model. This method allowed for gender differences to be examined across all factor loadings and beta paths. Factor loadings for the latent constructs did not differ by gender. There were some gender differences in the relationship between predictors and outcomes, mainly due to the timing of first child and living independently. These results are displayed in Table 6. Having a child before the age of 23 negatively predicted young adult socioeconomic success for women (*b* = -.54), but the same path was non-significant for men. Similarly, having a child at 23+ negatively predicted young adult socioeconomic success for women (*b* = -.40), but the same path was non-significant for men. Men experienced negative effects on young adult mental health if they had a child before 23 (*b* = -.18) or 23+ (*b* = -.15), but there was no relationship for women. Men had a stronger relationship between living independently and socioeconomic success (*b* = .28) as compared to women (*b* = .15). Men also had a significant relationship between living independently and mastery (*b* = .15) and living independently and mental health (*b* = .18), but these relationships did not exist for women. Finally, the correlation between young adult socioeconomic success and mental health was stronger for women (*r* = .38) than men (*r* = .29).

The second way to answer research question two was to predict the profiles created as a result of research question one. The goal was to use the same predictors from the latent regression analysis (family SES resources, intelligence (PPVT), gender, and psychological assets). The predictors were added one at a time to establish the stability of the overall model and the unique contributions of each predictor (i.e., the latent construct of family SES resources was considered as one predictor within the model). Gender was the only predictor that could be added to the latent profile analysis model without disrupting the stability of the five established classes. For family SES resources, intelligence (PPVT), and psychological assets, the model would not properly run or the classes changed as a result of the predictor. This indicated that these variables could influence class membership rather than only predicting the established membership. Therefore, only the model with gender as a covariate was discussed below.

When considering gender as a covariate on the latent profile analysis, it was important to first look at the hypothesis test for the effect of gender (Collins & Lanza, 2010). The loglikelihood for the baseline model with no covariates was -22205.47 (df = 46) and the loglikelihood for the model that included gender as a covariate was -22179.52 (df = 50), leading to the hypothesis test of -2(-22205.47 – (-22179.52)) = 51.9. Four degrees of freedom separated the two models because the model with gender estimated four more parameters than the baseline model. The significant hypothesis test revealed that gender was a statistically significant predictor of the latent profiles. Table 7 displayed the estimates of the intercepts (β_0's), regression coefficients (β_1's), and transformations to odds ratios for this model. The last class, *Overall High Well-Being*, was assigned as the reference profile due to its high contrast with the other four classes. Comparing the other four classes to this reference group allowed for a theoretical distinction of the most successful class compared to everyone else.

The intercept for the *Overall Low Well-Being* group was negative, indicating that for men, there was a smaller prevalence in this group than the reference latent profile. The gender coefficients indicated women had a higher probability of being in the other four profiles than men. The odds ratios allow for a direct comparison between probabilities. For women, the odds of being in the *Overall Low Well-Being* group relative to the *Overall High Well-Being* group were 10.20 times the odds for men. Women also had higher odds of being in all three of the average profiles as compared to the reference profile than men and these were significant differences. When the reference profile was shifted to one of the average profiles, it was clear that there were no significant differences among the average profiles between women and men. The stark differences were on the extreme ends with more women in the *Overall Low Well-Being* group and more men in the *Overall High Well-Being* group.

After the issues with model convergence and adding covariates in predicting the latent profile analysis, the basic mean differences between key variables and group status were examined through t-tests. The most likely class was assigned to each of the participants for these comparisons, so it was considered a basic analysis because the probabilities of class membership using a model approach were not taken into account. However, these analyses explained why there were problems with model convergence. The markers of adulthood (timing of marriage, timing of first birth, and living independently) were not significantly different by the five established groups, mainly due to the lack of differences between the three average groups. However, the extreme differences were interesting to point out through the use of t-tests for mean comparisons. Twenty-five percent of individuals in the *Overall Low Well-Being* group experienced a marriage before the age of 23 while 31% of individuals in the *Overall High Well-Being* group did. Thirty-nine percent of individuals in the *Overall Low Well-Being* group had a

child before the age of 23 as compared to 24% of individuals in the *Overall High Well-Being* group. These mean comparisons also showed similar findings to the latent class analysis with gender as a covariate because the *Overall Low Well-Being* group included 65% women and the *Overall High Well-Being* group was made up of 24% women.

Discussion

Currently in the United States, there is a critical discussion about the worth of postsecondary education for young adults (Barrow, Brock, & Rouse, 2013) while the federal government has strongly suggested higher levels of postsecondary education for everyone (Obama, 2009). This study answered two questions related to the large amount of young adults who drop out of college in the United States. First, it was established that this group is very different from bachelor degree's recipients in both adolescence and young adulthood. The heterogeneity within the group of young adults who dropped out of college was established through the formation of five latent classes based on seven measures of young adult well-being. The socioeconomic success, mastery, and mental health of college students who dropped out was predicted by family resources, psychological assets, and three transitions to adulthood. The importance of these findings in the context of life course theory is discussed below.

First, this study established the differences between young adults who dropped out of college to young adults who completed a bachelor's degree on measures of family of origin resources, adolescent assets, transitions to adulthood, and multiple outcomes of well-being. The hypotheses were supported in that bachelor's degree recipients had more family of origin resources, higher scores on most adolescent assets, higher socioeconomic success in young adulthood, and better mental health in young adulthood as compared to young adults who dropped out of college. Bachelor's degree recipients were less likely to be married or have

children and more likely to be living outside of the parental home than peers who dropped out of college, in line with the hypotheses based on life course theory. These results are consistent with past research that has compared the two groups in a dichotomous fashion (DiPrete & Buchmann, 2006), which is why researchers and practitioners highly encourage high school students to attend college. However, the main contribution of this study was the specific examination of the college student dropout population, an overlooked group that is rarely studied separately.

Latent Profiles of College Students who Dropped Out

This study found five distinct profiles within the population of college students who dropped out (i.e., *Overall Low Well-Being, Middle SES with Low Mental Health, Middle SES with Mid Mental Health, Middle SES with High Mental Health,* and *Overall High Well-Being*). Four groups with only two middle profiles were originally hypothesized. It was also hypothesized that group membership could be predicted by transitions into adulthood, but there were no significant findings. The five profiles and their relevancy for understanding the population of young adults who dropped out of college are discussed below.

The first profile, *Overall Low Well-Being*, was characterized as a group of young adults who were struggling on many aspects of well-being. They had the lowest income, job satisfaction, subjective SES, mastery, and happiness levels compared to all other groups. Young adults in this group also had the highest depression and stress scores. When college educators think of college student dropouts as a whole, it is assumed they must be part of this group that is treading water and struggling to succeed (Settersten & Ray, 2010). However, this group only made up seven percent of young adults who dropped out of college in this study. This group was also disproportionally comprised of women. Without a college degree, more women are in low paying jobs that are demanding and time consuming (Shulman, 2005). These jobs are stressful

and can influence other levels of well-being. Overall, this lowest group was struggling across many domains of well-being.

The three middle profiles made up the majority of the population studied (88%) and were very similar to each other on SES measures, but varied slightly on measures of mastery and mental health. These young adults had mean incomes within $5,000 of each other and generally felt high levels of job satisfaction and subjective SES. It was the *Middle SES with Low Mental Health* group that felt low happiness with higher depression and stress compared to the other middle SES groups. I hypothesized these middle groups would be different due to differences on timing of marriage, first child, and living independently from parents, but none of these transitions to adulthood distinguished the groups. From this study, it was unclear what made these three groups different from each other on the measures of mental health.

The last profile, *Overall High Well-Being*, was the most socioeconomically successful group out of the five and had high levels of mastery and mental health. This group only comprised five percent of young adults who dropped out of college and yet popular media focuses in on this group, referencing Steve Jobs and Bill Gates as successful college student dropouts. Many young adults who drop out of college could potentially perceive themselves as being able to become part of this group, even though it is actually very rare. College educators rarely expect college dropouts to be in this level because they know it is so rare. Even though this group had high mastery and mental health, their scores were still slightly lower than the *Average SES with High Mental Health* profile. Therefore, higher socioeconomic success does not always equal higher mental health for this population. The most interesting part about this group was that they had no degrees or certificates of any kind, part of the requirement for creating the overall sample of young adults who dropped out of college. Young adults in this

profile still make over $85,000 on average, without being a trained professional such as a plumber or electrician. Perhaps these individuals have some vocational training that did not result in a certification. Additionally, men were more likely to be in this profile compared to women. This finding makes sense because without a bachelor's degree, the jobs that earn the most money are in male-dominated fields such as manufacturing and construction (Carnevale et al., 2011). Therefore, men who dropped out of college were more likely to be in the highest profile and the most successful with women more likely to be a part of the lowest profile and the least successful.

Considering the heterogeneity of this population, it was important to re-examine how profile groups compared to the bachelor's degree recipients. Very few young adults who dropped out of college had personal incomes on average with bachelor's degree recipients. However, the majority of young adults who dropped out of college had a similar average of job satisfaction and subjective SES. Young adults who dropped out and were part of the high mental health profiles had comparable scores to bachelor's degree recipients. These results indicated that many young adults who dropped out of college had similar feelings of success and mental health compared to their peers who had completed bachelor's degrees. These findings are important in breaking down stereotypes about the college student dropout population being homogenous. The established profiles help distinguish these young adults.

Developmental Assets

The traditionally established relationships between social assets, intellectual assets, and well-being (Eccles et al., 2008) were not robust in this subpopulation of college students who dropped out. It was hypothesized that intellectual, psychological, and social assets would positively predict the latent constructs of young adult socioeconomic success and mental health.

Intellectual assets (i.e., intelligence (PPVT), GPA, and decision making skills) were not consistently related to each other, but intelligence (PPVT) was an important control variable in the overall model and a significant predictor of young adult mastery. Among young adults who dropped out of college, having the asset of higher intelligence (PPVT) during adolescence was important for feelings of mastery later in adulthood. The psychological assets measured during adolescence (i.e., physical self-perception, self-esteem, and positive affect) were significantly related to each other and as a construct, was a significant predictor of SES success, mastery, and mental health for young adults who dropped out of college. High psychological assets during adolescence only helped this population in young adulthood.

Unlike psychological assets, social assets (i.e., neighborhood quality, school connectedness, and peer relationships) were not significantly related to each other or significant predictors of outcomes for young adults who dropped out of college. School connectedness in particular has been found to be a strong predictor of well-being in previous research (Olsson et al., 2012), but young adults could have a complex relationship with school connectedness during adolescence if they eventually drop out of college. For example, a high school student who does not feel connected to school could go to college expecting a different atmosphere. However, college still has the same expectations of reaching out to your teachers and feeling part of the community. This connectedness in college is what many first year experience programs try to promote to help students succeed academically. These findings contribute to the growing body of research that links multiple assets with outcomes of well-being (Eccles et al., 2008). Perhaps young adults who drop out of college rely on other assets from adolescence or emerging adulthood to shape their well-being.

Markers of Adulthood

Among young adults who dropped out of college, the other transitions into adulthood were related to their socioeconomic success, mastery, and mental health in different ways. Before this study, it was unclear how the timing of marriage influenced outcomes of well-being in young adulthood for individuals who dropped out of college. Approximately half of the sample had married by the last wave of data collection, between 24-32 years old. The hypotheses were partially supportedbecause being married positively influenced young adult SES success, regardless of timing. However, marriage at any age was not a significant predictor of mastery or mental health when controlling for family of origin resources, intelligence (PPVT), gender, psychological assets during adolescence, and the other transitions to adulthood. These results did not differ when specifically examining gender. In other words, both men and women had a positive relationship between marriage and SES success.

The timing of the first child was another important transition to adulthood considered in this study. It was hypothesized having a child would be detrimental for the participants on measures of well-being, especially if the timing was before the age of 23. The overall model revealed that having a child was only negatively related to SES success and mental health if the child was born before the age of 23. Having a child after 23 had no influence on outcomes of well-being when men and women were examined together. However when gender was specifically examined, women who had a child at any age had a negative correlation with SES success as compared to men who had a child at any age. This finding is in line with the idea that women are typically caregivers of children and raising a child limits the ability to have a personal income and high job satisfaction. Young women who have dropped out of college may be particularly limited by the types of jobs they can work while raising a child (Budig & Hodges, 2010). Women did not feel an effect of having a child on their mental health, but men did have a

negative statistical association. Having a child at any time was negatively related to men's mental health. Men could be particularly struggling with the ideas of providing for their children after failing at the transition of completing postsecondary education.

Living independently of parents was the third marker of adulthood examined in this study. It was hypothesized that young adults who dropped out of college and lived independently of their parents would have better outcomes of well-being than peers who lived with parents. This hypothesis was partially correct because living independently was a positive predictor of young adult SES success and mental health, but not mastery. These findings are in line with past research about young adults who live independently and feel financially independent (Arnett & Schwab, 2012). This study also found a gender difference, with men who live independently having a stronger relationship to outcomes in young adulthood as compared to women who live independently. This finding is new in the field and especially relevant for the recent call for understanding gender patterns in the leaving home process (Seiffge-Krenke, 2013). Perhaps more men are able to leave home because of their socioeconomic success as compared to women. Men who have dropped out of college could feel better mastery and mental health because they have moved out of the parental home, a transition they have succeeded at compared to the failure of dropping out of school. These gender differences will need to be further clarified in future studies, especially related to the timing of when individuals first experience living independently.

Contributions to Theory

The theoretical framework for this study consisted of life course theory and the theory of emerging adulthood. Transitioning into young adulthood is complex and difficult due to increasing responsibilities and choices that will influence the rest of the life course (Furstenberg,

Rumbaut, & Settersten, 2005). Being part of a vulnerable population is especially difficult as these transitions have to be experienced on top of other burdens and possible lack of support (Osgood, Foster, Flanagan, Ruth, 2005). Both of these theories help contextualize the results from this study for understanding young adults who have dropped out of college.

A main assumption of life course theory is that prior experiences in life predict future life outcomes (Mayer, 2009). This study found several prior experiences to influence the outcomes of well-being for young adults who dropped out of college. Psychological assets during adolescence were particularly meaningful for later well-being. Life course theory particularly emphasizes the importance of family of origin, but family of origin resources were not direct predictors of any measures of well-being in this study within the sample of college students who dropped out. Life course theory also calls for the need to examine multiple life domains, but the social assets of neighborhood quality, school connectedness, and peer relationships were not correlated with transitions or outcomes among young adults who dropped out of college. These young adults could be relying on more recent domains for their success and mental health. Perhaps their current neighborhood and friendship levels in young adult influence their levels of success and mental health.

There were several key concepts of life course theory addressed in this study as well. The young adults who dropped out of college had already ended their role as a student, but many of them were balancing the combinations of being a worker, spouse, or parent. While the exact timing of the combination of roles was unknown, it was clear there were many pathways to experience in different orders, which has been a common occurrence in the past few decades (Arnett, 2006). It was surprising the timing of marriage did not differentiate well-being for this group of young adults who dropped out of college because past cohorts have felt the negative

effect of early marriage (Elder, 1998). However, those negative effects in past cohorts were the result of who was marrying early and lost education opportunities. This cohort of young adults who dropped out of college might not list marriage as one of the main reasons they were not enrolled in college. Their reasons could also change over time. Timing of first child still had the hypothesized negative relationship with well-being for this sample. This is in line with past cohorts because having a child before the age of 23 did relate to less socioeconomic success, particularly for women. For the young adults who had children before the age of 23, it could have limited their full-time educational opportunities. Juggling the full-time student role and being a parent at the same time is still non-traditional in the United States (Osgood et al., 2005). Emerging adulthood theory suggests that postponing the transitions such as marriage and parenthood to the late twenties is beneficial in making more options available for life directions (Arnett, 2000). However, the findings from this study for students who drop out suggest that delaying marriage does not have an advantage for mental health and socioeconomic success.

Another concept of life course theory is that of agency, or the idea that the self controls and regulates parts of life (Gecas, 2003). Although not directly measured in this study, the psychological assets have elements of the agency construct with the measurement of self-esteem. Agency is a concept that could help explain some of the findings and guide future research. The young adults in this study could have had different levels of agency about the act of dropping out of college. Some young adults could have attributed the act of dropping out to the educational system, other people, or other life events. Some young adults could have felt they really controlled their own decisions and were content with those decisions, even if it meant failing at a life transition or experiencing other transitions out of the traditional order. Perhaps the most successful group in this study, the *Overall High Well-Being* group, felt the most agency in their

lives. Examining feelings of self-efficacy will be important for future studies that consider how life course theory influences this time period of many transitions.

Life course theory began because of the differences noticed in cohorts of men who grew up in the times of the Great Depression and World War II (Elder, 2002), so there were few theoretical statements about gender until later generations were followed. Even more recent generations that have been studied vary greatly in gender roles and traditions compared to the young adults in this study. Therefore, this study makes a contribution to the ideas of gender for life course theory. In particular, men and women experienced the transition of having a child differently. Men who had a child at any age felt negative effects on their mental health, but no other outcomes. Women who had a child at any age felt the negative effects on their socioeconomic success, but no other outcomes. Gender inequality still exists for parenthood, even if it no longer exists for marriage, within a recent cohort of young adults who dropped out of college. These differences relate to recent research that has considered how women and men shift into traditional gender roles during the transition to parenthood (Katz-Wise, Priess, & Hyde, 2010). Men see themselves as a breadwinner while women transition into the established role of mother. In this study, the men could have been feeling negative mental health outcomes when they became a parent due to their status as a college student dropout. Men who have dropped out of college could be struggling with providing for their children and family. Recognizing these gender differences will be important for future research studying the life course and the transitions to adulthood.

Overall, most of the young adults in this study felt successful and were thriving rather than only surviving (Settersten & Ray, 2010), despite their failed transition of graduating from college on time with peers. These young adults overcame adversity and were still on a

promising path for good well-being throughout the life course (Eccles et al., 2003). This positive approach is in line with researchers who focus on emerging adulthood (Arnett, 2006), that it is important to help young adults succeed and thrive, whatever stumbling blocks they may encounter. Not all young adults who drop out of college are on the same path for the rest of their life course and future research will help reveal the variety in these paths.

Limitations

This study was not without limitations. First, this study focused on one cohort that was limited to the United States. By focusing on one Western country, the findings cannot be generalized to other cultures and countries. For example, living independently of the parental home is not considered a marker of adulthood in other countries, particularly collectivistic cultures (Seiffge-Krenke, 2013). Even though living independently was considered a marker of adulthood in this study, the timing was unclear within this sample. Future studies could examine the specific timing of leaving the parental home and whether or not young adults who drop out of college return after a period of time, known as the boomerang effect (Mitchell, 2006).

Additionally, this study did not have exact data about when or why the young adults dropped out of college. The timing of dropping out of college could have occurred within the first few months of starting or it could have been multiple years later in this sample. Timing of dropping out could have affected their socioeconomic success and mental health differently. These differences would also depend on why they dropped out in the first place. They could have dropped out because they were getting married or having a child. Other reasons outside the scope of this study could have also influenced their reasoning for dropping out, including pressure from parents, a lucrative job offer, or a medical reason. The reasoning for college student departure is a large field of educational research (Braxton, Hirschy, & McClendon,

2004), but it needs to be combined with the life course perspective for full understanding of the issues.

Another limitation was the lack of knowledge about student loan debt. Obtaining loans without completing a college degree are argued to be even more detrimental to young adults than never attending college (Dwyer, Hodson, & McCloud, 2013). This study knew the income levels of each young adult who dropped out, but it was unclear how much debt they could have accrued as a result of college. These loans may have been detrimental for other transitions to adulthood, including the costs of having a child and being able to live independently from parents. It is unclear how much parents were helping these young adults as well. Perhaps the young adults who were able to live independently from their parents were receiving financial contributions from their parents. Other research has examined this relationship between parents and young adults (Kirkpatrick Johnson, 2013). Future research will need to consider the combinations of income, parental financial assistance, and loan accruement when considering socioeconomic success.

While this study compared young adults who dropped out of college to bachelor's degree recipients, future research should compare equal groups of adolescents and follow their decision making process as they drop out of college. In other words, the college students who dropped out were probably not equal to their peers who did complete bachelor's degrees, particularly during adolescence. Future research can consider comparing individuals who have the same background characteristics and then experience dropping out of college through advanced statistical techniques such as propensity score matching (Schneider, Carnoy, Kilpatrick, Schmidt, & Shavelson, 2005).

Strengths

After considering the limitations of this study, there are several strengths to highlight. First, college student dropouts are rarely researched as a separate population because of the difficulty in accessing them after they leave the common institution of college. This study was able to access a nationally representative cohort of college student dropouts through secondary data that followed them from adolescence into young adulthood. Nationally representative data is one of the best ways to access young adults who have dropped out of college and future research should follow this trend in being able to study this population in the context of life course theory.

Another strength of this study was the focus on the heterogeneity within the population of young adults who have dropped out of college. Past research has been limited by the dichotomous focus of degree completion or not (Byun et al., 2012; DiPrete & Buchmann, 2006). If this study had stopped at the distinction between young adults who dropped out and bachelor's degree recipients, it would have been assumed that all young adults who dropped out had poor socioeconomic success and mental health. Instead, this study was able to demonstrate that some young adults who dropped out of college are struggling while others are highly successful on a variety of outcomes.

The focus on a variety of outcomes beyond income was also a strength of this study. Economists and educational researchers tend to focus on college students as potential earners and graduates. This study considered the whole person as someone with socioeconomic success, feelings of mastery, and feelings of mental health. Socioeconomic success was not only comprised of personal income, but the satisfaction the young adults felt in their jobs and how they subjectively placed themselves in society. The young adults also experienced other transitions in their lives that influenced their feelings, a key concept of emerging adulthood

theory (Arnett, 2006). Future studies should also move beyond sole outcomes and consider college student dropouts as entire people with multiple life domains.

Implications for Practice and Policy

Young adults who have dropped out of college lack a common educational institution, but they still have the potential to interact with public services. For example, young adults who have dropped out of college and have children could need the services of social workers. Due to the strong links between educational attainment and income, there are several policies surrounding the issue of returning to higher education for low-income families. However, many of these policies and programs have barriers that rarely increase the earnings for these families (Hamilton & Scrivener, 2012). Other options include helping young adults who have dropped out of college focus on career avenues, especially while they are still in high school and before they form families.

It is also important for practitioners to remember that the majority of young adults who drop out of college are somewhere in the middle on socioeconomic success and mental health, not on the extremes. This was evidenced in the low percentages in the *Overall Low Well-Being* group and the *Overall High Well-Being* group. Most young adults who have dropped out of college should not be perceived as struggling to survive, or treading water (Settersten & Ray, 2010). They may not even regularly identify themselves as a "drop out" as educational researchers commonly classify them. Just the knowledge that young adults who drop out of college are a heterogeneous population is important to guard against stereotypes.

Especially within the field of higher education, it is easy to assume that all young adults are enrolled in college after high school. Policies that remember young adults face a variety of situations are particularly important for young adults who have dropped out of college. For

example, the new Affordable Care Act in the United States considers all young adults in requirements for remaining under parental health insurance, regardless of school status, marriage, living arrangements, or financial dependence (U.S. Department of Health and Human Services, 2013). These requirements will override previous policies by states that mandated young adults must be enrolled in school in order to receive health insurance. Future policies should consider similar requirements to the Affordable Care Act when considering legislation that influences any young adults.

Future Directions

While this study provided a foundation for understanding young adults who have dropped out of college in the United States, there are many directions for future research. First, it is important to understand what else predicts the socioeconomic success and mental health of young adults who dropped out of college. Theoretically, developmental assets during adolescence and other life transitions should change levels of well-being. Perhaps it is only certain types of well-being in young adulthood that can be predicted by developmental assets for this subpopulation. While this study focused on a positive, asset approach for this population, future research could consider risky behaviors and health issues as important predictors of well-being.

Additionally, understanding exactly when and why young adults drop out of college is a priority for researchers who study the life course. Educational institutions that do collect data on college students who leave tend to focus on academic or immediate reasons for leaving the institution. For example, many college students struggle with succeeding in the classroom, self-management, and dealing with family crises at home (Conley, 2010). Young adults who

dropped out of college five years ago could have a different perspective on the reasons for leaving, particularly if they can speak about the timing of other transitions in their lives.

Future research also needs to consider the process of how young adults think about their act of dropping out of college. Especially in the framework of higher education, it is assumed that people who do not finish must be devastated and view themselves as failures. This could be especially true if they are surrounded by college graduates in their daily lives. However, from my own qualitative work with this population, I know that some young adults who have dropped out do not even associate themselves with the idea of being a dropout. Young adults can believe they will return in the future, which helps disassociate from the idea that they have dropped out. These high levels of optimism are common in emerging adulthood (Arnett, 2006). Young adults can also hold a stronger identity with other life transitions, such as being a colleague, spouse, parent, and independent person. These different identities are part of a whole person and future research can consider these identities and processes as important for understanding this time in the life course.

Conclusion

In conclusion, this study made an important contribution to understanding the population of young adults who dropped out of college in the United States within the context of life course theory. The heterogeneity of the population on measures of socioeconomic success, mastery, and mental health were established through five latent profiles. Gender was a significant predictor of these profiles, but developmental assets and transitions to adulthood did not predict the differences in profiles. When the outcomes were considered as separate continuous constructs, the timing of markers of adulthood varied in prediction. Getting married and living independently from parents were each positively associated with well-being in young adulthood,

but having a child before the age of 23 was negatively associated with outcomes of well-being. There were gender differences within those findings as well. Overall, this study aids in the understanding of a population that is often ignored and overlooked.

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Table 1

Comparisons of College Student Dropouts (N =1,530) and Bachelor's Degree Recipients (N = 1,977) on Weighted Percent or Mean (and Standard Deviation) on Selected Characteristics

	Overall	College Student Dropouts		Bachelor's Degree Recipients	
	Range	M	SD	M	SD
Family Income ***	$10,000 - $100,000[a]	$46,628	$23,962	$60,134	$25,836
Parent Education ***	1 – 8	5.18	1.83	6.19	1.70
Parent Occ. Prestige ***	1 – 7	4.24	1.72	4.94	1.60
Intelligence (PPVT) ***	10 – 141	99.79	13.88	105.71	13.33
Grade Point Average ***	1 – 4	2.74	0.69	3.25	0.60
Decision Making	4 – 20	15.25	2.44	15.15	2.46
Self-Esteem	6 – 30	24.77	3.57	24.95	3.41
Physical Self-Percept. ***	5 – 25	19.77	3.13	20.26	2.98
Positive Affect ***	4 – 16	12.01	2.59	12.69	2.47
Neighborhood Quality ***	0 – 12	7.32	1.57	7.82	1.37
School Connectedness ***	5 – 25	18.42	3.79	19.12	3.39
Peer Relationships	0 – 4	2.23	1.39	2.15	1.43
Marriage					
Married before 23 ***	--	28.5%	--	15.4%	--
Married 23+ ***	--	20.7%	--	27.5%	--
Not Married ***	--	50.7%	--	57.2%	--
Children					
Child before 23 ***	--	28.9%	--	6.4%	--
Child 23+ ***	--	28.6%	--	19.2%	--
No Child ***	--	42.5%	--	74.4%	--
Living Independently					
Independent **	--	83.6%	--	86.8%	--
Not Independent **	--	16.4%	--	13.2%	--
Personal Income ***	$10,000 - $100,000[a]	$36,467	$21,399	$47,565	$23,161
Job Satisfaction	1 – 5	3.82	0.96	3.86	0.93
Subjective SES Scale ***	1 – 10	4.81	1.66	5.65	1.51
Mastery ***	5 – 25	19.48	2.68	20.10	2.53
Happiness ***	0 – 17	12.34	3.11	12.96	2.96
Depression ***	0 – 28	5.88	4.30	5.13	3.65
Stress ***	0 – 16	4.88	2.97	4.25	2.66

Note: The asterisks indicate significant mean differences by t-tests or chi-square tests – * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

[a] Both income ranges include less than $10,000 and above $100,000 in the extreme ends.

Table 2

Correlations for Observed Variables (N = 1,530)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Family Income	-																		
2. Parent Education	.39	-																	
3. Parent Occ. Prestige	.34	.42	-																
4. Intelligence (PPVT)	.24	.26	.19	-															
5. Grade Point Average	-.04	.04	.04	.21	-														
6. Decision Making	-.06	-.03	-.02	-.05	.08	-													
7. Self-Esteem	.01	.01	.02	-.06	.09	.32	-												
8. Physical Self-Percept.	.07	.07	.05	.05	.10	.24	.57	-											
9. Positive Affect	.06	.07	.06	.19	.20	.17	.45	.32	-										
10. Neighborhood Qual.	.25	.20	.22	.12	.04	.00	.06	.06	.06	-									
11. School Connected.	-.05	.02	.02	.04	.24	.17	.36	.28	.26	.01	-								
12. Peer Relationships	.12	.03	.03	.08	-.08	.05	.05	.14	.04	.05	-.03	-							
13. Personal Income	.14	.05	.07	.12	.04	.05	.08	.16	.08	.11	.03	.17	-						
14. Job Satisfaction	.02	-.02	.03	.04	.10	.08	.06	.08	.06	.06	.10	.03	.14	-					
15. Subjective SES Scale	.00	-.01	.02	.01	.07	.05	.06	.08	.02	.04	.11	.08	.32	.19	-				
16. Mastery	.07	.05	.04	.09	.09	.10	.15	.15	.17	.02	.09	.01	.12	.18	.18	-			
17. Happiness	.04	.01	.04	.06	.10	.09	.21	.18	.23	-.02	.16	.02	.12	.25	.28	.40	-		
18. Depression	-.10	-.02	-.06	-.07	-.08	-.02	-.17	-.18	-.16	-.05	-.13	-.03	-.15	-.22	-.20	-.34	-.61	-	
19. Stress	-.06	-.00	-.05	-.05	-.07	-.08	-.18	-.17	-.16	.01	-.13	-.03	-.16	-.25	-.29	-.39	-.81	.71	-

Notes: All correlations above or equal to +/- .09 are significant at the $p < .001$. Correlations between -.05 and .05 are non-significant.

Table 3

Comparative Statistics of Alternative Latent Profile Model Solutions (N = 1,530)

Model	*AIC*	*BIC*	*aBIC*	*Entropy*
Two classes	45,929.21	46,046.53	45,976.64	0.85
Three classes	45,067.90	45,227.89	45,132.59	0.86
Four classes	44,680.15	44,882.81	44,762.09	0.82
Five classes	**44,502.93**	**44,602.12**	**44,602.12**	**0.82**
Six classes	44,707.39	44,995.38	44,823.83	0.87

Note: *AIC*, Akaike's information criterion; *BIC*, Bayesian information criterion; *aBIC*, sample-size-adjusted BIC. Smallest values are printed in **boldface.**

Table 4

Latent Profile Analysis Conditional Response Means and Standard Deviations (N = 1,530)

		Profiles				
		Overall Low	Avg. SES, Low MH	Avg. SES, Mid. MH	Avg. SES, High MH	Overall High
		(*n* = 107)	(*n* = 391)	(*n* = 574)	(*n* = 388)	(*n* = 70)
		7%	25%	38%	25%	5%
Well-being	Range	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Personal income	<= $10,000 - $100,000 +	$25,050 ($2,110)	$32,630 ($1,660)	$33,340 ($1,890)	$35,290 ($1,900)	$87,270 ($3,160)
Job satisfaction	1 – 5	3.25 (0.18)	3.58 (0.09)	3.88 (0.06)	4.10 (0.05)	4.48 (0.13)
Subjective SES scale	1 – 10	3.73 (0.28)	4.26 (0.09)	4.74 (0.12)	5.30 (0.12)	6.78 (0.33)
Mastery	5 – 25	16.13 (0.62)	18.47 (0.26)	19.51 (0.13)	20.68 (0.21)	21.20 (0.44)
Happiness	0 – 17	6.88 (0.45)	9.47 (0.25)	12.99 (0.20)	15.52 (0.13)	14.11 (0.95)
Depression	0 – 28	15.86 (0.90)	7.75 (0.43)	5.01 (0.20)	2.59 (0.16)	3.68 (0.84)
Stress	0 – 16	10.91 (0.42)	7.31 (0.22)	4.43 (0.19)	1.63 (0.17)	2.57 (0.90)

Table 5

Latent Regression Analysis Results (N = 1,530)

Parameter Estimate	*Unstandardized*	*Standardized*	*p*
Measurement Model Estimates			
Family Resources → Family Income	1.00	.55	<.001
Family Resources → Parent Education	0.96 (.11)	.71	<.001
Family Resources → Parent Occ. Prestige	0.71 (.07)	.55	<.001
Psych. Assets → Self-Esteem	1.00	.89	<.001
Psych. Assets → Physical Self-Perception	0.64 (.06)	.66	<.001
Psych. Assets → Positive Affect	0.41 (.03)	.51	<.001
SES Success → Personal Income	1.00	.57	<.001
SES Success → Job Satisfaction	0.29 (.08)	.38	<.001
SES Success → Subjective SES Scale	0.73 (.14)	.54	<.001
Mental Health → Happiness	1.00	.85	<.001
Mental Health → Depression	1.72 (.08)	.74	<.001
Mental Health → Stress	1.40 (.05)	.95	<.001
Significant Correlated Terms			
Child Before 23 with Child 23+	-0.08 (.00)	-.40	<.001
Married Before 23 with Married 23+	-0.06 (.01)	-.33	<.001
Married Before 23 with Child Before 23	0.06 (.01)	.31	<.001
Married After 23 with Child After 23	0.04 (.01)	.21	<.001
Female with Family Resources	-0.10 (.03)	-.16	<.001
Female with Psych. Assets	-.38 (.06)	-.24	<.001
Female with PPVT	-0.69 (.23)	-.10	<.01
Family Resources with PPVT	6.91 (.96)	.39	<.001
Living Independently with Married 23+	0.02 (.00)	.13	<.001
SES Success with Mental Health	1.26 (.15)	.39	<.001
Mastery with Mental Health	2.63 (.29)	.36	<.001
Mastery with SES Success	1.10 (.21)	.33	<.001
Structural Model (significant paths)			
Family Resources → Child Before 23	-0.03 (.01)	-.09	.02
Psych. Assets → SES Success	0.08 (.02)	.21	<.001
Psych. Assets → Mastery	0.19 (.03)	.23	<.001
Psych. Assets → Mental Health	0.23 (.03)	.28	<.001
Female → SES Success	-0.55 (.24)	-.23	.02
Married Before 23 → SES Success	0.30 (.13)	.11	.02
Married 23+ → SES Success	0.30 (.14)	.10	.05
Child Before 23 → SES Success	-0.30 (.13)	-.11	.05
Living Independently → SES Success	0.60 (.20)	.18	<.001

Parameter Estimate	*Unstandardized*	*Standardized*	*p*
Female → Mastery	0.56 (.19)	.10	<.01
PPVT → Mastery	0.03 (.01)	.12	<.01
Child Before 23 → Mental Health	-0.59 (.21)	-.10	<.01
Living Independently → Mental Health	0.66 (.25)	.09	<.01
Female → Child Before 23	0.22 (.03)	.23	<.001
Female → Married Before 23	0.12 (.03)	.13	<.001
Indirect Effects			
Fam. Res. → Child Before 23 → SES Success	0.01 (.01)	0.01	n.s.
Total indirect Female → SES Success	-0.03 (.03)	-0.01	n.s.
Female → Married Before 23 → SES Success	0.03 (.02)	0.01	<.01
Female → Child Before 23 → SES Success	-0.06 (.03)	-0.02	<.01
Female → Child Before 23 → Mental Health	-0.12 (.05)	-0.02	<.001
Residuals (listed out for variables)			
Parental Income	3.91 (.27)	.69	<.001
Parental Education	1.55 (.17)	.50	<.001
Parental Occupational Prestige	2.00 (.13)	.69	<.001
Self-Esteem	2.69 (.82)	.20	<.001
Physical Self-Perception	5.81 (.51)	.57	<.001
Positive Affect	5.08 (.30)	.74	<.001
Marriage Before Age 23	0.19 (.01)	.98	<.001
Child Before 23	0.20 (.01)	.93	<.001
Personal Income	3.13 (.38)	.68	<.001
Job Satisfaction	0.73 (.05)	.86	<.001
Subjective SES Scale	1.92 (.15)	.71	<.001
Mastery	7.04 (.59)	.94	<.001
Happiness	2.66 (.25)	.28	<.001
Depression (Reversed)	17.56 (1.51)	.46	<.001
Stress (Reversed)	1.39 (.34)	.09	<.001
Socioeconomic Success (Latent Construct)	1.22 (.35)	.83	<.001
Mental Health (Latent Construct)	6.30 (.39)	.90	<.001
R^2			
Parental Income	.307		
Parental Education	.505		
Parental Occupational Prestige	.306		
Self-Esteem	.797		
Physical Self-Perception	.428		
Positive Affect	.260		

Parameter Estimate	*Unstandardized*	*Standardized*	*p*
Marriage Before Age 23	.017		
Child Before 23	.068		
Personal Income	.320		
Job Satisfaction	.141		
Subjective SES Scale	.292		
Mastery	.062		
Happiness	.724		
Depression (Reversed)	.540		
Stress (Reversed)	.908		
Socioeconomic Success (Latent Construct)	.170		
Mental Health (Latent Construct)	.098		

Table 6

Latent Regression Analysis Results Comparing Men (N = 766) and Women (N = 764)

	Men		Women	
Parameter Estimate	*Unstd.*	*Std.*	*Unstd.*	*Std.*
Structural Model (significant paths)				
Family Resources → Child Before 23	-0.00 (.02)	-0.01	-0.08 (.03)	-0.20
Psych. Assets → SES Success	0.11 (.04)	-0.19	0.06 (.03)	0.21
Psych. Assets → Mastery	0.21 (.06)	0.21	0.18 (.04)	0.26
Psych. Assets → Mental Health	0.23 (.05)	0.26	0.22 (.04)	0.28
Married Before 23 → SES Success	0.43 (.28)	0.10	-0.01 (.22)	-0.01
Married 23+ → SES Success	0.53 (.27)	0.13	0.21 (.21)	0.08
Child Before 23 → SES Success	0.23 (.31)	0.05	-1.13 (.24)	-0.54
Child 23+ → SES Success	0.03 (.22)	0.01	-0.95 (.26)	-0.40
Living Independently → SES Success	1.24 (.25)	0.28	0.44 (.23)	0.14
PPVT → Mastery	0.04 (.01)	0.20	0.02 (.01)	0.09
Child Before 23 → Mental Health	-1.19 (.34)	-0.18	-0.47 (.34)	-0.09
Child 23+ → Mental Health	-0.86 (.28)	-0.15	0.08 (.31)	0.01
Living Independently → Mental Health	1.23 (.32)	0.18	0.37 (.39)	0.05
R^2				
Parental Income	0.31		0.29	
Parental Education	0.54		0.48	
Parental Occupational Prestige	0.32		0.27	
Self-Esteem	0.80		0.82	
Physical Self-Perception	0.39		0.42	
Positive Affect	0.24		0.26	
Personal Income	0.56		0.31	
Job Satisfaction	0.11		0.04	
Subjective SES Scale	0.29		0.10	
Mastery	0.10		0.08	
Happiness	0.72		0.73	
Depression (Reversed)	0.54		0.55	
Stress (Reversed)	0.92		0.90	
Socioeconomic Success (Latent)	0.17		0.31	
Mental Health (Latent)	0.14		0.10	

Table 7

Gender as a Predictor of Membership in Latent Profiles of Well-Being (N = 1,530)

	Latent Profiles				
	Overall Low	Avg. SES, Low MH	Avg. SES, Mid. MH	Avg. SES, High MH	Overall High
Intercepts					
β_0's	-0.69 **	0.88 **	1.19 **	1.05 **	Reference
Gender ($p < .0001$)					
β_1's	2.32 **	1.84 **	1.91 **	1.47 **	Reference
Odds ratios	10.20	6.30	6.73	4.36	Reference

Note: ** $p < .001$

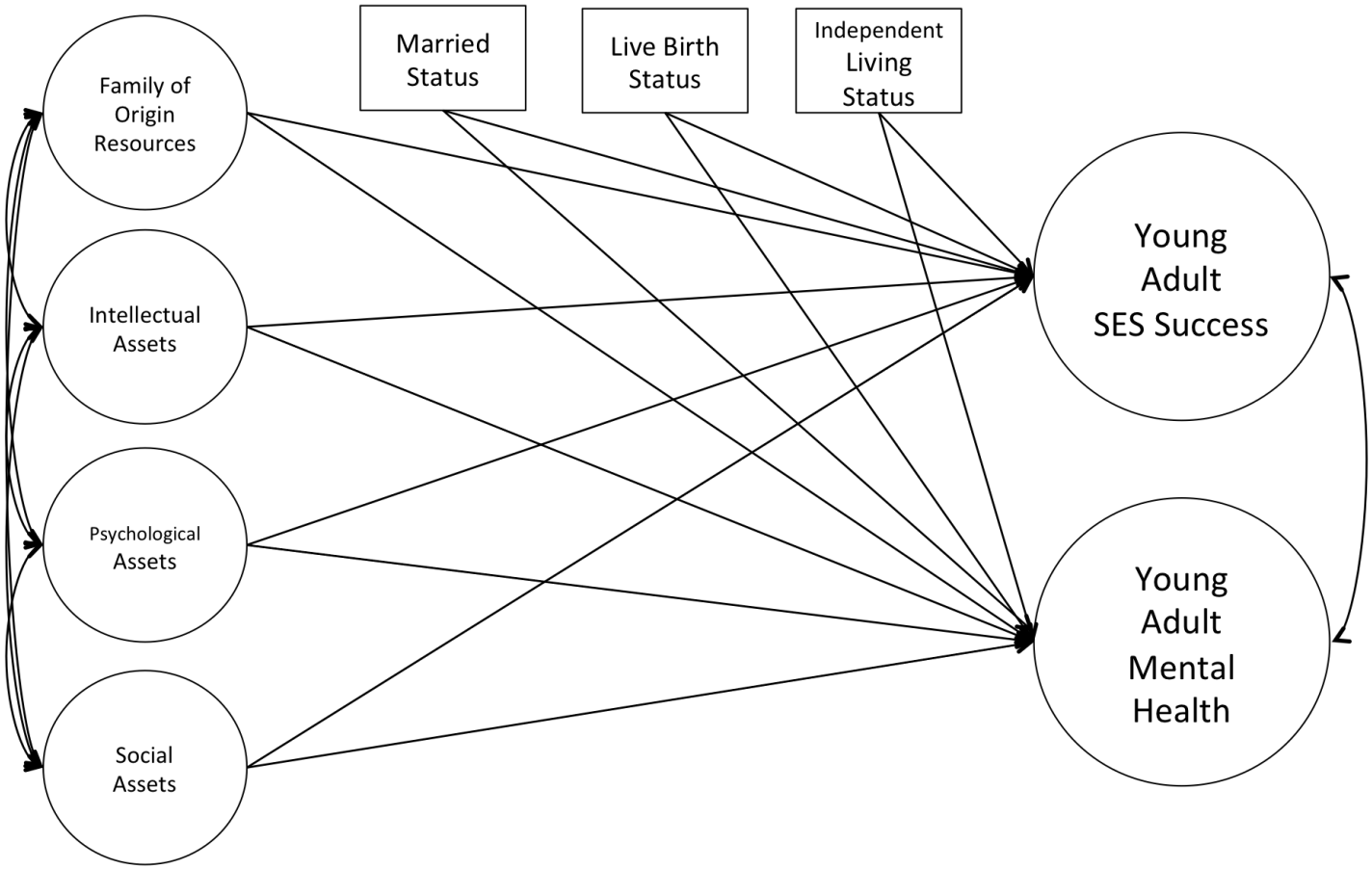

Figure 1. Conceptual model of research question two – latent regression analysis.

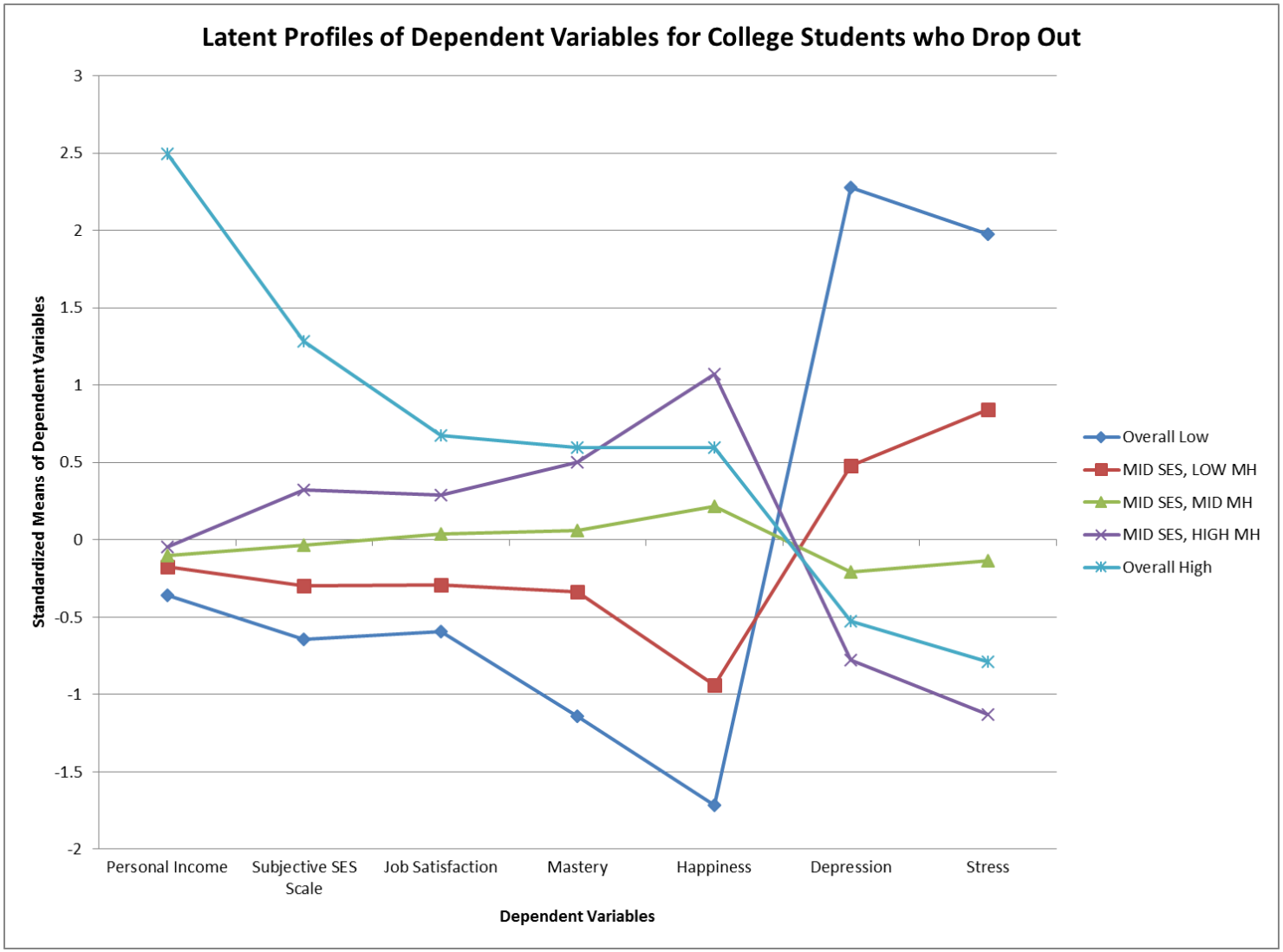

Figure 2. Latent profile indicator means for the 5-profile solution.

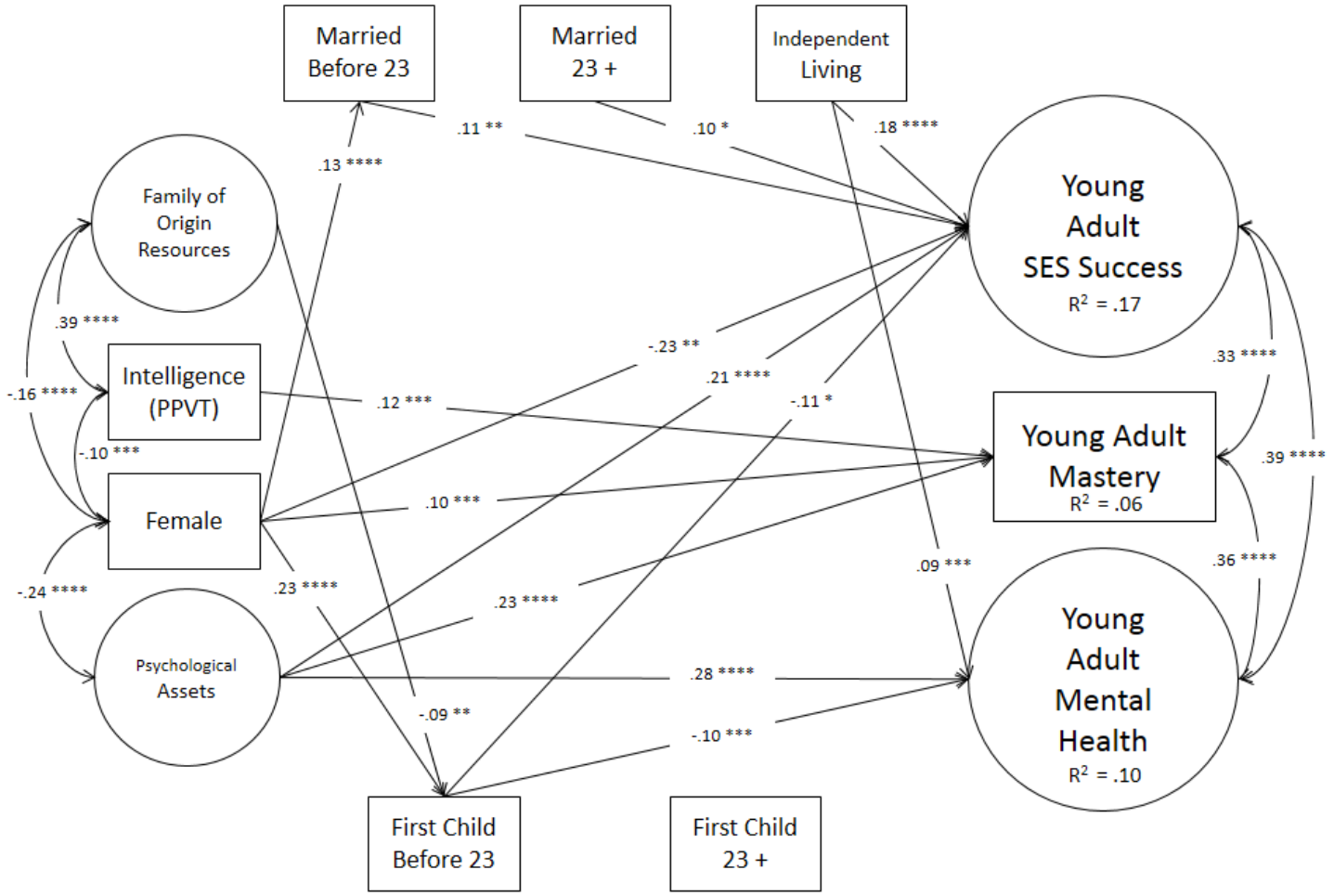

Figure 3. Structural model of latent regression analysis with significant pathways (*N* = 1,530).
* p = .05, ** p = .02, *** p < .01, **** p < .001

Appendix A

Syntax in MPlus for Research Question 1 – Latent Profile Analysis

```
Title:  Latent Profile Analysis for Dissertation
Data:
FILE IS "C:\Add Health Data\out\Caitlin\BOTHRQS-061513\READY4MPLUS4.csv";

VARIABLE:
NAMES ARE
ID AID PSUSCID REGION GSWGT4 SAMPLE
FAMST5 RACE1 W4AGE FEMALE
PMONEY MAXPARED MAXPAROC
GPA PVTSTD1 ANALYZE
SELFES PHYS HAPPY
INEIGH SCHCONNE FRIENDS
MARAGE2 ULTKID RINDEP
EARLYMAR LATEMAR EARLYKID LATEKID
MYINCOME JOBSAT LADDER
W4MASTERY W4HAPPY W4DEP W4STRESS;

USEVARIABLES ARE
MYINCOME JOBSAT LADDER
W4MASTERY W4HAPPY W4DEP W4STRESS;

IDVARIABLE IS ID;

STRATIFICATION = REGION;
CLUSTER = PSUSCID;
WEIGHT = GSWGT4;
SUBPOPULATION = SAMPLE EQ 1;

MISSING = .;

CLASSES = c(5);

ANALYSIS:
TYPE = COMPLEX MIXTURE MISSING;
ESTIMATOR = MLR;
OPTSEED = 605358;
ALGORITHM=INTEGRATION;

!SAVEDATA:
!FILE IS "C:\Add Health Data\out\Caitlin\BOTHRQS-061513\SAVECLASSES5.csv";
!SAVE = CPROB;

OUTPUT:  TECH11 TECH14 TECH8 SAMPSTAT STANDARDIZED;
```

Appendix B

Syntax in MPlus for Research Question 2 – Latent Regression Analysis

```
Title:  Latent Regression Analysis for Dissertation
Data:
FILE IS "C:\Add Health Data\out\Caitlin\BOTHRQS-061513\READY4MPLUS2.csv";

VARIABLE:
NAMES ARE
AID PSUSCID REGION GSWGT4 SAMPLE
FAMST5 RACE1 W4AGE FEMALE
PMONEY MAXPARED MAXPAROC
GPA PVTSTD1 ANALYZE
SELFES PHYS HAPPY
INEIGH SCHCONNE FRIENDS
MARAGE2 ULTKID RINDEP
EARLYMAR LATEMAR EARLYKID LATEKID
MYINCOME JOBSAT LADDER
W4MASTERY W4HAPPY RW4DEP RW4STRESS;

USEVARIABLES ARE
FEMALE
PMONEY MAXPARED MAXPAROC
PVTSTD1
SELFES PHYS HAPPY
RINDEP
EARLYMAR LATEMAR EARLYKID LATEKID
MYINCOME JOBSAT LADDER
W4MASTERY W4HAPPY RW4DEP RW4STRESS;

MISSING = .;

STRATIFICATION = REGION;
CLUSTER = PSUSCID;
WEIGHT = GSWGT4;
SUBPOPULATION = SAMPLE EQ 1;

ANALYSIS:
  TYPE IS COMPLEX;
  TYPE IS MISSING;
  ESTIMATOR IS MLR;
  ITERATIONS = 1000;
  CONVERGENCE = 0.00005;

MODEL:
FAMSES by PMONEY MAXPARED MAXPAROC;
PSYCH by SELFES PHYS HAPPY;
SESWB by MYINCOME JOBSAT LADDER;
MENTALWB by W4HAPPY RW4DEP RW4STRESS;

! below are non-significant with the !
SESWB on FEMALE;
!MENTALWB on FEMALE;
W4MASTERY on FEMALE;
EARLYKID on FEMALE;
```

```
!LATEKID on FEMALE;
EARLYMAR on FEMALE;
!LATEMAR on FEMALE;
!RINDEP on FEMALE;

!SESWB on FAMSES;
!MENTALWB on FAMSES;
!W4MASTERY on FAMSES;

!SESWB on PVTSTD1;
!MENTALWB on PVTSTD1;
W4MASTERY on PVTSTD1;

SESWB on PSYCH;
MENTALWB on PSYCH;
W4MASTERY on PSYCH;

SESWB on EARLYMAR;
SESWB on LATEMAR;

!W4MASTERY on EARLYMAR;
!W4MASTERY on LATEMAR;
!MENTALWB on EARLYMAR;
!MENTALWB on LATEMAR;

SESWB on EARLYKID;
!SESWB on LATEKID;

!W4MASTERY on EARLYKID;
!W4MASTERY on LATEKID;

MENTALWB on EARLYKID;
!MENTALWB on LATEKID;

SESWB on RINDEP;
!W4MASTERY on RINDEP;
MENTALWB on RINDEP;

!FAMSES with PSYCH;
FAMSES with PVTSTD1;
!PVTSTD1 with PSYCH;

MENTALWB with SESWB;
MENTALWB with W4MASTERY;
W4MASTERY with SESWB;

EARLYKID on FAMSES;
!LATEKID on FAMSES;

LATEKID  WITH EARLYKID;
LATEMAR with EARLYMAR;

EARLYMAR WITH EARLYKID;
LATEMAR  WITH LATEKID;

!MODINDICES
OUTPUT: SAMPSTAT STANDARDIZED
```

Appendix C

Syntax in MPlus for Alternative to Research Question 2 – Latent Profile Analysis with Covariate

```
Title:  Latent Profile Analysis with Female as Covariate
Data:
FILE IS "C:\Add Health Data\out\Caitlin\BOTHRQS-061513\READY4MPLUS4.csv";

VARIABLE:
NAMES ARE
ID AID PSUSCID REGION GSWGT4 SAMPLE
FAMST5 RACE1 W4AGE FEMALE
PMONEY MAXPARED MAXPAROC
GPA PVTSTD1 ANALYZE
SELFES PHYS HAPPY
INEIGH SCHCONNE FRIENDS
MARAGE2 ULTKID RINDEP
EARLYMAR LATEMAR EARLYKID LATEKID
MYINCOME JOBSAT LADDER
W4MASTERY W4HAPPY W4DEP W4STRESS;

USEVARIABLES ARE
FEMALE
MYINCOME JOBSAT LADDER
W4MASTERY W4HAPPY W4DEP W4STRESS;

IDVARIABLE IS ID;

STRATIFICATION = REGION;
CLUSTER = PSUSCID;
WEIGHT = GSWGT4;
SUBPOPULATION = SAMPLE EQ 1;

MISSING = .;

CLASSES = c(5);

ANALYSIS:
TYPE = COMPLEX MIXTURE MISSING;
ESTIMATOR = MLR;
OPTSEED = 605358;
ALGORITHM=INTEGRATION;

MODEL:
%OVERALL%
c#1 ON FEMALE;
c#2 ON FEMALE;
c#3 ON FEMALE;
c#4 ON FEMALE;

%c#1%
[MYINCOME JOBSAT LADDER W4MASTERY W4HAPPY W4DEP W4STRESS];
%c#2%
[MYINCOME JOBSAT LADDER W4MASTERY W4HAPPY W4DEP W4STRESS];
%c#3%
[MYINCOME JOBSAT LADDER W4MASTERY W4HAPPY W4DEP W4STRESS];
%c#4%
[MYINCOME JOBSAT LADDER W4MASTERY W4HAPPY W4DEP W4STRESS];
%c#5%
[MYINCOME JOBSAT LADDER W4MASTERY W4HAPPY W4DEP W4STRESS];

OUTPUT:  TECH1 TECH8 SAMPSTAT STANDARDIZED;
```